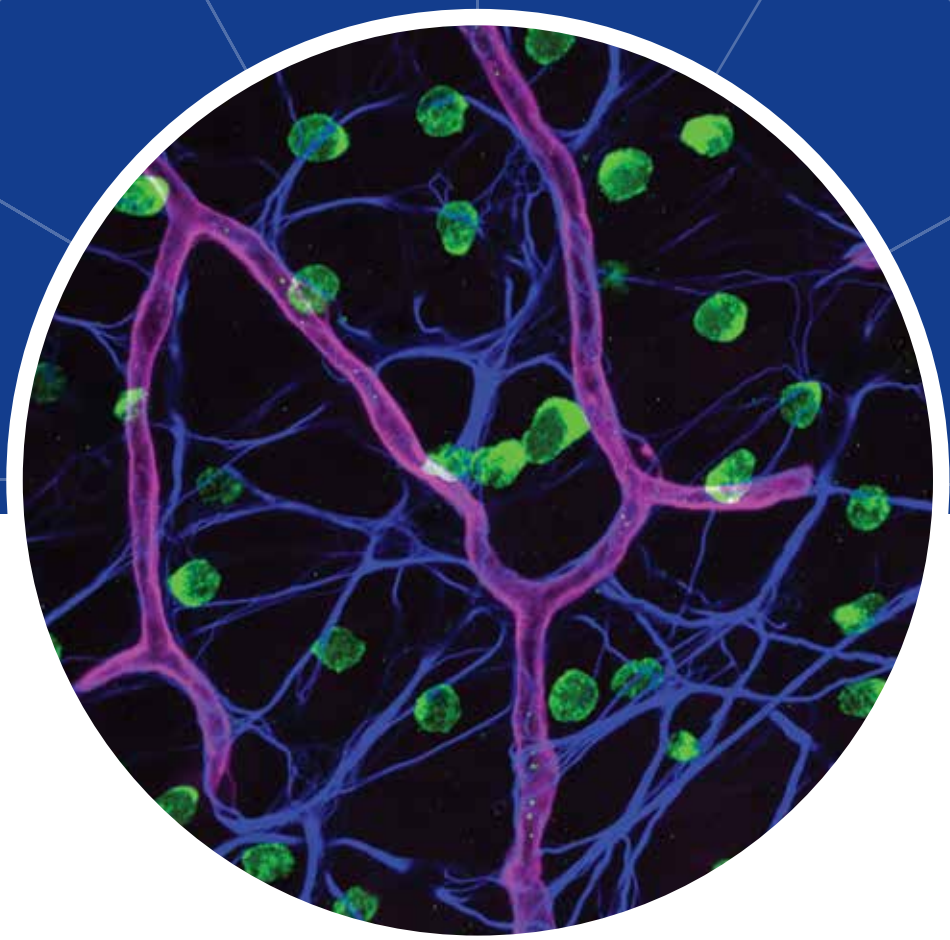
NEUROSCIENCE 2017

MONDAY

SCIENTIFIC SESSION LISTING:261–437



Washington, DC

Society for Neuroscience

Nov. 11–15

INFORMATION AT A GLANCE

IMPORTANT PHONE NUMBERS

Annual Meeting Headquarters Office

Logistics & Programming

Walter E. Washington Convention Center:
Room 102
Logistics, (202) 249-4200
Programming, (202) 249-4205

Volunteer Leadership Lounge

Walter E. Washington Convention Center:
Salon F, (202) 249 - 4235

Annual Meeting Information Booths

Walter E. Washington Convention Center

Grand Lobby, (202) 249-4224
L Street Bridge, (202) 249-4225
L Street Concourse, (202) 249-4226

Press Office

Walter E. Washington Convention Center:
Room 202A, (202) 249-4230

Exhibit Management

Walter E. Washington Convention Center:
Show Office B, (202) 249-4240

First Aid and Hospital Numbers

First Aid Room

Walter E. Washington Convention Center:
Hall A, (202) 249-3108
Hall D, (202) 249-3109

George Washington University Hospital
900 23rd Street, NW
Washington, DC 20037
(202) 715-4000

Medics USA Urgent Care Services
1700 17th Street, NW, Suite A
Washington, DC 20009
(202) 483-4400

Key to Poster Floor by Themes

The poster floor begins with Theme A in Hall C and ends with Theme J in Hall A. Refer to the poster floor map at the end of this booklet.

Theme

A ....Development
B.....Neural Excitability, Synapses, and Glia
C ....Neurodegenerative Disorders and Injury
D ....Sensory Systems
E.....Motor Systems
F.....Integrative Physiology and Behavior
G....Motivation and Emotion
H ....Cognition
I.....Techniques
J.....History and Education

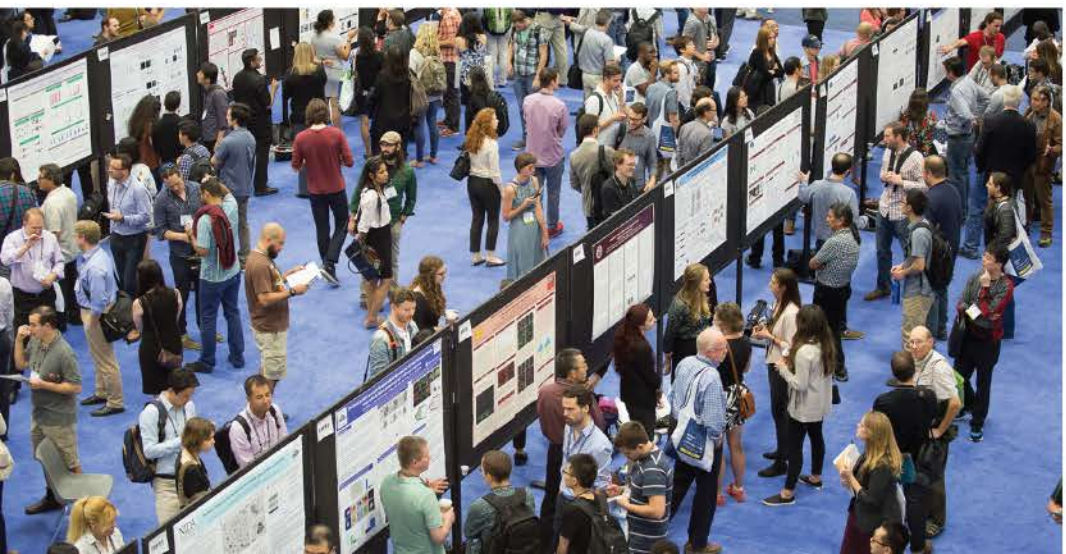
NOTE: Theme J Posters will be on display in Hall A beginning at 1 p.m. on Saturday, Nov. 11, and will remain posted until 5 p.m., Sunday, Nov. 12. One-hour presentations will occur either Saturday afternoon or Sunday morning.

Code of Conduct at SfN Events

SfN is committed to supporting discovery and scientific dialogue, and to fostering a welcoming community in which all scientists are able to contribute fully. The Society asserts that sexual harassment and other harassing behaviors have no place in a healthy scientific enterprise. We expect all attendees, media, speakers, volunteers, organizers, venue staff, guests, and exhibitors at SfN-organized events to help us ensure a safe and positive environment. At the convention center, onsite medical and security personnel are available directly or through the SfN headquarters office.

If attendees experience unwelcome or unsafe situations anywhere in the city, attendees should swiftly contact local authorities (dial 9-1-1), and additional local social services resources are listed in one convenient location at the federal website www.changingourcampus.org. Any official report of sexual harassment should be brought to the designated Human Resources Officer in the SfN headquarters office at each meeting convention center, or sent via email to hrofficer@sfn.org. The HR Officer will facilitate the completion of a report by a complainant.

For more information on SfN's policy, please go to: www.sfn.org/Member-Center/Professional-Conduct/Code-of-Conduct-at-SfN-Events.



Cover Image: This image shows the neurovascular unit of the retina, including capillaries (magenta), astroglia (blue), and cholinergic amacrine cells (green). **Courtesy, with permission:** Elena Ivanova, Tamas Kovacs-Oller and Botir T. Sagdullaev, 2017, *The Journal of Neuroscience*, 37(32): 7580-7594.

Complete Session Listing

Monday AM

LECTURE *Walter E. Washington Convention Center*

261. Neural Circuits Controlling the Selection and Persistence of Sensory Information — CME

Mon. 8:30 AM - 9:40 AM — Hall D

Speaker: T. MOORE, *Stanford Univ. and Howard Hughes Med. Inst.*

The processing and retention of sensory input is influenced by a number of endogenous factors, such as arousal, motivation, and cognitive control. These factors appear to constrain the sensory information guiding adaptive behavior. This lecture will discuss recent evidence on the neural circuits involved in the modulation, filtering, and persistence of sensory information and their relation to basic cognitive functions such as attention and working memory. The lecture will include evidence from a range of model systems and approaches, as well as a discussion on the relevance to mental disorders.

SYMPOSIUM *Walter E. Washington Convention Center*

262. Impact of Zika Virus Infection in the Nervous System and Its Underlying Mechanisms — CME

Mon. 8:30 AM - 11:00 AM — Ballroom A

Chair: G. MING
Co-Chair: N. SESTAN

The World Health Organization declared a public health emergency of international concern on Feb. 1, 2016, due to a potential link between Zika virus and microcephaly and/or other neurological diseases. This symposium will discuss recent advances in our understanding of how Zika virus impacts nervous system development and the underlying mechanisms using different model systems, including human fetal tissue, human pluripotent stem cell-derived organoids and neurospheres, and animal models.

8:30 **262.01** Introduction.

8:35 **262.02** Brain organoids for modelling human brain development and Zika infection. G. MING. *Univ. of Pennsylvania.*

9:10 **262.03** Mechanisms of Zika induced neuronal death in the developing and mature brain. J. GLEESON. *UCSD.*

9:45 **262.04** Zika virus impairs molecular fingerprinting in neural stem cells. P. P. GARCEZ. *Federal Univ. of Rio de Janeiro.*

10:20 **262.05** Mechanisms underlying Zika virus-related neurodevelopmental defects. N. SESTAN. *Yale Univ. Sch. of Med.*

10:55 **262.06** Closing Remarks.

SYMPOSIUM *Walter E. Washington Convention Center*

263. ● Assembly and Maintenance of the Peripheral Nerve Node of Ranvier in Development, Health, and Disease — CME

Mon. 8:30 AM - 11:00 AM — 146A

Chair: H. J. WILLISON
Co-Chair: P. J. BROPHY

Nodes of Ranvier are the sites of saltatory conduction, a fundamental adaption of myelinated axons. Our understanding of the molecular organization of the nodal region has rapidly advanced. Many components have been identified, as have the interactions among the axonal and glial molecules, accounting for the specialized features of nodal, paranodal, and juxtaparanodal domains. Human autoimmune neuropathies are diseases that target glial and axonal nodal proteins and glycolipids, leading to nodal disruption and conduction block. The symposium will comprise a broad overview of this area, including descriptions of the latest research findings from presenters' laboratories.

8:30 **263.01** Introduction.

8:35 **263.02** Role of myelinating glia in the organization of the nodes of Ranvier. E. PELES. *Weizmann Inst. of Sci.*

9:10 **263.03** Juxtaparanodal function at the nodal complex in health and disease. C. FAIVRE-SARRAILH. *CNRS UMR 7286, Aix Marseille Univ.*

9:45 **263.04** Assembly of PNS nodal complexes. P. J. BROPHY. *Univ. of Edinburgh.*

10:20 **263.05** ● Glycolipids at PNS nodes in Guillain-Barre syndrome. H. J. WILLISON. *Univ. of Glasgow.*

10:55 **263.06** Closing Remarks.

MINISYMPOSIUM *Walter E. Washington Convention Center*

264. Neuroscience of Maternal Psychopathology — CME

Mon. 8:30 AM - 11:00 AM — Ballroom B

Chair: J. PAWLUSKI
Co-Chair: J. S. LONSTEIN

Motherhood involves striking structural and chemical neuroplasticity, which is associated with increased susceptibility to anxiety and depression. These disorders have unique profiles of neural activation when experienced postpartum, and because the underlying systems overlap with those for caregiving, mother-infant interactions can be disrupted. Therefore, there is intricate interplay among maternal mental health, the mother-infant relationship, and neurobiological mechanisms mediating them.

8:30 **264.01** Introduction.

8:35 **264.02** Pregnancy and maternal attachment are associated with long-lasting changes in human brain structure. E. HOEKZEMA. *Leiden Univ.*

8:55 **264.03** Motherhood, stress and SSRIs: Effects on hippocampal plasticity during pregnancy and the postpartum period. J. PAWLUSKI. *Univ. of Rennes 1.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:15 **264.04** Motherhood and reproductive state influence central serotonin systems involved in postpartum mental illness. J. S. LONSTEIN. *Michigan State Univ.*

9:35 **264.05** The neural correlates of responsiveness to infant pictures: A comparison of depressed and nondepressed mothers and non-mothers. A. DUDIN. *McMaster Univ.*

9:55 **264.06** Gestational stress effects on the postpartum reward system: Implications for mood and mothering. B. LEUNER. *Ohio State Univ.*

10:15 **264.07** Maternal neglect and anxiety involve CRF receptors in the bed nucleus of the stria terminalis. O. BOSCH. *Univ. of Regensburg.*

10:35 **264.08** Closing Remarks.

MINISYMPOSIUM *Walter E. Washington Convention Center*

265. Beyond Place Cells: Recent Surprises From Hippocampal Neurophysiology — CME

Mon. 8:30 AM - 11:00 AM — Ballroom C

Chair: M. R. MEHTA

Hippocampal neurons show spatially selective responses, termed place cells. The minisymposium will highlight recent advances that elucidate the mechanisms governing place cells and demonstrate hippocampal responses beyond allocentric spatial selectivity or place cells. These insights are obtained using diverse species — mice, rats, bats, and primates — and range of behavioral, physiological, and computational techniques. The results provide significant new insights about hippocampal function.

8:30 **265.01** Introduction.

8:35 **265.02** Temporal lobe activity in nonhuman primates: Locomotion versus restraint. C. A. BARNES. *Univ. of Arizona.*

8:55 **265.03** Spatial representation of self and others in the hippocampus of bats. N. ULANOVSKY. *Weizmann Inst. of Sci.*

9:15 **265.04** Object-vector cells and position coding in the medial entorhinal cortex. E. MOSER. *Kavli Inst. Systems Neurosci.*

9:35 **265.05** From virtual reality to reality: How neurons make memorable maps. M. R. MEHTA. *Univ. of California at Los Angeles (UCLA).*

9:55 **265.06** Circuit mechanisms of CA1 place fields. J. C. MAGEE. *Howard Hughes Med. Inst.*

10:15 **265.07** Mapping of a non-spatial dimension by the hippocampal-entorhinal circuit. D. ARONOV. *Columbia Univ.*

10:35 **265.08** Closing Remarks.

MINISYMPOSIUM *Walter E. Washington Convention Center*

266. Open-Source Hardware for Neuroscience Research — CME

Mon. 8:30 AM - 11:00 AM — 145B

Chair: A. KRAVITZ

Neuroscientists often invent new devices to further their experiments. In recent years, neuroscientists have published several open-source inventions that rival commercial solutions. In this minisymposium, attendes will learn from the creators of six open-source projects, including a head-mounted mini-microscope, a high-channel count electrophysiology system, multiple operant behavioral systems, and novel experiment control software, all of which are freely available to be built, used, and modified.

8:30 **266.01** Introduction.

8:35 **266.02** New generation open source miniaturized microscopes for imaging during behavior. P. GOLSHANI. *UCLA.*

8:55 **266.03** Feeding Experimentation Device (FED): An open-source system for measuring food intake in rodents. K. P. NGUYEN. *Carnegie Mellon.*

9:15 **266.04** An open source device for operant licking in rats. H. CHEN. *Univ. Tennessee Hlth. Sci. Ctr.*

9:35 **266.05** Open ephys: An open source system for electrophysiology. J. VOIGTS. *MIT.*

9:55 **266.06** An open platform for real-time control of trial-based behavioral tasks. J. SANDERS. *Sanworks LLC.*

10:15 **266.07** Bonsai: A visual programming language for the rapid prototyping of neuroscience experiments. G. LOPES. *Sainsbury Wellcome Ctr.*

10:35 **266.08** Closing Remarks.

MINISYMPOSIUM *Walter E. Washington Convention Center*

267. Modulation of Spinal Motor Networks: New Perspectives in the Control of Movement — CME

Mon. 8:30 AM - 11:00 AM — 151B

Chair: P. J. WHELAN

Over the past decade technological advances have provided tools to identify and activate circuits within the brain and spinal cord. This has led to conceptual advances in our understanding of network connectivity and intracellular properties that contribute to rhythmogenesis. This minisymposium will explore these findings, including in topics ranging from the descending control of locomotion to an understanding of changes in pacemaker cells following spinal cord injury.

8:30 **267.01** Introduction.

8:35 **267.02** Activity-dependent regulation of spinal motor networks by sodium-potassium pumps. G. MILES. *Univ. of St. Andrews.*

8:55 **267.03** Contribution of DSCAM in the normal development of motor circuits. F. BRETZNER. *Univ. Laval.*

9:15 **267.04** Contribution of non-linear firing behaviors in locomotor function and dysfunction. F. BROCARD. *Inst. de Neurosciences de la Timone.*

9:35 **267.05** Light on a sensory interface linking cerebrospinal fluid to motor circuits in vertebrates. C. WYART. *Inst. Cerveau Et Moelle Epiniere.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:55 **267.06** Dopaminergic control of locomotion: Uncovering parallel pathways for movement control. P. J. WHELAN. *Univ. of Calgary.*

10:15 **267.07** Brainstem descending cells involved in starting, maintaining, and stopping locomotion. R. DUBUC. *Univ. du Quebec a Montreal.*

10:35 **267.08** Closing Remarks.

BASIC-TRANSLATIONAL-CLINICAL ROUNDTABLE *Walter E. Washington Convention Center*

268. ● Hearing Loss, Brain Function, and Healthy Aging — CME

Mon. 8:30 AM - 11:00 AM — 206

Organizer: FRANK R. LIN.

Speakers: L. FERRUCCI, A. SHARMA, B. WILSON.

Strategies to optimize healthy aging are imperative. From 2000 to 2050, the proportion of the world's population over age 60 will double from 11 percent to 22 percent, making this population larger than that of children under 14 for the first time in history. This session will discuss what constitutes healthy aging, explore hearing loss as an exemplar of a potential intervention target, and discuss the current and future role of neuroprostheses for hearing.

LECTURE *Walter E. Washington Convention Center*

269. DAVID KOPF LECTURE ON NEUROETHICS: The Fallacy of Fairness: Diversity in Academic Science

Mon. 10:00 AM - 11:10 AM — Hall D

Speaker: J. HANDELSMAN, *Univ. of Wisconsin-Madison.*

Support contributed by: David Kopf Instruments

Most people carry unconscious biases about other people that shape their evaluations of them and their work. Evidence shows scientists are no exception and, despite our belief in objectivity, we apply substantial prejudice to many decisions. There are, however, proven methods and best practices that mitigate the impact of bias.

LECTURE *Walter E. Washington Convention Center*

270. CLINICAL NEUROSCIENCE LECTURE: Insights Into Neural Degeneration From *Drosophila* Genetics — CME

Mon. 11:30 AM - 12:40 PM — Hall D

Speaker: N. M. BONINI, *Univ. of Pennsylvania.*

Generating models of key human neurodegenerative diseases in *Drosophila* is leading to discoveries about the molecular genetic pathways that modulate neural integrity. This lecture will illustrate how using the fly as a model for disease provides insight into modifier pathways. This lecture will also highlight the fundamental biological pathways of neural maintenance, as well as reveal the weak links and processes that can serve as protective players. This research highlights the importance of proper protein folding and stress pathways, and identifies new players critical for protection of the brain for the long term.

NANOSYMPOSIUM

271. Cellular Mechanisms in Neurogenesis

Theme A: Development

Mon. 8:00 AM – *Walter E. Washington Convention Center*, 152B

8:00 **271.01** ADAM10-initiated intramembrane proteolysis controls radial migration of cortical neurons. X. CHENG*; P. LI; Z. XIONG. *Inst. of Neuroscience, Chinese Acad. of Sci., Inst. of Neuroscience, Chinese Acad. of Sci.*

8:15 **271.02** Differential roles for dynein light intermediate chain orthologues in neocortex development. J. C. GONCALVES*; R. B. VALLEE. *Columbia Univ. Med. Ctr., Life and Hlth. Sci. Res. Inst. (ICVS) - Univ. of Minho, ICVS/3B's - PT Government Associate Lab.*

8:30 **271.03** Beta1 integrins control microglial migration in an age-specific manner during embryonic neurodevelopment. B. BRONE*; S. M. T. SMOLDERS; N. SWINNEN; S. KESSELS; K. ARNOUTS; S. SMOLDERS; B. LE BRAS; J. RIGO; P. LEGENDRE. *Hasselt Univ., INSERM, CNRS,Sorbonne Universités, UPMC Universités, Neurosci. Paris Seine.*

8:45 **271.04** KCC2 manipulation alters migration of interneurons. F. T. DJANKPA; M. CHATTERJEE; S. L. JULIANO*. *USUHS, USUHS, USUHS.*

9:00 **271.05** ● Rab23 regulates radial migration of projection neurons via PDGFRα-mediated expression of N-cadherin. C. HOR*; C. HOR*; C. HOR*; C. HOR*; E. L. GOH, 169857. *Duke-Nus Med. Sch., Natl. Neurosci. Inst., Natl. Univ. of Singapore, KK Women's and Children's Hosp.*

9:15 **271.06** Molecular mechanisms underlying migration of midbrain dopaminergic neuronal subpopulations in the developing brain. A. R. VASWANI*; P. MOCELLIN; M. K. SCHWARZ; H. FRIED; S. BLAESS. *Inst. of Reconstructive Neurobio., Lab. of Exptl. Epileptology and Cognition Research,Life & Brain Ctr., Deutsches Zentrum für Neurodegenerative Erkrankungen (DZNE).*

9:30 **271.07** Heterogeneity of glial progenitors in the developing cortex revealed by single cell RNA sequencing. R. Q. LU*; J. WANG. *Cincinnati Children's Hosp. Med. Ctr., Zhejiang Universty.*

NANOSYMPOSIUM

272. Postnatal Neurogenesis and Stem Cell Functions

Theme A: Development

Mon. 8:00 AM – *Walter E. Washington Convention Center*, 146C

8:00 **272.01** Regenerative capacity of adult mouse brain. M. V. SEMENOV; K. SMITH; O. L. BORDIUK; P. J. MORIN; J. M. WELLS*. *Edith Nourse Rogers Mem. Veterans Hosp., ENRM VA Hosp.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:15 **272.02** ● Neurogenesis in the human hippocampus declines sharply during infancy to extremely low levels in children and undetectable levels in the adult. S. F. SORRELLS*; M. F. PAREDES; A. CEBRIAN-SILLA; K. SANDOVAL; D. QI; K. KELLEY; D. JAMES; S. MAYER; J. W. CHANG; E. F. CHANG; K. I. AUGUSTE; A. J. GUTIERREZ MARTIN; A. R. KRIEGSTEIN; G. W. MATHERN; M. C. OLDHAM; E. J. HUANG; J. M. GARCIA-VERDUGO; Z. YANG; A. ALVAREZ-BUYLLA. *Univ. of California San Francisco, Univ. of California San Francisco, Univ. de Valencia, Fudan Univ., Univ. of California San Francisco, David Geffen UCLA Sch. of Med., Hosp. Universitario La Fe, Univ. of California San Francisco.*

8:30 **272.03** Complex 4D patterns of cell proliferation in the whole brain revealed by WM-CLICK. A. LAZUTKIN*; S. SHUVAEV; I. DORONIN; E. AMELCHENKO; K. ANOKHIN; G. ENIKOLOPOV. *Moscow Inst. of Physics and Technol., P.K. Anokhin Inst. of Normal Physiol., Cold Spring Harbor Lab., Stony Brook Univ., Kurchatov Inst.*

8:45 **272.04** Neonatal subventricular zone neural stem cells release extracellular vesicles that function as a non-canonical microglial morphogen. D. M. FELICIANO*; M. MORTON; V. NECKLES; C. SELUZICKI. *Clemson Univ., Clemson Univ.*

9:00 **272.05** Apical cell-cell adhesions reconcile symmetry and asymmetry in zebrafish neurulation. X. WEI*; C. GUO; J. ZOU. *Univ. of Pittsburgh.*

9:15 **272.06** Clonal analysis of newborn neurons in the adult telencephalon in medaka fish. Y. ISOE*; R. NAKAMURA; T. OKUYAMA; Y. KAMEI; S. NONAKA; T. KUBO; H. TAKEDA; H. TAKEUCHI. *The Univ. of Tokyo, the Univ. of Tokyo, MIT, NIBB, Okayama Univ.*

9:30 **272.07** Inactivation of HIPPO signaling components LATS1/2 initiates aggressive peripheral nerve malignancy. L. WU*; Q. LU. *CCHMC.*

9:45 **272.08** AhR suppresses tumour progression in Shh class medulloblastoma. N. SARIC*; B. PIJUAN SALA; S. CLIFFORD; G. STOCKINGER; C. HOGSTRAND; A. BASSON. *King's Col. London, Cambridge Stem Cell Inst., Northern Inst. for Cancer Res., Francis Crick Inst.*

NANOSYMPOSIUM

273. Transplantation and Regeneration

Theme A: Development

Mon. 8:00 AM – *Walter E. Washington Convention Center*, 147B

8:00 **273.01** Functional magnetically oriented collagen scaffolds for neuronal regeneration. O. SHEFI*; M. ANTMAN-PASSIG. *Fac. of Engin. and Inst. of Nanotechnologies and Advanced Materials.*

8:15 **273.02** ● Tissue engineered "pioneer" axons as regenerative bridges to guide modality-specific axonal regeneration following peripheral nerve injury. K. KATIYAR*; M. R. GROVOLA; L. A. STRUZYNA; D. P. BROWN; J. C. BURRELL; C. K. WALLACE; K. D. BROWNE; D. K. CULLEN. *Univ. of Pennsylvania, Corporal Michael J Crescenz Veterans Affairs Med. Ctr., Drexel Univ., Univ. of Pennsylvania Sch. of Vet. Med.*

8:30 **273.03** The role of poly ADP-ribosylation in axon regeneration. A. B. BYRNE*. *Univ. of Massachusetts Med. Sch.*

8:45 **273.04** Fabrication of cerebral organoid by using a 3D bio-printer and its maturation *in vitro* and *in vivo*. N. FUJITA*; Y. MASUI; J. CHAMBERS; K. UCHIDA; R. NISHIMURA; Y. KUNITOMI; K. NAKAYAMA. *The Univ. of Tokyo, Tokyo Univ., Tokyo Univ., Cyfuse Biomed. K.K., Saga Univ.*

9:00 **273.05** Transplantation of human cortical organoid tissue for reconstruction of rat visual cortex. D. JGAMADZE*; N. BILICI; J. T. LIM; C. ADAM; C. LIU; D. CONTRERAS; J. A. WOLF; H. CHEN. *Univ. of Pennsylvania, Perelman Sch. of Med., Sch. of Engin. and Applied Sci., Univ. of Pennsylvania, Corporal Michael J. Crescenz Veterans Affairs Med. Ctr.*

9:15 **273.06** Tissue-engineered nigrostriatal pathway for tract reconstruction in Parkinson's disease. L. A. STRUZYNA*; K. D. BROWNE; Z. D. BRODNIK; J. C. BURRELL; J. P. HARRIS; H. I. CHEN; J. A. WOLF; K. V. PANZER; J. E. DUDA; R. A. ESPAÑA; D. K. CULLEN. *Univ. of Pennsylvania, Univ. of Pennsylvania, Michael J. Crescenz Veterans Affairs Med. Ctr., Drexel Univ., Univ. of Pennsylvania.*

9:30 **273.07** Converted human neurons mature in adult rat hippocampus. M. S. ANDERSSON*; N. AVALIANI; U. PFISTERER; A. HEUER; M. P. PARMAR; M. KOKAIA. *Lund Univ., Univ. of Copenhagen, BRIC, Wallenberg Neurosci Ctr., Epilepsy Ctr.*

9:45 **273.08** High-resolution mass spectrometry imaging of the human subventricular zone lipidome. M. HUNTER*; R. L. M. FAULL; N. J. DEMARAIS; A. C. GREY; M. A. CURTIS. *Univ. of Auckland, Univ. of Auckland, Univ. of Auckland.*

NANOSYMPOSIUM

274. Cellular and Subcellular Synapse Organization: From Super-Resolution Imaging to Circuit Function

Theme B: Neural Excitability, Synapses, and Glia

Mon. 8:00 AM – *Walter E. Washington Convention Center*, 140A

8:00 **274.01** STED nanoscopy reveals the ultrastructure of the postsynaptic density protein PSD-95 in living mice. J. MASCH*; D. KAMIN; H. STEFFENS; J. FISCHER; J. ENGELHARDT; N. T. URBAN; M. KRATSCHKE; N. KOMIYAMA; S. G. N. GRANT; S. W. HELL. *Max Planck Inst. For Biophysical Chem., German Cancer Res. Ctr. (DKFZ), Ctr. for Clin. Brain Sciences, Edinburgh Univ.*

8:15 **274.02** Identifying NMDARs by EM tomography in the glutamatergic excitatory postsynaptic density. X. CHEN*; S. INCONTRO; C. WINTERS; M. ARONOVA; R. D. LEAPMAN; R. A. NICOLL; T. S. REESE. *NINDS-NIH, UCSF, NIBIB-NIH.*

8:30 **274.03** Fast and furious: Imaging dendritic spinule dynamics in cortical mouse neurons using rapid three dimensional structured illumination microscopy. C. R. ZACCARD*; K. MYCZEK; P. PENZES. *Northwestern Univ.*

8:45 **274.04** Modeling the nano-physiology of dendritic spines with electro-diffusion. T. LAGACHE*; K. JAYANT; R. YUSTE. *Columbia Univ., Columbia Univ., Columbia Univ.*

9:00 **274.05** Molecular mechanism of MDGA1: Regulation of neuroligin-neurexin trans-synaptic bridges. G. RUDENKO*; S. GANGWAR; X. ZHONG; S. SESHADRINATHAN; H. CHEN; M. MACHIUS. *Univ. of Texas Med. Br., Univ. of Michigan.*

9:15 **274.06** Branch- And input-specific synaptic clustering by single axons on CA1 pyramidal cell dendrites. E. BLOSS*; S. VISWANATHAN; B. KARSH; J. COLONELL; R. FETTER; N. SPRUSTON. *Janelia Res. Campus.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:30 **274.07** Post-transcriptional control of gene target specificity in neuronal plasticity. T. R. GAMACHE*; D. PHAM; A. AMEN; R. ROTH; G. DIERING; R. L. HUGANIR; M. K. MEFFERT. *Johns Hopkins Univ. Sch. of Med.*

9:45 **274.08** Whole-cell mapping of excitatory and inhibitory synapses in layer 2/3 pyramidal neurons reveals structured synaptic organization. D. IASCONE*; Y. LI; U. SUMBUL; H. CHEN; V. ANDREU; F. GOUDY; L. PANINSKI; H. PENG; F. POLLEUX. *Columbia Univ., Univ. of Georgia, Barnard Col., Allen Inst. for Brain Sci.*

NANOSYMPOSIUM

275. Proteinopathy Other Than Abeta and Tau

Theme C: Neurodegenerative Disorders and Injury

Mon. 8:00 AM – *Walter E. Washington Convention Center*, 150B

8:00 **275.01** Defining the aggregate interactome in models of Alzheimer amyloidopathy. M. BALASUBRAMANIAM; S. AYYADEVARA; X. DU; S. T. GRIFFIN*; R. SHMOOKLER REIS. *Univ. of Arkansas for Med. Sci., Univ. of North Carolina.*

8:15 **275.02** The Parkinson's-associated protein TMEM230 accumulates in granulovacuolar degeneration bodies and dystrophic neurites of Alzheimer's disease. X. WANG*. *Case Western Reserve Univ.*

8:30 **275.03** Pin1 and CDK5 regulates stability and solubility of phosphorylated CRMP2A in neurons. M. BALASTIK*; B. ELIASOVA; R. WEISSOVA; M. KLEISNEROVA; J. ZIAK. *Inst. of Physiology, CAS.*

8:45 **275.04** von Economo neurons and fork cell degeneration in right anterior insula is associated with network-based atrophy and impaired empathy in patients with frontotemporal dementia. L. PASQUINI*; A. NANA LI; G. TOLLER; J. DENG; J. BROWN; E. KIM; S. E. GAUS; H. HWANG; I. ALLEN; G. MARX; H. H. ROSEN; B. L. MILLER; K. RANKIN; W. W. SEELEY. *Memory and Aging Ctr. UCSF, Pathology department.*

9:00 **275.05** FUS and ELAV-like proteins cooperatively control SynGAP isoform alpah2 in a 3'UTR length-dependent manner to promote dendritic spine maturation and cognitive function. S. YOKOI*; T. UDAGAWA; Y. FUJIOKA; D. HONDA; H. OKADO; H. WATANABE; M. KATSUNO; S. ISHIGAKI; G. SOBUE. *Nagoya Univ. Grad. Sch. of Med., Tohoku Univ., Nagoya Univ. Grad. Sch. of Med., Tokyo Metropolitan Inst. of Med. Sci.*

9:15 **275.06** ● Circulating misfolded transthyretin oligomers detected by peptide probes decrease upon disease modifying therapies. C. MONTEIRO*; J. SCHONHOFT; X. JIANG; J. CHAPMAN; M. NOVAIS; E. T. POWERS; T. COELHO; J. W. KELLY. *The Scripps Res. Inst., Misfolding Diagnostics, Inc., Hosp. de Santo Antonio, The Scripps Res. Inst.*

9:30 **275.07** Versatile use of rtTA-expressing retroviruses in the study of adult neurogenesis and neurodegenerative diseases. M. LLORENS-MARTÍN*; C. M. TEIXEIRA; J. TERREROS-RONCAL; N. PALLAS-BAZARRA; J. AVILA. *Ctr. De Biología Mol. severo Ochoa CBMSO, Univ. Autónoma de Madrid, Ctr. de Investigación Biomédica en Red enfermedades neurodegenerativas, CIBERNED, Emotional Brain Inst., Ctr. de Biología Mol. "Severo Ochoa".*

9:45 **275.08** Inverse relationship between TDP-43 pre-inclusions and mature inclusions in primary progressive aphasia with FTLD-TDP pathology. G. KIM*; K. BOLBOLAN; T. GEFEN; S. WEINTRAUB; E. BIGIO; M. MESULAM; C. GEULA. *Northwestern Univ. Feinberg Sch. of Med.*

NANOSYMPOSIUM

276. Tauopathies

Theme C: Neurodegenerative Disorders and Injury

Mon. 8:00 AM – *Walter E. Washington Convention Center*, 147A

8:00 **276.01** Annexin-A1 tripeptide attenuates microglia activation after cardiac surgery in rats. Z. ZHANG*; Q. MA; B. SHAH; G. MACKENSEN; D. LO; J. P. MATTHEW; M. V. PODGOREANU; N. TERRANDO. *Duke Univ. Med. Ctr., Univ. of Washington Med. Ctr.*

8:15 **276.02** CX_3CR1^+ monocytes modulate learning and learning-dependent synapse remodeling via TNFα. G. YANG*; H. MOURA SILVA; J. J. LAFAILLE; J. GARRÉ. *New York Univ. Sch. of Med.*

8:30 **276.03** Tau communicates between neuron and microglia to generate neuroinflammation. Z. XIE*; Y. DONG; F. LIANG; Q. QUAN. *Massachusetts Gen. Hosp. and Harvard Med. Sch., Massachusetts Gen. Hosp. and Harvard Med. Sch., Rowland Inst. at Harvard Univ.*

8:45 **276.04** Isoflurane reduces brain-derived neurotrophic factor release leading to inhibition of glutamate exocytosis. K. W. JOHNSON; F. S. LEE; H. C. HEMMINGS, Jr; J. PLATHOLI*. *Weill Cornell Med., Weill Cornell Med.*

9:00 **276.05** ● Effect of general anesthetic on cognitive impairments and synaptic deficits in triple transgenic Alzheimer's mouse. G. LIANG; D. J. JOSEPH; C. LIU; J. PENG; R. G. ECKENHOFF*; H. WEI. *Univ. of Pennsylvania, Children's Hosp. of Philadelphia, China-Japan Friendship Hosp., Second Affiliated Hosp. of Sun Yat-Sen Univ., Univ. of Pennsylvania Perelman Sch. of Med., Univ. of Pennsylvania.*

9:15 **276.06** Amantadine attenuates sepsis-induced cognitive dysfunction: Contribution of inhibiting toll-like receptor 2. Z. ZUO*; W. XING; P. HUANG. *Unvi of VA, Univ. of Virginia.*

9:30 **276.07** Cyclophilin D-associated mechanism of sevoflurane-induced inhibition of neurogenesis. Y. ZHANG*; J. ZHENG; Z. XIE. *Massachusetts Gen. Hosp., Tenth People's Hosp. affiliated to Tongji Univ. Sch. of Med., Dept Pharmacol. & Exptl. Neurosci., Massachusetts Gen. Hosp. and Harvard Med. Sch.*

9:45 **276.08** Effects of propofol and surgery on neuropathology and cognition in the 3xTgAD Alzheimer transgenic mouse model. M. F. ECKENHOFF*; F. MARDINI; J. X. TANG; J. C. LI; M. J. ARROLIGA; R. G. ECKENHOFF. *Univ. of Pennsylvania Perelman Sch. of Med.*

10:00 **276.09** Mitochondrial PKA activation in the developing murine brain during exposure to isoflurane with carbon monoxide. R. J. LEVY*; A. WANG; Y. LONG. *Columbia Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

NANOSYMPOSIUM

277. Representation of Objects and Scenes

Theme D: Sensory Systems

Mon. 8:00 AM – *Walter E. Washington Convention Center*, 150A

8:00 **277.01** Does the primate ventral stream need cortical feedback to compute rapid online image-by-image object identity? K. KAR*; J. KUBILIUS; K. SCHMIDT; E. B. ISSA; J. J. DICARLO. *MIT, KU Leuven, MIT.*

8:15 **277.02** A functional dissociation of category-selective brain areas based on their response to moving and static stimuli. D. PITCHER*; G. R. IANNI; L. G. UNGERLEIDER. *Univ. of York, Natl. Inst. of Mental Hlth., Natl. Inst. of Mental Hlth.*

8:30 **277.03** Stimulus effects dwarf task effects in visual regions. M. C. MUR*; D. J. MITCHELL; S. BRUEGGEMANN; J. DUNCAN. *MRC Cognition and Brain Sci. Unit, Univ. of Hong Kong, Univ. of Oxford.*

8:45 **277.04** Tracking the spatio-temporal neural trace of visual memorability. Y. MOHSENZADEH*; C. R. MULLIN; D. PANTAZIS; A. OLIVA. *MIT, MIT.*

9:00 **277.05** Defining the most probable location of the parahippocampal place area using cortex-based alignment and cross-validation. K. S. WEINER*; M. A. BARNETT; N. WITTHOFT; G. GOLARAI; A. STIGLIANI; K. N. KAY; J. GOMEZ; V. S. NATU; K. M. AMUNTS; K. ZILLES; K. GRILL-SPECTOR. *Stanford Univ., Univ. of Minnesota Twin Cities, Res. Ctr. Jülich.*

9:15 **277.06** Computational mechanisms underlying the cortical analysis of affordance properties in visual scenes. M. F. BONNER*; R. A. EPSTEIN. *Univ. of Pennsylvania.*

9:30 **277.07** The influence of visual expertise upon the neural representational space of objects. F. MARTENS; C. TAS; H. P. OP DE BEECK*. *KU Leuven.*

9:45 **277.08** Do neural representations of categories in visual cortex employ principles of abstraction? B. RITCHIE*; H. P. OP DE BEECK. *KU Leuven, Univ. Leuven.*

10:00 **277.09** Neural representation of layout and relational information among multiple objects. R. WANG*; Y. XU. *Harvard Univ.*

10:15 **277.10** Time course for processing of real-world object size and contextual associations. J. P. SHAFTO*; R. KRISHNASAMY; M. J. TARR. *Carnegie Mellon Univ.*

10:30 **277.11** Abstract representations of object directed action in the left inferior parietal lobule. Q. CHEN*; F. E. GARCEA; R. A. JACOBS; B. Z. MAHON. *Univ. of Rochester, Univ. of Rochester, Univ. of Rochester Med. Ctr., Univ. of Rochester Med. Ctr.*

10:45 **277.12** Differential temporal patterns of object processing in the dorsal and ventral cortices. E. COLLINS*; E. FREUD; J. M. KAINERSTORFER; J. CAO; M. BEHRMANN. *Carnegie Mellon Univ., Univ. of Pittsburgh, Carnegie Mellon Univ., Carnegie Mellon Univ.*

11:00 **277.13** The dorsal pathway contributes to the perception of three-dimensional (3D) structure - Evidence from continuous flash suppression. E. FREUD*; A. ROBINSON; M. BEHRMANN. *Carnegie Mellon Univ.*

11:15 **277.14** EEG-based visual word decoding, feature derivation and image reconstruction. S. LING*; A. C. H. LEE; B. C. ARMSTRONG; A. NESTOR. *Univ. of Toronto Scarborough, Baycrest Ctr., BCBL - Basque Ctr. on Cognition, Brain, and Language.*

NANOSYMPOSIUM

278. Neurobiology of Motivated Behavior

Theme G: Motivation and Emotion

Mon. 8:00 AM – *Walter E. Washington Convention Center*, 143A

8:00 **278.01** Two-photon calcium imaging of neurons in the paraventricular thalamus during Pavlovian conditioning. J. M. OTIS*; C. M. CATAVERO; A. M. MATAN; C. A. COOK; V. M. K. NAMBOODIRI; M. A. ROSSI; G. D. STUBER. *Univ. of North Carolina At Chapel Hill.*

8:15 **278.02** Choice-selective sequential activity in prelimbic cortical neurons that project to the nucleus accumbens. N. F. PARKER*; M. MURUGAN; I. B. WITTEN. *Princeton Univ., Princeton Univ., Princeton Univ.*

8:30 **278.03** The role of the anterior cingulate cortex projection to the dorsomedial striatum in reinforcement learning. J. M. COX*; N. RANGARAJAN; I. B. WITTEN. *Princeton Univ.*

8:45 **278.04** Differential contributions of sub-regions of the dorsal anterior cingulate cortex (dACC) to the regulation of negative emotion in the common marmoset. S. RAHMAN*; A. M. SANTANGELO; N. K. HORST; G. COCKCROFT; A. C. ROBERTS. *Univ. of Cambridge, Univ. of Cambridge.*

9:00 **278.05** A dopaminergic signal coordinates the probabilities to initiate and sustain behavior. X. ZHANG*; D. ROGULJA; M. CRICKMORE. *Harvard Med. Sch., Boston Children's Hosp.*

9:15 **278.06** Orexin-1 receptors mediate oxycodone self-administration and cue-induced oxycodone seeking. G. MARRONE*; H. FARRUKH; G. ASTON-JONES. *Rutgers University, RBHS-UBHC-GSBS.*

9:30 **278.07** Neural population network for information-seeking mechanism in monkey prefrontal cortex. K. NAKAMURA*; M. KOMATSU. *Tokyo Inst. Technol., RIKEN Brain Sci. Inst.*

9:45 **278.08** Distinct processing of the effort cost and the food-patch information in socially foraging domestic chicks. T. MATSUSHIMA*; Q. XIN; Y. FUJIKAWA; Y. OGURA. *Hokkaido University, Grad Sch. Sci., Hokkaido Univ., Hokkaido Univ.*

10:00 **278.09** Dissecting the functional network connecting the lateral preoptic area and the ventral tegmental area. D. J. BARKER*; C. MEJIAS-APONTE; R. JUZA; B. LIU; J. MIRANDA BARRIENTOS; S. MONGIA; S. ZHANG; M. MORALES. *Natl. Inst. on Drug Abuse.*

10:15 **278.10** Persistently augmented lateral hypothalamic orexin/hypocretin function drives cocaine addiction behaviors after intermittent access. M. H. JAMES*; C. M. STOPPER; B. A. ZIMMER; N. E. KOLL; H. E. BOWREY; S. O'CONNOR; G. S. ASTON-JONES. *Brain Hlth. Inst., Rutgers Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

NANOSYMPOSIUM

279. Chemogenetics in Rodents and Primates

Theme H: Cognition

Mon. 8:00 AM – *Walter E. Washington Convention Center*, 144A

8:00 **279.01** Developmental model of nonhuman primate DREADDs: hM4Di transfection in the amygdala of infant rhesus monkeys. J. RAPER*; C. PAYNE; W. R. JONES; J. BACHEVALIER. *Yerkes Natl. Primate Res. Ctr., Marcus Autism Ctr., Emory Univ.*

8:15 **279.02** Characterizing the action of DREADD activating ligands in monkey using PET and behavioral testing. M. A. ELDRIDGE*; S. S. SHRESTHA; S. TELU; J. M. FREDERICKS; R. L. GLADDING; W. LERCHNER; J. TURCHI; C. MORSE; Y. NAGAI; T. MINAMIMOTO; V. W. PIKE; R. B. INNIS; B. J. RICHMOND. *NIMH, NIMH, Natl. Inst. For Quantum and Radiological Sc.*

8:30 **279.03** Subcellular localization of mCherry proteins fused to hM4Di in monkeys. A. GALVAN*; X. HU; J. PARE; J. RAPER; J. BACHEVALIER; T. WICHMANN; Y. SMITH. *Emory Univ., Emory Univ., Emory Univ.*

8:45 **279.04** Stereological analysis of DREADD transduction in prefrontal cortex of rhesus monkeys. N. UPRIGHT*; C. G. DAMATAC; P. R. HOF; P. H. RUDEBECK; P. L. CROXSON; M. G. BAXTER. *Mount Sinai Sch. of Med.*

9:00 **279.05** ● Chemogenetics revealed: DREADD occupancy and activation via converted clozapine. M. MICHAELIDES*; J. L. GOMEZ; J. BONAVENTURA; W. LESNIAK; W. B. MATHEWS; P. SYSA-SHAH; L. A. RODRIGUEZ; R. J. ELLIS; C. T. RICHIE; B. K. HARVEY; R. F. DANNALS; M. G. POMPER; A. BONCI. *NIDA IRP, Johns Hopkins Med., NIDA IRP, NIDA IRP.*

9:15 **279.06** Visualizing DREADDs receptor expression *in vivo* with ^{11}C-labeled clozapine PET imaging in the nonhuman primate. J. A. OLER*; P. H. ROSEBOOM; R. KOVNER; M. K. RIEDEL; E. M. FEKETE; M. R. RABSKA; V. R. ELAM; S. KULICK; P. J. LAO; M. D. ZAMMIT; B. T. CHRISTAIN; N. H. KALIN. *Univ. of Wisconsin, Univ. of Wiscosnin Madison.*

9:30 **279.07** A novel PET ligand for visualising cellular and axonal DREADD expression in monkeys. Y. NAGAI*; B. JI; Y. XIONG; J. G. ENGLISH; J. LIU; Y. HORI; K. INOUE; T. HIRABAYASHI; A. FUJIMOTO; C. SEKI; K. KUMATA; M. ZHANG; T. SUHARA; M. TAKADA; M. HIGUCHI; B. L. ROTH; J. JIN; T. MINAMIMOTO. *Natl. Inst. For Quantum and Radiological Sc, Departments of Pharmacol. Sci. and Oncological Sciences, Icahn Sch. of Med. at Mount Sinai, Univ. of North Carolina At Chapel Hill, Primate Res. Institute, Kyoto Univ.*

9:45 **279.08** Characterization of DREADD manipulation in rhesus monkeys trained to discriminate ethanol. D. C. ALLEN; V. C. CUZON CARLSON; C. D. KROENKE; Y. XIONG; J. JIN; K. GRANT*. *Oregon Hlth. and Sci. Univ., Oregon Natl. Primate Res. Center/OHSU, Icahn Sch. of Med. at Mount Sinai.*

10:00 **279.09** Memory retention involves the ventrolateral orbitofrontal cortex: Comparison with the basolateral amygdala and dorsal striatum using DREADDs. S. L. GOURLEY*; K. S. ZIMMERMANN. *Emory Univ., Emory Univ.*

10:15 **279.10** ● Engineering ultra-potent ion channel and ligand interactions. C. J. MAGNUS*; P. H. LEE; M. H. RAMIREZ; S. M. STERNSON. *HHMI, Janelia Farm.*

10:30 **279.11** Improving delivery of viral vectors to specific regions of the non-human primate brain. J. M. FREDERICKS*; M. A. G. ELDRIDGE; D. C. IDE; T. W. BENNETT, Jr.; D. C. MILLER; W. LERCHNER; G. R. DOLD; B. J. RICHMOND. *NIH.*

NANOSYMPOSIUM

280. Perception and Imagery: Semantic and Abstract Representation

Theme H: Cognition

Mon. 8:00 AM – *Walter E. Washington Convention Center*, 152A

8:00 **280.01** The hippocampus as a source of cross-modal predictions. P. KOK*; N. B. TURK-BROWNE. *Yale Univ., Princeton Univ.*

8:15 **280.02** Neural representations of perceived and remembered spoken sentences. K. MÜSCH*; K. HIMBERGER; K. TAN; T. A. VALIANTE; C. J. HONEY. *Johns Hopkins Univ., Princeton Univ., Toronto Western Hosp.*

8:30 **280.03** The representations of lipread words in posterior temporal cortex studied using an fMRI-rapid adaptation paradigm and functional localizers. L. E. BERNSTEIN*; S. P. EBERHARDT; X. JIANG; M. RIESENHUBER; E. AUER, Jr. *George Washington Univ., Georgetown Univ. Med. Ctr.*

8:45 **280.04** Perceptual adaptation to non-native sound contrasts: Electrophysiological evidence of neuroplasticity in the phonological system related to second language learning. K. HEIDLMAYR*; E. FERRAGNE; F. ISEL. *Max Planck Inst. For Psycholinguistics, Paris Diderot – Sorbonne Paris Cité Univ., Paris Nanterre – Paris Lumières Univ.*

9:00 **280.05** The evolution of braille letter representations in blind readers. S. TENG*; R. CICHY*; D. PANTAZIS; A. OLIVA. *MIT, Free Univ. of Berlin, MIT.*

9:15 **280.06** How do blind people represent rainbows? Disentangling sensory and semantic components in concept knowledge. E. STRIEM-AMIT*; X. WANG; Y. BI; A. CARAMAZZA. *Harvard Univ., Beijing Normal Univ., State Key Lab. of Cognitive Neurosci. and Learni, Harvard Univ., Univ. of Trento.*

9:30 **280.07** A modality-independent cortical organization of semantic knowledge. E. RICCIARDI*; G. HANDJARAS; A. LEO; L. CECCHETTI; P. PIETRINI. *IMT Sch. For Advanced Studies Lucca.*

9:45 **280.08** Fine-grained semantic representation in the white matter pathway. Y. BI*; Y. FANG; X. WANG; S. ZHONG; G. GONG. *State Key Lab. of Cognitive Neurosci. and Learni, Beijing Normal Univ.*

10:00 **280.09** Representations of belief concepts and the neural organization of abstract semantics. A. LESHINSKAYA*; J. CONTRERAS; A. CARAMAZZA; J. P. MITCHELL. *Univ. of Pennsylvania, Capital One, Harvard Univ., Harvard Univ.*

10:15 **280.10** An asymmetrical relationship between verbal and visual thinking: Converging evidence from behavior and fMRI. E. AMIT*. *Brown Univ.*

10:30 **280.11** Beyond Embodiment: Connectivity and dynamics in the conceptual system. B. MAHON*. *Univ. of Rochester.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

NANOSYMPOSIUM

281. Mechanisms of Working Memory

Theme H: Cognition

Mon. 8:00 AM – *Walter E. Washington Convention Center*, 156

8:00 **281.01** Decoding unattended working memory items: No evidence for activity-silent memory representations. T. CHRISTOPHEL*; P. IAMSHCHININA; C. YAN; C. ALLEFELD; J. HAYNES. *Charité-Universitätsmedizin.*

8:15 **281.02** Maintenance mechanisms of the content and the rule during visuomotor working memory. R. QUENTIN*; J. KING; E. SALLARD; N. FISHMAN; E. BUCH; R. THOMPSON; L. COHEN. *NIH, New York Univ.*

8:30 **281.03** COMT genotype, estradiol, and working memory after menopause. J. A. DUMAS*; J. MAKAREWICZ; J. Y. BUNN; J. NICKERSON; E. MCGEE. *Univ. of Vermont Larner Col. of Med., Univ. of Vermont Larner Col. of Med., Univ. of Vermont Larner Col. of Med., Univ. of Vermont Larner Col. of Med.*

8:45 **281.04** Visual working memory representations persist in visual cortex even in the presence of distracting visual inputs. R. L. RADEMAKER*; C. CHUNHARAS; J. T. SERENCES. *Univ. of California San Diego.*

9:00 **281.05** Neural correlates of an associative memory of elapsed time. V. G. VAN DE VEN*; J. LIFANOV; O. IOSIF; S. KOCHS; F. SMULDERS; P. DE WEERD. *Fac. of Psychology and Neuroscience, Maastricht Univ.*

9:15 **281.06** A combined analysis of the neuroelectric and behavioral effects of racial/gender stereotype and mathematics anxiety on mathematics performance and accuracy. E. T. MULUH*. *9 Cumnor Court, 292 Main Road Kenilworth.*

9:30 **281.07** Visual-verbal working memory training versus visual search training have overlapping and distinct transfer effects on tasks of spatial working memory and cognitive control: An event-related potential study. T. J. COVEY*; J. L. SHUCARD; X. WANG; K. SHERWOOD; J. NAKUCI; L. GOH; D. W. SHUCARD. *Univ. At Buffalo.*

9:45 **281.08** ● A novel mobile video game to assess the neural correlates of working and visual spatial memory for the brainstation wearable electroencephalography system. R. GIL-DA-COSTA*; M. LOPES; M. ZINNI; M. CASWELL. *Neuroverse, Inc.*

POSTER

282. Fate Specification and Generation of Neuronal Diversity

Theme A: Development

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 A1 **282.01** Local environment shapes phenotypic variations of hippocampal and neocortical chandelier cells. H. TANIGUCHI*; Y. ISHINO; M. J. YETMAN; S. M. SOSSI; A. STEINECKE; Y. HAYANO. *Max Planck Florida Inst.*

9:00 A2 **282.02** Cell lineage progression in the adult hippocampus revisited: Evidence of progenitor transdifferentiation. D. S. MOURA*; C. M. QUEIROZ; M. R. COSTA. *Brain Inst., Brain Institute-Ufrn, Univ. Federal do Rio Grande do Norte.*

10:00 A3 **282.03** Role of mitochondrial fusion dynamics in adult hippocampal NSCs lineage progression and new neuron development. S. WENDLER*; G. WANI; J. GÖBEL; M. BERGAMI. *CECAD Inst., Ctr. for Mol. Med.*

11:00 A4 **282.04** Uncovering floor plate descendants in the ependyma of adult mouse CNS by mapping of Nato3-expressing cells. N. BEN-ARIE*. *Hebrew Univ. Jerusalem.*

8:00 A5 **282.05** Capture Hi-C reveals the chromatin interactome and long-range gene regulatory landscape of cerebellar granule neuron progenitors. M. BASSON*; K. RIEGMAN; C. GEORGE; C. MOHAN; D. WHITTAKER; B. HUNTLY; D. SIMS; C. OSBORNE. *King's Col. London, Univ. of Oxford, King's College, London, Univ. of Cambridge.*

9:00 A6 **282.06** Autophagy sustains hyper-activation of mTORC1 in TSC1-deficient neural stem cells to promote tuberous sclerosis complex-associated defects. C. WANG*; M. HAAS; S. YEO; S. CHEN; J. WEN; J. GUAN. *Univ. of Cincinnati Dept. of Cancer Biol.*

10:00 A7 **282.07** Hox genes are essential for the diversification and connectivity of spinocerebellar tract neurons. M. BAEK*; A. W. HANTMAN; T. M. JESSELL; J. S. DASEN. *NYU Sch. of Med., Janelia Res. Campus, Howard Hughes Med. Inst., HHMI, Columbia Univ., NYU school of medicine.*

11:00 A8 **282.08** Identification of active enhancers during cerebellum development through co-regulation temporal analysis of enhancer RNAs. M. RAMIREZ*; R. ROBERT; P. ZHANG; F. CONSORTIUM; J. SONG; D. GOLDOWITZ. *Univ. of British Columbia, Univ. of Rennes 1, RIKEN, New Mexico State Univ.*

8:00 A9 **282.09** Lin28-mediated mRNA translation promotion is critical for neural progenitor cell fate and brain development. S. A. HERRLINGER*. *Univ. of Georgia.*

9:00 A10 **282.10** Deep homology of the genetic program controlling dopaminergic neuron differentiation in nematodes & mammals. L. R. GOMEZ*; M. MAICAS; A. ESCRICHE; C. CUCARELLA; R. RUIZ; Á. JIMENO; L. CHIRIVELLA; A. PEREZ; I. FARIÑAS; N. FLAMES. *Insituto De Biomedicina De Valencia CSIC, Univ. de Valencia.*

10:00 B1 **282.11** Mechanisms of fate specification in Cux2-expressing neural progenitors. S. P. FREGOSO*; B. DWYER; S. J. FRANCO. *Univ. of Colorado, Univ. of Colorado Sch. of Med.*

11:00 B2 **282.12** Overturning the role of Math5 (Atoh7) in retinal ganglion cell specification. J. BRODIE-KOMMIT*; H. SHI; F. WU; T. GLASER; T. M. SCHMIDT; X. MU; J. H. SINGER; S. HATTAR. *John Hopkins Univ., Univ. of Maryland, Univ. at Buffalo - Downtown Campus, Univ. of California Davis, Northwestern Univ., Johns Hopkins Univ., Natl. Inst. of Mental Hlth.*

8:00 B3 **282.13** Non-canonical Wnt signaling through Ryk drives SST cortical interneuron fate. M. MCKENZIE*; L. COBBS; G. J. FISHELL; E. AU. *Columbia Univ. Med. Ctr., NYULMC, Harvard Univ., Columbia Univ.*

9:00 B4 **282.14** Heterotypic transplantations reveal how the environment directs interneuron diversity and maturation. T. J. PETROS*; G. QUATTROCOLO; G. FISHELL. *NIH/NICHD, NYU.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 B5 **282.15** Role of *de novo* DNA methyltransferases in the development and function of human motor neurons. J. ORTEGA*; M. ZILLER; D. SANTOS; A. MEISSNER; E. KISKINIS. *Northwestern University, Feinberg Sch. of Medici, Max Planck Inst. of Psychiatry, Northwestern Univ., Broad Inst. of MIT and Harvard.*

11:00 B6 **282.16** A role for Tlx3 and Hipk2 in Prrxl1 phosphorylation during the development of nociceptive neurons. C. M. REGUENGA*; A. F. DIAS; F. MONTEIRO; D. LIMA. *IBMC- Inst. De Biologia Mol. E Celular, Faculdade de Medicina da Univ. do Porto, IBMC- Inst. De Biologia Mol. E Celular.*

8:00 B7 **282.17** microRNA controls over corticospinal motor neuron development. J. L. DIAZ*; V. B. SITHTHANANDAN; V. LU; J. L. MACDONALD; N. GONZALEZ-NAVA; L. PASQUINA; A. WHEELER; P. SARNOW; T. PALMER; J. D. MACKLIS; S. A. THARIN. *Stanford Univ., Syracuse Univ., Duke Univ., Harvard Univ., Stanford Univ., Harvard Univ.*

9:00 B8 **282.18** ● Mafb and c-Maf control the balanced neurogenesis of MGE-derived PV^+ and SST^+ GABAergic cortical interneurons. L. PAI*; D. VOGT; A. C. PEREZ; M. WIMER; G. MCKINSEY; J. S. HU; M. SANDBERG; R. PLA; L. V. GOODRICH; J. T. PAZ; J. L. RUBENSTEIN. *Univ. of California, San Francisco, Michigan State Univ., Gladstone Inst. of Neurolog. Dis., Univ. of California San Francisco, Univ. of California San Francisco, Harvard Med. Sch., Gladstone Inst. of Neurolog. Dis., Univ. of California San Francisco.*

10:00 B9 **282.19** Transcriptome analysis of spinal excitatory neurons. L. BORGIUS*; V. R. CALDEIRA; E. PROUX-WÉRA; M. RASING; P. LÖW; O. KIEHN. *Dept. of Neuroscience, Karolinska Institutet, Sci. for Life Lab.*

11:00 B10 **282.20** Preferential expression of Foxp2 in striatonigral projection neurons in the striatum of adult mouse brain. L. FONG; F. LIU*. *Natl. Yang-Ming Univ.*

8:00 B11 **282.21** Distribution, morphology, and function of serotonergic neurons in the larval zebrafish spinal cord. J. E. MONTGOMERY*; T. D. WIGGIN; B. CORWIN; C. LILLESAAR; L. BALLY-CUIF; M. A. MASINO. *Univ. of Minnesota, Dept. of Physiological Chem., Inst. of Neurobio. Alfred Fessard.*

9:00 B12 **282.22** KAT3 proteins are crucial for the maintenance of neuronal identity. M. LIPINSKI*; J. M. CARAMES; N. CASCALES-PICÓ; M. T. LÓPEZ-CASCALES; J. FERNÁNDEZ-ALBERT; J. MEDRANO-RELINQUE; A. MEDRANO-FERNÁNDEZ; B. DEL BLANCO; S. CANALS; J. P. LOPEZ-ATALAYA; A. BARCO. *Inst. De Neurociencias De Alicante UMH-CSIC.*

10:00 B13 **282.23** Neural patterns underlying the development of planning tool use. O. OSSMY*; B. KAPLAN; M. XU; K. E. ADOLPH. *New York Univ.*

POSTER

283. Autism Genetic Models

Theme A: Development

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 B14 **283.01** Abnormal prostaglandin E_2 signalling results in autism-associated behaviours in novel mouse models. C. T. WONG*; I. LORIGADOS; R. RAI-BHOGAL; D. A. CRAWFORD. *York Univ., York Univ., York Univ.*

9:00 B15 **283.02** Relationship between cadherin 11 and autism traits. Y. WANG*; C. WANG; X. YUAN. *Hussman Inst. For Autism, Hussman Inst. for Autism.*

10:00 B16 **283.03** An altered neurodevelopmental profile in mice deficient for autism associated Neurexin1 gene communicative and motor aspects at an early stage. M. L. SCATTONI*; A. CARUSO; S. DELLA NOTTE; C. FERNANDES. *Inst. Superiore di Sanita, King's Col. London.*

11:00 B17 **283.04** NRF2 deficient mice exhibit regression following P14 exposure to valproic acid. J. GIFFORD*; S. A. NORTON; A. W. KUSNECOV; G. C. WAGNER. *Rutgers Univ.*

8:00 B18 **283.05** Studies using Crmp4-KO mice show the functional relevance of Crmp4-deficiency to some symptoms of ASD. Y. NAKANO*; A. TSUTIYA; E. HANSEN-KISS; B. J. KELLY; M. NISHIHARA; Y. GOSHIMA; D. CORSMEIER; P. WHITE; G. E. HERMAN; R. OHTANI-KANEKO. *Grad. Sch. of Life Sciences, Toyo Univ., Inst. of Life Innovation Studies, Toyo Univ., The Inst. for Genomic Medicine, Nationwide Children's Hosp. and Dept. of Pediatrics, The Ohio State Univ., Vet. Med. Sci., Yokohama City Univ. Sch. Med.*

9:00 B19 **283.06** Loss of CDKL5 impairs hippocampus-dependent memory and hippocampal LTP in a mouse model of CDKL5 disorder. S. HAO*; Z. WU; B. TANG; Y. HUANG; H. Y. ZOGHBI; J. TANG. *Dept. of Pediatrics, Baylor Col. of Medici, Jan and Dan Duncan Neurolog. Res. Institute, Texas Children's Hosp., Dept. of Mol. and Human Genetics, Baylor Col. of Medici, Dept. of Neuroscience, Baylor Col. of Medici, Howard Hughes Med. Institute, Baylor Col. of Medici.*

10:00 B20 **283.07** Zinc as a therapy in an experimental model of autism prenatally induced by valproic acid. L. C. CEZAR*; T. B. KIRSTEN; C. C. N. FONSECA; A. P. N. LIMA; M. M. BERNARDI; L. F. FELICIO. *Univ. of Sao Paulo, Sch. of Vet. Medi, Paulista Univ., Federal Univ. of Sao Paulo.*

11:00 B21 **283.08** Analysis of empathic neural circuits regulated by oxytocin. S. YADA*; K. HORIE; K. NISHIMORI. *Tohoku Univ.*

8:00 B22 **283.09** Transient early gestational antithyroid treatment in mice results in behavioral deficits in adult offspring. M. PITSIANI; L. J. WILSON; A. RAJIC; D. BELL; C. FERNANDES; R. J. WINGATE*. *King's Col. London, Univ. of Suffolk, King's Col. London, King's Col. London.*

9:00 B23 **283.10** Sociability development in w=mice with cell-specific deletion of the NMDA receptor GluN1 (NR1) subunit gene. S. L. FERRI*; A. A. PALLATHRA; H. KIM; H. C. DOW; W. B. BILKER; T. ABEL; S. J. SIEGEL; E. S. BRODKIN. *The Univ. of Iowa, Univ. of Pennsylvania, Univ. of Pennsylvania, USC.*

10:00 B24 **283.11** Characterizing ultrasonic vocalizations in NS-Pten knockout pups: Implications for autism. M. BINDER*; J. LUGO. *Baylor Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 B25 **283.12** Pathogenic role for kynurenine pathway in maternal immune activation-induced autism-like behavior in mice. D. S. COELHO*; A. M. GARRISON; K. KIMENEZ; L. REDUS; J. VALDERAS; J. C. O'CONNOR. *Univ. of Texas Hlth. Sci. Ctr. At San A, Univ. of Texas Hlth. Sci. Ctr. at San Antonio, UTHSCSA.*

8:00 B26 **283.13** Preadolescent oxytocin ameliorate effects of maternal corticosterone and SSRI exposure on male and female offspring. W. QIU*; K. GO; L. CASANUEVA; A. R. GOBINATH; S. E. LIEBLICH; P. DUARTE-GUTERMAN; L. A. M. GALEA. *Univ. of British Columbia, Univ. of British Columbia, Univ. of British Columbia.*

9:00 B27 **283.14** Sensory processing deficits in a prenatal immune activation model of altered neurodevelopment. F. HADDAD; L. LU; C. DEOLIVEIRA; S. SCHMID*. *Univ. of Western Ontario.*

10:00 B28 **283.15** Behavioural characterisation of a rat lacking the GAP domain of SynGAP. D. KATSANEVAKI*; S. TILL; S. NAWAZ; O. DANDO; L. MIZEN; G. HARDINGHAM; S. CHATTARJI; E. WOOD; O. HARDT; D. WYLLIE; P. KIND. *Univ. of Edinburgh, Univ. of Edinburgh, Univ. of Edinburgh, Ctr. for Brain Develop. and Repair, Instem, McGill Univ.*

11:00 B29 **283.16** Assessing the differential integration of reward benefits and costs in neurexin1a mutant mice. O. O. ALABI*; M. FORTUNATO; M. FUCCILLO. *Univ. of Pennsylvania.*

8:00 B30 **283.17** Prenatal minocycline treatment alters synaptic protein expression, in oxytocin receptor-knockout mice. S. MIYAZAKI*; S. HIDEMA; K. NISHIMORI. *Tohoku Univ.*

9:00 B31 **283.18** Novel paradigms to analyze digging motivation and social interaction in mouse models of neuropsychiatric disease. H. POND*; O. MCKISSICK; M. WILKINSON; P. PARLANTI; M. MANZINI. *The George Washington Univ., Scuola Normale Superiore, The George Washington Univ.*

10:00 B32 **283.19** Development of an operant task to quantify social motivation in autism mouse models. C. T. WEICHSELBAUM*; K. PARKER; K. KNIEPKAMP; M. R. BRUCHAS; J. D. DOUGHERTY. *Washington Univ. In St. Louis, Washington Univ. In St. Louis, Washington Univ. In St. Louis, Washington Univ., Washington Univ. Sch. of Med.*

11:00 B33 **283.20** An autism mouse model exhibits enhanced stress responses associated with increased norepinephrine system activity. J. W. LUNDEN*; C. PENG; M. GENESTINE SCHMITT; M. DURENS; S. PREM; V. R. MIRABELLA; A. MARKOV; J. H. MILLONIG; E. M. DICICCO-BLOOM. *Rutgers - Robert Wood Johnson Med. Sch., Rutgers - Robert Wood Johnson Med. Sch., Rutgers Univ., Rutgers-Robert Wood Johnson Med. Sch.*

8:00 B34 **283.21** ● The role of STEP in a prenatal valproic acid exposure model of autism. M. CHATTERJEE*; J. XU; P. SINGH; P. J. LOMBROSO; P. K. KURUP. *Yale Univ.*

9:00 B35 **283.22** Modification of GABA receptors in the cerebellum of autistic rats subjected to an enriched environment. J. A. PEREZ*; O. E. CRUZ; M. R. TOLEDO-CARDENAS; L. I. GARCIA; G. CORIA-AVILA; M. E. HERNÁNDEZ; J. MANZO. *Doctorado En Investigaciones Cerebrales ,UV, Ctr. en Investigaciones Cerebrales, UV.*

10:00 B36 **283.23** Autism-associated 16p11.2 microdeletion impacts prefrontal connectivity in humans and mice. A. BERTERO*; A. LISKA; R. PAROLISI; M. GRITTI; M. PEDRAZZOLI; D. GERGELY; G. VALETTI; A. GALBUSERA; A. SARICA; A. CERASA; M. BUFFELLI; R. TONINI; A. BUFFO; M. PASQUALETTI; A. GOZZI. *Univ. of Pisa, Inst. Italiano di Tecnologia, Univ. of Turin, Inst. Italiano di Tecnologia, Univ. of Verona, Inst. Italiano di Tecnologia, Consiglio Nazionale delle Ricerche.*

11:00 B37 **283.24** ▲ Medial prefrontal cortex microcircuit dysfunction in NL3 R451C knock-in mice. S. LIN*. *Zhejiang Univ.*

8:00 B38 **283.25** Serotonin rebalances cortical tuning and behavior linked to autism symptoms in 15q11-13 duplication mice. N. NAKAI*; M. NAGANO; F. SAITOW; Y. WATANABE; Y. KAWAMURA; K. TAMADA; H. MONAI; H. HIRASE; H. MIZUMA; H. ONOE; T. MIYAZAKI; M. WATANABE; S. OKABE; M. KANO; K. HASHIMOTO; H. SUZUKI; T. TAKUMI. *RIKEN BSI, Nippon Med. Sch., Univ. Hosp. German Cancer Res. Ctr., Hiroshima Univ., RIKEN CLST, Hokkaido Univ. Sch. Med., Univ. Tokyo.*

9:00 B39 **283.26** Dysregulation of brain serotonergic systems in BALB/c mice: Relevance for autism and anxiety-like behavior. M. W. HALE*; A. M. RUSSO; A. J. LAWTHER; B. M. PRIOR; L. ISBEL; G. SOMERS; J. A. LESKU; A. RICHDALE; C. DISSANAYAKE; S. KENT; C. A. LOWRY. *La Trobe Univ., La Trobe Univ., Univ. of Colorado Boulder.*

10:00 B40 **283.27** ▲ Perinatal hyperserotonemia influences dopamine expression in the midbrain. Z. ZEISLER; S. SMITH; K. NORTHCUTT*. *Mercer Univ.*

11:00 B41 **283.28** Altered maturation of auditory system processing and sensory filtering deficits in the CNTNAP2 knockout rat model of autism: Electrophysiology and behaviour. K. SCOTT*; B. L. ALLMAN; S. SCHMID. *Univ. of Western Ontario.*

8:00 B42 **283.29** Bioinformatics study of non-genetic rodent models with ASD-consistent phenotypes. M. A. ESTEVEZ*; I. DAS; W. PEREANU; A. A. SARKAR; S. BANERJEE-BASU. *Mindspec, Inc.*

POSTER

284. Neurodevelopmental Disorders: Environmental Exposures

Theme A: Development

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 B43 **284.01** Placental allopregnanolone loss alters fetal brain development in a novel mouse model. J. O'REILLY*; D. BAKALAR; A. A. PENN. *The George Washington Univ., Children's Natl. Hlth. Syst., Children's Natl. Hlth. Syst.*

9:00 B44 **284.02** Long-term alteration of cerebellar white matter following prenatal allopregnanolone loss. A. A. PENN*; J. SALZBANK; C. VACHER. *Children's Natl. Med. Ctr., Children's Natl. Med. Ctr.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 B45 **284.03** Consequences of placental allopregnanolone withdrawal on mouse brain development. C. VACHER*; J. M. SALZBANK; A. LAZUTKIN; S. SHUVAEV; D. BAKALAR; G. N. ENIKOLOPOV; A. A. PENN. *Children's Natl. Med. Ctr., Moscow Inst. of Physics and Technol., P.K. Anokhin Inst. of Normal Physiology, Russia, Cold Spring Harbor Lab., Stony Brook Univ., Children's Natl. Med. Ctr.*

8:00 DP01/B46 **284.04** (Dynamic Poster) Correlation study of prolonged sedation and incidental MRI findings in full-term infants. H. W. KILCOYNE; C. R. L. MONGERSON; D. B. PIER; S. L. WILCOX; R. W. JENNINGS; P. E. GRANT; D. BAJIC*. *Boston Children's Hosp., Boston Children's Hosp., Boston Children's Hosp., Boston Children's Hosp., Boston Childrens Hosp., Boston Children's Hosp.*

8:00 B47 **284.05** Brain tissue oxygen regulation in neonates under anesthesia. D. P. AKSENOV*; A. DMITRIEV; M. MILLER; A. WYRWICZ; R. A. LINSENMEIER. *NorthShore Univ. HealthSystem, Northwestern Univ.*

9:00 B48 **284.06** The African Zika virus is more virulent and causes more severe brain damage compared to the Asian lineage and Dengue virus. J. CHEN*; Q. SHAO; S. A. HERRLINGER; M. YANG; M. BRINDLEY. *Univ. of Southern California (USC), Univ. of Georgia.*

10:00 B49 **284.07** Folic acid supplementation during prgnancy partially recovers memory deficits caused by neonatal hypoxia-ischemia in rats. B. FERRARY DENIZ*; H. DEOLA CONFORTIM; P. M. MIGUEL; L. BRONAUTH; B. DE OLIVEIRA; L. R. CECHINEL; I. R. SIQUEIRA; L. O. PEREIRA. *Federal Univ. of Rio Grande Do Sul, Univ. Federal Do Rio Grande Do Sul, Univ. Federal Do Rio Grande Do Sul.*

11:00 B50 **284.08** Developmental effects of the pyrethroid insecticide deltamethrin on medium spiny neurons of the nucleus accumbens. C. M. TAPIA*; K. WINTERS; M. NENOV; L. HALLBERG; B. AMEREDES; T. GREEN; F. LAEZZA. *Univ. of Texas Med. Br. Galveston, Univ. of Texas Med. Br. Galveston, Univ. of Texas Med. Br. Galveston.*

8:00 B51 **284.09** The effect of vincristine on the developing brain: A longitudinal MRI study in a mouse model. L. SPENCER NOAKES*; C. NICHOLLS; B. J. NIEMAN. *The Hosp. For Sick Children, Univ. of Waterloo, Hosp. For Sick Children, Ontario Inst. for Cancer Res.*

9:00 B52 **284.10** Long-term effects of perinatal bisphenol A exposure on the number of microglia and synapses in the medial prefrontal cortex of rats. L. M. WISE*; S. RHOADS; S. WANG; J. M. JURASKA. *Univ. of Illinois Dept. of Psychology.*

10:00 B53 **284.11** Perinatal exposure to either bisphenol A or phthalates and a high-fat diet minimally affect oxidative stress within the medial prefrontal cortex of both male and female pups. D. G. KOUGIAS*; L. M. WISE; A. P. BELAGODU; J. M. JURASKA. *Univ. of Illinois at Urbana-Champaign, Univ. of Illinois Dept. of Psychology, Univ. of Illinois.*

11:00 B54 **284.12** The effect of perinatal phthalate exposure on the number of synapses in the medial prefrontal cortex. E. SELLINGER*; D. G. KOUGIAS; J. M. JURASKA. *UIUC, Univ. of Illinois at Urbana-Champaign, Univ. of Illinois.*

8:00 B55 **284.13** Effects of a phthalate combination during perinatal development on apoptosis in the mPFC of male and female rats. J. M. JURASKA*; J. WILLING; D. G. KOUGIAS. *Univ. of Illinois, Univ. of Illinois at Urbana-Champaign.*

9:00 B56 **284.14** Chronic exposure to Bisphenol F, a substitute for Bisphenol A, and anxiety in male mice. A. TALAROVICOVA*; J. W. IRVIN; H. E. SCHRADER; E. F. RISSMAN. *North Carolina State Univ.*

10:00 B57 **284.15** Nature versus nurture: Small additions to one carbon metabolism in pregnant mice alter behavior in offspring as adults. R. F. YOSHIMURA*; A. ALACHKAR; A. LO; E. MURADYAN; H. SHAHARUDDIN; Y. TU; Y. YI; O. CIVELLI. *Univ. of California, Irvine.*

11:00 B58 **284.16** Prenatal one-carbon dysregulation impairs memory. A. ALACHKAR*; R. YOSHIMURA; L. WANG; G. ABBOTT; X. XU; O. CIVELLI. *Univ. of California Irvine.*

8:00 B59 **284.17** *In utero* exposure to anti-aquaporin-4 antibodies alters brain vasculature. S. MADER*; L. BRIMBERG; J. CRAWFORD; A. BONNIN; A. VO; J. CARRION; A. LA BELLA; S. DEWEY; D. EIDELBERG; J. BENNETT; B. VOLPE; P. HUERTA; B. DIAMOND. *Feinstein Inst. for Med. Res., Hofstra North Shore–LIJ Sch. of Med., USC - ZNI, Univ. of Colorado Sch. of Med.*

9:00 B60 **284.18** Evolution of the HIV-1 transgenic rat: Utility in assessing the progression of HIV-1 associated neurocognitive disorders. K. A. MCLAURIN*; R. M. BOOZE; C. F. MACTUTUS. *Univ. of South Carolina.*

10:00 B61 **284.19** Neurodevelopmental and behavioural consequences of maternal immune activation in male and female Wistar rats. J. OLADIPO*; V. FASOLINO; M. E. EDYE; N. DOOSTDAR; G. PODDA; M. MANCA; J. MIYAN; J. C. NEILL. *Univ. of Manchester, King's Col. London, Univ. of Manchester.*

11:00 B62 **284.20** End-gestational group B Streptococcus-induced inflammation and attention deficit/ hyperactivity disorder in the female rat offspring. M. ALLARD*; M. BROCHU; J. BERGERON; G. SEBIRE. *McGill Univ., Univ. de Sherbrooke.*

8:00 B63 **284.21** Behavioural & molecular consequences of perinatal infection throughout development. R. V. WHEELER*; S. ALAM; I. C. G. WEAVER; T. B. FRANKLIN. *Dalhousie Univ.*

9:00 B64 **284.22** Porcine fetal microglial cells are transiently activated by maternal viral infection. A. M. ANTONSON*; R. W. JOHNSON. *Univ. of Illinois Urbana-Champaign.*

10:00 B65 **284.23** Autism-relevant behavioral outcomes in an antigen-driven rat model of maternal autoantibody related autism. M. D. BAUMAN*; A. MELTZER; K. L. JONES; R. F. BERMAN; J. VAN DE WATER. *Univ. California, Davis, UC Davis, Univ. of California Davis, Univ. California, Davis.*

11:00 C1 **284.24** Biodistribution of autism-specific maternal autoantibodies in both maternal and fetal tissues throughout gestation and early postnatal life. K. L. JONES*; J. FUNG; D. ROWLAND; C. SMITH; D. KUKIS; J. L. SUTCLIFFE; J. VAN DE WATER. *Univ. of California Davis, Univ. of California Davis, Univ. of California Davis, Univ. of California Davis.*

8:00 C2 **284.25** Host cell binding mechanism of the zika virus envelope protein. M. MAY; C. A. PEARSON; D. GOODE; R. GEGUCHADZE; D. C. MOLLIVER; R. F. RELICH; J. M. VAUGHN; T. E. KING*. *Univ. of New England, Indiana Univ.*

9:00 C3 **284.26** Rat model of prenatal Zika virus infection. M. L. SHERER*; P. KHANAL; M. PARCELLS; J. M. SCHWARZ. *Univ. of Delaware, Univ. of Delaware, Univ. of Delaware.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 C4 **284.27** ▲ An investigation into the microglial response to neonatal ZIKV infection. J. H. LAWRENCE*; A. TURANO; M. S. PARCELLS; J. M. SCHWARZ. *Univ. of Delaware, Univ. of Delaware.*

POSTER

285. Development of Visual, Auditory, and Somatosensory Circuits

Theme A: Development

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 C5 **285.01** Late stage spontaneous waves and their role in downstream visual areas *in vivo.* A. GRIBIZIS*; X. GE; J. B. ACKMAN; D. LEE; M. C. CRAIR. *Yale Univ., Univ. of California, Santa Cruz.*

9:00 C6 **285.02** Origin and function of directionality in spontaneous retinal waves. X. GE*; A. GRIBIZIS; M. C. CRAIR. *Yale Univ.*

10:00 C7 **285.03** Ontogenetic course of the establishment of the thalamo-palio-intra pallial connectivity in birds. The chick visual DVR as a study case. R. REYES-PINTO; G. MARIN; J. MPODOZIS*. *Univ. of Chile.*

11:00 C8 **285.04** Hedgehog interacting protein is a candidate regulator of visual circuit formation in the superior colliculus. U. JAVED*; A. MONAVARFESHANI; M. A. FOX; J. TRIPLETT. *Children's Natl. Med. Ctr., Virginia Tech. Carilion Res. Inst., Children's Natl. Med. Ctr.*

8:00 C9 **285.05** Investigating the mechanisms of parallel circuit formation by converging visual inputs in the superior colliculus. N. GABRESKI*; J. TRIPLETT. *Children's Natl. Med. Ctr.*

9:00 C10 **285.06** Experience-regulated transcriptomic and imprintomic profilings during critical periods of mouse visual system development. C. HSU*; C. CHOU; S. HUANG; C. LIN; M. LIN; C. TUNG; C. LIN; P. LAI; Y. ZHOU; N. YOUNGSON; N. TAKAHASHI; S. LIN; A. FERGUSON-SMITH; C. YANG; S. CHEN; S. GAU; H. HUANG. *Col. of Medicine, Natl. Taiwan Univ., Grad. Inst. of Brain and Mind Sciences, Col. of Medicine, Natl. Taiwan Univ., Dept. of Life Science, Col. of Life Science, Natl. Taiwan Univ., Dept. of Pharmacology, Sch. of Med. Sciences, The Univ. of New South Wales, Dept. of Genetics, Univ. of Cambridge, Dept. of Biotechnology, Col. of Bio-Resources and Agriculture, Natl. Taiwan Univ., Dept. of Ophthalmology, Col. of Medicine, Natl. Taiwan Univ.*

10:00 C11 **285.07** Retinal origin of various functional maps in visual cortex. M. SONG*; J. JANG; S. PAIK. *KAIST, Program of Brain and Cognitive Engineering, KAIST.*

11:00 C12 **285.08** Effects of congenital hypothyroidism on development and plasticity of the visual system. W. S. RODRIGUES JUNIOR*; N. S. PULIMOOD; P. O. SILVA; P. CAMPELLO-COSTA; P. PANDOLFO; A. E. MEDINA; C. A. SERFATY. *Rio de Janeiro State Univ. (UERJ), Univ. of Maryland, Sch. of Med., Federal Fluminense Univ., Federal Fluminense Univ.*

8:00 C13 **285.09** Targeted expression of GCaMP6 to map functional retinotopy in the optic tectum of Xenopus tadpoles. V. J. LI*; A. SCHOHL; E. S. RUTHAZER. *McGill Univ.*

8:00 DP02/C14 **285.10** (Dynamic Poster) Characterization of Brn3c RGCs. T. C. BADEA*; N. PARMHANS; E. NGUYEN; K. CHUANG; S. SAJGO; W. LUO; J. NIU. *Natl. Eye Inst., Natl. Eye Inst., Univ. of Pennsylvania.*

10:00 C15 **285.11** Thalamic contributions to the developmental acquisition of state-dependent cortical activity. Y. MURATA*; M. T. COLONNESE. *George Washington Univ., The George Washington Univ. Sch. of Med.*

11:00 C16 **285.12** The profile of the critical period for darkness-induced recovery of vision in monocularly deprived kittens. D. E. MITCHELL*; N. A. CROWDER; K. R. DUFFY. *Dalhousie Univ., Dalhousie Univ., Dalhousie.*

8:00 C17 **285.13** Cell architecture alterations and loss of retinal ganglion cells followed by pupillary light reflex alteration in prenatal hypoxia ischemia rats. G. D. TAVEIRA*; L. S. FONSECA; M. N. OLIVEIRA; F. TENORIO; P. C. BARRADAS; T. KRAHE. *Univ. Do Estado Do Rio De Janeiro, Univ. Do Estado Do Rio De Janeiro, Univ. do Estado do Rio de Janeiro.*

9:00 C18 **285.14** Developmental refinement of interhemispheric connections in ferret visual cortex. R. KHALIL*; C. GONZALEZ; J. B. LEVITT. *City Col. of the City Univ. of New York, Grad. Ctr. of the City Univ. of New York, American Univ. of Sharjah.*

10:00 C19 **285.15** Binocular integration of orientation selectivity in the developing ferret visual cortex. D. E. WHITNEY*; G. B. SMITH; B. HEIN; M. KASCHUBE; D. FITZPATRICK. *Max Planck Florida Inst., Max Planck Florida Inst. For Neurosci., Frankfurt Inst. For Advanced Studies, Frankfurt Inst. For Advanced Studies, Max Planck Florida Inst.*

11:00 C20 **285.16** Rapid tissue dynamics during the formation of a mammalian central synapse. D. R. JACKSON*; J. HEDDLESTON; S. RAY; M. MOREHEAD; S. PIDHORSKYI; P. S. HOLCOMB; S. SIVARAMAKRISHNAN; S. M. YOUNG, JR; T. CHEW; T. DEERINCK; M. H. ELLISMAN; G. A. SPIROU. *West Virginia Univ., HHMI Janelia Res. Campus, West Virginia Univ. Sch. of Med., Max Planck Florida Inst., Univ. of California San Diego, West Virginia Univ. Sch. Med.*

8:00 C21 **285.17** Influence of thyroid hormone deficiency on mouse auditory cortex. M. CHANG*; H. D. KAWAI. *Soka Univ., Soka Univ.*

9:00 C22 **285.18** Transcriptional profiling of the tonotopic critical period in mouse primary auditory cortex. B. KALISH; E. E. DIEL; M. E. GREENBERG; T. K. HENSCH*. *Harvard Med. Sch., Harvard Univ.*

10:00 C23 **285.19** ● Cochlear purinergic receptors contribute to *in vivo* spontaneous activity in the developing auditory system. T. A. BABOLA*; A. GRIBIZIS; A. P. LOMBROSO; J. ISSA; S. LI; B. LEE; M. C. CRAIR; D. E. BERGLES. *Johns Hopkins Sch. of Med., Johns Hopkins Univ. Sch. of Med., Yale Univ., Yale Univ., Johns Hopkins Sch. of Med.*

11:00 C24 **285.20** Investigating the perinatal expression of tyrosine hydroxylase in the mouse spiral ganglion. T. SANDERS*; M. W. KELLEY. *NIH.*

8:00 C25 **285.21** ▲ Pharmacological reprogramming of lateral line progenitors to a multipotent state. M. KHALIL; J. R. MEYERS*. *Colgate Univ., Colgate Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 C26 **285.22** Developmental features of primary sensory cortex and subcortical areas in the prosimian galago (Otolemur garnettii). E. C. TURNER*; J. H. KAAS. *Vanderbilt Univ.*

10:00 C27 **285.23** ▲ Rapid and slow axon initial segment plasticity in rodent somatosensory cortex. N. JAMANN; M. KAISER; R. J. WAGENER; J. MAURER; C. CORCELLI; J. F. STAIGER; C. SCHULTZ; M. ENGELHARDT*. *Med. Fac. Mannheim Heidelberg Univ., Heidelberg Univ., Univ. of Geneva, Med. Fac. Mannheim, Heidelberg Univ., Georg-August-Univ, Univ. Heidelberg, Med. Fac. Mannheim.*

11:00 C28 **285.24** Embryonic thalamic calcium waves predate cortical map formation. N. ANTÓN-BOLAÑOS*; H. GEZELIUS; L. PÉREZ-SAIZ; F. J. MARTINI; A. FILIPCHUK; A. ESPINOSA; A. SEMPERE-FERRÀNDEZ; J. P. LÓPEZ-ATALAYA; M. VALDEOLMILLOS; G. LÓPEZ-BENDITO. *Inst. Neurociencias de Alicante UMH-CSIC, Sci. for Life Lab.*

8:00 C29 **285.25** Differences in state-dependent responses to sensory feedback between somatosensory and motor cortex in developing rats. J. C. DOOLEY*; M. S. BLUMBERG. *Univ. of Iowa.*

9:00 C30 **285.26** Distribution of P2X2 and P2X3 purinergic receptors in newborn and developing opossums, Monodelphis domestica. A. BEAUVAIS*; E. CORRIVEAU-PARENTEAU; J. PFLIEGER. *Univ. De Montréal.*

POSTER

286. Monamines

Theme B: Neural Excitability, Synapses, and Glia

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 C31 **286.01** Use of optogenetics to trigger and characterize somatodendritic dopamine release in the mouse mesencephalon. B. DELIGNAT-LAVAUD*; L. TRUDEAU. *Univ. De Montreal.*

9:00 C32 **286.02** Input-specific, dopaminergic modulation of synaptic gain in medial prefrontal cortex. K. BURKE*; K. J. BENDER. *UCSF.*

10:00 C33 **286.03** Localization and trafficking of dopamine D2 autoreceptors. B. G. ROBINSON*; J. R. BUNZOW; J. T. WILLIAMS. *Oregon Hlth. and Sci. Univ.*

11:00 C34 **286.04** Subcellular D2-receptor localization in the substantia nigra pars compacta of an EGFP transgenic mouse line. S. R. SESACK*; S. HETELEKIDES; M. TRINKLE; J. BALCITA-PEDICINO; B. G. ROBINSON; J. R. BUNZOW; S. A. AICHER; J. T. WILLIAMS. *Univ. of Pittsburgh, Oregon Hlth. & Sci. Univ., Oregon Hlth. & Sci. Univ.*

8:00 C35 **286.05** Understanding the selective vulnerability of neurons in Parkinson's disease: An *in vitro* study of the relationship between axonal growth, bioenergetics, and survival of noradrenergic neurons of the locus coeruleus. S. BURKE NANNI*; M. BOURQUE; L. TRUDEAU. *Univ. de Montréal.*

9:00 C36 **286.06** Comparison of transitional vs surgical menopause on monoamine and amino acid levels in the brain. T. LONG*; J. K. YAO; J. LI; Z. KIRSHNER; D. NELSON; G. G. DOUGHERTY; R. B. GIBBS. *Univ. of Pittsburgh, Veterans Affairs Pittsburgh Healthcare Syst.*

10:00 C37 **286.07** ▲ Benzodiazepines and their dual administration with ethanol increase accumbal transient dopamine release events. G. KRZYSTYNIAK*; K. J. PULTORAK; S. SCHELP; D. R. RAKOWSKI; E. B. OLESON; Z. BRODNIK; R. A. ESPAÑA. *Univ. of Colorado At Denver, Univ. of Colorado Denver, Univ. of Colorado, Denver, Univ. of Colorado Denver, Univ. of Colorado at Denver, Drexel Univ. Col. of Med.*

11:00 C38 **286.08** Noradrenaline in the monkey thalamus: Axonal innervation and adrenoceptors. I. PÉREZ-SANTOS; C. CAVADA*; N. PALOMERO-GALLAGHER; C. CAVADA*; K. ZILLES. *Univ. Autonoma Madrid, Fac Medicina, Univ. Autónoma Madrid, Fac Medicina, Res. Ctr. Jülich, Med. Faculty, RWTH Aachen, and JARA - Translational Brain Med.*

8:00 C39 **286.09** A role for norepinephrine in modulating glutamatergic synaptic transmission during and following intermittent hypoxia. M. A. KHUU*; J. E. BARNARD; A. J. GARCIA, III. *Univ. of Chicago.*

9:00 C40 **286.10** Role of nuclear membrane adrenergic receptors and organic cation transporter 3 in norepinephrine-induced stimulation of astrocyte BDNF expression. D. S. WHEELER; K. BENTON; D. CIBICH; E. DASSOW; P. FLETCHER; M. HERBST; B. KURTOGLU; A. TAYLOR; D. C. LOBNER; P. J. GASSER*. *Marquette Univ.*

10:00 C41 **286.11** Disruption of the axonal trafficking of tyrosine hydroxylase mRNA impairs catecholamine biosynthesis in the axons of sympathetic neurons. A. ASCHRAFI; A. E. GIOIO*; L. DONG; B. B. KAPLAN. *NIH/NIMH, NIH, NIMH-, Natl. Inst. of Health, Natl. Eye Inst., NIMH.*

11:00 C42 **286.12** Absence of translin/trax, a microRNA degrading RNase complex, blocks cocaine's ability to increase dopamine tone. X. FU; A. SHAH; M. NIWA; D. FUKUDOME; A. SAWA; J. CADET; J. KEIGHRON; G. TANDA; J. M. BARABAN*. *Johns Hopkins Univ., NIDA.*

8:00 C43 **286.13** Glutamate counteracts dopamine/PKA signaling via dephosphorylation of DARPP-32 Ser97 and alteration of its cytonuclear distribution. A. NISHI*; M. MATAMALES; V. MUSANTE; E. VALJENT; M. KUROIWA; Y. KITAHARA; H. REBHOLZ; P. GREENGARD; J. GIRAULT; A. C. NAIRN. *Kurume Univ. Sch. of Med., Inserm UPMC Inst. du Fer A Moulin, Yale Univ., Inserm U1191, CNRS UMR5302, IGF, UM, The Rockefeller Univ.*

9:00 C44 **286.14** Role of Selenoprotein P in dopaminergic transmission and modulation by methamphetamine. D. TORRES*; C. CHAO; J. T. YORGASON; S. KORUKAWA; M. ANDRES; S. C. STEFFENSEN; F. P. BELLINGER. *Univ. of Hawai'i at Manoa Dept. of Cell and Mol. Biol., Univ. of Hawai'i at Manoa Dept. of Cell and Mol. Biol., Brigham Young Univ., Osaka Ohtani Univ., Univ. of Hawai'i at Manoa Dept. of Cell and Mol. Biol.*

10:00 C45 **286.15** Activity of local inhibitory neurons gates locus coeruleus noradrenergic activity. V. BRETON-PROVENCHER*; M. SUR. *MIT.*

11:00 C46 **286.16** PEDOT nanocomposites based electrodes for high sensitivity detection of tonic and phasic dopamine *in vivo.* I. M. TAYLOR*; X. CUI. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

8:00 C47 **286.17** High sensitivity electrochemical probes for detection of glutamate and dopamine in brain tissue. T. A. MURRAY*; C. TAN; M. HOSSAIN; P. DOUGHTY; C. PERNICI; J. SCOGGIN; S. SIDDIQUI; P. ARUMUGAM. *Louisiana Tech. Univ., Louisiana Tech. Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 C48 **286.18** Enhancing fast-scan cyclic voltammetry detection of dopamine with tryptophan derivatives. S. E. THOMPSON*; E. RAMSSON. *Grand Valley State Univ., Grand Valley State Univ.*

10:00 C49 **286.19** ▲ Investigation of the basal dopamine levels in the zebrafish telencephalon using fast-scan controlled adsorptive voltammetry. K. BAUSTERT; E. RAMSSON*. *Grand Valley State Univ., Grand Valley State Univ.*

11:00 C50 **286.20** Escitalopram and serotonin reuptake parameters in animal model of chronic pain: an *in vivo* voltammetric study. H. AHMET*; U. OKKAY, 25240; K. NALCI; B. TOGAR; N. TASPINAR; I. AYDIN. *Ataturk Univ., Ataturk Univ., Bayburt Univ.*

8:00 C51 **286.21** Isoflurane anesthesia alters monoamine levels in prefrontal cortex (PFC) of C57BL/6J (B6) mouse. X. ZHANG*; A. BAER; N. R. HARP; H. A. BAGHDOYAN; R. LYDIC. *Univ. of Tennessee Med. Ctr., Univ. of Tennessee.*

9:00 C52 **286.22** ● Structure-activity relationships of N,N-diallyltryptamine hallucinogens. L. M. KLEIN*; M. A. GEYER; S. D. BRANDT; A. L. HALBERSTADT. *UCSD, UCSD, Liverpool John Moores Univ.*

10:00 C53 **286.23** Serotonin restricts synaptic plasticity and decreases excitability of vestibular circuits via distinct receptors. Y. CHAN*; L. HAN; Y. H. LI; K. L. K. WU; D. K. SHUM. *Sch. of Biomedic. Sci., Fac. Med., Univ. Hong Kong, Sch. of Life Sci. and Technology, Xi'an Jiaotong Univ.*

11:00 C54 **286.24** Electrophysiological properties of target-specific populations of rat dorsal raphe projection neurons. E. W. PROUTY*; W. GAO; B. D. WATERHOUSE. *Drexel Univ. Col. of Med., Rowan Univ. Sch. of Osteo. Med.*

8:00 C55 **286.25** Neurochemical profile in mice genetically depleted of brain serotonin: A proton magnetic resonance spectroscopy study. F. GHODDOUSSI*; D. I. BRIGGS; D. M. KUHN; M. P. GALLOWAY; J. A. STANLEY. *Wayne State University, Sch. of Med., Stanford University-School of Med., Wayne State University-School of Med., John Dingell VA Med. Ctr.*

9:00 C56 **286.26** Serotonin-7 receptors in the hippocampus vary with time of day but not aging. M. J. DUNCAN*; K. M. FRANKLIN; J. T. SMITH. *Univ. of Kentucky Dept. Neurosci.*

10:00 C57 **286.27** Towards a zebrafish serotonin receptor pharmacology. H. SCHNEIDER*; P. SURESH; S. GERONGAY; D. HUYNH. *Depauw Univ., DePauw Univ.*

11:00 C58 **286.28** Functional interplay between early growth response protein (EGR) and specificity protein (Sp) transcription factors is critical for activation of the human tryptophan hydroxylase 2 (TPH2) promoter in RN46A cells. H. KANEKO; Y. NAWA; M. TSUBONOYA; T. HIROI; R. TAKAHASHI; H. MATSUI*. *Inst. RI Res. St.Marianna Univ. Grad Sch. Med., Dep Biochem, Fac Pharmaceut Sci,Toho Univ., Dept Mol Behav Neurosci, St. Marianna Univ. Grad Sch. Med.*

8:00 C59 **286.29** Regulation of tetrahydrobiopterin (BH4), a required cofactor for serotonin & dopamine synthesis, in the nematode *C. elegans.* C. M. LOER*. *Univ. of San Diego.*

POSTER

287. GPCRs: Metabotropic Glutamate Receptors and Muscarinic Acetylcholine Receptors

Theme B: Neural Excitability, Synapses, and Glia

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 C60 **287.01** ● Therapeutic potential of mGlu1 PAMs in the treatment of schizophrenia via regulation of striatal dopamine release through an endocannabinoid-dependent mechanism. S. E. YOHN*; D. J. FOSTER; D. P. COVEY; P. M. GARCIA-BARRANTES; J. F. CHEER; C. W. LINDSLEY; P. J. CONN. *Vanderbilt Univ., Univ. of Maryland.*

9:00 C61 **287.02** ● Hindbrain cholinergic projections to the substantia nigra pars reticulata regulate direct pathway dopamine signaling. M. S. MOEHLE*; T. PANCANI; S. YOHN; N. BYUN; J. DICKERSON; D. REMKE; C. JONES; Z. XIANG; C. NISWENDER; J. WESS; G. WILSON; C. LINDSLEY; J. ROOK; J. CONN. *Vanderbilt Univ., NIDDK.*

10:00 C62 **287.03** ● ▲ M_4 receptor activation normalizes dopaminergic signaling in Huntington's disease mouse models. M. L. LAVERY*; D. J. FOSTER; S. E. YOHN; M. S. MOEHLE; J. W. DICKERSON; D. P. COVEY; W. PENG; Z. XIANG; J. M. ROOK; J. F. CHEER; P. CONN. *Vanderbilt Univ., Univ. of Maryland Sch. of Med.*

11:00 C63 **287.04** ● M_1 Allosteric modulators without agonist activity in the medial prefrontal cortex may provide the optimal profile for cognition enhancement. S. P. MORAN*; C. A. DOYLE; Z. XIANG; H. C. PLUMLEY; J. W. DICKERSON; D. H. REMKE; C. M. NISWENDER; D. W. ENGERS; C. W. LINDSLEY; J. M. ROOK; P. J. CONN. *Vanderbilt Univ.*

8:00 D1 **287.05** Mechanisms underlying persistent cholinergic excitation of corticofugal neurons. A. L. BAKER*; A. T. GULLEDGE. *Geisel Sch. of Med. at Dartmouth.*

9:00 D2 **287.06** Allosteric modulators enhance responses evoked at muscarinic receptors following alkylation by acetylcholine mustard or acetylethylcholine mustard. J. ELLIS*; G. ELMSLIE. *Penn State Univ.*

10:00 D3 **287.07** Expression of GABAergic interneuron-related genes in mice with genetic deletion of mGlu2 or mGlu3 metabotropic glutamate receptors. M. CANNELLA*; T. IMBRIGLIO; R. VERHAEGHE; D. BUCCI; F. SCALABRÌ; A. SIMEONE; S. MACCARI; G. BATTAGLIA; F. NICOLETTI. *IRCCS Neuromed, Univ. Sapienza, Intl. Lab. Associated (LIA) Univ. of Lille 1, CNRS, Sapienza Univ. of Rome, IRCCS Neuromed Pozzili, Inst. of Genet. and Biophysics, Univ. Lille, CNRS, UMR 8576, UGSF.*

11:00 D4 **287.08** Activation of mGlu1 metabotropic glutamate receptors plays a key role in excitotoxic neurodegeneration in the mouse retina. M. ROMANO; F. LIBERATORE; D. BUCCI; G. MASCIO; A. PULITI; M. MADONNA; R. GRADINI*; G. BATTAGLIA; V. BRUNO; F. NICOLETTI. *IRCCS Neuromed, Univ. Sapienza, Univ. of Genoa, Inst. Giannina Gaslini.*

8:00 D5 **287.09** Comparative subcellular expression patterns of metabotropic glutamate receptor 3 in the prefrontal cortex of the adult rat and monkey. J. L. CRIMINS*; A. F. T. ARNSTEN; C. D. PASPALAS. *Yale Univ. Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 D6 **287.10** Allosteric modulation and thermodynamic constraints in occupancy models of oligomeric G protein-coupled receptors. G. D. SMITH*; R. HAMMACK. *The Col. of William & Mary, Virginia Commonwealth Univ.*

10:00 D7 **287.11** Role of metabotropic glutamate receptors in low Mg^{2+}-induced Ca^{2+}-spikes in cultured rat hippocampal neurons. S. JEON; J. YANG; S. YOON*. *Catholic Univ. of Korea.*

11:00 D8 **287.12** Synaptic ERK2 phosphorylates and regulates metabotropic glutamate receptor 1 *in vitro* and in neurons. J. YANG*; L. MAO; J. Q. WANG; E. CHOE. *Pusan Natl. Univ., Sch. of Medicine, Univ. of Missouri-Kansas City, Beijing Inst. of Brain Disorders, Capital Med. Univ.*

8:00 D9 **287.13** Role of ubiquitination in glutamate receptors trafficking. R. GULIA*; R. SHARMA; S. BHATTACHARYYA. *Indian Inst. of Sci. Educ. and Res., Indian Inst. of Sci. Educ. and Res.*

9:00 D10 **287.14** Enhanced GABA uptake underlying the anti-absence activity of mGlu5 metabotropic glutamate receptor positive allosteric modulators. R. CELLI; I. SANTOLINI; M. VERGASSOLA; V. D'AMORE; R. GRADINI; G. VAN LUIJTELAAR; G. BATTAGLIA; V. BRUNO*; R. T. NGOMBA; A. PITTALUGA; F. NICOLETTI. *I.R.C.C.S. NEUROMED, Univ. of Genova, Univ. Sapienza, Donders Ctr. for Cognition, Donders Inst. for Brain, Cognition and Behaviour, Radboud Univ., Univ. of Lincoln.*

10:00 D11 **287.15** Coincident activation of adenosine A1 receptors and metabotropic glutamate receptor 5 modulates neuronal signalling. K. J. GREGORY*; S. HELLYER; S. ALBOLD; A. CHRISTOPOULOS; T. WANG; L. T. MAY. *Monash Univ., M.I.P.S., Monash Univ.*

11:00 D12 **287.16** ▲ Involvement of mGluR I in EphB/ephrinB reverse signaling induced retinal ganglion cell apoptosis in a rat chronic ocular hypertension model. Y. ZHAO*; Q. LI; X. LI; F. GAO; P. CUI; X. SUN; Z. WANG. *Inst. of Brain Sci., Dept. of Ophthalmology at Eye & ENT Hosp., Inst. of Brain Science, Dept. of Ophthalmology at Eye & ENT Hospital, State Key Lab. of Med. Neurobiology, Shanghai Key Lab. of Visual Impairment and Restoration, Collaborative Innovation Ctr. for Brain Science, Fudan Univ.*

8:00 D13 **287.17** Tonic and phasic activation of GIRKs contribute to low dentate granule cell excitability. J. GONZALEZ*; S. A. EPPS; S. J. MARKWARDT; J. I. WADICHE; L. OVERSTREET-WADICHE. *Univ. of Alabama At Birmingham.*

9:00 D14 **287.18** The unorthodox kynurenine metabolite, cinnabarinic acid, potently inhibits MK-801-induced hyperactivity by interacting with mGlu4 metabotropic glutamate receptors. F. FAZIO; M. ULIVIERI; L. LIONETTO; M. CURTO; G. MASCIO; A. TRAFICANTE; G. GIANNINO; V. BRUNO; G. BATTAGLIA*; M. SIMMACO; F. NICOLETTI. *I.R.C.C.S. Neuromed, Univ. Sapienza, Advanced Mol. Diagnostic, IDI-IRCCS, S. Andrea Hospital, Univ. Sapienza.*

10:00 D15 **287.19** Phospholipase C as a point of convergence between D1 receptor and mGlu5 receptor stimulation in the parkinsonian striatum. I. SEBASTIANUTTO; N. MASLAVA; L. DI MENNA; F. NICOLETTI*; M. CENCI. *Lund Univ., IRCCS Neuromed, Univ. Sapienza.*

11:00 D16 **287.20** ● Metabotropic glutamate receptors 4 and 7 modulate thalamus - lateral amygdala synaptic transmission and plasticity. A. C. CIOBANU*; C. FLORES NAKANDAKARE; E. VAN DEN BURG; R. LUTJENS; R. STOOP. *CHUV, CHUV, Addex Therapeut.*

8:00 D17 **287.21** Activity-dependent mGluR7 ubiquitination regulates receptor stability and trafficking. S. LEE; H. LEE; J. SONG; Y. SUH*. *Seoul Natl. Univ. Col. of Med.*

9:00 D18 **287.22** Phosphorylation of $GABA_{B1}$ by CaMKIIβ triggers lysosomal degradation of $GABA_B$ receptors by regulating MIB2-mediated Lys63-linked ubiquitination. K. BALAKRISHNAN*; K. ZEMOURA; T. GRAMPP; D. BENKE. *Univ. of Zurich, MIT.*

10:00 D19 **287.23** ● ▲ New advances in the knowledge of the 5HT2A / mGlu2/3 receptor-receptor functional cross talk in mammal central nervous system. A. PITTALUGA; G. OLIVERO; M. VERGASSOLA; T. BONFIGLIO; B. GARRONE; F. DI GIORGIO; S. TONGIANI; C. USAI; M. GRILLI*; M. MARCHI. *Univ. of Genoa, Angelini S.p.A. R&D Res. Ctr., Natl. Rese Council.*

11:00 D20 **287.24** Murine genetic variance in muscarinic cholinergic receptor antagonism of sucrose and saccharin solution intakes in three inbred mouse strains. K. OLSSON; F. BOURIE; B. ISKHAKOV; A. BURAS; G. FAZILOV; M. SHENOUDA; J. ZHEZHERYA; R. J. BODNAR*. *Queens College, CUNY, Queens Col.*

8:00 D21 **287.25** Murine genetic variance in muscarinic receptor antagonism of sucrose conditioned flavor preferences in three inbred mouse strains. F. R. BOURIE*; B. ISKHAKOV; G. FAZILOV; M. SHENOUDA; J. ZHEZHERYA; A. BURAS; R. J. BODNAR. *Queens Col., Queens College, CUNY, Queens Col.*

POSTER

288. Sodium Channels

Theme B: Neural Excitability, Synapses, and Glia

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 D22 **288.01** Symbiotic bacteria underlie neurotoxin production and evolution of toxin resistance in voltage-gated sodium channels of rough-skinned newts (Taricha granulosa). P. VAELLI*; K. R. THEIS; J. A. FOSTER; H. L. EISTHEN. *Michigan State Univ., Ecology, Evolutionary Biology, and Behavior Grad. Program, BEACON Ctr. for the Study of Evolution in Action, Wayne State Univ., Univ. of Idaho.*

9:00 D23 **288.02** ▲ Role of CaMKIIγ in Associative Conditioning and GLR-1 expression in *C. elegans.* A. H. BLACK*; S. LIN; M. R. PRIBIC; N. D. JOHNSON; A. R. LOFTUS; L. K. ALFILER; J. K. ROSE. *Western Washington Univ., Western Washington Univ., Western Washington Univ.*

10:00 D24 **288.03** Calcium regulation of voltage-gated sodium channels in serotonergic raphe neurons. M. A. NAVARRO*; M. MILESCU; L. S. MILESCU. *Univ. of Missouri.*

11:00 D25 **288.04** NaV subtypes in itch versus pain C-fibers in mouse skin. D. JURCAKOVA; M. KOLLARIK; F. RU; B. J. UNDEM*. *Johns Hopkins Asthma Ctr.*

8:00 D26 **288.05** The scaffold protein Magi-1 regulates voltage-dependent sodium channels in dorsal rott ganglion neurons. K. D. PRYCE*; R. POWELL; A. BHATTACHARJEE. *State Univ. of New York At Buffalo, SUNY at Buffalo.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 D27 **288.06** Dual action of CBZ as a blocker and modulator of activation of mutant $Na_v1.7$ channels that cause inherited erythromelalgia. T. ADI*; M. ESTACION; Y. YANG; S. D. DIB-HAJJ; S. G. WAXMAN. *Yale Univ. Sch. of Med., VA Connecticut Healthcare Syst.*

10:00 D28 **288.07** A gain-of-function Nav1.9 mutation from patients with peripheral neuropathy is rescued by low temperature. S. D. DIB-HAJJ*; C. HAN; M. SOPACUA; J. HOEIJMAKERS; F. DIB-HAJJ; P. SHAH; R. ALMOMANI; M. GERRITS; L. MACALA; G. LAURIA; I. MERKIES; C. FABER; S. G. WAXMAN. *Yale Sch. of Med., Ctr. for Neurosci. & Regeneration Research, Yale Sch. of Med., Rehabil. Res. Center, VA Connecticut Healthcare Syst., Dept. of Neurology, Maastricht Univ. Med. Ctr., Clin. Genetics, Maastricht Univ. Med. Ctr., Neuroalgology Unit, IRCCS Fndn. "Carlo Besta" Neurolog. Inst., Dept. of Neurology, Spaarne Hosp.*

11:00 D29 **288.08** From Nav1.7 to Nav1.8: A case for precision medicine. C. HAN*; A. THEMISTOCLEOUS; L. MACALA; I. BLESNEAC; C. FRATTER; D. L. BENNETT; S. D. DIB-HAJJ; S. G. WAXMAN. *Dept. of Neurology, Yale Uni. Sch. of Med., Ctr. for Neurosci. & Regeneration Research, Yale Univ. Sch. of Med., Rehabil. Res. Center, VA Connecticut Healthcare Syst., Nuffield Dept. of Clin. Neurosci., Oxford Med. Genet. Laboratories, Oxford Univ. Hosp. NHS Fndn. Trust.*

8:00 D30 **288.09** Gain-of-function sodium channel beta2 mutation in idiopathic small nerve fiber neuropathy. M. R. ESTACION*; M. ALSALOUM; C. G. FABER; G. LAURIA; M. SOPACUA; M. M. GERRITS; S. DIB-HAJJ; I. S. J. MERKIES; S. G. WAXMAN. *Yale Univ. Sch. of Med., Veterans Affairs Med. Ctr., Univ. Med. Ctr. Maastricht, Neuromuscular Dis. Unit, IRCCS Fndn., Dept of Clin. Genomics, Univ. Med. Ctr. Maastricht, Spaarne Hosp.*

9:00 D31 **288.10** Atypical changes in DRG neuron excitability and complex pain phenotype associated with a $Na_v1.7$ mutation that massively hyperpolarizes activation. J. HUANG*; B. TANAKA; M. ESTACION; S. LIU; S. M. WALKER; S. D. DIB-HAJJ; S. G. WAXMAN. *Yale Univ. Sch. of Med., UCL Great Ormond Street Inst. of Child Hlth.*

10:00 D32 **288.11** Myosins interact with voltage gated sodium channels, sodium calcium exchangers and sodium potassium ATPases. B. DASH*; C. HAN; E. J. AKIN; S. DIB-HAJJ; S. G. WAXMAN. *Yale Univ. Dept. of Neurol.*

11:00 D33 **288.12** ● Targeting pain pathways by inhibition of voltage-gated sodium channels. J. L. COSTANTIN*; A. OBERGRUSSBERGER; S. STÖLZLE-FEIX; N. BECKER; C. HAARMANN; M. RAPEDIUS; T. GOETZE; I. RINKE-WEIß; E. DRAGICEVIC; C. BOT; R. HAEDO; M. GEORGE; A. BRÜGGEMANN; N. FERTIG. *Nanion Technologies, Nanion Technologies.*

8:00 D34 **288.13** A small molecule activator of $Na_v1.1$ channels increases fast-spiking interneuron excitability and GABAergic transmission *in vitro* and has an anti-convulsive effect *in vivo.* C. HOUGAARD*; K. FREDERIKSEN; D. LU; J. YANG; H. S. JENSEN; J. F. BASTLUND; C. YANG; M. GRUNNET. *H Lundbeck A/S, H Lundbeck A/S, Shanghai ChemPartner Co.*

9:00 D35 **288.14** Hyperexcitability of GABAergic neurons triggers cortical spreading depression: New mechanism of migraine? M. A. MANTEGAZZA*; O. CHEVER; S. ZERIMECH; M. AYRAULT; F. DUPRAT. *CNRS Inst. Mol. & Cell. Pharmacol., CNRS, Inst. of Mol. and Cell. Pharmacol., Inst. of Mol. and Cell. Pharmacol.*

10:00 D36 **288.15** Akt regulates neuronal excitability by modulating Nav1.6 sodium channel. M. N. NENOV*; W. C. HSU; M. A. ALSHAMMARI; O. FOLORUNSO; N. I. PANOVA; F. LAEZZA. *Univ. of Texas Med. Br., King Saud Univ.*

11:00 D37 **288.16** Disease-specific mechanism of action of voltage-gated sodium channel allosteric modulators in a mood disorder mouse model. K. E. WINTERS*. *Univ. of Texas Med. Br.*

8:00 D38 **288.17** Mechanism of chemical induced peripheral neuropathy (cipn) by vincristine. H. LEE*; M. JOUNG; Y. CHOI; H. SUH; S. JUNG. *Hanyang Univ. Col. of Med., Hanyang Univ., Hallym Univ., Hanyang Univ.*

9:00 D39 **288.18** Strong G-protein-mediated voltage-dependent inhibition of voltage-gated sodium channels. G. B. MATTHEISEN*; T. TSINTSADZE; S. M. SMITH. *OHSU, VAPORHCS/OHSU, VAPORHCS/OHSU.*

10:00 D40 **288.19** Loperamide inhibits sodium channels to alleviate inflammatory hyperalgesia. H. YU*; Y. WU; M. LI; X. WANG. *Inst. of Materia Medica, Chinese Acad. of M.*

11:00 D41 **288.20** Site-directed mRNA editing of sodium channels has potential to alter neuronal firing and network dynamics: Computer models. W. W. LYTTON*; A. KNOX; J. J. C. ROSENTHAL. *SUNY Downstate, Kings County Hosp., Univ. of Wisconsin, Madison, Marine Biol. Lab.*

8:00 D42 **288.21** Specific interaction of amphiphiles with sodium channels. Z. WANG; S. R. LEVINSON; T. HEINBOCKEL*. *Howard Univ. Col. of Med., Univ. of Colorado Denver Sch. of Med.*

9:00 D43 **288.22** Gene therapy for Dravet syndrome: A proof of concept. A. RICOBARAZA*; M. VALENCIA; M. GONZÁLEZ-APARICIO; M. NICOLÁS; S. ARRIETA; M. BUÑUALES; E. PUERTA; R. SÁNCHEZ-CARPINTERO; G. GONZÁLEZ-ASEGUINOLAZA; J. ARTIEDA; R. HERNÁNDEZ-ALCOCEBA. *FIMA - Univ. of Navarra, Univ. of Navarra, Clínica Univ. de Navarra, Navarra Hlth. Res. Inst. (IDISNA).*

10:00 D44 **288.23** The mechanism of propofol action on voltage-gated sodium channels. E. YANG*; D. GRANATA; Y. WANG; R. G. ECKENHOFF; P. TANG; Y. XU; V. CARNEVALE; M. COVARRUBIAS. *Thomas Jefferson Univ., Inst. for Computat. Mol. Science, Temple Univ., Univ. of Pittsburgh, Univ. of Pennsylvania Perelman Sch. of Med., Univ. of Pittsburgh, Univ. Pittsburgh Sch. Med.*

11:00 D45 **288.24** Peptides mapping of the FGF14:Nav1.6 complex interface. A. K. SINGH*; P. A. WADSWORTH; O. O. FOLORUNSO; S. R. ALI; F. LAEZZA. *Univ. of Texas Med. Br. (UTMB), UTMB, Univ. of Texas Med. Br., Yale Univ., Univ. of Texas Med. Br. at Galveston.*

8:00 D46 **288.25** Functional modulation of voltage-gated sodium channel Nav1.6 by peptidomimetics. O. FOLORUNSO*; L. BOURNER; P. A. WADSWORTH; S. R. ALI; Z. LIU; H. CEHN; J. ZHOU; F. LAEZZA. *The Univ. of Texas Med. Br., The Univ. of Texas Med. Br., The Univ. of Texas Med. Br.*

9:00 D47 **288.26** GSK3β is a new molecular determinant of neuronal excitability. P. A. WADSWORTH*; A. K. SINGH; K. M. SEPURU; K. RAJARATHNAM; F. LAEZZA. *UTMB, UTMB.*

10:00 D48 **288.27** Sodium channel beta2 subunits prevent action potential propagation failures at axonal branch points. M. B. HOPPA*; I. CHO; L. PANZERA; M. CHIN. *Dartmouth Col., Dartmouth Col., Dartmouth Col.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 D49 **288.28** Neurofascin-186 modulates axon initial segment morphpology and function. S. ALPIZAR*; M. B. HOPPA. *Dartmouth Col.*

POSTER

289. Monamine Transporters

Theme B: Neural Excitability, Synapses, and Glia

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 D50 **289.01** Allosteric modulatory effects of SRI-30827 on HIV-1 Tat protein-induced inhibition of human dopamine transporter function and cocaine condition place preference in inducible Tat transgenic mice. J. ZHU*. *Col. of Pharmacy, Univ. of South Carolina.*

9:00 D51 **289.02** Dominant negative variant of DAT associate with early-onset parkinsonism and psychiatric disease. F. H. HANSEN*; N. V. ARENDS; S. TOLSTOY; K. L. JENSEN; S. APARNA; J. AGUILAR; T. SKJØRRINGE; L. FRIBERG; L. MØLLER; A. GALLI; L. E. HJERMIND; U. GETHER. *The Panum Inst., Vandebilt Univ., Kennedy center, Copenhagen Univ. Hosp., Copenhagen Univ. Hosp., Vanderbilt Univ., Copenhagen Univ. Hosp.*

10:00 D52 **289.03** Cholesterol- and neuronal activity-dependent dopamine transporter nanodomains revealed by super-resolution microscopy. M. D. LYCAS*; T. RAHBEK-CLEMMENSEN; S. ERLENDSSON; J. ERIKSEN; M. APUSCHKIN; F. VILHARDT; T. N. JØRGENSEN; F. H. HANSEN; U. GETHER. *Univ. of Copenhagen, Univ. of Copenhagen.*

11:00 D53 **289.04** Phenotypic characterization of aging dopamine transporter DAT-AAA knock-in mice. A. B. KØNIG; C. FITZPATRICK; M. RICKHAG; U. GETHER*. *Univ. Copenhagen, Univ. Copenhagen.*

8:00 D54 **289.05** The trace amine receptor 1 (TAAR1) is coupled to G_s and G_{13} G-protein subunits in distinct subcellular compartments. S. M. UNDERHILL*; S. H. MILLAN; P. D. HULLIHEN; J. CHEN; S. G. AMARA. *Natl. Inst. of Mental Hlth., Natl. Inst. of Mental Hlth., Natl. Inst. of Hlth., Natl. Inst. of Mental Hlth.*

9:00 D55 **289.06** Biogenic amine transporter activity of cathinone analogues. A. M. DECKER*; A. LANDAVAZO; J. S. PARTILLA; B. E. BLOUGH; M. H. BAUMANN; R. B. ROTHMAN. *RTI Intl., NIH.*

10:00 D56 **289.07** Structural, functional and behavioral characterization of an in-frame deletion associated with autism in the dopamine transporter gene. J. I. AGUILAR; N. CAMPBELL; A. SHEKAR; D. PENG; A. MORLEY; A. DURAN; G. GALLI; B. O'GRADY; L. BELLAN; R. RAMACHANDRAN; J. S. SUTCLIFFE; H. H. SITTE; K. ERREGER; J. MEILER; T. STOCKNER; H. MATTHIES; H. MCHAOURAB; A. GALLI*. *Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Med. Univ. of Vienna, Vanderbilt Univ., Univ. Sch. of Nashville, Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ. Med. Ctr., Med. Univ. of Vienna.*

11:00 D57 **289.08** Conformational changes induced by Gβ γ subunits regulate dopamine transporter function. J. GARCIA-OLIVARES*; S. A. WASSERMAN; D. TORRES-SALAZAR; W. C. HONG; S. A. AMARA. *Natl. Inst. of Mental Hlth., Buttler Univ.*

8:00 D58 **289.09** Regulation of amphetamine actions by the dopamine transporter and G protein beta gamma subunits interaction. S. S. HARRIS*; J. A. PINO; J. C. MAUNA; E. THIELS; G. E. TORRES. *Univ. of Florida, Univ. of Pittsburgh.*

9:00 D59 **289.10** Comparative proteomics analysis of dopamine transporter interactome upon methamphetamine and cocaine treatment. S. M. INGAM*; T. RANA; S. ELUHU; N. BERRYMAN; B. OGHIDE; S. PRATAP; J. GOODWIN. *Meharry Med. Col., Fisk Univ.*

10:00 D60 **289.11** Behavioral impact of Rin GTPase and dopamine transporter trafficking: AAV studies using novel conditional and inducible shRNA. C. G. SWEENEY*; J. XIE; G. GAO; H. E. MELIKIAN. *Univ. of Massachusetts Med. Sch., Univ. of Massachusetts Med. Sch.*

11:00 D61 **289.12** The impact of regulated dopamine transporter endocytosis on dopamine-dependent behaviors: *In vivo Drosophila melanogaster* studies. R. R. FAGAN*; C. G. SWEENEY; P. EMERY; H. E. MELIKIAN. *Univ. of Massachusetts Med. Sch., Brudnick Neuropsychiatric Res. Inst., Univ. of Massachusetts Med. Sch.*

8:00 D62 **289.13** Roles for cholesterol and the isoprenylation pathway in serotonin transporter regulation. C. MITCHELL*; A. SCHROERING; B. K. YAMAMOTO. *Indiana Univ., Univ. of Toledo, Indiana Univ. Sch. of Med.*

9:00 D63 **289.14** Dopamine transporter activation regulates Kv2.1 cluster size and activation potential. J. J. LEBOWITZ*; J. A. PINO; D. O. SAMBO; S. STREIT; K. DIVITA; C. HENCKEL; M. LIN; G. E. TORRES; H. KHOSHBOUEI. *Univ. of Florida, Univ. of Florida.*

10:00 E1 **289.15** Dopamine transporter interactome reveals differential interaction with DJ-1 when exposed to METH. N. BERRYMAN*; S. INGRAM; S. ELUHU; B. OGHIDE; T. RANA; H. KHOSHBOUEI; J. S. GOODWIN. *Fisk Univ., Meharry Med. Col., Univ. of Florida.*

11:00 E2 **289.16** Differential site-specific serotonin transporter phosphorylation governs kappa-opioid receptor mediated biphasic serotonin clearance. S. RAMAMOORTHY*; S. SUNDARAMURTHY; L. D. JAYANTHI. *Virginia Commonwealth Univ.*

8:00 E3 **289.17** Interaction of neurokinin signaling and norepinephrine transport in amphetamine behavior. L. D. JAYANTHI*; P. MANNANGATTI; S. RAMAMOORTHY. *Virginia Commonwealth Univ.*

9:00 E4 **289.18** Regulation of the sigma-1 receptor multimerization. W. C. HONG*. *Butler Univ.*

10:00 E5 **289.19** ● Slc22a3, a potential second presynaptic serotonin transporter. M. ARNOLD*; A. O. WILLIAMS; A. AGRAWAL; H. E. DAY; J. TALBOOM; M. ORCHINIK; C. A. LOWRY. *Univ. of Colorado Boulder, Univ. of Colorado Boulder, Arizona State Univ., Arizona State Univ., Univ. of Colorado Boulder.*

11:00 E6 **289.20** Investigation of IL-1β activation of serotonin transporter-mediated serotonin clearance *in vivo.* N. L. BAGANZ*; M. J. ROBSON; W. A. OWENS; L. C. DAWS; R. D. BLAKELY. *Florida Atlantic Univ., Univ. of Texas Hlth. Sci. Ctr. at San Antonio.*

8:00 E7 **289.21** Structural, biochemical and functional evidence of a biased conformation of serotonin transporters imposed by an autism-associated mutation. M. A. QUINLAN*; D. KROUT; M. J. ROBSON; L. K. HENRY; R. D. BLAKELY. *Vanderbilt, Florida Atlantic Univ., Univ. of North Dakota Sch. of Med. and Hlth. Sci.*

Mon. AM

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

290. LTP: Pre- and Postsynaptic Mechanisms II

Theme B: Neural Excitability, Synapses, and Glia

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 E8 **290.01** Transgenic mice carrying a serine to alanine mutation at residue 1928 of the voltage-gated calcium channel $Ca_V1.2$ display strong, sex-dependent differences in behavior related to learning, memory, and stress. K. E. IRETON*; J. W. HELL. *UC Davis, UC Davis.*

9:00 E9 **290.02** Theta-burst firing of a single dentate granule cell induces presynaptic LTP at mossy cell-dentate granule cell synapse. K. NASRALLAH*; P. E. CASTILLO. *Albert Einstein Col. of Med., Albert Einstein Coll Med.*

10:00 E10 **290.03** The effect of extracellular glutamate on synaptic plasticity and its relevance to neurodegenerative disease. J. R. BARNES; M. P. PARSONS*. *Mem. Univ.*

11:00 E11 **290.04** Activity-dependent netrin-1 secretion unmasks silent synapses in the adult hippocampus. S. D. GLASGOW*; I. V. BEAMISH; S. LABRECQUE; E. WONG; L. J. TRIGIANI; J. GIBON; D. HAN; S. N. HARRIS; F. GUIDO; E. HAMEL; R. A. MCKINNEY; P. DE KONINCK; P. A. SEGUELA; E. S. RUTHAZER; T. E. KENNEDY. *McGill Univ., Montreal Neurolog. Institute, McGill Univ., Ctr. De Recherche Univ. Laval Robert-Giffard, McGill Univ., Univ. Laval.*

8:00 E12 **290.05** Ketamine induces lasting alterations of AMPA receptors and synaptic plasticity in the mesolimbic circuit. O. SKITEVA*; N. YAO; X. ZHANG; P. SVENNINGSSON; K. CHERGUI. *Karolinska Institutet, Karolinska Institutet.*

9:00 F1 **290.06** NMDA receptors are specifically involved in LTP induction in late-spiking neurons of the rat visual cortex. K. JOO; K. CHO; H. JANG; D. RHIE*. *The Catholic Univ. of Korea, The Catholic university of Korea, Catholic Univ. Korea, Coll Med. Catholic Univ. Korea.*

10:00 F2 **290.07** PKA and Ube3a synergistically regulate SK2 synaptic expression and LTP. J. SUN*; G. ZHU; Y. LIU; R. ADHIKARI; X. HAO; C. CATO; L. HERRERA; M. BAUDRY; X. BI. *Western Univ. of Hlth. Sci.*

11:00 F3 **290.08** The Octopus vulgaris LTP expression and maintenance is mediated by activity dependent long-term elevation in NO concentration. B. HOCHNER*; N. STERN-MENTCH; N. NESHER; T. SHOMRAT; A. L. TURCHETTI-MAIA. *Dept of Neurobiology, Hebrew Univ., The Ruppin Academic Center, Sch. of Marine Sci.*

8:00 F4 **290.09** Activity-dependent plasticity of synaptic zinc signaling in the dorsal cochlear nucleus - A novel synaptic plasticity mechanism. N. W. VOGLER*; T. TZOUNOPOULOS. *Univ. of Pittsburgh.*

9:00 F5 **290.10** Projection-specific bias in CB_1R signaling and function in hippocampus: Implications for memory encoding. C. D. COX*; W. WANG; Y. JIA; L. C. PALMER; K. JUNG; D. PIOMELLI; C. M. GALL; G. LYNCH. *UCI, Univ. of California Irvine Dept. of Anat. and Neurobio., Univ. of California, Univ. of California Irvine Dept. of Anat. and Neurobio., Fondazione Inst. Italiano Di Tecnologia.*

10:00 F6 **290.11** Facilitating endocannabinoid signaling restores a component of episodic memory in Fmr1-KO mice. C. M. GALL*; W. WANG; B. M. COX; Y. JIA; A. A. LE; C. D. COX; K. M. JUNG; D. PIOMELLI; G. LYNCH. *Univ. of California.*

11:00 F7 **290.12** Long-term potentiation of inhibitory inputs onto VTA GABA neurons. T. M. NUFER*; J. G. EDWARDS. *Brigham Young Univ., Brigham Young Univ.*

8:00 F8 **290.13** Synaptic plasticity of interlamellar ca1 network of hippocampus. H. TETTEH*; D. SUN; J. SU; S. YANG; S. YANG. *City Univ. of Hong Kong, Incheon Natl. Univ.*

9:00 F9 **290.14** Highly irregularly patterned 10 Hz stimulation, but not regularly patterned 10 Hz stimulation, activates a disinhibition mechanism that induces long-term potentiation following mild traumatic brain injury. Q. S. FISCHER*; D. KALIKULOV; M. J. FRIEDLANDER. *Virginia Tech. Carilion Res. Inst.*

10:00 F10 **290.15** Metabolic processes underlying Hebbian hippocampal long term potentiation. P. MIRANDA*; H. PARK; S. SACCHETTI; K. N. ALAVIAN; H. LI; H. IMAMURA; H. NOJI; J. D. SHEPHERD; A. E. CHAVEZ; R. ZUKIN; E. A. JONAS. *Yale Univ. Dept of Intrnl. Med., Imperial Col. London, Yale Univ., Kyoto Univ., Univ. of Tokyo, Univ. of Utah, Albert Einstein Col. Medici, Albert Einstein Col. Med.*

11:00 F11 **290.16** Effects of non-selective activation of dopaminergic receptors by apomorphine in the hippocampus. L. ARROYO GARCÍA*, SR; R. A. VAZQUEZ-ROQUE; A. DIAZ; A. RODRIGUEZ-MORENO; F. DE LA CRUZ; G. FLORES. *Benemerita Univ. Autonoma De Puebla, Univ. Pablo de Olavide, Inst. Politecnico Nacional.*

8:00 F12 **290.17** The role of postsynaptic cell-adhesion molecules in the trafficking of AMPA-type glutamate receptors. A. RILEY*; X. WU; R. C. MALENKA; T. C. SUDHOF. *Stanford Univ.*

9:00 G1 **290.18** Extrasynaptic NMDA receptor dependent long-term potentiation of hippocampal CA1 pyramidal neurons. S. LI*; Q. YANG; J. WANG; J. LUO. *Bio-X Institutes, Shanghai Jiao Tong Univ., Zhejiang Univ. Sch. of Med.*

POSTER

291. Signal Propagation

Theme B: Neural Excitability, Synapses, and Glia

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 G2 **291.01** Utilization of a newly synthesized degradable biocomposite: Copper-high aspect ratio structure (CuHARS) for dynamic signaling to brain cells. K. C. ST MARTHE*; A. KARAN; Z. NORCROSS; M. A. DECOSTER. *Louisiana Tech. Univ.*

9:00 G3 **291.02** Enhanced responsiveness in asynchronous irregular network states as a mechanism for modulating sensory awareness. A. DESTEXHE*; Z. GIRONES; Y. ZERLAUT. *CNRS, European Inst. for Theoretical Neurosci., Inst. Italiano di Tecnologia.*

10:00 G4 **291.03** ● A study of single-pulse cortical stimulation effects across cortical micro-domains. P. KUDELA*; R. OH; G. MILSAP; N. E. CRONE; W. S. ANDERSON. *Johns Hopkins Univ., Johns Hopkins, Johns Hopkins Univ., Johns Hopkins Hosp.*

11:00 G5 **291.04** Balancing excitation and inhibition shapes the dynamics of a neuronal network for movement and reward. A. R. RADULESCU, 12561; A. SCIMEMI*. *SUNY New Paltz, Univ. at Albany State Univ. of New York.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 G6 **291.05** Activation of hilar mossy cells and dentate granule cells during sharp wave ripples *in vitro.* A. OUCHI*; N. MATSUMOTO; Y. IKEGAYA. *The Univ. of Tokyo.*

9:00 G7 **291.06** The characterization of hippocampal theta-driving neurons --- a time-delayed mutual information approach. S. LI*; J. XU; G. CHEN; L. LIN; D. ZHOU; D. CAI. *New York Univ., East China Normal Univ., Shanghai Jiao Tong Univ.*

10:00 G8 **291.07** Can neural activity propagation be mediated by ephaptic coupling? R. SHIVACHARAN*; C. CHIANG; D. M. DURAND. *Case Western Reserve Univ.*

11:00 G9 **291.08** Layer-dependent inter-areal effective connectivity among anterior cingulate and prefrontal cortex in monkeys revealed by electrical microstimulation. V. NACHER*; T. WOMELSDORF. *York Univ., Vanderbilt Univ.*

8:00 G10 **291.09** Peak reduction of axonal spikes in the hippocamal mossy fibers during the high frequency stimulation. S. OHURA*; H. KAMIYA. *Hokkaido Univ. Grad. Sch. of Med.*

9:00 H1 **291.10** Scale-free correlations in neuronal activity of behaving animals. T. L. RIBEIRO*; S. YU; D. WINKOWSKI; P. O. KANOLD; D. CHIALVO; D. PLENZ. *NIH, Inst. of Automation, Chinese Acad. of Sci., Univ. of Maryland, Univ. Nacional de San Martin.*

10:00 H2 **291.11** Analytical studies of activity propagation in neural networks. R. J. ERAZO*; C. T. THURMAN; R. M. OSAN. *Georgia State Univ., Georgia State Univ., Georgia State Univ.*

11:00 H3 **291.12** Investigating the mechanisms of claustrum-cortical connectivity. J. C. JACKSON*; M. M. KARNANI; D. BURDAKOV; A. K. LEE. *Janelia Res. Campus, The Francis Crick Inst., HHMI Janelia Res. Campus.*

8:00 H4 **291.13** Network dynamics of GABAergic neurons. D. POZZI*; Q. SONG; V. TORRE. *Intl. Sch. For Advanced Studies, Ningbo Inst. of Materials Technol. and Engineering, Chinese Acad. of Sci.*

9:00 H5 **291.14** Standard LFP reconstruction does not explain neuronal avalanches with power law scaling. D. PLENZ*; T. LINS-RIBEIRO; Y. KARIMIPANAH. *Natl. Inst. of Mental Health, NIH.*

10:00 H6 **291.15** High-precision fast-spiking basket cell discharge in the complex events of human neocortex. V. SZEGEDI*; G. MOLNAR; M. PAIZS; E. CSAKVARI; P. BARZO; G. TAMAS; K. LAMSA. *Univ. of Szeged, MTA-NAP Res. Group for Inhibitory Interneurons and Plasticity, MTA-SZTE Res. Group for Cortical Microcircuits, Univ. of Szeged.*

POSTER

292. Epilepsy: Synaptic Mechanisms

Theme B: Neural Excitability, Synapses, and Glia

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 H7 **292.01** Characterization of the inhibitory effects of bumetanide and several other loop diuretics on the sodium-potassium-chloride-cotransporter splice variants hNKCC1A and hNKCC1B. P. HAMPEL*; K. RÖMERMANN; N. MACAULAY; W. LÖSCHER. *Univ. of Vet. Med. Hannover, Ctr. for Systems Neurosci. Hannover, Univ. of Copenhagen.*

9:00 H8 **292.02** Spontaneous activity and increase in seizure susceptibility in the γCaMKII KO mice . A. SALAH*; H. MA; O. DEVINSKY; R. W. TSIEN. *New York Univ. Sch. Med., Zhejiang Univ., NYU Univ. Sch. Med.*

10:00 H9 **292.03** ▲ The γ-aminobutyric acid receptor modulates the mean duration of absence seizures on the myelin mutant taiep rat. J. M. IBARRA-HERNÁNDEZ*; C. CORTES; J. EGUIBAR. *Inst. De Fisiología. Benemérita Univ. Au, Benemerita Univ. Autonoma de Puebla, Benemerita Univ. Autonoma de Puebla.*

11:00 H10 **292.04** Deconstruction of thalamic circuits in a mouse model of post-traumatic epilepsy. S. HOLDEN*; J. PAZ. *UCSF, Gladstone Inst. of Neurolog. Dis.*

8:00 H11 **292.05** Impaired homeostatic potentiation of inhibitory GABAergic currents induced by slow-wave oscillation in an idiopathic generalized epilepsy model with GABAR A322D mutation. C. ZHOU*; L. DING; M. J. GALLAGHER; R. L. MACDONALD. *Vanderbilt Univ. Med. Ctr., Vanderbilt Univ. Sch. of Med., Vanderbilt Univ.*

9:00 H12 **292.06** Enhydrazinones have anticonvulsant activity in rat *in vitro* seizure models. S. B. KOMBIAN*; F. KHALIFOUH; I. O. EDAFIOGHO; C. I. EZEAMUZIE. *Kuwait Univ., Kuwait Univ., Univ. of St. Joseph.*

10:00 I1 **292.07** Opposite control by 5-HT_{2C} receptors on generalized and focal seizures. G. DI GIOVANNI*; G. DEIDDA; R. COLANGELI; A. CAVACCINI; M. VENZI; G. ORBAN; M. PIERUCCI; V. CRUNELLI. *Univ. of Malta, Cardiff Univ.*

11:00 I2 **292.08** An investigation into the cell-type specific effects of a dominant negative mutation in Kv3.1 underlying cases of progressive myoclonic epilepsy. J. C. CARPENTER*; G. LIGNANI; S. SCHORGE. *UCL Inst. of Neurol.*

8:00 I3 **292.09** Optokindling: Catastrophic reorganization of cortical circuits by repeated optogenetic stimulation. K. M. FRANKS*; P. LEE; B. RYU. *Duke Univ., Duke Univ.*

9:00 I4 **292.10** Measurement of effects and administration of carbenoxolone in real time on high frequency oscillations involved in hippocampal epileptogenesis. C. VENTURA*; J. R. BELTRAN-RAMIREZ; M. A. CERPA-GALLEGOS; E. ARCINIEGA-VÁZQUEZ; S. A. CASILLAS-ROMERO; E. A. PADILLA-ZEPEDA; J. A. JÍMENEZ-OLVERA; G. ZARATE-RODRÍGUEZ; J. A. CHÁVEZ-GARCÍA. *Ctr. De Enseñanza Técnica Industrial.*

10:00 I5 **292.11** GluA1 subunit plasticity is necessary to sustain prolonged seizures. S. JOSHI*; E. LEWCZUK; J. WILLIAMSON; M. PENMETSA; J. KAPUR. *Univ. of Virginia.*

11:00 I6 **292.12** Potentiation of AMPA receptor-mediated synaptic transmission in hippocampal CA1 pyramidal activated by a single seizure. H. SUN*; J. WILLIAMSON; J. KAPUR. *Univ. of Virginia.*

8:00 I7 **292.13** Functional analysis of GABAergic gene variants in genetic generalised epilepsy. S. CHUNG*; K. V. EVERETT; E. DUDLEY; C. A. HUNT; R. H. THOMAS; J. S. DAVIES; A. HIGGINS; W. O. PICKRELL; J. G. L. MULLINS; A. V. DERRICK; S. T. BELLOWS; P. S. BERGIN; R. J. HARVEY; I. E. SCHEFFER; S. F. BERKOVIC; M. I. REES. *Swansea Univ., St George's Univ. of London, Cardiff Univ., Univ. of Melbourne, Auckland District HealthBoard, Univ. Col. London.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 I8 **292.14** Short-term depression of sprouted mossy fiber synapses from adult-born granule cells. W. HENDRICKS*; Y. CHEN; G. L. WESTBROOK; E. SCHNELL. *Vollum Inst., Portland VA Med. Ctr.*

10:00 I9 **292.15** The role of Neuroligin 2 and inhibitory transmission in the function of thalamic circuitry during epilepsy. F. CAO*; J. LIU; Z. JIA. *The Hosp. For Sick Children.*

11:00 I10 **292.16** Effects of BDNF and trk receptors on models of seizure activity in hippocampal slices. J. J. BOTTERILL; H. E. SCHARFMAN*. *The Nathan Kline Inst. For Psych. Res.*

8:00 J1 **292.17** Physiological mapping of hippocampal networks after status epilepticus. A. L. SOMMER*; B. S. COVENTRY; N. D. SCHARTZ; A. L. BREWSTER; E. L. BARTLETT. *Purdue Univ.*

9:00 J2 **292.18** Contrasting properties of active and inactive hippocampal dentate granule cells. S. A. PARK*; F. HSU; H. TAKANO; I. PETROF; D. A. COULTER. *Children's Hosp. of Philadelphia, Children's Hosp. of Philadelphia, Univ. of Pennsylvania.*

10:00 J3 **292.19** Optogenetic dissection of developing synaptic activity during evolving epileptiform activity. R. T. GRAHAM*; E. JOHNSON; N. CODADU; R. R. PARRISH; A. J. TREVELYAN. *Newcastle Univ., Newcastle Univ., Univ. of Newcastle, Newcastle Univ.*

11:00 J4 **292.20** Constitutive phosphomimetic inhibition of KCC2 at Thr906/Thr1007 causes GABA-dependent network excitability, seizure, and early postnatal death. M. WATANABE*; J. DUAN; M. MANSURI; J. ZHANG; A. FUKUDA; K. T. KAHLE. *Dept Neurophysiol, Hamamatsu Univ. Sch. Med., Departments of Neurosurgery, Yale Sch. of Med., Yale Sch. of Med.*

8:00 J5 **292.21** Role of somatostatin and parvalbumin interneurons in 4-aminopyridine-induced epileptiform discharges in mouse cortex. W. E. LADO*; J. J. HABLITZ. *Univ. of Alabama in Birmingham.*

POSTER

293. Epilepsy: Animal Models: Consciousness, Novel Models, and Mechanisms

Theme B: Neural Excitability, Synapses, and Glia

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 J6 **293.01** Co-morbid epilepsy in a mouse model of autism. M. L. LEWIS*; J. M. RHO; Q. J. PITTMAN. *Univ. of Calgary, Alberta Children's Hosp. Res. Inst.*

9:00 J7 **293.02** Establishment of $Tsc1^{flox/flox}$-GFAP-Cre ($Tsc1^{GFAP}CKO$) mice for evaluating potential new antiepileptic therapies for tuberous sclerosis complex. S. C. LEISER*; A. GHAVAMI; M. KWAN; J. BELTRAN; D. SONG; D. M. DEVILBISS; M. WONG; N. RENSING; S. L. ROBERDS; D. BRUNNER. *PsychoGenics, PsychoGenics, Washington Univ. Sch. of Med., Tuberous Sclerosis Alliance.*

10:00 J8 **293.03** A spontaneous deletion in Eml1 underlies the bilateral cortical malformation in the tish rat model of subcortical heterotopia. D. K. GROSENBAUGH*; S. JOSHI; K. S. LEE; M. P. FITZGERALD; M. J. ANZIVINO; M. J. MCCONNELL; H. P. GOODKIN. *Univ. of Virginia, Univ. of Virginia, Univ. Virginia Hlth. Systems, Children's Hosp. of Philadelphia, Univ. of Virginia, Univ. of Virginia Sch. of Med., Univ. of Virginia.*

11:00 J9 **293.04** Seizure-like activity in Bang-sensitive *Drosophila* is increased by $GABA_A$ receptor antagonists and decreased by ellagic acid. A. A. SMITH*, JR; J. PAULDURAI; A. JAEGER; A. TROFIMOVA; C. BARCENAS; W. HARDEMAN; L. VILLALPANDO; A. BRISENO; N. KALYNOVSKA; R. E. HARTMAN. *Loma Linda Univ., Loma Linda Univ.*

8:00 J10 **293.05** ● A novel user-friendly automated tool to accurately detect seizures in rodent models of acquired and genetic epilepsy. A. SARGSYAN*; D. MELKONIAN; P. M. CASILLAS-ESPINOSA; T. J. O'BRIEN. *Kaoskey Pty Ltd, The Royal Melbourne Hospital, The Univ. of Melbourne.*

9:00 J11 **293.06** Variable phenotype in a Dravet syndrome model in Charles river versus Jackson C57BL/6 mice. J. L. WHITE; K. LEE; B. TARHAN; J. QI; S. KOH*. *Emory Univ., Daegu Catholic Univ., Northwestern Univ.*

10:00 J12 **293.07** Toll-like receptor and cytokine expression changes in a rodent model of epilepsy. C. SADANGI*; F. ROSENOW; B. NORWOOD. *Philips University, Marburg, Goethe Univ., Philipps Univ.*

11:00 K1 **293.08** A proposed role for the nucleus of pontis oralis of the brainstem (NPO) in sudden unexpected death in epilepsy. C. ISGOR*; R. P. VERTES; M. GIL; R. STCLAIR; R. LEMOS; K. KOROMA. *Florida Atlantic Univ. Charles E Schmidt Col. of Med., Florida Atlantic Univ.*

8:00 K2 **293.09** Correlation of seizure-associated central apneic episode durations with their frequency of occurrence in a rat model. M. G. STEWART*; S. VILLIERE; K. NAKASE; R. KOLLMAR; R. ORMAN. *SUNY Downstate Med. Ctr., CUNY Medgar Evers Col., SUNY Downstate Med. Ctr., SUNY Downstate Med. Ctr.*

9:00 K3 **293.10** A continuous hippocampal stimulation model of status epilepticus and temporal lobe epilepsy in C57bl/6 mice. J. KAPUR*; E. LEWCZUK; S. JOSHI; J. WILLIAMSON. *Univ. Virginai Hlth. Sci. Ctr.*

10:00 K4 **293.11** Variable impairment of consciousness in rodent absence seizures: Neuronal and hemodynamic mechanisms. C. P. MCCAFFERTY*; B. GRUENBAUM; Z. YUE; J. SAMPOGNARO; J. RYU; A. KUNDISHORA; P. HERMAN; B. SANGANAHALLI; F. HYDER; A. DEPAULIS; H. BLUMENFELD. *Yale Univ., Yale Univ., Yale Univ., Grenoble Inst. Neurosci, Yale Univ.*

11:00 K5 **293.12** Mechanism of decreased subcortical cholinergic arousal in focal limbic seizures: whole-cell recordings *in vivo*. J. P. ANDREWS*; Z. YUE; G. T. NESKE; D. A. MCCORMICK; H. BLUMENFELD. *Yale Univ. Sch. of Med., Yale Univ., Yale Univ., Yale Univ. Sch. Med., Yale Univ. Sch. of Med.*

8:00 K6 **293.13** Behavioral assessment of intralaminar thalamic neurostimulation to improve consciousness during the postictal period of seizures. J. XU*; M. M. GALARDI; J. Y. POK; C. P. MCCAFFERTY; L. FENG; A. GUMMADAVELLI; A. J. KUNDISHORA; J. L. GERRARD; M. LAUBACH; N. D. SCHIFF; H. BLUMENFELD. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., American Univ., Weill Cornell Med. Col., Yale Univ. Sch. of Med.*

9:00 K7 **293.14** Uncovering limbic seizure networks using optogenetic and neuroanatomical tracing approaches *in vivo*. L. SIEU; L. FENG*; C. MA; C. W. ZHAO; J. CARDIN; H. BLUMENFELD. *Yale Sch. of Med., Yale Sch. of Med., Yale Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

294. Epilepsy: Animal Models - Genetic Strategies, Optogenetics, and Mechanisms

Theme B: Neural Excitability, Synapses, and Glia

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 K8 **294.01** Rapid development of structural abnormalities following PTEN deletion from newborn dentate granule cells in a mouse model of epilepsy. S. R. ARAFA; C. L. LASARGE*; S. C. DANZER. *Univ. of Cincinnati JLW Col. of Pharm., Cincinnati Children's Hosp. Med. Ctr., Cincinnati Children's Hosp. Med. Ctr.*

9:00 K9 **294.02** PTEN deletion increases hippocampal granule cell excitability in male and female mice. R. Y. PUN*; V. R. SANTOS; S. R. ARAFA; C. L. LASARGE; S. ROWLEY; S. KHADEMI; T. BOULEY; K. HOLLAND; N. GARCIA-CAIRASCO; S. C. DANZER. *Cincinnati Children's Hosp., Georgetown Univ., Univ. of Cincinnati, Cincinnati Children's Hsptl Med. Ctr., Cincinnati Children's Hosp. Med. Ctr., Ribeirao Preto Sch. Med.*

10:00 K10 **294.03** Cellular heterogeneity in the anti-sezire effect of ontogenetic activation of the pedunculopontine nucleus. V. R. SANTOS*; R. HAMMACK; P. A. FORCELLI. *Georgetown Univ., Gerogetown Univ., Georgetown Univ.*

11:00 K11 **294.04** Wistar Audiogenic Rat (WAR) strain: contributions for epilepsy and associated comorbidities. L. D. GODOY*; I. B. BACCHIEGA; J. MARQUES GUZZI; J. CORTES DE OLIVEIRA; E. H. UMEOKA; N. GARCIA CAIRASCO. *Physiol. Department, Univ. of Sao Paulo, Ribeirão Preto Sch. of Med. - Univ. of São Paulo.*

8:00 DP03/K12 **294.05** (Dynamic Poster) *In vivo* brain imaging of seizure-induced and targeted optogenetically-induced spreading depolarization using diffusion-weighted MRI. S. M. CAIN*; B. BOHNET; A. C. YUNG; Y. YANG; J. K. KASS; P. KOZLOWSKI; T. P. SNUTCH. *Univ. of British Columbia, Univ. of British Columbia, Univ. of British Columbia, Univ. of British Columbia.*

9:00 L1 **294.06** Datamining to quantify and characterize dynamics of *in vitro* mouse seizures. D. N. CRISP; R. PARENT; G. G. MURPHY; W. C. STACEY*. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

10:00 L2 **294.07** The role of $K_v$beta2 in modulating *in vitro* seizure activity in mice treated with the ketogenic diet. R. PARENT*; G. L. FISHER; D. N. CRISP; H. BURNS; W. C. STACEY; G. G. MURPHY. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

11:00 L3 **294.08** ● ▲ Genetic background influences in "fast" kindling-susceptible PPKS and "slow" kindling-resistant PPKR rats transfer to kindling of the olfactory bulb. S. DUNN; C. LEVENICK; T. P. SUTULA*. *Univ. of Wisconsin.*

8:00 L4 **294.09** ● Optimization of a human stem cell derived neuron/astrocyte co-culture system for seizure liability assessment using microelectrode arrays. G. C. LUERMAN*; C. FLEMING; D. HESS; T. PALM; A. EHLICH; H. BOHLEN. *Axiogenesis Inc, Axiogenesis AG.*

9:00 L5 **294.10** Estrous cycle stage-dependent and sex-specific alterations of GnRH neuron firing activity in a mouse model of temporal lobe epilepsy. J. LI*; J. ROBARE; M. A. GHANE; M. E. NELSON; C. A. CHRISTIAN. *Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign.*

10:00 L6 **294.11** Non-periodic electrical stimulation to the amygdala delays the kindling-induced epileptogenesis in rats. D. MARTÍNEZ-VARGAS*; F. SANTOS-VALENCIA; S. ALMAZÁN-ALVARADO; A. RUBIO-LUVIANO; V. MAGDALENO-MADRIGAL; A. VALDÉS-CRUZ. *Inst. Nacional De Psiquiatría.*

11:00 L7 **294.12** Neuropathological assessment of hippocampal damage in C57BL/6J mice following convulsive motor seizures induced by repeated low-dose kainate administration. D. L. NGUYEN*; P. H. BESKE; M. R. EISEN; M. J. STENSLIK; D. M. KNIFFIN; C. L. HONNOLD; P. M. MCNUTT. *USAMRICD.*

8:00 L8 **294.13** Dorsal versus ventral hippocampus: Does target location matter in the kainic acid mouse model of temporal lobe epilepsy? Z. ZEIDLER*; C. LEINTZ; M. BRANDT-FONTAINE; E. I. KROOK-MAGNUSON. *Univ. of Minnesota, Univ. of Minnesota.*

9:00 L9 **294.14** ▲ Increased expression of proinflammatory cytokines IL-1α, IL-6 and TNF-α by a kainic acid-induced status epilepticus model in the neonatal rat brain. M. J. T. HERRERA*; C. R. DE LA CRUZ-NEGRETE; S. OROZCO-SUÁREZ; M. A. DELI; A. HARAZIN; F. WALTER; L. ROCHA; P. CAMPOS-BEDOLLA. *Inst. Mexicano Del Seguro Social, Hungarian Acad. of Sci., Univ. of Wisconsin, CINVESTAV.*

10:00 L10 **294.15** Cyclooxygenase-2 inhibitors differentially attenuate pentylenetetrazol-induced seizures and increase of pro- and anti-inflammatory cytokine levels in the cerebral cortex and hippocampus of mice. C. F. MELLO*; F. R. TEMP; T. DUARTE; J. R. MARAFIGA; M. M. PILLAT. *Fed Univ. S. Maria (UFSM), Univ. Federal de Santa Maria.*

11:00 M1 **294.16** Mild TBI generated by a supersonic helium wave provides mechanistic insight into induced pathological states such as absence seizures. J. SPIESS*; J. PINA-CRESPO; S. HUITRON-RESENDIZ; A. J. ROBERTS; K. S. MATHEWS; P. RIGBY; M. SMITH; P. N. VENKATASUBRAMANIAN; A. P. MANN; G. GARCIA; D. J. SHEFFLER; N. D. P. COSFORD; A. M. WYRWICZ; J. L. DUCKWORTH. *Cortrop Inc., Sanford Burnham Med. Discovery Inst., The Scripps Res. Inst., L3 Applied Technologies, Ctr. for Basic M.R. Res., Northshore Univ. Healthsystem, Uniformed Services Univ. of the Hlth. Sci.*

8:00 M2 **294.17** A novel fluorescamine-based imaging approach to investigate the diffusion of 4-aminopyridine in rat neocortex. M. ZHAO*; R. E. RADWANSKI; E. BAIRD-DANIEL; H. MA; N. NISHIMURA; C. B. SCHAFFER; T. H. H SCHWARTZ. *Weill Cornell Med. of Cornell Univ., Weill Cornell Med. of Cornell Univ., Cornell Univ., New York Presbyterian Hosp.*

9:00 M3 **294.18** The effect of time of day on respiratory outcomes and survival following maximal electroshock seizures in mice. B. S. PURNELL*; M. A. HAJEK; G. F. BUCHANAN. *Univ. of Iowa, Univ. of Iowa, Yale Sch. of Med.*

10:00 M4 **294.19** Ketogenic diet-induced extension of longevity in epileptic Kcna1-null mice is influenced by gender and age at treatment onset. K. CHUN; S. MA; H. CHOI*; J. M. RHO; D. KIM. *Inje university, ilsan paik hospital, Barrow Neurolog. Institute, St. Joseph's Hosp. & Med. Ctr., Harvard Med. Sch. (SERI/MEEI), Alberta Children's Hospital, Univ. of Calgary.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 M5 **294.20** Validating a nerve agent-induced seizure model by evaluating the anticonvulsant and neuroprotective effects of scopolamine, memantine, phenobarbital, and ganaxolone. C. JACKSON; C. ARDINGER; D. BALLOUGH; H. CRAIG; J. H. MCDONOUGH; H. S. MCCARREN*. *US Army Med. Res. Inst. of Chem. Def.*

8:00 M6 **294.21** Novel insights into the mechanisms underpinning modulation of cortical seizure propagation by sensory activation. S. S. HARRIS*; L. BOORMAN; A. KENNERLEY; P. OVERTON; Y. ZHENG; T. H. SCHWARTZ; J. BERWICK. *Univ. of Sheffield, Univ. of Reading, Joan and Sanford I Weill Med. Col. of Cornell Univ.*

9:00 M7 **294.22** Optogenetically induced population discharge threshold (oPDT) as a sensitive measure of excitability. D. C. KLORIG*; G. ALBERTO; D. W. GODWIN. *Wake Forest Hlth. Sci., Wake Forest Sch. of Med., Wake Forest Sch. of Med.*

10:00 M8 **294.23** Forebrain neuron-specific deletion of Sod2 results in epilepsy, mitochondrial oxidative stress, and altered bioenergetics and gene expression. R. FULTON; J. N. PEARSON; S. AIVAZIDIS; T. SHIMIZU; M. N. PATEL*. *Univ. of Colorado Anschutz Med. Campus, Univ. of Colorado, Chiba Univ., Univ. Colorado, Anschutz Med. Ctr.*

POSTER

295. Biology of Microglia

Theme B: Neural Excitability, Synapses, and Glia

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 M9 **295.01** Are microglia replaceable? A. J. FILIANO*; J. C. CRONK; D. GOLDMAN; J. KNOPP; A. LOUVEAU; I. MARIN; R. MARSH; E. JI; I. SMIRNOV; C. C. OVERALL; J. KIPNIS. *Univ. of Virginia.*

9:00 M10 **295.02** cAMP modulates microglial phagocytosis. M. ANDOH*; R. KOYAMA; Y. IKEGAYA. *Grad Sch. Pharma Sci, Univ. Tokyo.*

10:00 N1 **295.03** Epigenetic regulation of microglial phosphatidylinositol 3-kinase (PI3K) pathway involved in synaptic plasticity. G. SAW*; M. KARTHIK; T. DHEEN. *Natl. Univ. of Singapore, Natl. Univ. of Singapore.*

11:00 N2 **295.04** CRISPR/Cas9-mediated disruption of SGK1 enhances potential inflammatory activity of microglial BV-2 cells. H. ASAI; K. INOUE*; E. SAKUMA; T. UEKI. *Nagoya City Univ. Sch. Med.*

8:00 N3 **295.05** Aif1-iCre knock-in mouse line: A tool for conditional gene manipulation in microglia. M. ABE*; F. PENG; K. SAKIMURA. *Cell. Neurobiol, Brain Res. Inst, Niigata Univ.*

9:00 N4 **295.06** TSPO interacts with NOX2: A novel function in murine primary microglia. M. K. LOTH*; T. R. GUILARTE. *Columbia Mailman Sch. of Publ. Hlth., Florida Intl. Univ.*

10:00 N5 **295.07** Dark microglia: A follow-up study across the lifespan. K. BISHT*; K. PICARD; N. VERNOUX; K. SHARMA; Y. Y. GRINBERG; J. FAUSTINO; M. J. CARSON; Z. S. VEXLER; M. TREMBLAY. *Laval Univ., Univ. of California Riverside, Univ. California, Univ. of California Riverside, UCSF, Univ. Laval.*

11:00 N6 **295.08** Donepezil suppresses intracellular Ca^{2+} mobilization through the PI3K pathway in rodent microglia. Y. MIZOGUCHI*; Y. HARAGUCHI; T. MURAKAWA-HIRACHI; Y. IMAMURA; A. MONJI. *Dept. Psychiatry, Fac. Medicine, Saga Univ.*

8:00 N7 **295.09** Exosomes regulate microglia responses to inflammation and aging. J. C. UDEOCHU*; A. CAI; A. JOVICIC; C. SANCHEZ DIAZ; P. VENTURA; S. VILLEDA. *Univ. of California, San Francisco, Stanford Univ., Univ. of California, San Francicsco.*

9:00 N8 **295.10** Spatial and temporal activation of microglia and astrocytes following transcranial focused ultrasound. J. SILBURT*; S. HEINEN; K. MARKHAM-COULTES; M. A. O'REILLY; K. HYNYNEN; I. AUBERT. *Univ. of Toronto, Sunnybrook Res. Inst., Univ. of Toronto / Sunnybrook Res. Inst., Sunnybrook Res. Inst.*

10:00 N9 **295.11** Local cues establish and maintain region-specific phenotypes of basal ganglia microglia. L. M. DE BIASE*; K. E. SCHUEBEL; Z. H. FUSFELD; K. JAIR; I. A. HAWES; R. CIMBRO; H. ZHANG; Q. LIU; H. SHEN; Z. XI; D. GOLDMAN; A. BONCI. *Natl. Inst. on Drug Abuse, Natl. Inst. on Alcohol Abuse and Alcoholism, Natl. Inst. On Drug Abuse, Johns Hopkins Univ. Sch. of Med., Natl. Inst. on Drug Abuse Intramural Res. Program, Intramural Res. Program,Nia/ NIH, NIDA/IRP, Natl. Inst. on Alcohol Abuse and Alcoholism Lab. of Neurogenetics, Natl. Inst. On Drug Abuse.*

11:00 N10 **295.12** Effect of microglia depletion on cerebral kynurenine pathway metabolism in control and R6/2 mice. K. V. SATHYASAIKUMAR*; D. W. DONLEY; M. A. R. THOMAS; F. M. NOTARANGELO; P. SEVERSON; B. L. WEST; J. H. FOX; R. SCHWARCZ. *Univ. of Maryland Sch. of Med., Univ. of Wyoming, Plexxikon Inc.*

8:00 N11 **295.13** The role of microglia/macrophages in the response to olfactory bulb damage in adult zebrafish. S. R. VAR*; C. A. BYRD-JACOBS. *Western Michigan Univ.*

9:00 N12 **295.14** ● Improved culturing conditions for the generation of *in vivo*-like primary microglia. H. CYNIS*; S. BARENDRECHT; B. HIETEL; R. EICHENTOPF; S. SCHILLING; H. U. DEMUTH; D. C. WAGNER. *Fraunhofer IZI-MWT, Johannes-Gutenberg Univ.*

10:00 O1 **295.15** Microglial-specific gene expression in adult prefrontal cortex following perinatal exposure to high fat diet. B. L. SMITH*; S. E. MCKEE; E. S. WOHLEB; T. M. REYES. *Univ. of Cincinnati, Univ. of Pennsylvania.*

11:00 O2 **295.16** Repopulated microglia are solely derived from the proliferation of residual microglia, not from *de novo* progenitor cells. B. PENG*; Y. HUANG; S. XIONG; G. QIN; G. HU; J. WANG; F. SUN; Y. LIANG; Z. XU; K. SO; T. YUAN; Y. RAO. *Chinese Acad. of Sci., Shenzhen Inst. of Advanced Technology, Chinese Acad. of Sci., Shanghai Ctr. for Bioinformation Technol., The Univ. of Hong Kong, Jinan Univ., Nanjing Normal Univ., The Univ. of Hong Kong.*

8:00 O3 **295.17** Translational profiling of microglia reveals artifacts of cell sorting. J. D. FRYER*; S. KANG. *Mayo Clin. FL, Mayo Clin.*

9:00 O4 **295.18** Noradrenergic modulation of microglial dynamics and synaptic plasticity. R. STOWELL*; A. MAJEWSKA. *Univ. of Rochester.*

10:00 O5 **295.19** Withdrawn

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 O6 **295.20** Microglial-specific myd88 signaling impacts extinction of morphine cpp and adult hippocampal neurogenesis. P. D. RIVERA*; R. HANAMSAGAR; M. KAN; P. TRAN; D. STEWART; M. GUNN; S. BILBO. *Massachusetts Gen. Hosp. for Children, Harvard Med. Sch., Duke Univ. Med. Ctr., Duke Univ.*

8:00 O7 **295.21** The role of microglial Stat3 signaling in early postnatal brain development. B. BARTH; H. LU; S. KIM; A. BOWLING; D. MICHAUD; K. KONGANTI; J. CAI; W. GRIFFITH; J. LI*. *Texas A&M Univ., Texas A&M Univ., Texas A&M Hlth. Sci. Ctr.*

POSTER

296. Oligodendrocyte and Schwann Cells Development and Myelination

Theme B: Neural Excitability, Synapses, and Glia

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 O8 **296.01** Lifelong myelin plasticity along single cortical axons. R. A. HILL*; A. LI; J. GRUTZENDLER. *Yale Univ. Sch. of Med.*

9:00 O9 **296.02** ● Nanoscale alignment of the periodic subcortical cytoskeleton of axon and glia at nodes of Ranvier. E. D'ESTE*; D. KAMIN; F. BALZAROTTI; S. W. HELL. *Max Planck Inst. For Biophysical Chem.*

10:00 O10 **296.03** Oligodendrocyte myelination: Axon size may be all that matters. S. R. MAYORAL*; A. ETXEBERRIA; C. J. SHIN; C. S. YIAN; J. R. CHAN. *Univ. of California San Francisco Dept. of Neurol., UCSF, Nanyang Technological Univ.*

11:00 P1 **296.04** Selection of CNS axons for myelination is negatively regulated by EphA4 and RhoA signaling. L. S. LAURSEN*; M. HARBOE; J. TORVUND-JENSEN; K. KJAER-SORENSEN. *Aarhus Univ., Aarhus Univ., Aarhus Univ.*

8:00 P2 **296.05** Pentose pathway activation in M leprae-infected Schwann cells leads to reduced lactate generation and nerve damage. B. S. MIETTO*; K. G. C. VASCONCELLOS; B. JUNQUEIRA; R. C. A. MEDEIROS; S. L. G. ANTUNES; M. C. V. PESSOLANI; E. N. SARNO; F. A. LARA. *Fiocruz, Fiocruz.*

9:00 P3 **296.06** Nectin-like 2 (Necl-2) cell adhesion molecule is a negative regulator of Schwann cell myelination. P. MAUREL*; M. CHEN; C. HEFFERNAN; M. RODRIGUEZ. *Rutgers - The State Univ. of New Jersey.*

10:00 P4 **296.07** ● Reversing polycomb repression in schwann cells after nerve injury. P. T. DUONG*; K. H. MA; J. P. SVAREN. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

11:00 P5 **296.08** Schwann cell metabolism: Is glycolysis favoured to support axons? G. DELLA FLORA NUNES; M. FELTRI*; Y. POITELON; E. HURLEY; M. PATEL; L. WRABETZ. *HJKRI, Univ. at Buffalo, State Univ. of New York at Buffalo - South Campus Med. Bookstore, State Univ. of New York at Buffalo.*

8:00 P6 **296.09** AMPA receptor signaling regulates the fate of oligodendrocyte progenitors. A. AGARWAL*; L. CHAKRAVARTI; K. SPARKS; A. MENON; D. E. BERGLES. *Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ. Sch. Med.*

9:00 P7 **296.10** Optogenetic, electrical and electromagentic stimulation for subcellular induction of neuron activity in myelination studies *in vitro*. A. BLASIAK*; D. WONG; N. V. THAKOR; J. YOO; I. YANG. *NUS.*

10:00 P8 **296.11** Diverse patterns of myelination along individual axons in the adult cerebral cortex. C. CALL*; D. E. BERGLES. *Johns Hopkins Univ.*

11:00 P9 **296.12** Axonal domain components are transported independently in separate vesicles. Y. BEKKU*; J. L. SALZER. *New York Univ. Neurosci. Inst., NYU Sch. of Med.*

POSTER

297. Amyloid-Beta Tau Interaction

Theme C: Neurodegenerative Disorders and Injury

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 P10 **297.01** Abeta oligomers in synaptic lipid rafts induce phosphorylated tau and impair signal transduction. T. KAWARABAYASHI*; S. NARITA; K. SATO; T. NAKAMURA; Y. SEINO; M. HIROHATA; N. NAKAHATA; M. SHOJI. *Hirosaki Univ. Grad. Sch. of Med.*

9:00 Q1 **297.02** ▲ Extracts from AD synapses accelerate *in vitro* tau propagation. E. E. MIYOSHI*; T. BILOUSOVA; M. ALAM; J. J. CAMPAGNA; C. J. ELIAS; A. HATAMI; D. FAKHRUTDINOV; V. JOHN; K. H. GYLYS. *UCLA, UCLA, UCLA.*

10:00 Q2 **297.03** Characterization of a novel APP/tau transgenic mouse model of Alzheimer's disease. S. L. LIPPI*; M. L. SMITH; T. T. DIMOPOULOS; J. M. WOOD; A. BOOTH; J. M. FLINN. *George Mason Univ.*

11:00 Q3 **297.04** Impairments in activities of daily living and wheel running behavior in a novel APP/tau mouse model of Alzheimer's disease. M. L. SMITH*; S. L. P. LIPPI; J. M. WOOD; T. T. DIMOPOULOS; C. M. HERNANDEZ; J. M. FLINN. *George Mason Univ.*

8:00 Q4 **297.05** ● A common upstream target? Novel small drug-like molecules decreasing toxic Abeta species and tau phosphorylation simultaneously. V. R. LINGAPPA*; A. MÜLLER-SCHIFFMANN; D. DEY; S. SELVARAJAH; V. ASUNDI; C. KORTH. *Prosetta Biosciences, Inc, Univ. of Düsseldorf.*

9:00 Q5 **297.06** Exogenous tau produces sectorial degeneration in the murine retinal projection. M. A. SMITH*; E. S. PLYLER; G. N. WILSON; C. M. DENGLER-CRISH; S. D. CRISH. *Northeast Ohio Med. Univ., Kent State Univ., Northeast Ohio Med. Univ., NEOMED.*

10:00 Q6 **297.07** Ocular amyloid-beta induces sectorial gliosis in the distal retinal projection. E. S. PLYLER*; M. A. SMITH; C. M. DENGLER-CRISH; S. D. CRISH. *Northeast Ohio Med. Univ., Northeast Ohio Med. Univ., NEOMED.*

11:00 Q7 **297.08** Retinofugal degeneration in Alzheimer's disease: Evidence of axonal transport deficits in aged 3xtg mice. C. M. DENGLER-CRISH*; M. A. SMITH; A. J. SCHULLER; E. S. PLYLER; S. D. CRISH. *Northeast Ohio Med. Univ., Northeast Ohio Med. Univ., The Univ. of Akron, NEOMED.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 Q8 **297.09** ▲ Mechanism of toxicity mediated by the interplay of tau, amyloid-β and α-synuclein. K. S. INGRAM; E. WIAFE; B. FORBES; T. LEWTER; S. TATE; M. GUERRERO-MUNOZ; D. L. CASTILLO-CARRANZA*. *Minority Men's Hlth. Initiative / Hampton Univers, Hampton Univ., Hampton Univ.*

9:00 Q9 **297.10** Amyloid beta and Tau neuropathology increases with aging in a natural model of Alzheimers Disease (Octodon degus). C. B. LINDSAY*; D. S. RIVERA; P. CISTERNAS; N. C. INESTROSA. *Pontificia Univ. Catolica De Chile, Pontificia Univ. Católica de Chile, CARE-UC, Pontificia Univ. Católica de Chile, Ctr. For Aging and Regeneration (CARE),P. Catholic Univ. of Chile.*

POSTER

298. Dementia: Proteinopathy and Pathology Other Than Abeta and Tau

Theme C: Neurodegenerative Disorders and Injury

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 Q10 **298.01** Dipeptide repeat-containing protein oligomers in ALS and FTD. M. CARRETERO MURILLO*; S. A. MCALLEN; U. SENGUPTA; J. RUDRA; R. KAYED. *Univ. of Texas Med. Br. At Galveston, Univ. of Texas Med. Br., Univ. of Texas Med. Br.*

9:00 Q11 **298.02** Genetic modification of proteasome expression in *Drosophila.* T. SCHMIDT-GLENEWINKEL*; C. YEH; M. E. FIGUEIREDO-PEREIRA. *Hunter Col. of CUNY, Hunter Col.*

10:00 Q12 **298.03** ● TDP-43 oligomers in AD pathogenesis. S. A. MCALLEN*; M. CARRETERO MURILLO; U. SENGUPTA; R. KAYED. *Univ. of Texas Med. Br., Univ. of Texas Med. Br.*

11:00 R1 **298.04** Restoration of progranulin to progranulin-deficient mice corrects lysosomal abnormalities. A. E. ARRANT*; D. E. UNGER; V. C. ONYILO; E. D. ROBERSON. *Univ. of Alabama At Birmingham, UAB.*

8:00 R2 **298.05** Disruption of ion channel gradients in aged cognitively-impaired rats. L. A. BEAN*; T. F. MUSIAL; M. L. RUSSO; R. BORENSTEIN; S. A. MULLEN; G. D. AYALA; M. M. OH; J. F. DISTERHOFT; D. NICHOLSON. *Rush Univ. Med. Ctr., Northwestern Univ. Med. Sch., Northwestern Univ. - Chicago.*

9:00 R3 **298.06** Alzheimer's disease-linked HCN channelopathy rescued via intrahippocampal infusion of carvedilol. T. F. MUSIAL*; L. A. BEAN; M. L. RUSSO; S. A. MULLEN; G. AYALA; D. A. NICHOLSON. *Rush Univ. Med. Ctr.*

10:00 R4 **298.07** Alterations in the failure rate of antidromic action potential generation in mouse models of Alzheimer's disease. M. L. RUSSO*; G. D. AYALA; S. A. MULLEN; D. NICHOLSON. *Rush Univ. Med. Ctr.*

11:00 R5 **298.08** JZ101 is required for mitochondrial quality control. L. CHAO*; J. ZHANG. *Peking Union Med. Col.*

8:00 R6 **298.09** CRISPR/Cas9-mediated generation of a GPR3 knockin mouse. Y. HUANG*; C. FERGUSON; G. E. HOMANICS; A. THATHIAH. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh Brain Inst., Pittsburgh Inst. for Neurodegenerative Dis., KU Leuven Ctr. for Human Genet. and Leuven Inst. for Neurodegenerative Dis. (LIND).*

POSTER

299. LRRK2 Mechanisms, Targets, and Pathways

Theme C: Neurodegenerative Disorders and Injury

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 R7 **299.01** ● ▲ In silico simulation of LRRK2 and rab3 vesicle cycle interactions in Parkinson's disease. L. E. VINCENT*; J. W. RYAN; D. A. DODDS; A. D. LEE; B. BEHROUZ. *Neuroinitiative, Neuroinitiative.*

9:00 R8 **299.02** Inhibition of LRRK2 kinase activity results in abnormal protein dynamics and reduces protein stability. B. J. SANSTRUM*; B. M. S. S. GOO; D. Z. Y. HOLDEN; D. D. DELGADO; N. G. JAMES. *Univ. of Hawaii at Manoa.*

10:00 R9 **299.03** Parkinson´s disease-associated mutations in LRRK2 cause centrosomal defects via Rab8a phosphorylation. J. MADERO-PÉREZ*; E. FDEZ; B. FERNÁNDEZ; A. J. LARA ORDÓÑEZ; M. BLANCA RAMÍREZ; P. GÓMEZ-SUAGA; D. WASCHBÜSCH; E. LOBBESTAEL; V. BAEKELANDT; A. C. NAIRN; J. RUIZ-MARTÍNEZ; A. AIASTUI; A. LÓPEZ DE MUNAÍN; P. LIS; T. COMPTDAER; J. TAYMANS; M. CHARTIER-HARLIN; A. BEILINA; A. GONNELLI; M. R. COOKSON; E. GREGGIO; S. HILFIKER. *Inst. Parasitology and Biomedicine López-Neyra,CSIC, Dept. of Exptl. Tumorbiology, WestfälischeWilhelms Univ. Münster, Lab. for Neurobio. and Gene Therapy, KU Leuven, Dept. of Psychiatry, Yale Univ. Sch. of Med., Div. of Neurosciences, InstitutoBiodonostia-CIBERNED, Med. Res. Council Protein Phosphorylation and Ubiquitylation Unit, Col. of Life Sciences, Univ. of Dundee, Ctr. de Recherche Jean-Pierre AUBERT Neurosciences et Cancer, Univ. Lille, Lab. of Neurogenetics, Natl. Inst. on Aging, Natl. Inst. of Hlth., Dept. of Biology, Univ. of Padova.*

11:00 R10 **299.04** ● Rats carrying human LRRK2 G2019S mutation show dopaminergic vulnerability and gait abnormalities after peripheral LPS induced inflammation. S. SUBRAMANIAM*; E. HINGCO; N. NECKEL; J. WANG; R. MALHAS; R. MIRAMONTES; X. SU; M. S. FIANDACA; H. J. FEDEROFF. *Univ. of California Irvine, Georgetown Univ. Med. Ctr.*

8:00 S1 **299.05** Parkinson's disease-linked LRRK2 positively regulates type 1 Interferon-induced inflammatory signaling and cytokine production through selective DSCR1 phosphorylation. H. PARK; K. HAN; H. RHIM*; K. CHUNG. *Yonsei Univ., Korea Inst. Sci. Tech. (KIST).*

9:00 S2 **299.06** Age-dependent dopaminergic neurodegeneration and impairment of the autophagy-lysosomal pathway in LRRK-deficient mice. Y. YUAN*; E. GIAIME; Y. TONG; L. WAGNER; J. SHEN. *Brigham and Women's Hosp., Harvard Med. Sch.*

10:00 S3 **299.07** Altered slow-wave sleep in the LRRK2 G2019S mouse model of Parkinson's disease. J. WIEGAND*; K. GIES; M. J. BARTLETT; T. FALK; S. L. COWEN. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona Col. of Med., Univ. of Arizona Col. of Med.*

11:00 S4 **299.08** Divergent autophagic signature in G2019S-LRRK2 mutation compared to idiopathic PD cases. A. MAMAIS; C. MANZONI; I. NAZISH; T. WARNER; M. R. COOKSON; P. LEWIS; R. BANDOPADHYAY*. *Lab. of Neurogenetics, Univ. of Reading, Inst. of Neurol., Inst. of Neurol.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 T1 **299.09** ● Phosphorylation of p53 by LRRK2 induces microglial TNFα-mediated neurotoxicity. D. HO*; J. EUN; W. SEOL; I. SON. *Inam Neurosci. Res. Ctr., Dept. of Biomed. Sciences, Neurosci. Grad. Program, Ajou Univ. Sch. of Med., Dept. of Neurology, Sanbon Med. Center, Collage of Medicine, Wonkwang Univ.*

9:00 T2 **299.10** LRRK1 and LRRK2 function in the kidney. G. HUANG*; L. WANGER; J. SHEN. *Brigham and Women's Hosp., Harvard Med. Sch.*

10:00 T3 **299.11** Decreased Lamp2 CSF concentrations in female Parkinson's disease patients with LRRK2 mutations. D. A. LOEFFLER*; A. C. KLAVER; M. P. COFFEY; J. O. AASLY; P. A. LEWITT. *Beaumont Hlth., St. Olav's Hosp., Henry Ford West Bloomfield Hosp.*

11:00 T4 **299.12** LRRK2 G2019S mutation modulates intracellular and ER calcium homeostasis in human iPSC-derived neurons. J. A. KORECKA*; S. TALBOT; S. M. DE LEEUW; E. F. FERRARI; A. M. MOSKITES; L. BARRET; D. C. DINESH; F. M. JODELKA; A. J. HINRICH; T. OSBORN; C. J. WOOLF; M. L. HASTINGS; O. ISACSON; P. J. HALLETT. *McLean Hospital/Harvard Med. Sch., Children's Hosp. Boston., Rosalind Franklin Univ. of Med. and Sci.*

8:00 T5 **299.13** Parkinson's disease-linked LRRK2 regulates epigenetic histone tail acetylation and neuronal apoptosis through HDAC3 phosphorylation and modulation of its activity and localization. W. SHIN; K. HAN; H. RHIM; K. C. CHUNG*. *Yonsei Univ., Korea Inst. Sci. Tech. (KIST).*

9:00 T6 **299.14** CRISPR/Cas9 genomic editing of leucine-rich repeat kinase 2 (LRRK2) in marmoset stem cells. S. C. VERMILYEA*; A. BABINSKI; S. GUTHRIE; T. G. GOLOS; M. E. EMBORG. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

10:00 T7 **299.15** Pharmacodynamic profiles of LRRK2 kinase inhibitors in transgenic rats. K. J. KELLY*. *Univ. of Alabama At Birmingham.*

POSTER

300. Movement Disorders I

Theme C: Neurodegenerative Disorders and Injury

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 T8 **300.01** Biochemical and behavioral outcome in AMN mice after intrathecal delivery of AAV9-hABCD1. Y. GONG*; F. LAHEJI; A. BERENSON; A. VOLAK; G. GAO; X. O. BREAKEFIELD; C. MAGUIRE; F. EICHLER. *Massachusetts Gen. Hosp., Gene Therapy Ctr. of Univ. of Massachusetts, Massachusetts Gen. Hosp.*

9:00 T9 **300.02** The DNA repair histone H2AX controls motor learning and balance. U. WEYEMI*; B. D. PAUL; S. H. SNYDER. *Johns Hopkins Univ., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. Med.*

10:00 T10 **300.03** ▲ How extracellular α-synuclein affects the function of oligodendrocytes and the pathology of multiple system atrophy? S. KAJI*; T. MAKI; N. UEMURA; R. TAKAHASHI. *Kyoto Univ. Grad. Sch. of Med.*

11:00 T11 **300.04** Preclinical assessment of an FTY720-derivative, FTY720-Mitoxy, as a potential novel therapy for multiple system atrophy (MSA). G. VIDAL-MARTINEZ; B. YANG; I. SEGURA; J. VARGAS-MEDRANO; S. CHAPPARO; J. B. ARTERBURN; H. SANDOVAL*; R. G. PEREZ. *Texas Tech. Univ. Hlth. Sci. Center- El Paso Campus, New Mexico State Univ., Texas Tech.*

8:00 T12 **300.05** TDP-43 is a key factor in regulating oligodendroglial lineage biogenesis and myelination. J. WANG*; W. HO; S. LING. *Natl. Univ. of Singapore.*

9:00 U1 **300.06** Non-immunosuppressive FTY720 analogues increase brain derived neurotrophic factor (BDNF) in oligodendroglia. I. SEGURA-ULATE; R. G. PEREZ*; T. BELCHER; G. VIDAL-MARTINEZ. *Texas Tech. Hlth. Sci. Ctr., Texas Tech. Univ. Hlth. Sci. Ctr. - El Paso Campus.*

10:00 U2 **300.07** ● Understanding the basis of CSMN vulnerability and degeneration using a proteomics approach. M. C. SCHULTZ*; J. KLESSNER; P. THOMAS; S. SANCHEZ; R. DAVIS; P. GOTTLIEB; N. KELLEHER; P. ÖZDINLER. *Northwestern U. Feinberg Sch. of Med. Dept. Neurol, Northwestern Univ., Northwestern Univ., Northwestern Univ.*

11:00 U3 **300.08** Prolonged striatal cholinergic activation and nicotine treatment similarly reduce L-dopa-induced dyskinesias. T. BORDIA*; M. QUIK; X. PEREZ. *SRI Intl.*

8:00 U4 **300.09** Targeting hypersensitive corticostriatal terminals and the dopamine D_4 receptor in restless leg syndrome. C. R. QUIROZ*; G. YEPES; M. SANCHEZ-SOTO; H. YANO; X. GUITART; W. REA; N. S. CAI; V. CASADÓ-ANGUERA; V. CASADÓ; R. P. ALLEN; C. J. EARLEY; S. FERRÉ. *Natl. Inst. on Drug Abuse Intramural Res. Program, Univ. of Barcelona, Johns Hopkins Univ. Dept. of Neurol. and Neurosurg.*

9:00 U5 **300.10** Assessment of haloperidol-induced tremulous jaw movement in rats using loose restraint and a video recording system. E. LATONUMMI*; R. HODGSON; A. J. NURMI; L. KOISTINEN. *Charles River Discovery.*

10:00 U6 **300.11** Novel viral vector-mediated rat model of multiple system atrophy. D. J. MARMION*; M. H. SAVOLAINEN; Y. CHU; D. KIRIK; R. J. MANDEL; T. MCCOWN; S. J. GRAY; J. H. KORDOWER. *Rush Univ. Med. Ctr., Lund Univ., Univ. Florida Coll Med. Univ. Florida Brain Inst., Univ. of North Carolina at Chapel Hill, Univ. of North Carolina, Univ. of North Carolina at Chapel Hill, Rush Univ. Med. Ctr., The Van Andel Inst.*

11:00 U7 **300.12** Combined therapy with tempol (4-Hidroxy-TEMPO) and human mesenchymal stem cells from adipose tissue: Neuroprotection, glial reactivity attenuation, and immunomodulation in SOD1-G93A transgenic mice. G. CHIAROTTO*; M. V. DE CASTRO; A. S. S. DUARTE; Â. C. M. LUZO; A. L. OLIVEIRA. *Univ. of Campinas.*

8:00 U8 **300.13** Optimizing patient-specific cellular neurodegenerative disease model based on human iPSc derived neuronal differentiation. M. FANG*; Z. HU; Y. YANG. *Zhejiang Univ., Dept. of Obstetrics and Gynecology, Hangzhou Red Cross Hosp., Inst. of Neurosciences, Zhejiang Univ. Sch. of Med.*

9:00 U9 **300.14** Neurological manifestation of Wilson disease as a distinct disease subgroup. B. LEE*; G. SEO; Y. KIM; G. KIM; H. YOO. *Asan Med. Ctr., Asan Med. Ctr. Children's Hosp.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 U10 **300.15** PRRT2 function and mutations in the pathogenesis of Paroxysmal Kinesigenic Dyskinesia. Y. PAN*; Y. YANG; Q. LIU; Y. TIAN; W. CHEN; K. YANG; X. LI; S. LI; B. TANG. *Emory Univ. Sch. of Med., Xiangya Hospital, Central South Univ.*

11:00 U11 **300.16** Functional activity within the visuomotor system predicts severity of essential tremor. D. B. ARCHER*; W. T. CHU; J. W. CHUNG; R. G. BURCIU; S. A. COOMBES; A. WAGLE SHUKLA; D. E. VAILLANCOURT. *Univ. of Florida, Univ. of Florida, Univ. of Florida.*

8:00 U12 **300.17** Creating volitional movement in cerebral palsy. K. N. HUGGINS*; M. TURNER. *Movement Lesson, LLC, Movement Lesson, LLC.*

POSTER

301. Motor Neuron Disease: Animal Models I

Theme C: Neurodegenerative Disorders and Injury

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 V1 **301.01** Human superoxide dismutase 1 (SOD1) enters the nucleus and binds chromatin in neurons of G93A-SOD1 transgenic mice. B. KIM*; L. J. MARTIN. *John Hopkins Univ. Sch. of Med.*

9:00 V2 **301.02** Increasing urate levels may delay disease onset in the SOD1 G93A mouse model of amyotrophic lateral sclerosis. E. GRANUCCI*; K. E. GLAJCH; K. TSIORAS; K. A. MUELLER; A. M. DIOS; Y. XU; R. BAKSHI; X. CHEN; S. PAGANONI; M. A. SCHWARZSCHILD; E. KISKINIS; G. SADRI-VAKILI. *Massachusetts Gen. Hosp., Northwestern Univ.*

10:00 V3 **301.03** Behavioral and histological evaluation of SOD1 (G93A) and Profilin 1(PFN1 G118V) mouse models of motor neuron disease. I. MORGANSTERN*; N. ROBERTS; E. SABATH; D. HAVAS; L. THIEDE; M. KIAEI; T. HANANIA. *Psychogenics, Univ. of Arkansas for Med. Sci.*

11:00 V4 **301.04** ● Longitudinal measurements of neurofilament light in the SOD1^{G93A} mouse model of amyotrophic lateral sclerosis. B. L. BURGESS*; D. L. BAKER; S. L. DOMINGUEZ; A. DATWANI; F. L. YEH. *Genentech, Genentech, Genentech.*

8:00 V5 **301.05** Altered regulation of upper motor neuron synaptic hyper-excitability by TrkB receptor signaling in the SOD1G93A mouse model of amyotrophic lateral sclerosis. J. PRADHAN; P. G. NOAKES; M. C. BELLINGHAM*. *Univ. of Queensland, Univ. of Queensland, Univ. of Queensland.*

9:00 V6 **301.06** Inhibitor of differentiation 2 (ID2) as a modifying factor of oligodendrocyte dysfunction in the SOD1G93A mouse model. C. EYKENS; C. JENSEN; A. IAVARONE; L. VAN DEN BOSCH; W. L. ROBBERECHT*. *VIB, KULeuven, Columbia Univ., Univ. Hosp Gasthuisberg.*

10:00 V7 **301.07** Assessing skeletal muscle bioenergetics *in situ* in amyotrophic lateral sclerosis: Characterizing metabolic perturbations in a SOD1 mouse model. R. LI*; S. T. NGO. *The Univ. of Queensland, SBMS, The Univ. of Queensland, The Univ. of Queensland, Royal Brisbane & Women's Hosp.*

11:00 V8 **301.08** Knocking-down metabotropic glutamate receptor type 5 (mGluR5) in the SOD1^{G93A} mouse ameliorates ALS disease hallmarks. M. MILANESE; T. BONIFACINO; F. PROVENZANO; E. GALLIA; L. CATTANEO; A. PULITI; C. USAI; F. CONTI; G. BONANNO*. *Univ. of Genoa, Univ. of Genoa and Giannina Gaslini Inst., Natl. Res. Council, Univ. Politecnica delle Marche, Departemnt of Pharmacy, Sch. of Med. and Pharmacy, Univ. of Genoa.*

8:00 V9 **301.09** Symptom severity in the acute phase following repeat mild TBI predicts early disease onset in the SOD1^{G93A} ALS rat model. G. M. THOMSEN*; N. CHO; N. DHILLON; M. ALKASLASI; P. HARO-LOPEZ; O. SHELEST; G. BARMPARAS; E. LEY. *Cedars-Sinai Med. Ctr.*

9:00 V10 **301.10** Studying neuroprotective mechanisms in the SOD1-G93A mouse model of Amyotrophic lateral sclerosis. S. FIGUEROLA SANTAMONICA*; F. DE LORENZO; M. SENDTNER; M. H. VOUTILAINEN; M. SAARMA. *Univ. of Helsinki, Univ. Wurzburg.*

10:00 V11 **301.11** ● SOD1^{G93A} astrocytes induce toxicity in motor neurons via a DR6-mediated pathway in ALS model. V. MISHRA*; V. LE VERCHE; D. B. RE; K. POLITI; P. RINCHETTI; M. J. ALVAREZ; A. CALIFANO; F. LOTTI; S. PRZEDBORSKI. *Columbia Univ., Columbia Univ., Columbia Univ., Columbia Univ.*

11:00 V12 **301.12** ▲ Towards syncing polytherapy to the multi-factorial dynamics of the SOD1 G93A ALS pathology. A. LEE; S. TRAVAGLINO; T. KITTEL; C. S. MITCHELL*. *Georgia Inst. Technol., Georgia Inst. of Technol.*

8:00 V13 **301.13** Point mutations within Tardbp differentially affect TDP-43 functions. A. ACEVEDO AROZENA*; T. RICKETTS; P. SIVAKUMAR; H. OLIVEIRA; V. PLAGNOL; K. LO; J. HUMPHREY; E. M. C. FISHER; P. FRATTA. *Hosp. Universitario De Canarias, MRC Mammalian Genet. Unit, UCL.*

9:00 V14 **301.14** Muscle fiber atrophy in tibialis posterior of a TDP-43 over-expressing mouse. L. HEYBURN*; M. HEBRON; C. E. MOUSSA; B. T. HARRIS. *Georgetown Univ., Georgetown Univ.*

10:00 V15 **301.15** Regulation of CDC7 kinase activity controls pathological TDP-43 phosphorylation. N. LIACHKO*; H. CURREY; B. C. KRAEMER. *VA Puget Sound Hlth. Care Syst.*

11:00 V16 **301.16** Activation of PI3K/mTOR pathway alleviates TDP-43-induced axonopathy in the spinal motor neuron in a zebrafish ALS model. K. ASAKAWA*; K. KAWAKAMI. *Natl. Inst. of Genet., SOKENDAI.*

8:00 V17 **301.17** *In vivo* characterisation of neurodegeneration and TDP-43 redistribution following UV induced stress in the Zebrafish spinal cord. A. J. SVAHN*; R. RADFORD; E. K. DON; N. J. COLE; R. CHUNG; M. MORSCH. *Macquarie Univ.*

9:00 V18 **301.18** Impaired mitophagy in ALS mice results in degeneration of neuromuscular junctions. R. S. ROGERS*; S. TUNGTUR; T. TANAKA; Y. BADAWI; L. L. NADEAU; H. WANG; H. NI; W. DING; H. NISHIMUNE. *Univ. of Kansas Med. Ctr., Univ. of Kansas Med. Ctr.*

10:00 V19 **301.19** A resource for research on peripheral neuropathy using mouse models at The Jackson Laboratory. K. L. SEBURN*; R. W. BURGESS; C. M. LUTZ. *Jackson Lab.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 V20 **301.20** ▲ Animal model indicating an interaction between MS and exercise's impact on adult hippocampal neurogenesis. J. KLEINER*; B. M. SCHILDER; C. SHERWOOD; K. A. PHILLIPS. *George Washington Univ., George Washington Univ., Trinity Univ.*

8:00 V21 **301.21** Environmental and genetic contributions in an ALS rat model: Failed recovery and enhanced ventral horn inflammation after peripheral nerve injury. S. SCHRAM*; D. CHUANG; H. PIPONOV; C. HELDER; G. SCHMIDT; R. MICHAEL; F. SONG; J. KERNS; M. GONZALEZ; J. LOEB. *Univ. of Illinois - Chicago, Univ. of Illinois at Chicago.*

9:00 V22 **301.22** Neurodegenerative changes in the hypoglossal nucelus of the LgDel mouse model of DiGeorge/22q11 Deletion Syndrome. A. S. POPRATILOFF*; X. WANG; P. MISTRY; L. MATSIYEVSKIY; C. CLARKSON-PAREDES; C. A. BRANTNER; T. M. MAYNARD; D. W. MEECHAN; S. A. MOODY; D. S. MENDELOWITZ; A. S. LAMANTIA. *George Washington Univ., George Washington Univ., George Washington Univ., George Washington Univ.*

10:00 V23 **301.23** Branch-specific assembly and disassembly precedes global motor-unit degeneration in a model of amyotrophic lateral sclerosis. E. MARTINEAU*; A. DI POLO; C. VANDE VELDE; R. ROBITAILLE. *Univ. de Montréal, Ctr. de recherche du Ctr. Hospitalier de l'Université de Montréal, Univ. de Montréal.*

11:00 V24 **301.24** Novel mouse model of an amyotrophic lateral sclerosis-associated profilin 1 mutation. M. E. BRETTLE*; H. STEFEN; A. DJORDJEVIC; J. W. CHAN; S. FOK; F. DELERUE; Y. D. KE; L. M. ITTNER; T. FATH. *UNSW Australia.*

POSTER

302. Mechanisms of Neuroprotection

Theme C: Neurodegenerative Disorders and Injury

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 V25 **302.01** Exosome-derived from bone marrow mesenchymal stem cells promote retinal ganglion cell survival. B. MEAD; S. I. TOMAREV*. *Natl. Eye Institute, NIH, NEI, NIH.*

9:00 V26 **302.02** ● Natural history model of soman-induced epileptogenesis and brain pathology in rats: A long-term study. L. A. LUMLEY*; M. . DE ARAUJO FURTADO; C. R. SCHULTZ; M. Q. PHAM; M. BELLIN; M. F. STONE; B. M. MARRERO-ROSADO; F. ROSSETTI. *USAMRICD, Uniformed Services Univ. of the Hlth. Services, BioSEaD, LLC, Walter Reed Army Inst. of Res.*

10:00 W1 **302.03** ● Evaluation of an improved telemetry transmitter (HD-S02) in experimental pharmacology studies to assess seizure activity in rats. M. D. FURTADO*; C. SCHULTZ; T. HAAS; F. ROSSETTI; M. STONE; B. MARRERO-ROSADO; L. A. LUMLEY. *USUHS, BioSEaD, LLC, US Army Med. Res. Inst. of Chem. Def., Data Sci. Intl., Walter Reed Army Inst. of Res.*

11:00 W2 **302.04** Evaluation of cannabinoids for anticonvulsant and neuroprotective efficacy in a rat model of soman-induced status epilepticus. B. MARRERO-ROSADO*; C. R. SCHULTZ; E. KUNDRICK; M. F. STONE; S. O'BRIEN; K. WALKER; F. ROSSETTI; L. A. LUMLEY. *US Army Med. Res. Inst. of Chem. Def., Walter Reed Army Inst. of Res.*

8:00 W3 **302.05** Neuroprotective effects of active fraction of flavonoids from Saperavi on kainic acid-induced epilepsy in rats. M. QURASBEDIANI; N. DOREULEE; M. ALANIA*; B. CHKHARTISHVILI; B. PARTSVANIA; M. CHIKOVANI; R. BUKIA. *I.Javakhishvili Tbilisi State Univ., Georgian Tech. University, Inst. of Cybernetics.*

9:00 W4 **302.06** ▲ Neuroprotective effect of raloxifene under chronic cerebral hypoperfusion, in ovariectomized rats. L. SALCIDO-CADENA; G. LETECHIPIA-VALLEJO; M. OLVERA-CORTES; G. MORALI; M. CERVANTES*. *Fac. C. Med. y Biol., UNIVERSIDAD MICHOACANA, Ctr. de investigación Biomédica de Michoacán, Inst. Mexicano Del Seguro So, Inst. Mex. Seguro Social, Fac. C. Medicas y Biologicas.*

10:00 W5 **302.07** Neuroprotective effects of Aristotelia chilensis (Maqui berry) extract and dapsone on neonatal status epilepticus model induced by kainic acid. L. A. BAUTISTA OROZCO*; S. A. OROZCO-SUAREZ. *Inst. Mexicano Del Seguro Social, Inst. Mexicano del Seguro Social.*

11:00 W6 **302.08** Ferulic acid enhances the neuroprotective properties of calorie restriction against acrylamide model in *Drosophila melanogaster*: Neurobehavioral and biochemical evidences. G. CHANDRAN*; K. SUGUR; J. CHAUHAN. *Pooja Bhagavat Mem. Mahajana PG centre, Pooja Bhagavat Mem. Mahajana PG centre.*

8:00 W7 **302.09** Shining a light on glaucoma: Optogenetic brain stimulation confers retinal neuroprotection. E. GEERAERTS*; M. CLAES; E. DEKEYSTER; C. VAN DEN HAUTE; M. SALINAS-NAVARRO; L. H. ARCKENS; L. MOONS. *KU Leuven.*

9:00 W8 **302.10** Phenytoin promotes remyelination of the corpus callosum in the adult mouse brain. J. M. VEGA-RIQUER*; N. IBARRA-CASTAÑEDA; D. ZARATE-LOPEZ; G. MENDEZ-VICTORIANO; N. MOY-LOPEZ; J. GUZMAN-MUNIZ; O. GONZALEZ-PEREZ. *Sch. of Psychology/ University of Colima, Sch. of Medicine/University of Colima.*

10:00 W9 **302.11** Alpha7 nAChR activation or inhibition can mediate neuroprotective activity in hippocampal slices and in isolated mitochondria. V. A. ETEROVIC; H. R. ARIAS; M. SKOK; D. PEREZ; P. A. FERCHMIN*. *Univ. Central del Caribe; Sch. of Med., California Northstate Univ. Col. of Med., Palladin Inst. of Biochem., Univ. Central del Caribe; Sch. of Med.*

11:00 W10 **302.12** Palmitate-enriched diet mitigates BDNF expression in the brain. G. A. MARWARHA*; J. LILEK; J. SCHOMMER; O. GHRIBI. *Univ. of North Dakota Sch. of Med., Univ. of North Dakota.*

8:00 W11 **302.13** Knockdown of heat shock proteins HSPA6 (Hsp70B`) and HSPA1A (Hsp70-1) affects the viability of differentiated human neuronal cells following thermal stress. C. A. DEANE*; I. R. BROWN. *Univ. of Toronto Scarborough.*

9:00 W12 **302.14** ● Neuroprotective and anti-inflammatory effects of the microneurotrophin BNN27 in the STZ-model of diabetic retinopathy. R. IBÁN-ARIAS*; S. LISA; N. MASTRODIMOU; I. CHARALAMPOPOULOS; A. GRAVANIS; K. THERMOS. *Pharmacol. Lab, Med. Sch., Inst. de Neurociencias de Castilla y León (INCyL), Univ. of Salamanca & Inst. of Biomed. Res., Inst. of Mol. Biol. & Biotechnology, Fndn. of research & Technology-Hellas (FORTH).*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 W13 **302.15** Genetic deletion of Sarm1 prevents axon degeneration in chemotherapy induced peripheral neuropathy. A. CETINKAYA-FISGIN*; X. LUAN; N. REED; A. HOKE. *Johns Hopkins Sch. of Med., Johns Hopkins Sch. of Med.*

11:00 W14 **302.16** Intestinal dysbiosis affects motorsensory function after intracerebral hemorrhage. G. KONE*; C. IADECOLA; J. ANRATHER. *Weill Cornell Med.*

8:00 W15 **302.17** Photoregulin3 prevents retinal degeneration in mice. P. A. NAKAMURA*; A. SHIMCHUK; S. TANG; S. DING; T. REH. *Univ. of Washington, Gladstone Inst.*

9:00 W16 **302.18** Intrathecally injected bone marrow stromal cells produce sustained neuropathic pain reduction via neuro-immune regulation. Y. D. HUH*; G. CHEN; R. JI. *Duke Univ. Med. Ctr.*

10:00 W17 **302.19** ▲ Efficacy of novel acetylcholinesterase reactivators against organophosphate poisoning: In silico and *in vitro* studies. M. ARSHAD*; M. Q. FATMI; K. MUSILEK; K. KUCA; S. M. NURULAIN. *Comsats Inst. Of Information Technol. Islama, Univ. Hosp. Hradec Kralove, Hradec Kralove, Univ. of Defense, Hradec Kralove, Czech Republic.*

11:00 W18 **302.20** Mechanism of action of retinal pigment epithelial (RPE) grafts reducing drug seeking in high-dose cocaine taking rats after a period of abstinence. K. VENKITESWARAN*; T. CAYTON; S. SINGH; A. PATEL; T. SUBRAMANIAN; P. SUE GRIGSON. *Penn State Milton S Hershey Med. Ctr., Penn State Col. of Med.*

8:00 W19 **302.21** ▲ Using Trichostatin A to rescue Trka+ neurons in a mouse model of familial dysautonomia. R. G. BUKSCH*, III; J. WALTERS; J. GOFFENA; L. GEORGE. *Montana State Univ. Billings.*

9:00 W20 **302.22** Rescuing synaptic activity in prion-disease mice. J. BOURGOGNON*; J. R. STEINERT. *MRC Toxicology Unit.*

10:00 W21 **302.23** GDPGP1 is a novel and conserved stress-responsive gene in neurons. A. SCHULZ*; M. HAMMARLUND. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med.*

11:00 W22 **302.24** Neuroprotection and neurodegenerative response by CB1 and CB2 cannabinoid receptor inactivation after neonatal peripheral nerve lesion. M. PEREZ*; L. P. CARTAROZZI; G. B. CHIAROTTO; F. S. GUIMARÃES; A. L. R. OLIVEIRA. *Unicamp, Univ. of São Paulo.*

8:00 W23 **302.25** Interleukin-10 expression in the facial motor nucleus: Roles for motoneuron survival after axotomy. E. M. RUNGE*; D. O. SETTER; F. M. KENNEDY; V. M. SANDERS; K. J. JONES. *Indiana Univ. Sch. of Med., Richard L. Roudebush VA, The Ohio State Univ.*

9:00 W24 **302.26** Activating transcription factor 3 protects retinal ganglion cells and promotes regeneration after optic nerve crush. C. KOLE; T. ZHAO; L. BONET-PONCE; N. NAKAYA*; B. MEAD; S. I. TOMAREV. *Natl. Eye Inst., Natl. Eye Inst.*

10:00 W25 **302.27** ▲ Cromolyn sodium administration after pilocarpine-induced Status epilepticus reduces the subsequent neuronal damage in hippocampus of rats. M. G. VALLE DORADO*; S. A. OROZCO; L. ROCHA. *CINVESTAV, Netional Med. Ctr.*

11:00 W26 **302.28** Analysis of Recurrent Seizures after soman-induced status epilepticus: Comparison between Tezampanel versus Diazepam when treatment is delayed. T. H. FIGUEIREDO*; J. P. APLAND; M. D. FURTADO; V. ARONIADOU-ANDERJASKA; M. M. F. BRAGA. *Uniformed Services Univ., USAMRICD, USUHS, Uniformed Services Univ. of the Hlth. Sci.*

8:00 DP04/W27 **302.29** (Dynamic Poster) Steroid hormone receptors control neuronal inositol 1,4,5-trisphosphate receptor activity in the nucleus. P. KOULEN*. *Univ. of Missouri Kansas City.*

9:00 W28 **302.30** EphB2 controls depression & cognitive impairment by regulating neurogenesis in hippocampus. Y. XIAOKAITI*; V. LURIA; H. ZHANG; J. O'DONNELL; Y. XU. *State Univ. of New York at Buffalo, Harvard Med. Sch., West Virginia Univ. Hlth. Sci. Ctr.*

POSTER

303. Neuroinflammation: Animal Models

Theme C: Neurodegenerative Disorders and Injury

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 W29 **303.01** Time-dependent changes in cholesterol 24-hydroxylase expression in the spinal cords during experimental autoimmune encephalomyelitis. I. LAVRNJA*; K. SMILJANIC; D. SAVIC; A. MLADENOVIC-DJORDJEVIC; K. TESOVIC; S. KANAZIR; S. PEKOVIC. *Inst. For Biol. Res. Sinisa Stankovic.*

9:00 W30 **303.02** Baicalein neutralizes inflammation and nerve growth factor in cerebral cortex in diabetic rat model. S. S. AL-REJAIE; M. N. ASHRAF*. *King Saud Univ., The Islamia Univ. of Bahawalpur.*

10:00 W31 **303.03** Role of neuroinflammation in the regulation of the cytochromes P450 2C11 and 2J3 in the brain. M. M. LOAIZA ZULUAGA*; C. NAVARRO-MABARAK; S. L. HERNÁNDEZ-OJEDA; R. CAMACHO-CARRANZA; J. J. ESPINOSA-AGUIRRE. *Univ. Nacional Autónoma De México.*

11:00 W32 **303.04** Neuromodulators of inflammation in mouse administered with exogenous soluble gp130. A. M. SALAZAR*; A. S. MURTISHAW; M. M. BOLTON; J. W. KINNEY. *Univ. of Nevada Las Vegas.*

8:00 W33 **303.05** ● Changes in neuroinflammation markers across brain regions of interest in alcohol-related brain damage. P. TOLEDO NUNES*; L. C. VEDDER; T. DEAK; M. M. DEAK; L. M. SAVAGE, Ph.D. *Binghamton Univ. - SUNY, Binghamton Univ., Binghamton University-SUNY, Binghamton Univ. Dept. of Psychology.*

9:00 W34 **303.06** ● Dynamics of blood-brain barrier repair in a neonatal rabbit model of cerebral palsy and its implications in nanoparticle-based drug delivery. J. E. PORTERFIELD*; E. S. SMITH; K. LIAW; Z. ZHANG; R. M. KANNAN; S. KANNAN. *Johns Hopkins Univ., Johns Hopkins Med. Inst., Johns Hopkins Med. Inst.*

10:00 W35 **303.07** Intranasal IGF-1 protects against neonatal lipopolysaccharide-induced neuroal inflammation in the brain of juvenile rats. L. TIEN*; Y. LEE; C. CHIEN; S. LU; L. FAN. *Fu Jen Catholic Univ., Cathay Gen. Hosp., Univ. of Mississippi Med. Ctr.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 W36 **303.08** Mammary tumors induce neuroinflammation, but not behavioral deficits in Balb/C mice. W. H. WALKER*; J. C. BORNIGER; A. A. ZALENSKI; S. GAHOLT; N. ZHANG; A. C. DEVRIES. *The Ohio State Univ.*

8:00 X1 **303.09** Application of retinoic acid after optic nerve injury affects optic nerve glia and macrophages in adult frog Rana pipiens. V. DE LA ROSA-REYES; M. V. DUPREY-DIAZ; J. M. BLAGBURN; R. E. BLANCO*. *Univ. of Puerto Rico- Med. Sci. Campus, Inst. of Neurobio., Univ. Puerto Rico, Inst. Neurobiol Univ. Puerto Rico.*

9:00 X2 **303.10** Effects of Humanin on cognitive deficit and neuroinflammation by short-term exposure to cuprizone in mice. Y. ABE*; M. MURAKAMI; T. NIIKURA. *Sch. of Medicine, Keio Univ., Sophia Univ.*

10:00 X3 **303.11** ● Mast cells and their involvement in neurological damage in a Huntington's disease model. P. E. MARTÍNEZ-GOPAR*; F. PEREZ; C. RIOS; L. A. TRISTAN-LOPEZ; C. GONZÁLEZ-ESPINOSA. *Natl. Inst. of Neurol. and Neurosurg., Inst. Nacional De Neurología Y Neurocirugía. D, Natl. Inst. Neurology, Neurosurg, Inst. Nacional de Neurología y Neurocirugía, Ctr. for Res. and Advanced Studies.*

11:00 X4 **303.12** Fibroblasts infiltrate the spinal cord in experimental autoimmune encephalomyelitis. S. L. YAHN*; J. LI; R. BRAMBILLA; J. K. LEE. *Univ. of Miami.*

8:00 X5 **303.13** Low dose of Diphenyleneiodonium (DPI), specific NADPH oxidase 2 (NOX2) inhibitor, targets NOX2 & ameliorates experimental autoimmune encephalomyelitis (EAE) severity in mouse model. C. HU*; S. CHEN; J. HONG. *Tri-Service Gen. Hosp., NIEHS.*

9:00 X6 **303.14** ▲ Intestinal microbiota modulates depressive-like behavior in a mouse model of multiple sclerosis. J. E. GOERTZ*; I. A. MARIN; A. GAULTIER. *Univ. of Virginia.*

10:00 X7 **303.15** Dose-dependent effects of systemic inflammation on murine cortical activity. E. R. JAECKEL*; M. I. BANKS; C. N. MURPHY; S. M. GRADY; P. A. BARNARD; S. KAUR; E. A. TOWNSEND; R. D. SANDERS. *Univ. of Wisconsin, Univ. of Wisconsin, Univ. of Wisconsin, Univ. of Wisconsin.*

11:00 X8 **303.16** Correlation analysis of [^{18}F]ROStrace *ex vivo* autoradiography and dihydroethidium fluorescent images in lipopolysaccharides treated animals. C. WENG*; C. HOU; C. ZENG; C. HSIEH; S. LI; H. LEE; R. H. MACH. *Univ. of Pennsylvania.*

8:00 X9 **303.17** ● Persistence of cognitive deficits in the absence of systemic inflammation following acute LPS administration in immune-competent and immunodeficient mice. S. REGE*; H. HACKBART; A. TEICHERT; J. MASUMI; S. P. BRAITHWAITE; S. MINAMI. *Alkahest, Inc.*

9:00 X10 **303.18** Baicalein neutralizes brain oxidative stress in diabetic rat model. S. ALSHARARI*; S. AL-REJAIE. *1217 E. Marshall St, King Saud Univ.*

10:00 X11 **303.19** CCL2 increases neuronal excitability during the early stage of systemic inflammation. L. DUAN*; X. ZHANG; W. MIAO; H. LI; X. YU. *Inst. of Neurosci., Univ. of Chinese Acad. of Sci.*

11:00 X12 **303.20** Establishment of minimal positive conditions to ensure brain safety for rapid development of emergency vaccines. H. BAEK*; G. KIM; M. PARK; B. KO; K. KIM; H. SEO; S. YI. *Soonchunhyang Univ., Konyang Univ.*

8:00 X13 **303.21** Deficits in touchscreen-based operant tasks and fear conditioning memory in the cuprizone model of multiple sclerosis. A. J. NURMI; A. KÄRKKÄINEN*; M. KOPANITSA; K. LEHTIMÄKI; M. FORSMAN; A. SUHONEN; J. KOPONEN; A. MERENLENDER-WAGNER; J. KAYE; A. ORBACH. *Charles River Discovery, Teva Pharmaceut. Industries Ltd.*

9:00 X14 **303.22** Immunophenotyping and characterization of PLP and MOG induced relapsing/remitting and chronic mouse models of experimental autoimmune encephalomyelitis. J. KURKIPURO; M. VIHMA*; L. KOISTINEN; A. OKSMAN; L. TAHTIVAARA; A. J. NURMI. *Charles River Discovery.*

10:00 X15 **303.23** Treatment of brain injury due to extreme prematurity: Effect of melatonin on ADHD-like hyperactivity and midbrain dopaminergic neurons. O. OKPE*; L. GODDARD; D. E. OORSCHOT. *Univ. of Otago.*

11:00 X16 **303.24** NADPH oxidase type 4 inhibits immune cell trafficking into the central nervous system during neuroinflammation. A. M. HERRMANN*; K. GÖBEL; S. EICHLER; J. BREUER; S. GLUMM; S. KOVAC; T. RUCK; M. MERKER; E. GEUSS; P. HUNDEHEGE; C. KLEINSCHNITZ; H. H. H. W. SCHMIDT; S. G. MEUTH. *Univ. of Münster Dept. For Neurol., Univ. Hosp. Würzburg, Univ. Hosp. Essen, Fac. of Health, Med. & Life Science, Maastricht Univ.*

8:00 X17 **303.25** Celecoxib ameliorates neonatal lipopolysaccharide-enhanced adult susceptibility to the rotenone-induced neurodegenerative disorder. L. FAN*; L. TIEN; A. M. KAIZAKI; S. LU; J. W. LEE; J. P. SHAFFERY; X. DAI; N. B. OJEDA; A. J. BHATT; R. D. SAVICH; Y. PANG. *Univ. of Mississippi Med. Ctr., Fu Jen Catholic Univ., Showa Univ., Univ. Mississippi Med. Ctr., Univ. Mississippi Med. Ctr.*

9:00 X18 **303.26** The role of inflammation in healthy and natural neruodegenerative states of a sensorimotor pathway responsible for song production. T. LARSON*; Y. TOKAREVA; M. MERRITT-COLE1; E. A. BRENOWITZ. *Univ. of Virginia, Univ. of Washington, Univ. of Washington.*

10:00 X19 **303.27** Differential anticonvulsant responses of the basolateral amygdala and area tempestas to muscarinic receptor subtype antagonists following soman-induced seizures. K. LAITIPAYA*; J. K. CHANDLER; E. A. JOHNSON; J. W. SKOVIRA. *USAMRICD, US Army Med. Res. Inst. of Chem. Def, US Army Med. Res. Inst. of Chem. Def., US Army Med. Res. Inst. of Chem. Def.*

11:00 X20 **303.28** Pparγ Agonism in Alzheimer's disease and irradiated mouse models. D. CORTEZ*; L. A. DENNER; K. T. DINELEY, 77550. *UTMB, Univ. Texas Med. Br., The Univ. of Texas Med. Br.*

8:00 X21 **303.29** ▲ Imaging the 18-kda translocator protein (a marker for neuroinflammation) in alcoholism. R. E. TYLER*; S. KIM; Y. JANG; C. WIERS; L. VENDRUSCOLO; G. KOOB; G. WANG; J. LIOW; M. GUO; R. DAMADZIC; N. VOLKOW. *NIH, NIH, NIH.*

9:00 X22 **303.30** Axonal conduction is a useful measurement to assess demyelination and remyelination in preclinical models and correlates with histology. P. PANG*; B. GIACOMOZZI; N. PANDE; W. M. SIDERS; C. E. PEDRAZA. *Sanofi.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

304. Neuroinflammation in Neurodegenerative Diseases

Theme C: Neurodegenerative Disorders and Injury

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 X23 **304.01** Cognitive impairment induced by systemic inflammation in mice. E. ANDRIAMBELOSON*; B. HUYARD; E. POIRAUD; F. LAUGA; C. NEVEU; S. WAGNER. *NEUROFIT.*

9:00 X24 **304.02** Prior exposure to repeated LPS injections prevents further accumulation of hippocampal beta-amyloid. J. L. PETERMAN*; J. D. WHITE; A. HARDY; M. J. EIMBERBRINK; K. PAULHUS; M. THOMPSON; G. W. BOEHM; M. J. CHUMLEY. *Texas Christian Univ.*

10:00 X25 **304.03** Progranulin loss dysregulates splenic and peripheral blood immune cells populations and may contribute to neuroinflammation and neurodegeneration in early-onset frontotemporal dementia. T. L. KUKAR*; G. T. KANNARKAT; K. P. MACPHERSON; E. M. KLINE; C. J. HOLLER; M. A. JOHNSON; M. G. TANSEY. *Emory Univ., Emory Univ., Emory Univ., Emory Univ. Sch. of Med.*

11:00 X26 **304.04** The TRAIL DR5 receptor substantially contributes to amyloid beta-related neurotoxicity in the mouse. R. BERNARDINI*; G. DI BENEDETTO; L. LEMPEREUR; F. SERAPIDE; H. WALKZAC; G. CANTARELLA. *Univ. Catania Med. Sch., Univ. of Catania, Eli-Lilly, UCL.*

8:00 X27 **304.05** A model of neonatal Zika virus infection for the study of neurodevelopmental disorders. I. NEM DE OLIVEIRA SOUZA*; P. DA SILVA FROST; R. LEÃO SILVA NERIS; S. TEIXEIRA FERREIRA; F. GUARINO DE FELICE; A. THOMPSON DA POIAN; I. ASSUNÇÃO-MIRANDA; G. NEVES; C. PINTO FIGUEIREDO; J. ROSSAURO CLARKE. *Federal Univ. of Rio De Janeiro, Federal Univ. of Rio De Janeiro, Federal Univ. of Rio De Janeiro, Federal Univ. of Rio De Janeiro.*

9:00 X28 **304.06** Zika virus replicates in adult human and mouse brains, leading to brain inflammation, synapse loss and memory impairment in mice. F. G. BARROS-ARAGÃO*; C. P. FIGUEIREDO; R. L. S. NERIS; P. S. FROST; D. C. ZAMBERLAN; L. M. S. ANTONIO; C. S. P. S. MELO; A. S. SOUZA; A. L. A. GUIMARÃES; J. M. SOUZA; S. ALVES-LEON; F. G. DE FELICE; J. R. CLARKE; I. B. ASSUNÇÃO-MIRANDA; A. DA POIAN; S. FERREIRA. *Federal Univ. of Rio De Janeiro, Federal Univ. of Rio de Janeiro, Federal Univ. of Santa Maria.*

10:00 X29 **304.07** ▲ Intraventricular administration of TH2 cells into the CNS ameliorates the inhibitory effects of IFNg on remyelination. M. J. ALEXIS*; L. R. HERBST; H. STRAUSBURGER; K. MARTIN; L. KIRBY; P. CALABRESI. *Johns Hopkins Sch. of Med.*

11:00 X30 **304.08** Interleukin-4 induced protein 1 as a biomarker & treatment option in multiple sclerosis. S. DAVIS*; H. OFT; E. VIETSCH; F. AMJAD; A. WELLSTEIN; J. HUANG. *Georgetown Univ., MedStar Georgetown Univ. Hosp., MedStar Georgetown Univ. Hosp., Georgetown Univ.*

8:00 X31 **304.09** The development of inflammatory responses in degenerative thalamic injury after stroke. Z. CAO*; M. CHENG; A. FOLTZ; G. STEINBERG. *Stanford Univ.*

9:00 X32 **304.10** ▲ Determination of endogenous antioxidant capacity and profile of proinflammatory cytokines in patients with metabolic syndrome: Risk for neurodegenerative diseases. R. G. RESENDIZ GUTIERREZ*; I. IBARRA VALVODINOS; B. UGALDE VILLANUEVA; M. SALGADO SALGADO; M. RAMOS GÓMEZ; N. HERNÁNDEZ CHAN; H. L. HERNÁNDEZ MONTIEL. *Univ. Autónoma De Querétaro.*

10:00 X33 **304.11** Up-regulation of the neurotrophin receptor p75NTR by valproic acid in human neuroblastoma cells. S. DEDONI*; M. C. OLIANAS; P. ONALI. *Univ. of Cagliari, Dept Biomed. Sci.*

11:00 Y1 **304.12** Changes in the blood-brain barrier under toxic demyelination. J. SHELESTAK*; R. CUKELJ; N. K. SINGHAL; J. MCDONOUGH; R. CLEMENTS. *Kent State Univ., Kent State Univ., Kent State Univ.*

8:00 Y2 **304.13** ▲ Evaluation of the electrophysiological effect in patients with diabetic polyneuropathy treated with thiamine pyrophosphate. I. IBARRA VALDOVINOS*; B. UGALDE VILLANUEVA; R. G. RESENDIZ GUTIERREZ; M. SALGADO SALGADO; M. RAMOS GÓMEZ; N. G. HERNANDEZ CHAN; H. L. HERNANDEZ MONTIEL. *Univ. Autonoma De Queretaro.*

9:00 Y3 **304.14** Knockout mice with inhibited IL-1 and TNF signaling pathways have significantly reduced seizure activity, morbidity and mortality following exposure to soman. E. A. JOHNSON*; J. F. IRWIN; K. LAITIPAYA; J. K. CHANDLER; D. D. PALMER; T. M. FERRARA-BOWENS; C. L. HONNOLD; M. D. WEGNER. *US Army Med. Res. Inst. of Chem. Def., US Army Med. Res. Inst. of Chem. Def., Armed Forces Res. Inst. of Med. Sci.*

10:00 Y4 **304.15** Exosomally secreted miR-146a dysregulates brain energy metabolism during neuroinflammation. S. JUN*; A. E. RUSSELL; W. WANG; S. N. SARKAR; J. W. SIMPKINS; C. M. BROWN. *West Virginia Univ. Hlth. Sci. Ctr., West Virginia Univ. Hlth. Sci. Ctr.*

11:00 Y5 **304.16** Efficacy of subcutaneous route of administration of gm1 ganglioside in the r62 mouse model of huntington disease. N. MUNRO*; D. SIMON; N. GHENA; G. DUNBAR; J. ROSSIGNOL. *Central Michigan Univ.*

8:00 Y6 **304.17** Dimethyl fumarate accelerates axonal regeneration following peripheral nerve axotomy by modifying macrophage response post-injury. A. L. BOMBEIRO*; B. T. N. PEREIRA; A. L. OLIVEIRA. *Univ. Estadual De Campinas, Univ. of Campinas, Univ. of Campinas - Lab. of Nerve Regeneration.*

9:00 Y7 **304.18** Neurotoxic reactive astrocytes in neurodegenerative disease. S. A. LIDDELOW*; T. PETERSON; R. N. ELDANAF; A. M. MÜNCH; K. A. GUTTENPLAN; A. D. HUBERMAN; M. S. BUCKWALTER; B. A. BARRES. *Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ.*

10:00 Y8 **304.19** Effect of intra-nigral injection of endotoxin on neuronal homeostasis in the hippocampus. B. DARWISH; F. CHAMAA; J. ISMAIL; E. AL-CHAER; N. SAADE; W. ABOU-KHEIR*. *American Univ. Of Beirut, American Univ. of Beirut.*

11:00 Y9 **304.20** *In vivo* analysis of calcium-initiated axon degeneration in an animal model of MS. M. M. WESOLOWSKI*; M. A. SCHUMACHER; K. KNELLES; I. KLEIN; M. KERSCHENSTEINER. *Inst. of Clin. Neuroimmunology, Munich Cluster of Systems Neurol. (SyNergy).*

8:00 Y10 **304.21** Alterations of neurochemical, inflammatory and behavioral parameters in hyperphenylalaninemic female rats. P. F. SCHUCK*; J. F. AGOSTINI; F. MALGARIN; M. L. GOMES; B. K. FERREIRA; M. L. GARCEZ; M. MICHELS; F. S. VUOLO; F. DAL-PIZZOL; J. BUDNI; E. L. STRECK; G. C. FERREIRA. *Univ. Do Extremo Sul Catarinense, Univ. Federal do Rio de Janeiro, Univ. do Extremo Sul Catarinense, Univ. do Extremo Sul Catarinense, Univ. do Extremo Sul Catarinense.*

9:00 Y11 **304.22** Dynamics of spinal cord axonal degeneration and innate immune cell phenotypes in multiple sclerosis. C. CARAVAGNA*; A. JAOUËN; K. K. FENRICH; S. JEGO-DESPLAT; M. MALISSEN; G. ROUGON; F. DEBARBIEUX. *Inst. De Neurosciences De La Timone, Univ. of Alberta, Aix-Marseille Univ. - AP-HM, CIML.*

10:00 Y12 **304.23** Modification of gut microbiota through Brassicaceae and Asteraceae plants (Kale, Arugula, Dandelion) modulate neurodegeneration and memory in diet-induced obese pre-diabetic C57BL/6 mice. B. TENG*; D. FOSTER; D. G. HICKS; A. A. OYETUNDE; N. OCFEMIAA; G. E. FLORES; L. R. BANNER. *California State Univ. Northridge, California State Univ. Northridge.*

11:00 Y13 **304.24** ● Chronic inhibition of HDACs for the treatment of neurodegenerative diseases. M. S. ALAM; K. HALDAR*. *Univ. of Notre Dame, Univ. of Notre Dame.*

8:00 Y14 **304.25** Blood vitronectin robustly induces LIF and pro-inflammatory IL-6 expression *in vitro* and in the mouse brain through integrin-FAK signaling. M. P. KEASEY*; C. JIA; L. PIMENTEL; R. SANTE; C. LOVINS; T. HAGG. *East Tennessee State Univ., East Tennessee State Univ., East Tennessee State Univ.*

9:00 Y15 **304.26** Ethanol activates 'death receptor' signaling to cause neurodegeneration. L. G. COLEMAN*, JR; J. Y. ZOU; F. T. CREWS. *Univ. of North Carolina at Chapel Hill, Univ. North Carolina, Chapel Hill, Skipper Bowles Ctr. Alcohol.*

10:00 Y16 **304.27** Intracellular calcium channel expression in autoimmune encephalomyelitis. R. GUMMI*; S. L. GRILLO; H. JOHNSON; C. L. MONTGOMERY; P. KOULEN. *Univ. of Missouri Kansas City, Univ. of Missouri Kansas City.*

POSTER

305. Inflammation in Ischemia

Theme C: Neurodegenerative Disorders and Injury

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 Y17 **305.01** Nasal Associated Lymphoid Tissue ablation does not affect infarct volume or immune cell infiltration after stroke. D. BREA*; C. POON; M. MURPHY; C. IADECOLA; J. ANRATHER. *Joan and Sanford I Weill Med. Col. of Cornell Univ., Weill Cornell Med. Col., Weill Cornell Med., Weill Cornell Med.*

9:00 Y18 **305.02** Natural product balasubramide derivative ameliorates brain inflammation and brain ischemic stroke via AMPK-mediated microglia polarization. T. PANG*; Y. WANG; W. RUAN; H. WANG; H. LIN. *China Pharmaceut. Univ., Col. of Pharm.*

10:00 Z1 **305.03** Mafb prevents excess inflammation after ischemic stroke by accelerating clearance of danger signals through MSR1. T. SHICHITA*; H. OOBOSHI; A. YOSHIMURA. *Tokyo Metropolitan Inst. of Med. Sci., Fukuoka Dent. Col. Med. and Dent. Hosp., Keio University, Sch. of Med.*

11:00 Z2 **305.04** Infiltrated peripheral macrophages expresses elevated phagocytic markers in the stroked brain during recovery. K. PARK*; M. WOO; S. CHO. *Burke-Cornell Med. Res. Inst., Burke/Cornell Med. Res. Inst., Burke/Cornell Med. Res. Insitute.*

8:00 Z3 **305.05** Inflammatory profile in a canine model of Hypothermic Circulatory Arrest. S. TORRES-ODIO; J. G. ALLEN; E. S. WEISS; G. J. ARNAOUTAKIS; P. CARR; C. C. TALBOT; M. E. BLUE*; M. V. JOHNSTON; W. A. BAUMGARTNER; M. A. WILSON. *Hugo W Moser Res. Inst., Johns Hopkins Univ. Sch. of Med.*

9:00 Z4 **305.06** Interferon-gamma as a double-edged sword: Its roles on neural stem cells therapy for ischemic stroke model. G. ZHANG*; B. LI; L. CHEN. *Sch. of Medicine, Southeast Univ.*

10:00 Z5 **305.07** Sexual dimorphism in inflammasome activation: Possible cause of exacerbated ischemic brain damage in reproductively senescent female rats. A. P. RAVAL*; J. DE RIVERO VACCARI. *Univ. of Miami, Univ. of Miami.*

11:00 Z6 **305.08** Neuroprotective effect of a single injection of losartan in male and female rats subjected to ischemic stroke. S. MARTINEZ*; M. N. GONZALEZ VEGA; A. H. MARTINS. *Univ. Central Del Caribe, Univ. Central del Caribe, Univ. of Puerto Rico Med. Sci. Campus.*

8:00 Z7 **305.09** The apolipoprotein E4 allele induces neurovascular dysfunction mediated by perivascular macrophages. Y. HATTORI*; K. UEKAWA; K. KOIZUMI; L. ZHAO; S. M. PAUL; C. IADECOLA; L. PARK. *Weill Cornell Med., Weill Cornell Med. Col., Appel Alzheimer's Dis. Res. Inst., Weill Cornell Med., Weill Cornell Med. Col.*

9:00 Z8 **305.10** Suppression of nitric oxide level from microglia by co-culturing with human mesenchymal stem/progenitor cells. H. OHTAKI*; J. WATANABE; K. YAGURA; K. MIYAMOTO; Y. HIRAIZUMI; K. HONDA; K. DOHI. *Showa Univ. Sch. of Med., Showa Univ., Showa Univ. Sch. of Med., Showa Univ. Sch. of Med.*

10:00 Z9 **305.11** Transplantation of mesenchymal stem cells which overexpress interleukin 10 as treatment for stroke-induced behavioral deficits in rats. M. M. ANDREWS*; S. PERUZZARO; J. ROSSIGNOL; G. L. DUNBAR. *Central Michigan Univ., Central Michigan Univ., Field Neurosciences Inst. Lab., Central Michigan Univ.*

11:00 Z10 **305.12** The role of GPR37 in microglia/macrophage activation and proinflammatory responses after focal ischemic stroke. X. HUANG; M. R. MCCRARY; M. Q. JIANG; X. H. GU; R. A. HALL; M. FAN; L. WEI; S. YU*. *Emory Univ. Sch. of Med., Inst. of Basic Med. Sci., Emory Univ. Sch. of Med., Emory Univ. Sch. of Med.*

8:00 DP05/Z11 **305.13** (Dynamic Poster) TREM1 signaling in peripheral infiltrating myeloid cells increases stroke severity. Q. LIU*; J. WANG; Q. WANG; H. YE; K. ANDREASSON. *Stanford Univ.*

9:00 Z12 **305.14** Alcohol-induced inflammatory priming worsens outcome after ischemic stroke. A. DRIEU*; M. NAVEAU; A. QUENAULT; D. VIVIEN; M. RUBIO. *GIP Cyceron, GIP Cyceron.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

306. Stroke: Imaging Assessments

Theme C: Neurodegenerative Disorders and Injury

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 Z13 **306.01** The role of the left inferior frontal cortex in cognitive challenge. D. NARDO*; K. PAPPA; J. DUNCAN; P. ZEIDMAN; M. CALLAGHAN; A. P. LEFF; J. CRINION. *Univ. Col. London, Med. Res. Council, UCL Inst. of Neurology, London, United Kingdom, Univ. Col. London, UCL.*

9:00 Z14 **306.02** Dynamic rat MCA stroke evolution in relation to reperfusion and spreading depolarizations. U. HOFFMANN; D. A. TURNER*. *Duke Univ. Med. Ctr., Duke Univ. Med. Ctr.*

10:00 Z15 **306.03** Relative and absolute reliabilities of the MScanFit MUNE. X. LI*; Y. ZONG; P. ZHOU. *Univ. of Texas, UTHealth, Univ. of Texas Hlth. Sci. Ctr. At Houst.*

11:00 Z16 **306.04** Understanding neurovascular mechanisms during cortical spreading depression in ischemic stroke rats. L. LIAO*; H. PAN; S. SUN. *Natl. Hlth. Res. Inst.*

8:00 Z17 **306.05** Sequential restoration patterns of cerebral autoregulation in different ischemic rat models. E. CHOI*; G. PARK; Y. KWON; K. LEE; M. CHOI; J. LEE; J. HONG. *Dept. of Neurology, Ajou Univ. Sch. of Med.*

9:00 Z18 **306.06** Using diffusion kurtosis magnetic resonance imaging to monitor iPS-MSCs treatment response in stroke. C. CHIANG*; K. WU; S. LIN; K. CHO; B. YEN; Y. WANG; L. KUO. *Natl. Hlth. Res. Inst., Natl. Hlth. Res. Inst., Natl. Chiao Tung Univ., Natl. Hlth. Res. Inst., Natl. Taiwan Univ. Col. of Med.*

10:00 Z19 **306.07** Determination of stroke volume using multi-parametric analysis based on *in vivo* MRI measurements in rats. K. J. PATZWALDT*; P. KATIYAR; Y. WANG; X. YANG; R. K. LERCH; J. A. DISSELHORST; S. POLI; S. CASTANEDA VEGA; B. J. PICHLER. *Eberhard Karls Univ. of Tuebingen, Eberhard Karls Univ. of Tuebingen, Univ. Hosp. Tuebingen.*

11:00 Z20 **306.08** An introduction to 'F2': A quantitative MRI classifier for treatment stratification of acute ischaemic stroke patients with unknown onset time. B. L. MCGARRY*; M. J. KNIGHT; P. CLATWORTHY; R. BOSNELL; D. CARONE; G. HARSTON; J. KENNEDY; P. JEZZARD; R. A. KAUPPINEN. *Univ. of Bristol, North Bristol NHS Trust, Acute Vascular Imaging Ctr., Oxford Ctr. for Functional MRI of the Brain.*

8:00 Z21 **306.09** A theranostic approach in stroke imaging: The benefit of using an intranasal erythropoietin-tracer for multiparametric imaging. R. K. LERCH*; K. J. PATZWALDT; P. KATIYAR; R. STUMM; N. ALTMEYER; A. MAURER; S. CASTANEDA VEGA; B. J. PICHLER. *Werner Siemens Imaging Ctr.*

9:00 Z22 **306.10** A novel infarct-avid agent ^{18}F-fluorodeoxyglucaric acid (FGA) for imaging brain stroke by positron emission tomography (PET). V. AWASTHI*; H. HOUSON; A. MDZINARISHVILI. *Univ. of Oklahoma Hlth. Sci. Ctr., Univ. of Oklahoma, Col. of Allied Hlth.*

10:00 Z23 **306.11** Genomic analysis revealed changes of inflammation-related genes in a mice model of focal cerebral ischemia. Z. CHENGJIE*; Y. B. ZHU; S. WANG; Z. Z. WEI; M. Q. JIANG; Y. B. ZHANG; Y. H. L. PAN; S. X. TAO; J. M. LI; L. WEI. *Neurol. Beijing Friendship Hosp.Capital Med. Univ., Anesthesiol., Sch. Med., Emory Univ., Labs. Stem Cell Biol. Regen. Med., Exp. Res. Ctr., Beijing Friendship Hosp.*

11:00 Z24 **306.12** ● Regional diffusion differences in people with severe upper limb impairment post-stroke: A multi centre study. K. S. HAYWARD*; M. R. BORICH; S. C. CRAMER; A. BORSTAD; J. C. STEWART; J. L. NEVA; J. K. FERRIS; J. M. CASSIDY; L. A. BOYD. *Univ. of British Columbia, Florey Inst. of Neurosci. and Mental Hlth., Emory Univ., Univ. of California Irvine, Col. of St. Scholastica, Ohio State Univ., Univ. of South Carolina, Univ. of British Columbia, Univ. of California Irvine Dept. of Neurol.*

8:00 Z25 **306.13** Quantification of corticospinal tract using DTI in chronic stroke survivors. B. KIM*; S. CHOI; D. B. KAY; N. SCHWEIGHOFER; J. P. HALDAR; R. M. LEAHY; B. E. FISHER; C. J. WINSTEIN. *USC, USC, USC.*

9:00 Z26 **306.14** Estimation of motor impairment in sub-cute stroke patients using least absolute and selection operator (LASSO) analysis of resting state functional connectivity. T. NAKAMURA*; F. HOTTA; K. SHINDO; M. HIROSAWA; J. USHIBA; T. HANAKAWA. *NCNP, IBIC, Tokyo Metropolitan Rehabil. Hosp., Keio Univ., Natl. Ctr. Neurol & Psych.*

10:00 Z27 **306.15** Ascending cerebello-cortical projection viewed by manganese-enhanced MRI. L. COVOLAN*; A. MARTIN; C. WATHEN; C. ANDROJNA; H. BATTAPADY; K. B. BAKER; A. G. MACHADO. *Lerner Res. Inst. - Cleveland Clin., Lerner Res. Inst. - Cleveland Clin., Cleveland Clin., Lerner Res. Inst. - Cleveland Clin., Cleveland Clin., Cleveland Clin.*

POSTER

307. Stroke: Neuroprotection

Theme C: Neurodegenerative Disorders and Injury

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 Z28 **307.01** Monomethyl fumarate confers neuroprotective effect against experimental model of ischemic stroke in rat by inhibiting TNF-α and IL-1β. D. SINGH*; R. KH; U. SHARMA; J. NR; Y. K. GUPTA. *All India Inst. of Med. Sci. (AIIMS) Ne, All India Inst. of Med. Sci. (AIIMS) Ne, All India Inst. of Med. Sci. (AIIMS) Ne.*

9:00 Z29 **307.02** CXCR4 antagonist CX549 induces neuroprotection in stroke brain. Y. WANG*; K. WU; S. YU; E. BAE; K. SHIA. *Natl. Hlth. Res. Inst.*

10:00 Z30 **307.03** ● Unable to Attend Therapeutic antibody targeting of Notch 3 signaling prevents mural cell loss in CADASIL. J. ARBOLEDA-VELASQUEZ*; A. I. MACHUCA-PARRA; A. A. BIGGER-ALLEN; A. V. SANCHEZ. *Schepens Eye Res. Inst.*

11:00 Z31 **307.04** Green tea polyphenols and cAMP induce internalization of the Nogo-A receptor NgR1 and desensitize neuronal cells to axonal growth inhibitor Nogo-A. R. GOPALAKRISHNA*; U. GUNDIMEDA; S. ZHOU; H. BUI; C. LE; A. DAVIS; T. MCNEILL; W. MACK. *USC Keck Sch. of Med., USC Keck Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 Z32 **307.05** Palmitic acid methylation provides neuroprotection against cerebral ischemia. A. DO COUTO E SILVA*; R. H. LEE; C. Y. WU; H. POSSOIT; R. AZIZBAYEVA; J. NEUMANN; H. LIN. *LSU Hlth. Sci. Ctr. Shreveport, LSU Hlth. Sci. Ctr. Shreveport, West Virginia Sch. of Osteo. Med.*

9:00 AA1 **307.06** Role of prostaglandin D_2 DP1 receptor on post-stroke sleep disturbance and stroke outcomes. A. S. AHMAD*; P. KAMAT; D. HERNANDEZ; S. DORE. *Univ. of Florida, Univ. of Florida, Univ. of Florida.*

10:00 AA2 **307.07** Microrna-9 inhibition upregulates glutamate oxaloacetate transaminase attenuating stroke injury. S. KHANNA; R. STEWART; S. GNYAWALI; C. K. SEN; C. L. RINK*. *Ohio State Univ., The Ohio State Univ. Wexner Med. Ctr.*

11:00 AA3 **307.08** Xenon improves hemorrhagic stroke outcome in spontaneous hypertensive rats. H. SHENG*; H. SUN; B. YAN; D. S. WARNER. *Duke Univ. Med. Ctr., Kunming Med. Univ., Xian Jiaotong Univ., Duke Univ. Dept. of Anesthesiol.*

8:00 AA4 **307.09** The endozepine ODN improves functional recovery after experimental stroke. J. CHUQUET*; R. LAMTAHRI; M. HAZIME; P. P. QUILICHINI; B. LEFRANC; D. VAUDRY; J. LEPRINCE. *Normandy University, UNIROUEN, INSERM U1239, INSERM U1106 INS.*

9:00 AA5 **307.10** Neuroprotective effects diphenyldihaloketone EF24 in brain stroke model. A. MDZINARISHVILI*; H. HOUSON; V. AWASTHI. *Univ. of Oklahoma, Col. of Allied Hlth., Univ. of Oklahoma, Col. of Pharm.*

10:00 AA6 **307.11** Thrombolysis and antihypertensive agents in the functional and clinical outcome of acute ischemic stroke. T. I. NATHANIEL*; N. PATIL; C. UBAH; B. BAILES; T. FLEMING; Z. CONN; L. BRECHTEL; M. SCALISE; J. SULIVAN; A. FRAZIER; A. SHIPLEY; L. WORMACK; A. VENKATESH; B. AVERKAMP; S. STERNBERG; D. BLACKHURST. *Univ. of South Carolina, Greenville Hlth. Syst., Univ. of South Carolina Sch. of Med. Greenville.*

11:00 AA7 **307.12** Role of caspase-9 in blood brain barrier integrity in a mouse model of stroke. E. CANEPA*; K. JOHNSON; M. AVRUTSKY; B. CHRISTOPHE; E. CONNOLLY; C. TROY. *Columbia Univ.*

8:00 AA8 **307.13** Evaluation of systemic and cerebral safety profile of pro-hemostatic red blood cell microparticles. K. DAVE*; A. K. REHNI; C. BIDOT, Jr.; H. NAVARRO; Y. S. AHN; W. JY. *Univ. Miami Sch. Med., Univ. of Miami Sch. of Med.*

9:00 AA9 **307.14** Huo-Luo-Xiao-Ling-Dan plays a protective role in ischemic brain in rats via inhibiting inflammatory responses after stroke. H. ZHANG*; Z. JIN; W. SHEN. *Univ. of Illinois at Chicago, Sch. of Basic Medicine, Zhejiang Chinese Med. Univ., The First Affiliated Hospita of Zhejiang Chinese Med. Univ.*

10:00 AA10 **307.15** Multimodal tocotrienol vitamin e protection against ischemic stroke. C. RINK; S. KHANNA; H. HARRIS; S. GNYAWALI; C. K. SEN*. *The Ohio State Univ. Wexner Med. Ctr., Ohio State Univ. Med. Ctr.*

11:00 AA11 **307.16** Impact of immune receptor CD36 on post-stroke cognitive impairments. M. BALKAYA*; J. YANG; S. CHO. *Burke-Cornell Med. Res. Inst.*

8:00 AA12 **307.17** Pinocembrin protects hemorrhagic brain primarily by inhibiting toll-like receptor 4 and reducing M1 phenotype microglia in mice. X. LAN*; X. HAN; Q. LI; J. WANG. *Johns Hopkins Med.*

9:00 AA13 **307.18** Inhibition of neuronal ferroptosis protects hemorrhagic brain in mice. Q. LI*; X. HAN; X. LAN; J. WANG. *Johns Hopkins Univ.*

10:00 AA14 **307.19** Neuropeptide Y plays a detrimental role in cardiac arrest-induced brain injury. R. H. LEE*; A. COUTO E SILVA; H. POSSOIT; C. Y. WU; H. LIN. *LSU Hlth. Sci. Ctr. Shreveport, LSU Hlth. Sci. Ctr. Shreveport.*

11:00 AA15 **307.20** The role of nitric oxide and dimethyl sulfoxide in formation of penumbra characteristics. M. DEVDARIANI*; L. DAVLIANIDZE; M. NEBIERIDZE; L. GUMBERIDZE; I. KVACHAKIDZE; N. SIKHARULIDZE; N. MITAGVARIA. *I.Beritashvili Ctr. of Exptl. Biomedicine.*

8:00 AA16 **307.21** Xueshuantong Injection effectively relieves inflammatory reaction induced by ischemic stroke through regulating NF-kappa B signaling pathway. X. LIANG*. *UCSF.*

9:00 AA17 **307.22** ▲ Role of the haptoglobin-CD163 scavenging system in intracerebral hemorrhage. C. M. LI*; J. L. LECLERC; S. DORÉ. *Univ. of Florida, Univ. of Florida.*

10:00 AA18 **307.23** ● ▲ Parawixin2, a gaba uptake inhibitor molecule isolated from parawixia bistriata spider venom is neuroprotective against experimental ischemic stroke damage in wistar rats. T. BRONHARA*; J. L. LIBERATO; W. F. SANTOS. *Faculdade De Filosofia Ciências E Letras RP FFCLRP, Faculdade De Filosofia Ciências E Letras RP FFCLRP.*

11:00 AA19 **307.24** ▲ Advances in vasospasm research: Vasoactive impact of heme degradation products (HDPs) on mouse cerebral arterioles *in vivo* and *in vitro.* A. JOERK; N. LANGGUTH; M. RITTER; R. A. SEIDEL; M. GUENTHER; G. POHNERT; M. WESTERHAUSEN; K. HOLTHOFF; O. W. WITTE*. *Friedrich Schiller Univ. Jena, Friedrich Schiller Univ. Jena, Friedrich Schiller Univ. Jena, Friedrich-Schiller-University Jena, Friedrich Schiller Univ. Jena.*

8:00 AA20 **307.25** Biodistribution study of human red blood cell microparticles (RMPs) in rat. V. SHUKLA*; A. K. REHNI; C. BIDOT, Jr; H. NAVARRO; Y. S. AHN; W. JY; K. R. DAVE. *MILLER SCHOOL OF MEDICINE, UNIVERSITY OF MIAMI, MILLER SCHOOL OF MEDICINE, UNIVERSITY OF MIAMI.*

9:00 AA21 **307.26** Transplanted modificed bone marrow-derived mesenchymal stem cells, SB623, ameliorate chronic behavioral and pathological deficits in stroke rats. E. MORADI*; Z. WARRAICH; A. SATO; M. RAZAVIAN; M. PERNETT; M. POLEWSKI; K. RAVINA; M. DUGICH-DJORDJEVIC; M. SHAMLOO; D. BATES; Y. ANDREWS-ZWILLING. *Sanbio, Inc., Wester Univ. of Hlth. Sci., Stanford Univ. Sch. of Med.*

10:00 AA22 **307.27** ● Neural stem cell derived extracellular vesicle therapy in a porcine model of stroke. S. SPELLICY*; B. JURGIELEWICZ; E. KAISER; R. L. WEBB; S. PLATT; F. WEST; S. L. STICE. *Univ. of Georgia, Univ. of Georgia, Univ. of Georgia, Med. Col. of Georgia at Augusta Univ., Univ. of Georgia, ArunA Biomed., Univ. of Georgia.*

11:00 AA23 **307.28** Sex differences in stroke neuroprotection via stimulation of FAO. M. M. SIFUENTES*; J. LECHLEITER. *Univ. of Texas Hlth. Sci. Ctr. At San A, Univ. of Texas Hlth. San Antonio.*

8:00 AA24 **307.29** ● *In vitro* stroke model for evaluating SPION translation and clot lysis. H. H. ENGELHARD*; A. LEVIN; S. PERNAL; Z. GAERTNER; M. SABO; F. CREIGHTON. *Univ. of Illinois, Pulse Therapeutics, Inc.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 AA25 **307.30** Mitochondria in cerebral vascular endothelial cells play a key role in blood-brain barrier opening. H. HU*; I. FAROOQI; K. GRASMICK; S. RELLICK; X. REN. *West Virginia University, Ctr. For Basic and Translational Stroke Res.*

POSTER

308. Spinal Cord Injury: Cellular and Molecular Mechanisms

Theme C: Neurodegenerative Disorders and Injury

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 AA26 **308.01** PTPσ knockdown promotes Akt phosphorylation after spinal cord transection in the lamprey. W. RODEMER*; K. G. ZHANG; J. HU; M. SELZER. *Lewis Katz Sch. of Med. at Temple Univ., Lewis Katz Sch. of Med. at Temple Univ.*

9:00 AA27 **308.02** The effect of axon resealing time on retrograde neuronal death after spinal cord injury. K. G. ZHANG*; W. RODEMER; T. LEE; J. HU; M. E. SELZER. *Lewis Katz Sch. of Medicine, Temple Univ., Lewis Katz Sch. of Med. at Temple Univ.*

10:00 AA28 **308.03** Correlation of diffusion tensor indices and axonal injury in rat spinal cord distal from injury. O. MOTOVYLYAK*; M. D. BUDDE; S. N. KURPAD; B. D. SCHMIT. *Marquette Univ., Med. Col. of Wisconsin, Marquette Univ. Dept. of Biomed. Engin., Med. Col. of Wisconsin.*

11:00 AA29 **308.04** Synapse formation of NG2 glia prevents re-entry of sensory axons at the CNS-PNS border. H. KIM*; S. HAN; J. XIA; H. HU; S. H. KANG; Y. SON. *SHPRC and Ctr. for Neural Repair and Rehabilitat, SHPRC and Ctr. for Neural Repair and Rehabilitat, Drexel Univ. Col. of Med.*

8:00 AA30 **308.05** The effect of duraplasty after a traumatic spinal cord injury on behavioural recovery, spinal cord morphology, and tissue sparing, in a porcine model of SCI. M. STRAWFORD; K. SO*; F. STREIJGER; K. SHORTT; N. MANOUCHEHRI; E. B. OKON; B. K. KWON. *Univ. of British Columbia, Vancouver Spine Surgery Inst.*

9:00 AA31 **308.06** Proteomic biomarkers of acute traumatic spinal cord injury in human cerebrospinal fluid. Y. J. KURTZKE*; J. ROGALSKI; A. PURDOVA; J. JEONG; S. S. TIGCHELAAR; N. MANOUCHEHRI; K. SHORTT; F. STREIJGER; K. SO; L. FOSTER; B. K. KWON. *Univ. of British Columbia, The Univ. of British Columbia, The Univ. of British Columbia, ICORD, The Univ. of British Columbia, The Univ. of British Columbia.*

10:00 AA32 **308.07** Serum inflammatory cytokines and biomarkers of injury severity in acute human spinal cord injury. N. MANOUCHEHRI*; K. DONG; F. STREIJGER; L. BELANGER; L. RITCHIE; S. PAQUETTE; J. STREET; T. AILON; M. BOYD; C. G. FISHER; M. F. DVORAK; J. MAC-THIONG; S. PARENT; C. BAILEY; S. CHRISTIE; K. SO; B. K. KWON. *Univ. of British Columbia, Vancouver Gen. Hosptial, Vancouver Spine Surgery Inst., Hop. du sacre-Coeur de Montreal, Univ. of Montreal, Victoria Hosp., Dalhousie Univ.*

11:00 AA33 **308.08** Development of a high-thoracic pig model of SCI reveals robust and rapid impairments in cardiac and hemodynamic function. K. SHORTT*; N. MANOUCHEHRI; K. SO; Z. K. SARAFIS; M. POORMASJEDI-MEIBOD; F. STREIJGER; B. K. KWON; C. R. WEST. *Univ. of British Columbia, Univ. of British Columbia, Vancouver Spine Surgery Inst.*

8:00 AA34 **308.09** Microrna and cell-free dna biomarkers for injury severity in acute human traumatic spinal cord injury. S. S. TIGCHELAAR*; F. STREIJGER; S. SINHA; S. FLIBOTTE; M. RIZZUTO; J. STREET; S. PAQUETTE; M. BOYD; T. AILON; C. FISHER; M. DVORAK; J. MAC-THIONG; S. PARENT; C. BAILEY; S. CHRISTIE; K. VAN KEUREN-JENSEN; C. NISLOW; B. K. KWON. *ICORD, Pharmaceut. Sci., Pharmaceut. Sci., Vancouver Spine Surgery Inst., 6Hôpital du Sacré-Coeur de Montréal, Dept. of Surgery, Chu Sainte-Justine, Univ. of Montreal, 8Division of Orthopaedic Surgery, Schulich Med. & Dentistry, Victoria Hosp., Div. of Neurosurgery, Halifax Infirmary, Translational Genomics, ICORD, UBC.*

9:00 AA35 **308.10** Dendritic cells and their immunomodulatory role after SCI. S. SALIMI ELIZEI*; K. DONG; M. POORMASJEDI-MEIBOD; S. S. TIGCHELAAR; N. MANOUCHEHRI; K. SO; K. SHORTT; Y. J. KURTZKE; F. STREIJGER; B. K. KWON. *Intl. Collaboration On Repair Discoveries, Univ. of British Columbia, Univ. of British Columbia.*

10:00 AA36 **308.11** The acute effects of vasopressor administration timing on perfusion, oxygenation and metabolic responses in a porcine model of traumatic spinal cord injury. E. B. OKON*; K. SO; F. STREIJGER; N. MANOUCHEHRI; K. SHORTT; M. STRAWFORD; D. E. GRIESDALE; M. SEKHON; B. K. KWON. *Univ. of British Columbia, Vancouver Gen. Hospital, Div. of Critical Care Med., Vancouver Gen. Hospital, Div. of Critical Care Med., Vancouver Spine Surgery Inst.*

11:00 BB1 **308.12** Gene and cellular localizations of chemokines and their receptors after spinal cord injury(SCI) in mice. K. YAGURA; H. OHTAKI; T. TSUMURAYA; A. SATO; J. WATANABE; K. MIYAMOTO; S. TANAKA*; Y. HIRAIZUMI; K. KANZAKI; K. HONDA. *Showa Univ. Sch. of Med., Showa Univ. Fujigaoka Hosp., Showa Univ., Showa Univ. Fujigaoka Hosp., Showa Univ. Sch. of Pharm., Showa Univ. Sch. of Pharm., Showa Univ. Sch. of Med.*

8:00 BB2 **308.13** The spinal transcriptome after large unilateral cortical stroke and its impact on sprouting and 'side-switch' of contralateral corticospinal fibers. J. KAISER*; I. SALPETER; V. BARBOSA C. DE SOUZA; M. D. ROBINSON; M. E. SCHWAB. *Brain Res. Inst., Inst. of Mol. Life Sci.*

9:00 BB3 **308.14** Transcriptional screen in the target region of sprouting hindlimb corticospinal fibers after thoracic spinal cord injury in rats. N. RUSSI*; A. HOFER; A. K. ENGMANN; S. IMOBERSTEG; J. M. HELDNER; M. E. SCHWAB. *Univ. and ETH Zurich.*

10:00 BB4 **308.15** Emergence of epigenetic mechanisms by metalloproteinases and purinergic receptors modulation in the maladaptive plasticity in the rat spinal cord. A. VIRTUOSO; C. DE LUCA; G. CIRILLO; L. ALBERGHINA; A. COLANGELO; M. PAPA*. *Anatomia Umana Univ. Degli Studi Della Campan, Univ. of Milano-Bicocca.*

11:00 BB5 **308.16** Abnormal posture and muscle spasms after spinal cord injury: different neuronal circuits but a common neural mechanism. C. BELLARDITA*; O. KIEHN. *Karolinska Institutet, Dept. of Neuroscience, Karolinska.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 BB6 **308.17** Identification of a novel binding domain for heparin in RPTPσ, but not LAR or RPTPδ: Implications for proteoglycan signaling. P. YU*; H. KATAGIRI; S. HIGASHI; A. A. MORGAN; N. J. BANGAYAN; R. JUNKA; H. M. GELLER. *Jinan Univ., NIH, Columbia Univ., NIH.*

9:00 BB7 **308.18** Impact of spinal cord injury on synaptic transmission in neurons of mouse major pelvic ganglia. C. W. KYI*; V. B. GARCIA; D. J. SCHULZ. *Univ. of Missouri, Univ. of Missouri, Univ. of Missouri-Columbia.*

10:00 BB8 **308.19** Reciprocal interaction between mesenchymal stem cells and macrophages support the formation and maturation of blood vessels. An *in vitro* study. I. MALDONADO-LASUNCION*; M. OUDEGA; J. VERHAAGEN. *Univ. of Miami, Vrije Univ. Amsterdam, Univ. of Miami Dept. of Neurolog. Surgery, Netherlands Inst. for Neurosci.*

11:00 BB9 **308.20** Role of local neurogenesis in functional recovery following spinal cord injury in larval zebrafish. D. VASUDEVAN*. *Univ. of Utah.*

8:00 BB10 **308.21** Acute immune response to spinal cord injury in the dorsal root ganglia as a predictor of pain development. S. J. CHHAYA*; A. ONG; J. D. HOULE; M. R. DETLOFF. *Drexel Univ. Col. of Med.*

9:00 BB11 **308.22** AAV9-driven neuron-specific transgene expression: A tool to study the role of IMP2 in axon regeneration. S. BLIZARD*; D. PARK; N. O'TOOLE; S. NOOROZ; M. DELA TORRE; S. AUSTIN; J. HARMAN; S. HARASZTI; M. XU. *Philadelphia Col. of Osteo. Med.*

10:00 BB12 **308.23** Genomic basis of spinal cord regeneration in the freshwater turtle *Trachemys scripta elegans*. A. VALENTIN*; G. LIBISCH; O. TRUJILLO - CENÓZ; C. ROBELLO; R. E. RUSSO; F. ALVAREZ-VALIN. *IIBCE, Inst. Pasteur Montevideo, Facultad de Ciencias, Univ. de la República.*

11:00 BB13 **308.24** Macrophages promote axonal regeneration after spinal cord injury in zebrafish larvae. T. TSAROUCHAS*; D. WEHNER; T. BARRETT; T. CARR; L. CAVONE; T. BECKER; C. G. BECKER. *The Univ. of Edinburgh.*

8:00 BB14 **308.25** miR-21 deletion reduces inflammation and promotes locomotor recovery in spinal cord injury. A. M. LALIBERTE*; S. K. KARADIMAS; P. VIDAL VERA; K. SATKUNENDRARAJAH; M. G. FEHLINGS. *Univ. Hlth. Network, Krembil Discovery Tower, UHN, Toronto Western Res. Inst., Toronto Western Hosp.*

9:00 BB15 **308.26** Stimulation of cervical excitatory cells restores breathing after cervical SCI. K. SATKUNENDRARAJAH*; S. K. KARADIMAS; A. M. LALIBERTE; S. SIVAKUMARAN; M. G. FEHLINGS. *Toronto Western Res. Inst., Krembil Discovery Tower, Univ. Hlth. Network, Univ. of Toronto, Toronto Western Hosp.*

10:00 BB16 **308.27** Stimulation of lumbar excitatory cells preserves function after cervical spinal cord injury. S. K. KARADIMAS*; K. SATKUNENDRARAJAH; A. M. LALIBERTE; S. SIVAKUMARAN; S. GOSGNACH; M. G. FEHLINGS. *Krembil Discovery Tower, Toronto Western Res. Inst., Univ. Hlth. Network, Sanghavy Sivakumaran, Univ. of Alberta, Toronto Western Hosp.*

11:00 BB17 **308.28** Epigenomic signatures. I. PALMISANO; M. C. DANZI; A. HERVERA; E. MACLACHLAN; L. LEVI; E. ELLIOTT; V. LEMMON; J. L. BIXBY; S. DI GIOVANNI*. *Imperial Col. London, Univ. of Miami, Bar Ilan Univ., Univ. of Miami, Univ. Miami, Miller Sch. Med.*

8:00 BB18 **308.29** Transplantation of mitochondria following spinal trauma in rats. S. P. PATEL*; J. L. GOLLIHUE; K. C. ELDAHAN; D. H. COX; P. G. SULLIVAN; A. G. RABCHEVSKY. *Univ. of Kentucky, Univ. of Kentucky, Univ. of Kentucky.*

9:00 BB19 **308.30** Environmental enrichment induces a lasting increase in axon regeneration potential via activity-dependent epigenetic reprogramming. T. H. HUTSON*; L. ZHOU; I. PALMISANO; A. HERVERA; F. DE VIRGILIIS; E. MCLACHLAN; G. KONG; C. KATHE; K. BARTHOLDI; M. C. DANZI; A. MEDRANO-FERNANDEZ; J. LOPEZ-ATALAYA; A. BOUTILLIER; L. D. MOON; T. K. KUNDU; J. L. BIXBY; V. LEMMON; A. BARCO; G. COURTINE; S. DI GIOVANNI. *Imperial Col. London, Hertie Inst. For Clin. Brain Res., Hertie Inst. for Clin. Brain Res., Ecole Polytechnique Fédérale De Lausanne, EPFL, Univ. of Miami, Inst. De Neurociencias (UMH-CSIC), UMR 7364 UNISTRA CNRS, King's Col. London, JNCASR, Univ. Miami, Miller Sch. Med., Univ. of Miami.*

POSTER

309. Opioids and the Treatment of Pain

Theme D: Sensory Systems

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 BB20 **309.01** Phosphatidylethanolamine-binding protein reduces mu opioid receptor induced βarrestin2 recruitment and promotes opioid mediated antinociception. J. E. LAVIGNE*; K. A. EDWARDS; J. M. STREICHER. *Univ. of Arizona Col. of Med., Univ. of New England.*

9:00 BB21 **309.02** ▲ Modulation of alcohol reward by a truncated variant of the mu opioid receptor gene OPRM1. T. G. BROWN; S. MARTINEZ; J. XU; G. W. PASTERNAK; Y. PAN; G. C. ROSSI*. *Villanova Univ., Long Island Univ., Mem Sloan Kettering Cancer Ctr., Mem Sloan Kettering Cancer Ctr., Long Island Univ.*

10:00 BB22 **309.03** The nitric oxide-cGMP-ATP-sensitive K^+ channel pathway participates in the peripheral antinociceptive effect of nalbuphine, but not of buprenorphine on the rat formalin test. M. I. ORTIZ*; R. CARIÑO-CORTÉS; H. A. PONCE-MONTER; E. FERNÁNDEZ-MARTÍNEZ; G. CASTAÑEDA-HERNÁNDEZ. *Área Académica De Medicina, ICSA, UAEH, Dept. de Farmacología, CINVESTAV. IPN.*

11:00 BB23 **309.04** Targeting delta opioid receptor- kappa opioid receptor (DOR-KOR) heteromers in peripheral pain sensing neurons: A strategy for peripheral analgesic drug development. M. M. PANDO*; B. A. JACOBS; E. M. JENNINGS; T. A. CHAVERA; W. P. CLARKE; K. A. BERG. *Univ. of Texas Hlth. Sci. Ctr. San Antonio, Univ. of Texas Hlth. Sci. Ctr. San Antonio.*

8:00 BB24 **309.05** Functional selectivity profiles of U50,488 analogues at kappa opioid receptors (KOR) expressed in peripheral nociceptors. J. C. ZAMORA; T. A. CHAVERA; E. M. JENNINGS; S. N. JOHNSON; T. E. PRISINZANO; W. P. CLARKE; K. A. BERG*. *UT Hlth. San Antonio, Univ. of Kansas Sch. of Pharm.*

9:00 BB25 **309.06** siRNA screening of Regulator of G Protein Signaling (RGS) and adenylyl cyclase (AC) genes to determine the mechanism of endomorphin cAMP biased signaling. A. KERESZTES; J. LAVIGNE; D. CHIEM; K. OLSON; J. M. STREICHER*. *Univ. of Arizona.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 BB26 **309.07** Characterization of DALDA peptides following bolus intrathecal delivery (1). S. A. WOLLER*; S. KOKUBU; K. A. EDDINGER; P. W. SCHILLER; T. L. YAKSH. *UCSD, Montreal Clin. Res. Inst., Univ. of Montreal.*

11:00 BB27 **309.08** Sustained release buprenorphine induces acute analgesic tolerance. C. LARSON*; K. KITTO; G. L. WILCOX; C. A. FAIRBANKS. *Univ. of Minnesota, Univ. of Minnesota, Univ. Minnesota Med. Sch., Univ. Minnesota.*

8:00 CC1 **309.09** Optogenetic dissection of the descending pain modulatory system. M. LI*; Q. CHEN; K. L. SUCHLAND; Y. ZHANG; M. M. HEINRICHER; S. L. INGRAM. *Oregon Hlth. and Sci. Univ.*

9:00 CC2 **309.10** Imatinib prevents morphine tolerance without inducing MOR endocytosis. S. PUIG*; P. M. W; S. R. SZOTT; H. B. GUTSTEIN. *Univ. of Pittsburgh.*

10:00 CC3 **309.11** ● Mast cell degranulation: *in vivo* and *ex vivo* screening of spinal analgesics. T. L. YAKSH*; Z. WANG; S. A. MALKMUS; P. W. SCHILLER; K. HILDEBRAND; L. PAGE; E. S. RONDON; A. DI NARDO; S. KOKUBU. *Dept. of Anesthesiology, UCSD, Dept. of Dermatology, UCSD, Dept. of Anesthesiology, UCSD, Montreal Clin. Res. Inst., Univ. of Montreal, Medtronic, PLC., Univ. Federal de Mato Grosso do Sul, Dept. of Anesthesiology, UCSD.*

11:00 CC4 **309.12** Inhibition of fatty acid amide hydrolase in the insular cortex produces analgesic effects in neuropathic rats. K. KIM*; M. KIM; B. LEE. *Yonsei University, Grad. Sch. Dept. of Med. Sci., Brain Korea 21 PLUS Project for Med. Sci.*

8:00 CC5 **309.13** Reduced antinociceptive responses to mu but not kappa opioid agonists in aged rats. E. JENNINGS*; H. SMITH; L. SULLIVAN; R. JAMSHIDI; K. A. BERG; W. P. CLARKE. *UT Hlth. San Antonio.*

9:00 CC6 **309.14** DOPr displays constitutive internalization and sorting to the rapid recycling pathway. S. GRASTILLEUR*; J. SIMARD; V. BLAIS; J. PARENT; C. LAVOIE; L. GENDRON. *Univ. De Sherbrooke, Univ. of Sherbrooke.*

10:00 CC7 **309.15** MMG22: A bivalent ligand that contains a MOR agonist and an $mGluR_5$ antagonist exhibits potent antinociception without adverse effects. R. SPELTZ-PAIZ*; G. CATALDO; S. SHUEB; M. LUNZER; E. AKGUN; P. S. PORTOGHESE; D. A. SIMONE. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota, Col. of Pharmacy, Univ. of Minnesota, Univ. Minnesota.*

11:00 CC8 **309.16** A conditional knockin mice to study the delta opioid receptor in pain pathways. L. GENDRON*; K. ABDALLAH; J. DEGRANDMAISON; V. BLAIS; K. BRADBURY; F. BERGERON; K. FONTES; C. LAVOIE; C. M. CAHILL; J. BOULTER; J. PARENT. *Univ. De Sherbrooke, Bishop's Univ., Univ. of California Irvine, Univ. of California Los Angeles.*

8:00 CC9 **309.17** NR2B subunit mRNA is upregulated in the spinal cord following development of analgesic tolerance to intrathecal opioids and inflammation. H. VERMA*; C. PETERSON; K. PFLEPSEN; C. A. FAIRBANKS; K. KITTO; G. L. WILCOX. *Univ. of Minnesota Twin Cities, Univ. of Minnesota, Univ. of Minnesota, Univ. Minnesota, Univ. Minnesota Med. Sch.*

9:00 CC10 **309.18** Decreased morphine analgesia in t-cell deficient mice. S. F. ROSEN*; B. HAM; M. HAICHIN; S. TOHYAMA; S. SOTOCINAL; J. S. MOGIL. *McGill Univ., McGill Univ.*

10:00 CC11 **309.19** Opiod activation of fibroblast. R. RAMACHANDRAN*; Y. HE; Y. ZHU; D. QUANG; F. WERREN; Z. WANG; S. MALKMUS; B. ELICEIRI; A. DINARDO; T. L. YAKSH. *UCSD, UCSD, UCSD.*

11:00 CC12 **309.20** An investigation of the influence of endogenous anxiety on opioid sensitivity in a model of osteoarthritis pain. A. LILLYWHITE*; J. BURSTON; G. J. HATHWAY; V. CHAPMAN. *Univ. of Nottingham, Univ. of Nottingham.*

8:00 CC13 **309.21** An essential role of RGSz1 in signal transduction events underlying opioid tolerance and addiction-related behaviors. S. GASPARI; I. PURUSHOTHAMAN; V. COGLIANI; L. SHEN; V. ZACHARIOU*. *Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Mount Sinai Sch. of Med.*

9:00 CC14 **309.22** Test. A. E. KALYUZHNY*; R. REED; J. HAGEN; N. HOPP; M. GRAHEK; A. PTAK; J. HUMPHREY; G. DU; P. MURTHA; B. AGGELER. *Bio-Techne.*

10:00 CC15 **309.23** Transdermal administration of Loperamide/Oxymorphindole combination reduces evoked responses of C-fiber nociceptors in $Na_v1.8^+$-ChR2 optogenetic mice. M. L. UHELSKI*; D. J. BRUCE; C. A. FAIRBANKS; G. L. WILCOX; D. A. SIMONE. *Univ. of Minnesota Twin Cities, Univ. of Minnesota, Univ. Minnesota, Univ. Minnesota Med. Sch., Univ. Minnesota.*

11:00 CC16 **309.24** Peripherally restricted opioid combination therapy synergizes in multiple pain states. D. J. BRUCE*; C. D. PETERSON; K. F. KITTO; C. HARDING-ROSE; K. D. WICKMAN; C. A. FAIRBANKS; G. L. WILCOX. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota.*

8:00 CC17 **309.25** Expression of Gi-insensitive adenylyl cyclase isoform AC2 in mouse sensory neurons: Contributions to nociceptive signaling. J. J. HAVELIN*; J. R. YASKO; C. ESANCY; R. GEGUCHADZE; K. M. BAUMBAUER; T. E. KING; D. C. MOLLIVER. *Univ. of New England, Uconn Hlth., Univ. of Connecticut.*

9:00 CC18 **309.26** Dopamine receptor modulators enhance opioid analgesia in a rodent model of spinal cord injury. E. EVANS; J. JENKINS; J. YOW; S. CLEMENS; K. L. BREWER*. *Brody Sch. Med. East Carolina Univ., Brody Sch. Med. East Carolina Univ.*

10:00 CC19 **309.27** Combining neurotensin and opioid receptor agonists to relieve pain. E. EISELT*; V. BLAIS; J. LONGPRÉ; P. SARRET; L. GENDRON. *Sherbrooke Univ.*

11:00 CC20 **309.28** ● Muscarinic allosteric modulation alleviates chronic post-ischemia pain in rats. V. GOURA; A. VUYYURU; R. KALLEPALLI; P. JAYARAJAN; S. M. IRAPPANAVAR*; R. NIROGI. *SUVEN LIFE SCIENCES LTD.*

8:00 CC21 **309.29** ▲ Evaluation of Mygalin anti-nociceptive activity, analogue synthesized from natural acylpolyamine of the A. gommesiana (Araneae, Theraphosidae) hemolymph, in a model of neuropathic pain in Wistar rats. A. C. MEDEIROS*; J. L. LIBERATO; P. MEDEIROS; R. L. FREITAS; P. I. SILVA, Jr.; N. C. COIMBRA; W. F. SANTOS. *Faculdade De Filosofia Ciências E Letras De Ribeir, Faculde de Medicina de Ribeirão Preto - Univ. de São Paulo, Inst. Butantam - Univ. de São Paulo.*

9:00 CC22 **309.30** ▲ Analgesic properties of plant-derived analgesic compounds in infant rats. C. J. MASCARENHAS; R. LIU; G. A. BARR*. *Univ. of Pennsylvania, Perelman Sch. of Medicine, Univ. of Pennsylvania, Children's Hosp. of Philadelphia.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

310. Somatosensation: Transduction Mechanisms

Theme D: Sensory Systems

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 CC23 **310.01** Developmental expression of the mechanically-gated channel Piezo2. C. I. FÜRST*; G. R. LEWIN; A. HAMMES-LEWIN. *Max-Delbrueck-Center For Mol. Med.*

9:00 CC24 **310.02** Effects of vincristine on Piezo2 channels and tactile responses of whisker hair follicles. M. SONEKATSU*; W. CHANG; H. KANDA; J. LING; J. GU. *Univ. of Alabama at Birmingham.*

10:00 CC25 **310.03** Characterizing the expression and function of TMC proteins in dorsal root ganglia neurons. K. M. WEBSTER*; R. C. KNABLE; W. R. SCHAFER. *MRC Lab. of Mol. Biol.*

11:00 CC26 **310.04** Evidence for mechanosensitive channel activity of tentonin 3/TMEM150C. G. HONG*; J. WEE; U. OH. *Korea Inst. of Sci. & Technol.*

8:00 CC27 **310.05** Polarized initiation of neuronal varicosities. C. GU*; Y. GU. *Ohio State Univ.*

9:00 CC28 **310.06** Sensory afferent coding of non-noxious thermal perception in mice. R. PARICIO MONTESINOS*; F. SCHWALLER; A. UDHAYACHANDRAN; G. R. LEWIN; J. F. A. POULET. *Max Delbruck Ctr. For Mol. Med., Cluster of Excellence NeuroCure, Charité-Universitätsmedizin Berlin.*

10:00 CC29 **310.07** STIM-Orai channels may detect cold in the somatosensory and sympathetic nervous system. T. J. BUIJS*; P. A. MCNAUGHTON. *King's Col. London.*

11:00 CC30 **310.08** Glucosylsphingosine, an endogenous pruritogen in atopic dermatitis, activates serotonin receptor 2a and 2b. W. SHIM*; A. RAMSHA. *Gachon Univ., Gachon Univ.*

8:00 CC31 **310.09** ● Change in pupillary autonomic activity by mandible grinding with different types of simulated dental occlusion. H. YOSHIMI*; M. SHINOMIYA; Y. KOMORIYA; Y. ONO. *Med. Corp. Jivaka Yoshimi Dent. Office, Sch. of Sci. and Technology, Meiji Univercity.*

9:00 CC32 **310.10** Connective tissue does not mediate the therapeutic effect of acupuncture. Y. FAN*; Y. RYU; S. CHANG; O. KWON; S. BANG; N. KIM; D. KIM; H. KIM; E. JANG; C. YANG; H. KIM. *Col. of Korean Medicine, Daegu Haany Univ., Acupuncture, Moxibustion& Meridian Res. Center, Div. of Standard Research, Korea Inst. of Oriental Med.*

POSTER

311. Auditory Processing: Circuits, Synapses, and Neurotransmitters I

Theme D: Sensory Systems

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 CC33 **311.01** Effect of chronic radio frequency exposure in the superior olivary nuclear complex: An immunohistchemical study. D. MASKEY*; M. KIM; H. KIM. *Ctr. For Advanced Imaging, Dankook Univ., Dankook Univ.*

9:00 DD1 **311.02** Anodal transcranial direct current stimulation modulates structural plasticity in the rat auditory cortex and counteracts cortical alterations induced by chronic exposure to noise. M. V. PODDA*; F. PACIELLO; R. ROLESI; S. COCCO; A. R. FETONI; G. PALUDETTI; C. GRASSI; D. TROIANI. *Inst. of Human Physiology, Univ. Cattolica, Inst. of Cell Biol. and Neurobiology, CNR, Dept. of Head and Neck Surgery, Univ. Cattolica.*

10:00 DD2 **311.03** Channelrhodopsin-assisted circuit mapping of ascending and commissural synaptic inputs to VIP neurons in mouse inferior colliculus. D. GOYER*; P. T. MALINSKI; A. P. GEORGE; M. T. ROBERTS. *Univ. of Michigan.*

11:00 DD3 **311.04** Characterization of a brainstem-amygdala pathway important for attention processing. J. C. CANO*; K. FENELON. *Univ. of Texas at El Paso Dept. of Biol. Sci., Univ. of Texas at El Paso.*

8:00 DD4 **311.05** A novel mutual information estimator to measure spike train correlations in a model of the thalamocortical network. E. D. GRIBKOVA*; B. A. IBRAHIM; D. A. LLANO. *Univ. of Illinois At Urbana-Champaign, Univ. of Illinois At Urbana-Champaign, Univ. of Illinois At Urbana-Champaign.*

9:00 DD5 **311.06** Age-related changes in the expression of glutamic acid decarboxylase (GAD67) and NMDA receptor (NMDAR1) in the human inferior colliculus. I. PAL*; T. G. JACOB; R. DADA; D. N. BHARDWAJ; T. S. ROY. *All India Inst. of Med. Sci., All India Inst. of Med. Sci.*

10:00 DD6 **311.07** Differential contribution of presynaptic calcium channels to synaptic transmission at the mouse medial olivocochlear-outer hair cell synapse at two developmental stages. L. VATTINO; A. B. ELGOYHEN; E. KATZ*. *INGEBI (CONICET), Univ. de Buenos Aires, Univ. de Buenos Aires.*

11:00 DD7 **311.08** A reticular-limbic ascending pathway for transmitting aversive auditory signals. G. ZHANG*; W. SUN; B. ZINGG; H. TAO; L. I. ZHANG. *Third Military Med. Univ., USC, City Univ. of HongKong, USC, USC Keck Sch. Med.*

8:00 DD8 **311.09** Tuning of cortical gain, sound frequency selectivity and auditory-driven behaviors by synaptically released zinc. M. KUMAR*; C. T. ANDERSON; S. XIONG; T. TZOUNOPOULOS. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

9:00 DD9 **311.10** Hearing with an oversized inferior colliculus - is bigger better? A. BURGHARD*; N. MOREL; D. L. OLIVER. *UConn Hlth., Univ. of Connecticut.*

10:00 DD10 **311.11** Principal neurons in the anteroventral cochlear nucleus express cell-type specific glycine receptor subunits. S. LIN; R. XIE*. *Univ. of Toledo.*

11:00 DD11 **311.12** Axonal projection map of auditory areas in the common marmoset. H. ABE*; T. TANI; H. MASHIKO; N. KITAMURA; K. SAKAI; T. HAYAMI; N. MIYAKAWA; W. SUZUKI; H. MIZUKAMI; A. WATAKABE; T. YAMAMORI; N. ICHINOHE. *RIKEN Brain Sci. Inst., Natl. Ctr. of Neurol. and Psychiatry, Natl. Inst. of Neurosci., Jichi Med. Univ., RIKEN Brain Sci. Inst.*

8:00 DD12 **311.13** Cell type-specific long-range connections of the higher-order auditory thalamus. D. CAI*; Y. YUE; X. SU; Y. WANG; M. LIU; F. DENG; L. YOU; F. XIE; F. CHEN; M. LUO; K. YUAN. *Tsinghua Univ., Tsinghua Univ., Natl. Inst. of Biol. Sci., Tsinghua Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 DD13 **311.14** Functional topography of raphe-collicular projections: Contributions of dorsal raphe sub-regions to the inferior colliculus of the mouse. C. L. PETERSEN*; L. M. HURLEY. *Indiana University, Bloomington.*

10:00 DD14 **311.15** ▲ Role of Kv1 channels in regulating the excitability and firing patterns of neurons in the medial geniculate body. A. M. PEDERSON; A. B. KARAGOZ; D. DEAN; K. E. DEMBNY; M. DODLA; L. DUNCAN; R. FAHMY; A. KUO; V. RAMIREZ; D. B. HAIMES; N. L. GOLDING*. *Univ. of Texas at Austin.*

11:00 DD15 **311.16** Modularity of intrinsic inputs within the lateral cortex of the mouse inferior colliculus. A. M. LESICKO*; D. LLANO. *Univ. of Illinois At Urbana-Champaign, Univ. of Illinois at Urbana-Champaign.*

8:00 DD16 **311.17** A Cre mouse line labeling stellate cells of the ventral cochlear nucleus. G. E. ROMERO*; L. O. TRUSSELL. *Oregon Hlth. and Sci. Univ., Oregon Hlth. and Sci. Univ.*

9:00 DD17 **311.18** Neuronal organization in the inferior colliculus revisited with cell-type dependent monosynaptic tracing. C. CHEN*; M. CHENG; T. ITO; S. SONG. *Tsinghua Univ., Kanazawa Med. Univ.*

10:00 DD18 **311.19** OHC glutamate signaling: OHC VGLUTS and cochlear nucleus neurons activated by Type-II afferents in response to sound. C. J. WEISZ*; C. S. ECKARD; C. B. DIVITO; K. N. FANTETTI; S. A. DETTWYLER; M. E. RUBIO; K. KANDLER; R. P. SEAL. *NIH, Univ. of Pittsburgh, Univ. of Pittsburgh, Cook MyoSite, Inc., Univ. of Pittsburgh Sch. of Med.*

11:00 DD19 **311.20** A layer-specific corticofugal input to the mouse superior colliculus. H. ZURITA*; C. ROCK; J. PERKINS; A. APICELLA. *Univ. of Texas At San Antonio, Univ. of Texas at San Antonio, Univ. of Texas at San Antonio.*

POSTER

312. Visual Cortical Streams: Mouse and Primate

Theme D: Sensory Systems

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 DD20 **312.01** Laminar differences in responses to naturalistic texture in macaque V1 and V2. R. K. PEREZ*; J. PAI; C. M. ZIEMBA; L. E. HALLUM; C. SHOONER; J. G. KELLY; J. A. MOVSHON. *New York Univ.*

9:00 DD21 **312.02** Organization of binocular signals in macaque V1 and V2. L. E. HALLUM*; C. SHOONER; J. G. KELLY; R. RAGHAVAN; M. J. HAWKEN; J. A. MOVSHON. *Ctr. for Neural Science, New York Univ.*

10:00 DD22 **312.03** ● Curvature sensitivity of V2 neurons in amblyopic monkeys. Y. WANG*; B. ZHANG; X. TAO; G. SHEN; J. M. WENSVEEN; I. OHZAWA; E. L. SMITH, III; Y. M. CHINO. *Univ. of Houston, Nova Southeastern Univ. Col. of Optometry, Baylor college of Med., Osaka Univ.*

11:00 DD23 **312.04** Spiking noise in V2 neurons of infant monkeys. B. ZHANG*; Y. WANG; X. TAO; G. SHEN; J. WENSVEEN; E. L. I. SMITH; Y. M. CHINO. *Nova Southeastern Univ. Col. of Optometry, Univ. of Houston, Baylor Col. of Med., Univ. of Houston, Univ. of Houston Col. of Optometry.*

8:00 DD24 **312.05** Three organizing principles for feature selectivity in V2. R. ROWEKAMP*; T. O. SHARPEE. *Salk Inst. CNL-T, Salk Inst.*

8:00 DP07/DD25 **312.06** ● (Dynamic Poster) A deep convolutional energy model of ventral stream areas V1, V2 and V4. M. D. OLIVER*; J. L. GALLANT. *UC Berkeley, Univ. of California Berkeley.*

10:00 DD26 **312.07** Different cell types project from L4B of V1 to V2 in macaque monkey. J. T. YARCH*; H. LARSEN; M. CHEN; M. FIEDEL; A. ANGELUCCI. *Univ. of Utah, Univ. of Utah, Univ. of Utah.*

11:00 DD27 **312.08** Kv3.1b expression in putative excitatory subpopulations in macaque V2: Quantitative laminar investigation of Kv3.1b, PV, and GABA co-immunoreactivity. J. G. KELLY*; M. J. HAWKEN. *New York Univ.*

8:00 DD28 **312.09** Properties of layer 1 inputs to layer 1 neurons of the medial secondary visual cortex in mice. Y. LAM*; S. SHERMAN. *Univ. of Chicago, Univ. Chicago.*

9:00 DD29 **312.10** Functional relationship between primary and higher-order visual cortices. R. BELTRAMO*; M. SCANZIANI. *UCSF.*

10:00 DD30 **312.11** The transformation of visual information through the mouse visual cortex. S. E. DEVRIES*; M. A. BUICE; J. LECOQ; G. K. OCKER; D. MILLMAN; N. H. CAIN; D. FENG; R. REID. *Allen Inst. For Brain Sci., Allen Inst., Allen Inst. for Brain Sci., Allen Inst. for Brain Sci.*

11:00 DD31 **312.12** Large-scale imaging and functional parcellation of mouse visual cortex. M. HU*; R. V. RIKHYE; A. RAMANUJAN; M. G. M. KUMAR; H. SUTHAR; M. J. GOARD; M. HEMA; M. SUR. *MIT, HHMI/Janelia Res. Campus, Indian Inst. of Technol., Univ. of California, Santa Barbara.*

8:00 DD32 **312.13** A hierarchical organization of mouse visual cortical areas. R. D'SOUZA*; Q. WANG; W. JI; A. MEIER; H. KENNEDY; K. KNOBLAUCH; A. BURKHALTER. *Washington Univ. Sch. of Med., Allen Inst. for Brain Sci., Inserm U846.*

9:00 DD33 **312.14** Area specialization of feature selectivity in the mouse visual cortex. X. HAN*; B. VERMAERCKE; V. BONIN. *Neuro-Electronics Res. Flanders, KU Leuven, Vlaams Inst. voor Biotechnologie.*

10:00 DD34 **312.15** Modular organization of inputs to mouse postrhinal cortex involved in contextual visual processing. A. M. MEIER*; Q. WANG; A. H. BURKHALTER. *Washington Univ. Sch. of Med., Allen Inst. for Brain Sci., Washington Univ. Med. Sch.*

11:00 DD35 **312.16** Visual cortex activation modulated by relative head direction changes is stronger in secondary areas. M. KANG*; H. YANG; Y. JEONG. *KAIST.*

8:00 DP06/DD36 **312.17** (Dynamic Poster) The Allen Brain Observatory: A standardized and ongoing survey of evoked neuronal activity in the mouse visual cortex. J. LECOQ*; J. D. LARKIN; K. ROLL; C. WHITE; F. GRIFFIN; T. NGUYEN; S. CROSS; R. VALENZA; S. CALDEJON; E. K. LEE; A. STEGER; S. E. DEVRIES; M. A. BUICE; M. STOECKLIN; P. A. GROBLEWSKI; D. SULLIVAN; W. WAKEMAN; N. BOWLES; J. PERKINS; A. WILLIFORD; A. HO; L. KUAN; D. FENG; C. FARRELL; C. SLAUGHTERBECK; H. ZENG; C. KOCH. *Allen Inst., Allen Inst. for Brain Sci., Allen Inst. For Brain Sci.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 EE1 **312.18** Relationship among sensory tuning profiles across stimulus sets in mouse primary visual cortex. D. MILLMAN*; N. CAIN; G. OCKER; P. LEDOCHOWITSCH; C. REID; J. LECOQ; M. BUICE; S. DE VRIES. *Allen Inst. For Brain Sci.*

10:00 EE2 **312.19** Hierarchical models of processing in the mouse visual cortex. N. H. CAIN*; R. IYER; Y. N. BILLEH; A. ARKHIPOV; M. A. BUICE; S. MIHALAS. *Allen Inst. For Brain Sci., Allen Inst.*

POSTER

313. Sensorimotor Transformation: Behavior and Whole-Animal Processing

Theme D: Sensory Systems

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 EE3 **313.01** ▲ Developing a virtual environment for studying spatial orientation in rotating visual environments. H. DRILLICK; E. DOROKHIN; L. GOETZ; T. RAPHAN*. *Brooklyn Col. of CUNY, Brooklyn Col. of the City Univ. of New York.*

9:00 EE4 **313.02** Descending interneurons controlling visually-evoked escape in *Drosophila.* M. Y. PEEK*; S. NAMIKI; P. BREADS; W. R. WILLIAMSON; J. M. ACHE; G. M. CARD. *HHMI Janelia Res. Campus.*

10:00 EE5 **313.03** Looming sensitivity in *Drosophila* visual projection neurons. N. C. KLAPOETKE*; A. NERN; M. PEEK; E. ROGERS; G. RUBIN; M. REISER; G. CARD. *Janelia Res. Campus.*

11:00 EE6 **313.04** Control of landing in *Drosophila.* J. M. ACHE*; S. NAMIKI; A. LEE; K. BRANSON; G. M. CARD. *HHMI/Janelia Res. Campus.*

8:00 EE7 **313.05** A cell type specific driver line library targeting wing motor circuits in the ventral nerve cord of *Drosophila.* E. E. EHRHARDT*; S. NAMIKI; H. OTSUNA; I. COHEN; D. STERN; M. DICKINSON; W. KORFF; G. M. CARD. *HHMI Janelia Res. Campus.*

9:00 EE8 **313.06** An apparatus for automated, high-throughput, and detailed assessment of individual *Drosophila* free behavior. W. R. WILLIAMSON*; M. PEEK; P. BREADS; C. BRIAN; G. M. CARD. *HHMI Janelia Res. Campus.*

10:00 EE9 **313.07** Quantitatively tuned internal predictions orchestrate visual signaling in *Drosophila.* A. J. KIM*; L. M. FENK; C. LYU; G. MAIMON. *The Rockefeller Univ., The Rockefeller Univ.*

11:00 EE10 **313.08** Cortical sensorimotor transformations in a mouse visual detection task. D. B. SALKOFF*; E. ZAGHA; D. A. MCCORMICK. *Yale Med. Sch., Univ. of California Riverside, Yale Univ. Sch. Med.*

8:00 EE11 **313.09** Hiding in plain sight: Neuronal integration of specific changes in luminosity encode perceived threat and leads to behavioral freeze. J. A. JELLIES*; M. R. KING; V. PARIKH; T. K. H. GROVES. *Western Michigan Univ., Western Michigan Univ., Kalamazoo Area Math and Sci. Ctr.*

9:00 EE12 **313.10** A link between brains, learning and recurrent neural networks . M. STERN*; K. CHAMPION; A. S. ROKEM; D. R. OLLERENSHAW; S. MANAVI; S. R. OLSEN; E. T. SHEA-BROWN. *Univ. of Washington, Allen Inst. For Brain Sci., The Univ. of Washington.*

10:00 EE13 **313.11** Automatic adjustment of walking speed by optic flow benefits from binocular vision. S. TAKAMUKU*; T. NAGASAWA; H. GOMI. *NTT Communication Sci. Labs., Nagaoka Univ. of Technol.*

11:00 EE14 **313.12** Neuronal integration of spectral contrast information: Receptive field properties of visually sensitive neurons in the medicinal leech. T. K. GROVES*; J. A. JELLIES. *Western Michigan Univ., Western Michigan Univ.*

8:00 EE15 **313.13** Phototactic responses of histamine-deficient *Drosophila* mutants. J. BORYCZ*; J. A. BORYCZ; I. A. MEINERTZHAGEN. *Dalhousie Univ., Dalhousie Univ.*

9:00 EE16 **313.14** ● Processing of passive and motion-induced visual percepts in the rat dorsomedial striatum. A. J. NAGY*; Y. TAKEUCHI; A. BERENYI. *Univ. of Szeged, Fac. of Med., Univ. of Szeged, New York Univ.*

10:00 EE17 **313.15** Generalization of rat spontaneous behavior between real world and virtual reality environments in a CAVE experimental setup. N. A. DEL GROSSO*; J. J. GRABOSKI; E. BLANCO-HERNÁNDEZ; W. CHEN; A. SIROTA. *Lmu-Biozentrum, Grad. Sch. of Systemic Neurosciences, DFG Res. Training Group 2175, LMU-Biozentrum, Munich Cluster for Systems Neurol.*

11:00 EE18 **313.16** Cerebellar granule cells mediate transient sensory-evoked locomotor inhibition in larval zebrafish. A. A. BHANDIWAD*; H. A. BURGESS. *NIH/NICHD.*

8:00 EE19 **313.17** Sensori-motor processing during heat perception in larval zebrafish. M. HAESEMEYER*; D. N. ROBSON; J. M. LI; A. SCHIER; F. ENGERT. *Harvard Univ., Rowland Inst. at Harvard, Harvard Univ.*

9:00 EE20 **313.18** Visual guidance of flight mode transitions in birds. D. L. ALTSHULER*; R. DAKIN. *Univ. of British Columbia.*

POSTER

314. Cerebellum Purkinje Cells and Plasticity

Theme E: Motor Systems

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 EE21 **314.01** The Purkinje cell climbing fiber calcium response increases after induction of parallel fiber long term depression. F. SANTAMARIA*; Z. YANG. *Univ. Texas San Antonio, UTSA.*

9:00 EE22 **314.02** Dual mode representation of efference copy in purkinje neurons. M. SENGUPTA*; S. NARAYANAN; C. WYART; V. THIRUMALAI. *Natl. Ctr. For Biol. Sci., Inst. Cerveau Et Moelle Epiniere.*

10:00 EE23 **314.03** Mechanisms of Purkinje cell-dependent instructive signaling in the cerebellum. J. M. CHRISTIE*; C. A. BAKER; M. G. PINO; M. BOLTON; A. BONNAN. *Max Planck Florida Inst., Allen Inst. For Brain Sci., Max Planck Florida Inst., MPFI.*

11:00 EE24 **314.04** Inhibitory control of climbing fiber-mediated plasticity and motor learning in the cerebellum. M. J. ROWAN*; A. BONNAN; S. B. AMAT; E. M. PATINO; J. M. CHRISTIE. *Max Planck Florida Inst., Florida Atlantic Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 EE25 **314.05** Capturing the functional importance of graded climbing fiber bursts using calcium imaging in awake mice. A. FANNING*; J. SIEGEL; R. CHITWOOD; D. JOHNSTON; H. NISHIYAMA. *The Univ. of Texas at Austin, Ctr. for Learning and Memory.*

9:00 EE26 **314.06** Long-term depression of intrinsic excitability accompanied by the synaptic depression in the cerebellar Purkinje cells. H. SHIM*; D. JANG; S. KIM. *Seoul Natl. Univ. Col. of Med., Seoul Natl. Univ.*

10:00 EE27 **314.07** Enhanced intrinsic excitability in cerebellar Purkinje cells following delay eyeblink conditioning in mice. G. V. WATKINS*; H. K. TITLEY; C. LIN; C. WEISS; J. F. DISTERHOFT; C. HANSEL. *Univ. of Chicago, Northwestern Univ.*

11:00 EE28 **314.08** Functional coordination of parallel fiber and climbing fiber inputs during multi-sensory association and timed motor behavior in cerebellar cortex. S. TSUTSUMI*; O. CHADNEY; M. HÄUSSER. *Univ. Col. London.*

8:00 EE29 **314.09** Ablation of TFR1 in Purkinje cells inhibits mGlu1 trafficking and impairs motor coordination, but not autistic-like behaviors. J. ZHOU*; L. ZHOU; C. DE ZEEUW; Y. SHEN. *Inst. of Neurosci. Zhejiang Univ., Dept. of Neuroscience, Erasmus MC, Netherlands Inst. for Neuroscience, Royal Dutch Acad. for Arts & Sci.*

9:00 FF1 **314.10** Population coding in the Purkinje cell network during execution of goal directed action. D. KOSTADINOV*; M. BLANCO POZO; M. BEAU; M. HAUSSER. *Univ. Col. London.*

10:00 FF2 **314.11** BDNF Val66Met and transcranial direct current stimulation interact in cerebellar-dependent motor learning. M. A. FRENS*; R. VAN DER VLIET; S. LOUWEN; M. HOOG; L. DE VREEDE; G. M. RIBBERS; C. I. DE ZEEUW; O. DONCHIN; R. W. SELLES; J. N. VAN DER GEEST. *Erasmus MC Rotterdam, Rijndam Rehabil. Ctr., Ben Gurion Univ. of the Negev.*

POSTER

315. Striatal Physiology

Theme E: Motor Systems

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 FF3 **315.01** Alcohol induces input-specific aberrant synaptic plasticity in the rat dorsomedial striatum. T. MA*; B. BARBEE; X. WANG; J. WANG. *Texas A&M Hlth. Sci. Ctr.*

9:00 FF4 **315.02** Stroke triggers nigrostriatal plasticity and increases alcohol consumption in rats. J. WANG*; C. HUANG; T. MA; E. HELLARD; X. WANG; A. SELVAMANI; J. LU; F. SOHRABJI. *Texas A&M Hlth. Sci. Ctr.*

10:00 FF5 **315.03** Chronic intermittent ethanol potentiates goal-directed behavior via dorsomedial striatal adenosine A2A receptor. S. HONG*; S. CHANG; D. CHOI. *Mayo Clin. Col. of Med., Mayo Clin.*

11:00 FF6 **315.04** Retrograde mapping of afferent inputs to direct- and indirect-pathway neurons in the dorsomedial striatum. Y. CHENG*; J. LU; B. BARBEE; X. WANG; J. WANG. *Texas A&M Univ. Hlth. Sci. Ctr.*

8:00 FF7 **315.05** Pharmacologic and genetic targeting of the neural extracellular matrix to ameliorate aging-related cognitive decline. A. D. RICHARD*; X. TIAN; X. W. YANG; X. LU. *Louisiana State Univ. Hlth. Sci. Ctr., LSU, UCLA Hlth. Syst., Louisiana State Univ. Hlth. Sci. Ctr.*

8:00 DP09/FF8 **315.06** (Dynamic Poster) Anatomical evidence that multiple striatal regions influence motor cortex. S. AOKI*; M. IGARASHI; P. COULON; J. R. WICKENS; T. J. RUIGROK. *Okinawa Inst. of Sci. and Technol., Erasmus MC Rotterdam, Inst. de Neurosciences de La Timone, OKINAWA INSTITUTE OF SCIENCE AND TECHNOLOGY.*

10:00 FF9 **315.07** Predicting the PSTH for inhibitory conductance input to substantia nigra pars reticulata. D. V. SIMMONS*; D. SIMMONS*; M. H. HIGGS; C. J. WILSON. *Univ. of Texas At San Antonio.*

11:00 FF10 **315.08** Predicting the PSTH for excitatory current input to substantia nigra pars reticulata neurons. M. H. HIGGS*; D. V. SIMMONS; C. J. WILSON. *Univ. of Texas at San Antonio.*

8:00 FF11 **315.09** Oscillatory entrainment of striatal low threshold spike interneurons. J. C. MORALES*; C. J. WILSON. *Univ. of Texas At San Antonio.*

9:00 FF12 **315.10** Involvement of the store operated calcium entry in the long-lasting calcium transient in the striatal GABAergic neuron. S. KIKUTA; Y. YANAGAWA; N. HOMMA; M. TAKADA; M. OSANAI*. *Primate Res. Institute, Kyoto Univ., Tohoku Univ. Grad Sch. Med., Gunma Univ. Grad. Sch. of Med., Grad Sch. Biomed Eng, Tohoku Univ.*

10:00 FF13 **315.11** Dopaminergic modulation of striatal cholinergic interneurons governs sequence learning. J. H. CHANCEY*; D. M. LOVINGER. *NIH-NIAAA, Natl. Inst. on Alcohol Abuse and Alcoholism Rockville Office.*

11:00 FF14 **315.12** Differential impact of specific midbrain to striatal cholinergic interneurons pathways in conditioned behavior. K. TAN*; Z. LI; A. MERLI; G. RIZZI. *Univ. of Basel.*

8:00 FF15 **315.13** Subcellular functional analysis of direct pathway striatal spiny projection neurons in patch versus matrix compartments of the dorsal striatum. E. M. PRAGER*; C. CUHNA; M. HARNETT; J. L. PLOTKIN. *Stony Brook Univ.*

9:00 FF16 **315.14** Parallel striatal pathways collaboratively control the dynamics and fate of actions. C. MENG*; J. ZHOU; A. PAPANERI; G. CUI. *NIH/NIEHS, NIH/NIEHS.*

10:00 FF17 **315.15** Molecular tools for *in vivo* spectrometry: Viral vectors designed to target neuronal subsets. A. PAPANERI*; C. MENG; J. ZHOU; C. MAZZONE; G. CUI. *NIEHS.*

11:00 FF18 **315.16** Simultaneous dual color recording of neural activity from parallel striatal pathways. J. ZHOU*; C. MENG; A. PAPANERI; G. CUI. *NIEHS/NIH, NIH/NIEHS, NIEHS, NIH/NIEHS.*

8:00 FF19 **315.17** Striatal representation of competing cortical information. M. ISRAELASHVILI*; I. BAR-GAD. *Bar Ilan Univ.*

9:00 FF20 **315.18** Differences in LTP between dorsolateral and dorsomedial striatum: Induction frequency, D1 receptors, and Trkb receptors. V. LEWITUS*; A. KAISER; R. KEITH; K. T. BLACKWELL. *George Mason Univ., George Mason Univ., George Mason Univ.*

10:00 FF21 **315.19** Fast-spiking interneurons regulate ensemble calcium signaling and striatum-dependent learning. S. F. OWEN*; J. D. BERKE; A. C. KREITZER. *Gladstone Inst. of Neurolog. Dis., UCSF.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 FF22 **315.20** Spatiotemporal GABAergic inhibition regulates cooperative spine calcium signaling in a spiny projection neuron model. D. B. DORMAN*; K. T. BLACKWELL. *George Mason Univ.*

8:00 GG1 **315.21** Coordinated encoding of action velocity by striatal fast-spiking interneurons. M. H. PATTON*; B. M. ROBERTS; M. G. WHITE; R. CHEN; B. N. MATHUR. *Univ. of Maryland, Baltimore, Univ. of Oxford, Univ. of Maryland, Baltimore.*

9:00 GG2 **315.22** Motor activity modulates slowly oscillating basal ganglia neurons in awake, dopamine depleted mice. T. C. WHALEN*; A. M. WILLARD; K. J. MASTRO; J. E. RUBIN; A. H. GITTIS. *Carnegie Mellon Univ., Carnegie Mellon Univ., Univ. of Pittsburgh, Univ. of Pittsburgh.*

10:00 GG3 **315.23** *In vivo* and *in vitro* synaptic plasticity mechanisms in cortico-striatal circuits. K. JUCZEWSKI*; D. M. LOVINGER. *NIH, Natl. Inst. on Alcohol Abuse and Alcoholism Rockville Office.*

11:00 GG4 **315.24** Resting-state fMRI analysis revealed human caudate topology along two principle axes: Medial-lateral and anterior-posterior. J. F. O'RAWE*; M. KHAN; H. LEUNG. *Stony Brook Univ.*

8:00 GG5 **315.25** Spine density in the nucelus accumbens is differentially changed after rat gambling task with different housing condition. M. KWAK; W. KIM; B. CHO; W. CAI; J. KIM*. *Yonsei Univ. Coll Med.*

9:00 GG6 **315.26** Visualization of ERM proteins on dendritic spines in the rat nucleus accumbens. W. CAI; W. KIM*; M. KWAK; J. KIM. *Yonsei Univ. Col. Med.*

POSTER

316. The Control of Reaching Movements I

Theme E: Motor Systems

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 GG7 **316.01** Vestibular input modulates visuomotor feedback responses in reaching. L. OOSTWOUD WIJDENES*; W. P. MEDENDORP. *Radboud Univ.*

9:00 GG8 **316.02** Unique oscillatory entrainment of spike timing after ischemic infarct in rat motor cortex is associated with behavioral outcomes. M. D. MURPHY*; A. R. PACK; C. L. DUNHAM; S. BARBAY; D. J. GUGGENMOS; R. J. NUDO. *Univ. of Kansas, Emory Univ., Univ. of Kansas Med. Ctr., Univ. of Kansas Med. Ctr.*

10:00 GG9 **316.03** Sensory prediction and sensory surprise in goal-directed movement. G. JURAVLE*; F. L. COLINO; G. BINSTED; A. FARNE. *INSERM, Lyon Neurosci. Res. Ctr., Univ. of Victoria, Univ. of British Columbia, Lyon Neurosci. Res. Center, INSERM 1028, CNRS 5292, Ucbl1.*

11:00 GG10 **316.04** Neuronal activity in motor cortex during coherent sequential reach. T. WANG*; Y. ZHANG; H. CUI. *Inst. of Neuroscience, CAS.*

8:00 GG11 **316.05** Neuronal activity in motor cortex during flexible manual interception. Y. ZHANG*; T. WANG; H. CUI. *Inst. of Neuroscience, CAS.*

9:00 GG12 **316.06** The functional organization of movement maps in New World titi monkeys. M. K. BALDWIN*; A. C. HALLEY; L. A. KRUBITZER. *Univ. of California Davis, Univ. of California, Davis, UC Davis.*

10:00 GG13 **316.07** Movement characteristics encoded by single neurons in the cuneate nucleus of an awake behaving rhesus macaque. C. VERSTEEG*; R. CHOWDHURY; T. TOMLINSON; J. M. ROSENOW; L. E. MILLER. *Northwestern Univ., Northwestern Univ., Northwestern Univ. Feinberg Sch. of Med., Northwestern Univ. and Rehabil. Inst. of Chicago, Shirley Ryan AbilityLab, Northwestern Univ.*

11:00 GG14 **316.08** Cortical EEG dynamics during reaching movement under the influence of the mirror illusion. K. YAMANAKA*. *Showa Women's Univ.*

8:00 GG15 **316.09** 3D assessment of upper limb proprioception. J. D. KLEIN*; B. WHITSELL; P. ARTEMIADIS; C. A. BUNEO. *ASU, Interdisciplinary Grad. Program in Neurosci., Alliance for Person-Centered Accessible Technologies IGERT Program, Sch. of Engin. of Matter, Transport, and Energy, Sch. of Biol. and Hlth. Systems Engin.*

9:00 GG16 **316.10** Segregated processing of reach depth and direction signals in the macaque area PE. M. DE VITIS; K. HADJIDIMITRAKIS; R. BREVEGLIERI; A. BOSCO*; C. GALLETTI; P. FATTORI. *Univ. of Bologna, KU Leuven, Monash Univ.*

10:00 GG17 **316.11** Relationship between muscle synergies and physical performance in patients with hemiparesis. T. KAWASE*; A. NISHIMURA; A. NISHIMOTO; F. LIU; Y. KIM; H. KAMBARA; N. YOSHIMURA; Y. KOIKE. *Tokyo Inst. of Technol., Keio Univ. Sch. of Med.*

11:00 GG18 **316.12** Neurobehavioral effects of sensory loss and augmented feedback. J. T. JOHNSON*; L. A. WHEATON. *Georgia Inst. of Technol., Georgia Tech.*

8:00 GG19 **316.13** Involvement of the posterior parietal cortex in online control of reaching. L. MIKULA*; L. PISELLA; G. BLOHM; A. Z. KHAN. *Inserm U1028, CNRS UMR5292, Univ. de Montreal, Queen's Univ.*

9:00 GG20 **316.14** What is the best methods to determine reaction times. J. B. SMEETS*; E. BRENNER. *Vrije Univ. Amsterdam.*

10:00 GG21 **316.15** Reaching for water: A novel cortex dependent forelimb task for mice. C. BONARDI*; G. GALINANES; D. HUBER. *Univ. of Geneva.*

11:00 GG22 **316.16** The influence of action reinforcement on perceptual decision-making. N. KUMAR; P. K. MUTHA*. *Indian Inst. of Technol. Gandhinagar, Indian Inst. of Technol. Gandhinagar.*

8:00 GG23 **316.17** Circle drawing as an objective indicator of handedness. N. DOUNSKAIA*. *Arizona State Univ.*

9:00 GG24 **316.18** ● Co-activation uses early antagonist response in upper limb postural control. C. M. SALIBA*; M. J. RAINBOW; W. S. SELBIE; K. J. DELUZIO; S. H. SCOTT. *Queen's Univ., HAS Motion Inc, Queen's Univ.*

10:00 GG25 **316.19** Fitts' law explanation based on human arm dynamics. M. TAKEDA*; I. NAMBU; Y. WADA. *Nagaoka Univ. of Technol.*

11:00 GG26 **316.20** Competitive game influences risk-sensitivity in motor decision-making. K. OTA*; K. TAKIYAMA. *Tokyo Univ. of Agr. and Technol., Japan Society for Promotion of Sci. Res. Fellow, Tokyo Univ. of Agr. and Technol.*

8:00 GG27 **316.21** Control of arm reaching movements as a trade-off between movement variability and sub-quadratic effort. V. BARRADAS PATINO*; C. WANG; E. BURDET; N. SCHWEIGHOFER. *USC, USC, Imperial Col. London.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 GG28 **316.22** EMG-controlled force field generation: Incorporating muscle geometry and muscle activation dynamics. N. LOTTI*; V. SANGUINETI. *Univ. of Genoa.*

10:00 GG29 **316.23** Whole body muscle activity in quasi-static force efforts. N. SPEIDEL; P. CHEMBRAMMEL; R. MCNISH; S. N. MCKEEMAN; C. LOPEZ-ORTIZ*. *Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Univ. of Illinos at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Univ. of Illinois At Urbana-Champaign.*

11:00 GG30 **316.24** Motor-evoked pain increases force variability in chronic jaw pain. W. WANG*; A. ROY; S. COOMBES. *Univ. of Florida.*

8:00 GG31 **316.25** Probing motor priorities with electrical manipulation of neural noise scaling. F. LUNARDINI; D. STERNAD; C. J. HASSON*. *Politecnico Di Milano, Northeastern Univ., Northeastern Univ.*

9:00 GG32 **316.26** Sifts in strategic time points of a complex motor task with aging. E. THOMAS*; P. HILT; P. MANCKOUNDIA; F. MOUREY; M. CASTERAN. *Univ. De Bourgogne, Italian Inst. of Technol., Hosp. of Champmaillot, Univ. de Lorraine.*

POSTER

317. Motor Learning and Recovery

Theme E: Motor Systems

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 GG33 **317.01** Searching for the genetic components of long-term memory for operant self-learning in *Drosophila.* B. BREMBS*; W. SUN. *Univ. Regensburg.*

9:00 HH1 **317.02** ● Cortical map plasticity as a function of vagus nerve stimulation intensity paired with motor training. R. A. MORRISON*; T. DANAPHONGSE; S. SARKER; J. MONG; H. ZHANG; D. HULSEY; K. ADCOCK; S. A. HAYS; M. P. KILGARD; R. L. RENNAKER. *Univ. of Texas At Dallas.*

10:00 HH2 **317.03** ● Optogenetic stimulation leads to connectivity changes across sensorimotor cortex in nonhuman primates. D. B. SILVERSMITH*; A. YAZDAN-SHAHMORAD; V. KHARAZIA; P. SABES. *Univ. of California San Francisco, Univ. of California Berkeley, Univ. of California San Francisco.*

11:00 HH3 **317.04** Effects of chronic antidepressant use on neurophysiological responses to tDCS post-stroke. X. LI*; S. M. MORTON. *Univ. of Delaware, Univ. of Delaware.*

8:00 HH4 **317.05** Female sex hormones modulate the response to low-frequency rTMS in the human motor cortex. L. M. ROGERS*; Y. Y. DHAHER. *Shirley Ryan AbilityLab, Northwestern Univ., Northwestern Univ.*

9:00 HH5 **317.06** ● Vagus nerve stimulation dependent enhancement of motor cortex plasticity requires noradrenergic innervation. D. HULSEY*; M. SHEDD; J. MONG; R. L. RENNAKER; S. A. HAYS; M. P. KILGARD. *Univ. of Texas at Dallas, Univ. of Texas at Dallas, Univ. of Texas At Dallas.*

10:00 HH6 **317.07** The effect of volitional movement on paired associative stimulation-induced plasticity. A. O. ALOKAILY*; M. YAROSSI; S. V. ADAMOVICH. *New Jersey Inst. of Technol., King Saud Univ., Rutgers Univ., New Jersey Inst. of Technol.*

11:00 HH7 **317.08** Voluntary control of residual antagonist muscles in transtibial amputees: Coactivation,reciprocal activation, and residual muscle plasticity. S. HUANG*; H. HUANG. *North Carolina State Univ.*

8:00 HH8 **317.09** Music training differentially modulates motor cortical activity in healthy young adults. P. IZBICKI*; S. ANDERSON; E. STEGEMOLLER. *Iowa State Univ.*

9:00 HH9 **317.10** Volitional control of inhibitory neuron subtypes. A. MITANI*; T. KOMIYAMA. *UCSD, Univ. of California San Diego.*

10:00 HH10 **317.11** An ERP study of homeostatic plasticity in human motor cortex following artificial syndactyly. S. M. LONG*; M. M. GARDNER; M. A. GANNON; N. A. PARKS. *Univ. of Arkansas.*

11:00 HH11 **317.12** Influence of age, motor cortex stimulation, and motor training on neuroplasticity. C. L. MASSIE*; A. BERCOVITZ; B. STAMPER; S. MCGUIRE; K. JEFFERS. *Indiana Univ.*

8:00 HH12 **317.13** Task and region specific changes in resting state fMRI induced by short-term motor sequence and visuospatial learning. C. THOMAS*; A. STEEL; A. TREFLER; G. CHEN; C. I. BAKER. *NIMH, NIMH.*

9:00 HH13 **317.14** Voluntary rehabilitation for promoting motor paralysis recovery in intracerebral hemorrhage model rats. C. SATO*; S. KOEDA; K. SUMIGAWA; M. MIKAMI; K. AKAHIRA; J. YAMADA. *Hirosaki Univercity.*

10:00 HH14 **317.15** ● Influence of nerve regeneration on anterior cruciate ligament injury healing process in a rat model. N. KANEMURA*; T. KOKUBUN; Y. MORISHITA; K. MURATA; A. NAKAJIMA; K. MATSUI; K. ONITSUKA; S. FUJIWARA. *Saitama Prefectural Univ., Grad. School of Hlth. and Social Services, Saitama Prefectural Univ., Grad. Sch. of Hlth. and Social Services, Saitama Prefectural Univ., Kawaguchi Municipal Med. Ctr., Tokyo Women Med. Univ. Yachiyo Med. Ctr.*

11:00 HH15 **317.16** Implicit learning in a visuomotor skill task mimics the SRTT. J. REIS*; M. ULBRICH; M. CURADO; B. FRITSCH. *Univ. of Freiburg, Univ. of Freiburg, Univ. Med. Ctr. Freiburg, Univ. of Freiburg/ Neurocenter.*

8:00 HH16 **317.17** Modulation of the sodium potassium ATPase function and expression by transcranial direct current stimulation of the right sensorimotor cortex. S. BENDAOUD*; Z. AHMED. *CUNY Col. of Staten Island, Col. of Staten Island.*

9:00 HH17 **317.18** Effect of mesenchymal stem cells on motor recovery in subacute stroke. A. JAILLARD*; T. A. ZEFFIRO; A. MOISAN; M. BARBIEUX-GUILLOT; I. WIKI FAVRE; K. GARAMBOIS; W. VADOT; S. MARCEL; M. J. G. HOMMEL; O. DETANTE. *Univ. Hosp. Grenoble, Neurometrika, Etablissement Français du Sang, Ctr. Hospitalier Universitaire Toulouse, Ctr. Hospitalier Universitaire Grenoble Alpes, Ctr. Hospitalier de la Région d'Annecy, Ctr. Hospitalier Chambery, Univ. Grenoble Alpes.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

318. Neuroethology: Development and Anatomy

Theme F: Integrative Physiology and Behavior

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 HH18 **318.01** ▲ Examining the proportion of brain devoted to various structures across certain mammalian orders. W. TOMITA; S. GRETA; A. BURRE; D. ROSTAMIAN; K. UNO; N. SCHOTTLER; W. E. GRISHAM*. *UCLA, Univ. of Chicago, Claremont McKenna Col., UCLA.*

9:00 HH19 **318.02** The auditory system of two pinniped species. J. KRUEGER*; E. C. TURNER; E. K. SAWYER; J. H. KAAS. *Vanderbilt Univ., Vanderbilt Univ.*

10:00 HH20 **318.03** Quantifying the spinal locomotor network-driven oculomotor behavior and its developmental adaptation in larval and adult frog. J. BACQUE-CAZENAVE*; F. LAMBERT; M. CAYREL; G. COURTAND; M. BERANECK; D. COMBES. *Univ. de Bordeaux INCIA - CNRS UMR 5287, Univ. Paris Descartes, CNPP CNRS UMR8119.*

11:00 HH21 **318.04** What lies below: A visual tour through Tritonia's brain. W. N. FROST*; M. BRITTON; A. FERRIER; J. WANG; N. WANG; C. J. BRANDON. *The Chicago Med. Sch., Lake Forest Col.*

8:00 HH22 **318.05** Using gene expression to define the architecture of the zebra finch arcopallium. T. M. KASER*; M. WIRTHLIN; P. V. LOVELL; C. V. MELLO. *Oregon Hlth. and Sci. Univ., Carnegie Mellon Univ., Oregon Hlth. and Sci. Univ. Sch. of Med.*

9:00 HH23 **318.06** Perineuronal nets development correlates with developmental and adult neuroplasticity related to song learning in the songbird brain. G. CORNEZ; E. JONCKERS; S. M. TER HAAR; O. SHEVCHOUK; S. GHORBANPOOR; G. F. BALL; A. VAN DER LINDEN; C. A. CORNIL; J. H. BALTHAZART*. *Univ. of Liège, Univ. of Antwerp, Univ. of Maryland, Univ. of Liege.*

10:00 HH24 **318.07** ● Developmental reconfiguration of the *Drosophila ecdysis* neural circuit. A. R. LAZARCHIK*; M. ROBERTS; H. LUAN; F. DIAO; F. DIAO; B. H. WHITE. *NIH, NIMH.*

11:00 HH25 **318.08** Systematic identification of ocellar ganglion interneurons and their projections in the brain of *Drosophila melanogaster.* J. GOLDAMMER*; G. M. RUBIN; K. ITO. *HHMI: Janelia Res. Campus, Howard Hughes Med. Inst. Janelia Farm Res. Campus, Univ. of Cologne.*

8:00 HH26 **318.09** Anatomy and function of distinct groups of sensory neurons in the femoral chordotonal organ of *Drosophila.* A. S. CHOCKLEY; S. RATICAN; V. GODESBERG; A. BÜSCHGES; T. BOCKEMÜHL*. *Univ. of Cologne.*

9:00 HH27 **318.10** Non-visual functions of opsins in *Drosophila* larval mechanosensors. D. GIRALDO-SANCHEZ*; D. ZANINI; B. R. H. GEURTEN; M. ANDRÉS; M. C. GÖPFERT. *Univ. of Göttingen, Ear Institute, Univ. Col. London.*

10:00 HH28 **318.11** Generation and utilization of sensory signals encoding force decreases in insect legs. S. N. ZILL*; S. S. CHAUDHRY; C. J. DALLMANN; T. HOINVILLE; J. SCHMITZ; A. BÜSCHGES. *J.C. Edwards Sch. Med., Marshall Univ., Bielefeld Univ., Univ. of Cologne.*

11:00 HH29 **318.12** ▲ Potential dopaminergic modulation rescues acoustic startle responses after lesions of the telencephalon in goldfish. A. N. OPALKA; N. FISCHER; C. A. ANZULEWICZ; R. F. WALDECK*. *Univ. of Scranton, Western Univ. of Hlth. Sci., Univ. of Scranton.*

8:00 HH30 **318.13** Comparative study of movement behavior and spiking patterns of the electrosensory nerves in glass catfish under sinusoidal electrical stimulation. Y. ADACHI*; K. TATENO. *Kyushu Inst. of Technol., Dept. of Human Intelligence Systems, Kyushu Inst. of Technol.*

9:00 HH31 **318.14** Activation profiles of Purkinje neurons during optomotor adaptation in larval zebrafish. S. NARAYANAN*; V. THIRUMALAI. *Natl. Ctr. For Biol. Sci.*

10:00 HH32 **318.15** The weakly electric fish Apternotus displays stochastic resonance. W. M. SAIDEL*; S. SHENDE; A. SHAH. *Rutgers, the State Univ. of NJ, Rutgers Univ.*

11:00 HH33 **318.16** How a soft surface releases its grasp: Radular opening in *Aplysia californica.* C. E. KEHL*; D. M. NEUSTADTER; S. C. LU, 44118; H. J. CHIEL. *Case Western Reserve Univ., Calore Med. LTD, Case Western Reserve Univ., Case Western Res. Univ.*

8:00 HH34 **318.17** Axonal dynamics during thermal block in unmyelinated axons. M. GANGULY*; M. W. JENKINS; E. D. JANSEN; H. J. CHIEL. *Vanderbilt Univ., Case Western Reserve Univ., Case Western Res. Univ.*

9:00 HH35 **318.18** Mechanisms of motor neuronal recruitment for load response in feeding *Aplysia.* J. P. GILL*; H. LU; D. N. LYTTLE; H. J. CHIEL. *Case Western Reserve Univ.*

10:00 HH36 **318.19** Methodology for analyzing the performance of muscles of *Aplysia californica* as actuators for biohybrid devices. F. R. YOUNG*; V. A. WEBSTER-WOOD; O. AKKUS; U. GURKAN; H. J. CHIEL; R. D. QUINN. *Case Western Reserve Univ., Case Western Res. Univ.*

11:00 II1 **318.20** Combining temporal structure with quantified bursting character aids in ENG classification. J. P. SASSE*; J. GILL; P. MYERS; M. CULLINS; H. LU; J. M. MCMANUS; H. J. CHIEL. *Case Western Reserve Univ.*

8:00 II2 **318.21** ▲ Neural dynamics of a feeding pattern-generating circuit in the marine mollusk *Aplysia californica.* J. YANG*; H. LU; N. KODAMA; T. FENG; R. FERNANDEZ GALAN; H. J. CHIEL. *Case Western Reserve Univ., Case Western Res. Univ., Case Western Reserve Univ., Case Western Reserve Univ., Case Western Reserve Univ., Case Western Res. Univ.*

POSTER

319. Birdsong: From Neurogenesis to Genetics and Epigenetics

Theme F: Integrative Physiology and Behavior

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 II3 **319.01** Global DNA methylation patterns in the brain of the black-capped chickadee (Poecile atricapillus). S. D. AITKEN; C. A. BLACKMAN; I. C. WEAVER; L. S. PHILLMORE*. *Dalhousie Univ., Dalhousie Univ., Dalhousie Univ.*

9:00 II4 **319.02** Interspecific divergence of cis- and trans-regulation for gene expression associated with species-specific learned vocalization. W. HONGDI*; A. SAWAI; S. HAYASE; K. WADA. *Hokkaido Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 II5 **319.03** Enhancing vocal learning: Gene regulatory specializations in the song circuit. L. CANTIN*; M. WIRTHLIN; J. CAHILL; G. GEDMAN; A. R. PFENNING; E. D. JARVIS. *The Rockefeller Univ., Carnegie Mellon Univ., Howard Hughes Med. Inst., Duke Univ.*

11:00 II6 **319.04** Targeting activity-dependent chromatin remodeling pathways to rescue deficits in learned vocal communication. C. M. AAMODT*; C. FUENTES MARTINEZ; J. T. WEISS; S. A. WHITE. *UCLA, UCLA.*

8:00 II7 **319.05** Epigenetic mechanisms enable song specific auditory memories in songbirds. M. L. PHAN*; M. M. GERGUES; S. MAHIDADIA; R. BERNABE; J. JIMÉNEZ CASTILLO; D. S. VICARIO; K. M. BIESZCZAD. *Rutgers Univ. Dept. of Psychology.*

9:00 II8 **319.06** Genomics and transcriptomics of ion channel genes in the vocal control system of the zebra finch. S. R. FRIEDRICH*; C. R. OLSON; C. V. MELLO. *Oregon Hlth. & Sci. Univ., Midwestern Univ.*

10:00 II9 **319.07** Development of a more efficient approach for generating germline transgenic songbirds. M. T. BIEGLER*; A. KEYTE; K. M. JUNG; Y. H. PARK; J. Y. HAN; E. D. JARVIS. *Duke Univ., Howard Hughes Med. Inst., Rockefeller Univ., Seoul Natl. Univ.*

11:00 II10 **319.08** Update and applications of the zebra finch expression brain atlas (ZEBrA; www.zebrafinchatlas.org). C. V. MELLO*; P. V. LOVELL. *Oregon Hlth. and Sci. Univ. Sch. of Med.*

8:00 II11 **319.09** ▲ Molecular specializations of the tracheosyringeal portion of the hypoglossal nucleus (nXIIts) in a vocal learning songbird, the zebra finch (Taeiniopygia guttata). N. HUIZINGA*; P. V. LOVELL; C. V. MELLO. *Oregon Hlth. & Sci. Univ., Oregon Hlth. and Sci. Univ. Sch. of Med.*

9:00 II12 **319.10** Molecular specializations of vocal nuclei in zebra finches (Taeniopygia guttata) associated with neurotransmitter receptors, neuropeptides, and axonal guidance cues. P. V. LOVELL*; C. V. MELLO. *Oregon Hlth. and Sci. Univ. Sch. of Med.*

10:00 II13 **319.11** Experience dependent changes in immediate early gene expression in the auditory forebrain in response to conspecific song in female canaries (Serinus canaria). C. M. HAAKENSON*; F. N. MADISON; G. F. BALL. *Univ. of Maryland, Univ. of Maryland, Univ. of Maryland.*

11:00 II14 **319.12** Nature via nurture of vocal learning in hybrid songbirds. K. WADA*; A. SAWAI. *Hokkaido Univ., Hokkaido Univ.*

8:00 II15 **319.13** ▲ Transcriptional clustering reveals molecular convergence between human and songbird vocal learning circuits. S. ANNALDASULA*; M. WIRTHLIN; G. GEDMAN; E. D. JARVIS; A. R. PFENNING. *Carnegie Mellon Univ., Carnegie Mellon Univ., Rockefeller Univ., Duke Univ. Hosp.*

9:00 II16 **319.14** Behavioral plasticity is related to adult neurogenesis in songbirds. L. NIEDEROVA-KUBIKOVA*; K. LUKACOVA; J. POLOMOVA; L. BACIAK; S. KASPAROVA. *Ctr. of Biosciences, Inst. Anim. Biochem. Gen., Slovak Univ. of Technology, Fac. of Chem. and Food Technol.*

10:00 II17 **319.15** Unilateral vocal nerve section alters new neuron survival in the zebra finch song system. J. V. ARONOWITZ*; C. O'BRIEN; A. PEREZ; S. RIBEIRO; K. WASNER; A. LOPEZ; E. RODRIGUEZ; B. KOO; C. PYTTE. *Queens Col., Grad. Center, City Univ. of New York, Uniformed Services Univ. of the Hlth. Sci., Luxembourg Ctr. for Systems Biomedicine, Duke Univ.*

POSTER

320. Stress-Modulated Pathways: Networks, Circuits, and Morphology

Theme F: Integrative Physiology and Behavior

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 II18 **320.01** ▲ Sex differences in the effects of chronic stress on dendritic remodeling in orbitofrontal cortex. A. GUTIERREZ*; V. SZALAVARI; C. WELLMAN. *Indiana Univ. Bloomington, Indiana Univ.*

9:00 II19 **320.02** BAG-1 deficiency impairs stress-induced neuroplasticity and alters gene expression in the mouse prefrontal cortex. J. KOGAN*; M. W. SCHELKE; T. G. RUBIN; R. DAVIDSON; N. P. BOWLES; B. S. MCEWEN; J. D. GRAY. *Rockefeller Univ., Weill Cornell Med. Col., Albert Einstein Col. of Med.*

10:00 II20 **320.03** The unusual suspects: Oligodendrocytes predict resilience vs. vulnerability in response to stress. K. LONG*; L. CHAO; T. C. NEYLAN; D. KAUFER. *UC Berkeley, Univ. of California, San Francisco, Univ. of California, San Francisco.*

11:00 II21 **320.04** HIF1a signaling modulates synaptic plasticity and adult neurogenesis following chronic intermittent hypoxia. A. J. GARCIA*, III; M. A. KHUU; T. NALLAMOTHOU. *The Univ. of Chicago, Univ. of Chicago, The Univ. of Chicago.*

8:00 II22 **320.05** Network analysis of frontal cortical microcirrcuit dynamics after chronic stress hormone exposure and ketamine treatment. R. N. MODA*; M. MURDOCK; R. FETCHO; E. ALWAY; D. ROSENTHAL; K. LOPEZ; Y. MENG; T. HUYNH; C. LISTON. *Weill Cornell Med. Col., Feil Family Brain & Mind Res. Inst.*

9:00 II23 **320.06** Prefrontal somatostatin interneurons in action valuation processing and motivational anhedonia. R. N. FETCHO*; T. N. HUYNH; B. S. HALL; F. LEE; C. M. LISTON. *Weill Cornell Med. Col., Weill Cornell Med., Weill Cornell Med. Col.*

10:00 II24 **320.07** FAAH Genetic variation in mice leads to enhanced auditory fear extinction and increased frontolimbic circuit activity. T. N. HUYNH*; R. N. FETCHO; F. S. LEE; C. LISTON. *Weill Cornell Med.*

11:00 II25 **320.08** Frontostriatal circuit function in social interaction behavior and chronic social stress. B. S. HALL*; R. N. FETCHO; T. N. HUYNH; A. M. RAJADHYAKSHA; C. M. LISTON. *Weill Cornell Med. Col., Weill Cornell Med., Joan and Sanford I Weill Med. Col. of Cornell Univ., Weill Cornell Med. Col.*

8:00 II26 **320.09** Hippocampal engrams: Roles in stress susceptibility. T. ZHANG*; A. S. WONG; T. P. WONG. *Douglas Mental Hlth. Univ. Inst.*

9:00 II27 **320.10** Medial prefrontal cortex versus orbitofrontal cortex: Teasing apart differences in plasticity after stress. S. M. ADLER*; S. E. BULIN; M. S. PATTON; M. GIROTTI; D. A. MORILAK. *Univ. of Texas Hlth. At San Antonio.*

10:00 JJ1 **320.11** HPA axis disruption alters glutamate signaling in the prefrontal cortex: Consequences for acute stress exposure and stress adaptation. S. A. KINLEIN*; S. KINLEIN*; F. SHAFFER; M. SAVENKOVA; I. N. KARATSOREOS. *Washington State Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 JJ2 **320.12** Hodgkin-Huxley models of excitatory-inhibitory balance in a cortico-striosomal circuit underlying aberrant cost-benefit decision-making caused by chronic stress. L. G. GIBB*; A. FRIEDMAN; D. HOMMA; B. BLOEM; K. AMEMORI; D. HU; S. DELCASSO; A. S. HOOD; J. YANG; K. A. MIKOFALVY; T. F. TRUONG; S. E. TORO ARANA; D. W. BECK; N. NGUYEN; R. H. VORDER BRUEGGE; E. D. NELSON; K. A. GOOSENS; A. M. GRAYBIEL. *MIT.*

8:00 JJ3 **320.13** Rescue and mimicking of chronic stress effects on cost-benefit decision-making by manipulation of a cortico-striosomal circuit. D. HOMMA*; A. FRIEDMAN; B. BLOEM; L. G. GIBB; K. AMEMORI; D. HU; S. DELCASSO; A. S. HOOD; J. YANG; K. A. MIKOFALVY; T. F. TRUONG; S. E. TORO ARANA; D. W. BECK; N. NGUYEN; R. H. VORDER BRUEGGE; E. D. NELSON; K. A. GOOSENS; A. M. GRAYBIEL. *MIT.*

9:00 JJ4 **320.14** A shift in the excitation-inhibition balance of a cortico-striosomal circuit underlies aberrant cost-benefit decision-making caused by chronic stress. A. FRIEDMAN*; D. HOMMA; B. BLOEM; L. G. GIBB; K. AMEMORI; D. HU; S. DELCASSO; A. S. HOOD; J. YANG; K. A. MIKOFALVY; T. F. TRUONG; S. E. TORO ARANA; D. W. BECK; N. NGUYEN; R. H. VORDER BRUEGGE; E. D. NELSON; K. A. GOOSENS; A. M. GRAYBIEL. *MIT.*

10:00 JJ5 **320.15** ▲ Corticohippocampal NMDAR-GluN2B subunit deletion protects against stress-induced dendritic remodelling. S. E. KANDIGIAN*; A. NG; C. R. PINARD; A. HOLMES; H. C. BERGSTROM. *Vassar Col., NIAAA/NIH.*

11:00 JJ6 **320.16** Rapid brain changes in cortical midline structures after acute psychosocial stress. M. UHLIG*; J. REINELT; M. E. LAUCKNER; D. KUMRAL; L. SCHAARE; A. REITER; M. ERBEY; J. ROEBBIG; T. HENDLER; Y. BAE; J. KRATZSCH; A. BABAYAN; A. VILLRINGER; M. GAEBLER. *MPI for Human Cognitive and Brain Sci., Intl. Max Planck Res. Sch. NeuroCom, Berlin Sch. of Mind and Brain, Humboldt-Universität zu Berlin, Lifespan Developmental Neuroscience, Technische Univ. Dresden, Fac. of Medicine, Sagol Sch. of Neurosci. Tel Aviv Univ., Inst. of Lab. Medicine, Clin. Chem. and Mol. Diagnostics, Leipzig Res. Ctr. for Civilization Diseases, Univ. of Leipzig.*

8:00 JJ7 **320.17** Subtle hippocampal CA1 dendritic restructuring following chronic stress: Influence of a post-stress rest period and hippocampal CA3 BDNF downregulation. J. B. ORTIZ*; E. J. DAAS; A. FLEGENHEIMER; B. Q. LE; C. D. CONRAD. *Arizona State Univ., Arizona State Univ.*

9:00 JJ8 **320.18** ● Attenuated nucleus accumbens dopamine neurotransmission in a rodent model of antidepressant resistance. S. J. TYE*; A. WALKER; R. P. KALE; B. MORATH. *Mayo Clin., Mayo Clin.*

10:00 JJ9 **320.19** Prior chronic stress exposure alters medial prefrontal cortex response to a novel stressor in a sex-dependent manner. K. M. MOENCH*; C. L. WELLMAN. *Indiana Univ.*

11:00 JJ10 **320.20** Sphingosine-1-phosphate receptor 3 in the medial prefrontal cortex: A novel target to promote resilience to stress. B. CORBETT*; N. SOTUYO; S. LUZ; J. PEARSON-LEARY; J. STAIB; S. BHATNAGAR. *Children's Hosp. of Philadelphia.*

8:00 JJ11 **320.21** Vagus nerve stimulation upregulates the production of 5HT1A and 5HT1B receptors in hippocampal neurons of a chronic restraint stress model of depression. H. SHIN; J. PARK; U. NAMGUNG*. *Daejeon Univ., Daejeon Univ.*

9:00 JJ12 **320.22** ▲ Development of a hippocampal circuit-specific knockout of FOSB gene. A. J. WIRTZ*; A. L. EAGLE; A. ROBISON. *Michigan State Univ., Michigan State Univ., Michigan State Univ.*

10:00 JJ13 **320.23** ▲ Chronic cocaine and stress alter spine morphology of hippocampal pyramidal neurons. A. R. ST. GERMAIN*; A. L. EAGLE; A. ROBISON. *Michigan State Univ., Michigan State Univ., Michigan State Univ.*

11:00 JJ14 **320.24** Circuit-specific genomic and functional dissection of male and female resilience to social stress. E. S. WILLIAMS*; A. L. EAGLE; C. E. MANNING; R. L. NEVE; A. ROBISON. *Michigan State Univ., Michigan State Univ., Michigan State Univ., MIT.*

8:00 JJ15 **320.25** Circuit-specific ventral hippocampus ΔFosb expression mediates resilience in the social defeat model of depression. C. MANNING*; A. L. EAGLE; D. T. CARABALLO; E. S. WILLIAMS; P. A. GAJEWSKI; R. L. NEVE; M. S. MAZEI-ROBISON; A. ROBISON. *Michigan State Univ., Michigan State Univ., Univ. of Peurto Rico Arecibo, Michigan State Univ., Michigan State Univ., MIT, Michigan State Univ., Michigan State Univ.*

9:00 JJ16 **320.26** Circuit-specific FOSB gene silencing in ventral hippocampal projections underlies differential behavioral phenotypes associated with psychiatric disease. A. L. EAGLE*; C. E. MANNING; E. S. WILLIAMS; P. A. GAJEWSKI; F. M. BOYCE; R. L. NEVE; I. S. MAZE; A. ROBISON. *Michigan State Univ., Michigan State Univ., Michigan State Univ., Michigan State Univ., Massachusetts Gen. Hosp., MIT, Icahn Sch. of Med. At Mount Sinai, Michigan State Univ.*

10:00 JJ17 **320.27** Distinct physiological and molecular characteristics of cortical S100a10 neurons in response to stress and antidepressant treatment. D. SARGIN; R. C. UTHAIAH; D. T. CHU; K. E. PERIT; E. F. SCHMIDT; N. HEINTZ; P. GREENGARD; E. K. LAMBE*. *Univ. of Toronto, Rockefeller Univ., Rockefeller Univ.*

POSTER

321. Stress-Modulated Pathways: Physiological and Behavioral Outcomes

Theme F: Integrative Physiology and Behavior

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 DP10/JJ18 **321.01** (Dynamic Poster) Infralimbic prefrontal cortical structural and functional projections to the limbic forebrain: A combined viral genetic and optogenetic analysis. B. MYERS*; M. WOOD; O. ADIL; S. FOURMAN; J. P. HERMAN. *Colorado State Univ., Univ. of Cincinnati.*

9:00 JJ19 **321.02** ● Long-term lactate and oxygen measurements in group housed animals. D. V. AILLON; S. GABBERT; E. KERNER; S. GROTH; E. NAYLOR; D. GWARTNEY; B. BARRETT; D. A. JOHNSON*; D. A. JOHNSON. *Pinnacle Technology, Inc.*

10:00 JJ20 **321.03** Neurogenic and stress-ameliorating effect in hippocampus and hypothalamus of OVX mice model with chronic TM extraction administration. K. KIM*; H. BAEK; M. PARK; B. KO; K. KIM; S. YI. *Soonchunhyang Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 JJ21 **321.04** ▲ Chronic Predator Stress in zebrafish as a simpler, cost effective *in vivo* depression model: Characteristic evaluation to be used as a tool in potential drug screening. S. CHAKRAVARTY*; B. R. REDDY; A. GOLLA; T. DAS; D. BHATTACHARYA; A. KUMAR. *Indian Inst. of Chem. Technol. (CSIR-IICT), Indian Inst. of Chem. Technol. (CSIR-IICT), Acad. of Scientific and Innovative Res., Ctr. for Cell. and Mol. Biol., Indian Inst. of Chem. Technol. (CSIR-IICT).*

8:00 JJ22 **321.05** A new framework for identifying molecular drivers of resilient neural circuit activity. R. HULTMAN*; M. JONES; L. MA; K. ULRICH; D. CARLSON; L. CARIN; K. DZIRASA. *Duke Univ., Human Longevity Inst., Duke Univ., Duke Univ. Med. Ctr.*

9:00 JJ23 **321.06** Local microinfusion of pituitary adenylate cyclase-activating polypeptide into the infralimbic cortex alters ACTH sensitivity and behavioral coping strategies. S. E. MARTELLE*; B. A. PACKARD; E. M. COTELLA; J. HERMAN. *Univ. of Cincinnati, Univ. of Cincinnati.*

10:00 JJ24 **321.07** Differential effects of ventral hippocampal corticosterone and its receptors on accumbal dopamine output in drug-naïve and amphetamine withdrawn rats. B. BRAY*; M. A. WEBER; G. L. FORSTER. *Univ. of South Dakota, Univ. of South Dakota.*

11:00 JJ25 **321.08** Cell type specific and region specific knockdown of glucocorticoid receptors: sex specific effects on the HPA axis and behavior. J. SCHEIMANN*; R. MORANO; P. MAHBOD; J. P. HERMAN. *Univ. of Cincinnati.*

8:00 JJ26 **321.09** ▲ The impact of acute stress on the expression of brain adenosine receptors. B. A. BAUSTIAN*; E. BAUER; A. BELL; P. J. CLARK. *Iowa State Univ.*

9:00 JJ27 **321.10** Food restriction alone exercise alone or the combined during adolescence rescue elevated anxiety and deficits in memory and social function resulting from variant BDNF Val66Met single nucleotide polymorphism through GABAergic mechanisms in the dorsal hippocampus. Y. CHEN*; H. ACTOR-ENGEL; F. LEE; C. J. AOKI. *New York Univ., Weill Cornell Med. Col.*

10:00 JJ28 **321.11** ● Optogenetic induction of LTD in the Medial Prefrontal Cortex results in set-shifting deficits. S. E. BULIN*; K. M. HOHL; D. A. MORILAK. *UT Hlth. Sci. Ctr. at San Antonio, Univ. of Texas Hlth. Sci. Ctr. at San Antonio.*

11:00 JJ29 **321.12** Social stress produces a long-term activation of locus coeruleus neurons in adolescent vs. adult female rats. A. L. CURTIS*; H. GUAJARDO; G. ZITNIK; R. VALENTINO. *Children's Hosp. Philadelphia.*

8:00 JJ30 **321.13** Social stress activates amygdalar corticotropin releasing factor and brainstem enkephalinergic afferents to the rat locus coeruleus in adolescent male rats depending on coping strategy. M. URQUHART*; B. A. REYES; X. ZHANG; R. VALENTINO; E. J. VAN BOCKSTAELE. *Col. of Medicine, Drexel Univ., Drexel Univ. Col. of Med., Children's Hosp. of Philadelphia, Drexel Univ. Col. Of Med.*

9:00 KK1 **321.14** Sex-specific behavior and dorsal raphe 5-HT neuronal excitability in response to acute and chronic stress. D. T. CHU*; D. K. OLIVER; D. SARGIN; E. K. LAMBE. *Univ. of Toronto.*

10:00 KK2 **321.15** Cellular sites for interactions between the endocannabinoid metabolic enzyme monoacylglycerol lipase and norepinephrine in the rat frontal cortex. E. J. VAN BOCKSTAELE*; K. MACKIE; B. A. REYES. *Drexel Univ. Col. Of Med., Indiana Univ., Drexel Univ.*

11:00 KK3 **321.16** Gender-specific changes in hippocampal synaptic plasticity and cognitive performance in C57BL/6J mice exposed to maternal separation. G. TALANI*; G. SARIGU; F. VEDELE; M. PETRELLA; D. COLOMBO; E. SANNA. *Natl. Res. Council, Univ. of Cagliari.*

8:00 KK4 **321.17** Paraventricular thalamic regulation of habituation to repeated stress: Molecular and network mechanisms. B. CORBETT; S. BHATNAGAR*; S. LUZ. *Children's Hosp. of Philadelphia, Univ. Pennsylvania, Children's Hosp Philadelphia, Children's Hosp. of Philadelphia.*

9:00 KK5 **321.18** Effect of corticotropin-releasing factor on noradrenergic locus coeruleus neurons in cannabinoid type 1 receptor knock out mice. R. WYROFSKY*; L. G. KIRBY; E. J. VAN BOCKSTAELE. *Drexel Univ. Col. of Med., Lewis Katz Sch. of Med. At Temple Univ.*

10:00 KK6 **321.19** Sex differences in cytokine expression following sub-chronic variable stress. J. R. RAINVILLE*; G. E. HODES. *Virginia Tech.*

11:00 KK7 **321.20** Transcriptional sex differences in the nucleus accumbens and hippocampus following sub-chronic and chronic variable stress. M. TSYGLAKOVA; J. RAINVILLE; A. JOHNSON; B. SMITH; G. E. HODES*. *Virginia Tech. Carilion Sch. of Med. and Res. Insititute, Virginia Tech.*

8:00 KK8 **321.21** Paired fighting causes social withdrawal and leukocyte recruitment to the cerebral ventricle in an IL-1R1 dependent manner. D. J. DISABATO*; D. P. NEMETH; X. LIU; G. GORANTLA; J. P. GODBOUT; N. QUAN. *The Ohio State Univ., The Ohio State Univ., The Ohio State Univ.*

9:00 KK9 **321.22** Exploring the role of GPR83, a newly deorphanized G-protein coupled receptor, in stress and immune function. L. M. LUEPTOW*; L. MIORIN; A. FAKIRA; M. SCHOTSAERT; A. GARCIA-SASTRE; L. DEVI. *Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai.*

10:00 KK10 **321.23** Distribution of type 1 interleukin-1 receptor in the central nervous and neuroendocrine systems in mouse. X. LIU*; A. SONG; D. NEMETH; L. ZHU; N. QUAN. *The Ohio State Univ., Ohio State Univ.*

11:00 KK11 **321.24** Chronic IL-1 suppresses hippocampal neurogenesis via dentate neuronal IL-1R1. D. NEMETH*; X. LIU; G. GORANTLA; D. J. DISABATO; N. QUAN. *Inst. For Behavioral Med. Res., The Ohio State Univ., The Ohio State Univ., Ohio State Univ.*

8:00 KK12 **321.25** Microglial recruitment of monocytes to the brain underlies reoccurring anxiety in stress-sensitized mice. J. P. GODBOUT*; M. D. WEBER; J. F. SHERIDAN. *Ohio State Univ. Dept. of Neurosci., Ohio State Univ., Ohio State Univ.*

9:00 KK13 **321.26** Extramedullary monopoiesis underlies stress-sensitization and recurring anxiety. D. B. MCKIM*; J. P. GODBOUT; J. F. SHERIDAN. *The Ohio State Univ., Ohio State Univ. Dept. of Neurosci., Ohio State Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

322. Stress and Cognition: Clinical Studies

Theme F: Integrative Physiology and Behavior

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 KK14 **322.01** Disorganization between default mode and attention networks is the feature of acute mental fatigue. A. T. SASAKI*; K. MIZUNO; K. WATANABE; K. TAJIMA; T. HAYASHI; Y. WATANABE. *RIKEN Ctr. for Life Sci. Technologies, RIKEN Cluster for Sci. and Technol. Hub, Osaka City Univ. Ctr. for Hlth. Sci. Innovation, Osaka City Univ. Grad. Sch. of Med., Osaka City Univ. Grad. Sch. of Med., RIKEN Ctr. for Life Sci. Technologies.*

9:00 KK15 **322.02** A haplotype of the mineralocorticoid receptor gene promotes the stress-induced shift from 'cognitive' to 'habit' learning. L. WIRZ*; M. REUTER; J. WACKER; A. FELTEN; L. SCHWABE. *Cognitive Psychology, Differential and Biol. Psychology, Differential Psychology.*

10:00 KK16 **322.03** Stress modulates motor memory consolidation. N. DOLFEN*; B. R. KING; L. SCHWABE; S. P. SWINNEN; G. ALBOUY. *KU Leuven, Univ. of Hamburg.*

11:00 KK17 **322.04** ▲ The effects of psychological and physiological stress on spatial reasoning skills. B. ROMAGNA*; B. P. GEE. *Western Connecticut State Univ.*

8:00 KK18 **322.05** ▲ Interactive influence of sex, stressor timing, and the BclI glucocorticoid receptor polymorphism on stress-induced alterations of long-term memory. T. J. DUFFY*; H. E. NAGLE; A. M. DAILEY; M. K. FIELY; B. E. MOSLEY; A. R. SCHARF; C. M. BROWN; M. B. EARLEY; K. L. HESS; J. K. HANDEL; M. R. RIGGENBACH; M. T. ROSELER; L. E. WIREMAN; J. J. HIPSKIND; B. R. RORABAUGH; P. R. ZOLADZ. *Ohio Northern Univ., Ohio Northern Univ.*

9:00 KK19 **322.06** FKBP5 polymorphisms influence pre-learning stress-induced alterations of learning and memory. P. R. ZOLADZ*; A. M. DAILEY; H. E. NAGLE; M. K. FIELY; B. E. MOSLEY; C. M. BROWN; T. J. DUFFY; A. R. SCHARF; M. B. EARLEY; K. L. HESS; J. K. HANDEL; M. R. RIGGENBACH; M. T. ROSELER; L. E. WIREMAN; J. J. HIPSKIND; B. R. RORABAUGH. *Ohio Northern Univ., Ohio Northern Univ.*

10:00 KK20 **322.07** Stress responsiveness alters human performance on tests of executive function under varying air quality conditions in a built environment. A. A. WALF*; L. HALDERMAN; A. MURALI; D. RIVERA; Z. LIN; A. DYSON; J. DRAPER. *Rensselaer Polytechnic Institute, Rensselaer Polytechnic Inst., Rensselaer Polytechnic Inst., Rensselaer Polytechnic Inst., Rensselaer Polytechnic Inst., Ctr. for Architectural Sci. and Ecology (CASE).*

11:00 KK21 **322.08** ● Influence of Neurexan® on brain activity in responses to deviant stimuli during an auditory oddball task. M. A. KRYLOVA*; G. SUROVA; S. ALIZADEH; H. JAMALABADI; M. SCHULTZ; M. WALTER. *Univ. Clin. For Psychiatry and Psychotherapy, Clin. Affective Neuroimaging Lab., Biologische Heilmittel Heel GmbH, Leibniz Inst. for Neurobio.*

8:00 KK22 **322.09** Differential effects of stress exposure on working memory performance across the hormonal contraceptive cycle. A. Y. HERRERA*; R. VELASCO; S. FAUDE; J. WHITE; P. C. OPITZ; R. HUANG; K. TU; M. MATHER. *USC, USC, USC, Tufts Univ.*

9:00 KK23 **322.10** ▲ ADRA2B deletion variant influences time-dependent effects of pre-learning stress on long-term memory. B. E. MOSLEY*; A. M. DAILEY; H. E. NAGLE; M. K. FIELY; C. M. BROWN; T. J. DUFFY; A. R. SCHARF; M. B. EARLEY; K. L. HESS; J. K. HANDEL; M. R. RIGGENBACH; M. T. ROSELER; L. E. WIREMAN; J. J. HIPSKIND; B. R. RORABAUGH; P. R. ZOLADZ. *Ohio Northern Univ., Ohio Northern Univ.*

10:00 KK24 **322.11** An Experimental Manipulation of hypothalamic pituitary axix in humans. B. BARRERA-MERA*. *Fac Med, UNAM.*

11:00 KK25 **322.12** Unhealed wounds: Childhood maltreatment is associated with heightened brain response to 33 msec subliminal aversive cues. P. S. REGIER*; A. M. TEITELMAN; K. JAGANNATHAN; A. R. CHILDRESS. *Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania.*

8:00 KK26 **322.13** Magnetoencephalographic and cardiac parameters are changed in employees with permanent hearing loss - A quantitative analysis in elderly workers. R. HUONKER; J. MÜLLER; J. LUKAJEWSKI; P. JAUER; O. W. WITTE; F. RICHTER*. *Univ. Hosp. Jena.*

POSTER

323. Stress and Cognition: Animal Studies

Theme F: Integrative Physiology and Behavior

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 KK27 **323.01** Anxiety/depressive-like behaviors without the change of the HPA axis by mild stress can be improved treadmill exercise in rats. K. ISHIDA*; K. KOIKE; A. MARUYAMA; Y. UENISHI; T. GYOUDA; Y. SUGIYAMA. *Nagoya Univ. Grad. Sch. of Med., Saarland Univ.*

9:00 KK28 **323.02** Susceptibility to post-traumatic stress disorder is comorbid with reduced mitochondrial capacity in mice. G. PRESTON*; T. EMMERZAAL; F. KIRDAR; E. MORAVA-KOZICZ; T. L. KOZICZ. *Tulane Univ. Sch. of Med., Radboud Univ. Nijmegen Med. Ctr.*

10:00 KK29 **323.03** Antagonizing the $GABA_A$ receptor during behavioral testing improves spatial memory in chronically stressed rats. K. NISHIMURA*; J. B. ORTIZ; C. D. CONRAD. *Arizona State Univ.*

11:00 KK30 **323.04** Sex differences in the role of adult neurogenesis in the development of learning and memory dysfunction following chronic stress. T. P. O'LEARY*; B. LEE; D. ESPINUEVA; J. S. SNYDER. *Univ. of British Columbia, Univ. of British Columbia.*

8:00 KK31 **323.05** Method for affective profiling for anxiety-like behavior in rodent model. J. STATZ; R. MCCARRON; J. GOODRICH; S. L. CIARLONE; M. L. MEHALICK; S. T. AHLERS; P. B. WALKER; A. E. TSCHIFFELY*. *Naval Med. Res. Center, HJF, Naval Med. Res. Ctr., Naval Med. Res. Ctr., Naval Med. Res. Ctr.*

9:00 KK32 **323.06** ▲ Stress-induced deficits in latent inhibition in GDNF-deficient mice. C. K. BROWN*; C. V. BUHUSI; M. BUHUSI. *Utah State Univ.*

10:00 KK33 **323.07** The pregnane x receptor is implicated in the therapeutic mechanism of finasteride. L. J. MOSHER*; J. L. STAUDINGER; M. BORTOLATO. *Univ. of Utah, Univ. of Kansas.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 KK34 **323.08** Altered stress adaptation, glucose metabolism, and increased susceptibility for mood disorders in a mouse model with decreased mitochondrial complex I function. T. L. EMMERZAAL*; E. VASILEIOU; B. GEENEN; K. SCOTT; B. H. GRAHAM; W. J. CRAIGEN; E. MORAVA; R. RODENBURG; T. L. KOZICZ. *Radboudumc, Tulane Univ., Baylor Col. of Med., Radboud Univ. Nijmegen Med. Ctr.*

8:00 KK35 **323.09** Corticotropin releasing factor in the medial septum impairs spatial learning in rats. K. WIERSIELIS*; M. SALVATORE; H. LEFEBO; H. JANG; A. CERETTI; V. CANTORAL; D. BANGASSER. *Temple Univ.*

9:00 KK36 **323.10** Chronic stress regulation of sustained attention and cholinergic dendritic morphology in rats. A. TELENSON*; B. WICKS; J. BERGMANN; M. SHORE; N. NEWCAMP; A. CERETTI; S. ECK; A. HALL; K. WIERSIELIS; J. TUCCI; D. A. BANGASSER. *Temple Univ., Temple Univ., Temple Univ., Temple Univ., Temple Univ.*

10:00 LL1 **323.11** The effects of corticotropin releasing factor in the nucleus basalis of meynert on sustained attention in male and female rats. S. ECK*; B. WICKS; N. DUNCAN; M. SALVATORE; S. COHEN; J. BERGMANN; A. CERETTI; A. HALL; D. BANGASSER. *Temple Univ.*

11:00 LL2 **323.12** Corticotropin releasing factor differentially activates brain networks in males and females. M. SALVATORE*; K. WIERSIELIS; D. E. WAXLER; D. A. BANGASSER. *Temple Univerisity, Temple Univ., Temple Univ., Temple Univ.*

8:00 LL3 **323.13** ▲ Evaluating stressor controllability effects in female rats . I. P. FALLON*; M. V. BARATTA; N. R. LESLIE; S. D. DOLZANI; L. E. CHUN; A. M. TAMALUNAS; L. R. WATKINS; S. F. MAIER. *Univ. of Colorado Boulder, Univ. of Colorado Boulder.*

9:00 LL4 **323.14** ● Synthesis of 1-N-substituted analogues of melatonin as potential anxiolytic-like compounds. J. T. MONTIEL-AVILÉS; A. ALMARÁZ-SÁNCHEZ; A. S. LIRA-ROCHA*; E. NARANJO-RODRÍGUEZ*. *Univ. Nacional Autónoma De México, Univ. Nacional Autónoma De México, Univ. Nacional Autónoma de México.*

10:00 LL5 **323.15** Behavioral and neurobiological effects of social housing conditions on male Long-Evans rats: Elevated plus-maze and open field. M. E. HASTINGS; R. M. CAIN; M. L. HOLLAND; R. J. STAMM; J. A. WILLNER; D. M. HAYES; P. A. JACKSON*. *Radford Univ., Radford Univ.*

11:00 LL6 **323.16** Behavioral and neurobiological effects of social housing conditions on male Long-Evans rats: Morris water maze. R. M. CAIN; M. E. HASTINGS; M. M. GALLAGHER; J. A. SAAD; J. A. WILLNER; P. A. JACKSON; D. M. HAYES*. *Radford Univ.*

8:00 LL7 **323.17** Sex differences in HPA and metabolic responses to early life stress in rats. H. SHI*. *Miami Univ.*

9:00 LL8 **323.18** Divergence in cognitive performance under chronic stress is associated with the hippocampal whole transcriptomic modification. S. H. JUNG*; M. L. BROWNLOW; M. PELLEGRINI; R. JANKORD. *U.S. Air Force Res. Lab., Univ. of California.*

10:00 LL9 **323.19** Investigating the fear-reducing effects of controllable stress with a robust activity marking system. N. R. LESLIE*; M. V. BARATTA; A. T. SØRENSEN; B. J. KEDL; L. R. WATKINS; Y. LIN; S. F. MAIER. *Univ. of Colorado Boulder, Univ. of Copenhagen, MIT.*

11:00 LL10 **323.20** ● The autism-mutated ADNP is a risk factor for post-traumatic stress: Protection with the regulatory neuropeptide PACAP. I. GOZES*; S. SRAGOVICH. *Sackler Sch. Med/Tel Aviv Univ.*

8:00 LL11 **323.21** Nosema parasitism in the honey bee brain: A neuroethology approach toward a honey bee stressor implicated in colony losses. S. L. GAGE*; C. KRAMER; S. CALLE; A. RODRIGUES; M. CARROLL; M. HEIEN; G. DEGRANDI-HOFFMAN. *Carl Hayden Bee Res. Center, USDA-ARS, Univ. of Arizona, Univ. of Arizona, USDA-ARS.*

9:00 LL12 **323.22** Evidence that chronic stress-induced prefrontal dendritic spine loss and working memory impairment are not sexually-differentiated in adult rats. R. M. ANDERSON*; M. MAHANNA; S. ROMIG-MARTIN; J. J. RADLEY. *Univ. of Iowa, Univ. of Iowa, Univ. of Iowa.*

POSTER

324. Energy Metabolism and Blood Brain Barrier

Theme F: Integrative Physiology and Behavior

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 LL13 **324.01** Molecular and biochemical characterization of the rare mitochondrial respiratory disorder Leber's hereditary optic neuropathy associated with multiple sclerosis-like illness. A. E. CHIARAMELLO*; M. N. UITTENBOGAARD; C. A. BRANTNER; A. GROPMAN. *George Washington Univ. Med. Ctr., George Washington Univ. Med. Ctr., George Washington Univ., Children's Natl. Med. Ctr.*

9:00 LL14 **324.02** Epigenetic modifiers induce an energy metabolic shift accompanied by increased mitochondrial biogenesis in differentiating neuroprogenitor cells. M. N. UITTENBOGAARD*; C. BRANTNER; J. S. LIU; A. E. CHIARAMELLO. *George Washington Univ. Med. Ctr., George Washington Univ., Children's Natl. Med. Ctr., George Washington Univ. Med. Ctr.*

10:00 LL15 **324.03** Assessing the impact of glucose and lactate for presynaptic ATP generation during sustained transmission at the calyx of Held. S. J. LUCAS*; C. B. MICHEL; V. MARRA; J. L. SMALLEY; M. H. HENNIG; B. P. GRAHAM; I. D. FORSYTHE. *Univ. of Leicester, Univ. of Stirling, Edinburgh Univ.*

11:00 LL16 **324.04** Rapid fluctuations in nucleus accumbens oxygen levels induced by arousing stimuli: Relationships with changes in brain glucose and metabolic neural activation. E. A. KIYATKIN*; K. T. CAMERON-BURR; E. SOLIS, Jr. *NIDA-IRP, NIH, DHHS.*

8:00 LL17 **324.05** Assessing affective behaviors in mice lacking the creatine transporter. Z. I. ABDULLA*; J. L. PENNINGTON; K. C. UDOBI; N. LATUSHKA; M. R. SKELTON. *Cincinnati Children's Res. Fndn., Univ. of Cincinnati.*

9:00 LL18 **324.06** Leptin absence in early life causes long-term disturbances in energy balance that can be restored by early intervention. A. M. RAMOS LOBO*; P. S. TEIXEIRA; I. C. FURIGO; A. M. LIMA; J. DONATO, Jr. *Univ. of Sao Paulo.*

10:00 LL19 **324.07** High fat diet impairs hippocampal intrinsic excitability and memory and sex-dependently alters insulin signaling in hippocampus. N. TANDON*; L. T. THOMPSON. *Univ. of Texas At Dallas.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 LL20 **324.08** Nutrient shuttling in hypothalamic astrocytes is linked to the whole body energy metabolism. J. KIM*; J. LEE; B. PARK. *Incheon Natl. Univ., Incheon Natl. Univ., Incheon Natl. Univ.*

8:00 LL21 **324.09** Unable to Attend Activation of Adenosine A_{2A} or A_{2B} receptor sub-types causes hypothermia in mice. J. CARLIN*; S. JAIN; C. XIAO; J. A. AUCHAMPACH; K. A. JACOBSON; O. GAVRILOVA; M. L. REITMAN. *NIH, NIH, Med. Col. of Wisconsin.*

9:00 LL22 **324.10** The impact of running on the expression of brain adenosine receptors. E. BAUER*; B. A. BAUSTAIN; A. BELL; M. R. CARLSON; P. J. CLARK. *Iowa State Univ.*

10:00 LL23 **324.11** Lateral but not medial hypothalamic AMPK activation occurs at the hypoglycemic nadir in insulin-injected male rats: Impact of caudal dorsomedial hindbrain catecholamine signaling. H. N. ALHAMAMI*; K. P. BRISKI. *Univ. of Louisiana At Monroe.*

11:00 LL24 **324.12** Role of hindbrain adenosine 5'-monophosphate-activated protein kinase (AMPK) in hypothalmic AMPK and neuropeptide adaptation to recurring insulin-induced hypoglycemia. S. K. MANDAL*; K. P. BRISKI. *Univ. of Louisiana At Monroe.*

8:00 LL25 **324.13** Fluoxetine-induced mitochondrial and molecular effects in the hypothalamus of overfed rats. G. FEITOZA*; S. C. SILVA; C. M. FREITAS; A. A. PEDROZA; A. I. DA SILVA; C. J. LAGRANHA. *Federal Univ. of Pernambuco.*

9:00 LL26 **324.14** Non-monotonic effect of temperature on cortical-evoked potentials. M. GOTOH*; K. NAGASAKA; I. TAKASHIMA; S. YAMAMOTO. *AIST, Univ. of Tsukuba, JSPS Res. fellow.*

10:00 LL27 **324.15** Courtship changes in a *Drosophila* model of classic galactosemia. V. BAGGETT; A. KEHRER; J. FRIDOVICH-KEIL; T. ZARS*. *Univ. of Missouri, Univ. of Missouri, Emory Univ., Univ. of Missouri.*

11:00 LL28 **324.16** Central role of melatonin on food intake and energy balance. D. C. BUONFIGLIO*; R. PARTHIMOS; R. CERQUEIRA; F. G. AMARAL; J. A. DA SILVA; A. M. RAMOS-LOBO; R. A. MATOS; J. S. DA SILVA, Jr; L. CLEMENTE; J. CIPOLLA, Neto. *Univ. of Sao Paulo.*

8:00 LL29 **324.17** Assessing sex-differences in the effects of intranasal insulin on spatial memory impairments of young LE rats on a chronic high-fat diet. N. DOS SANTOS*; L. T. THOMPSON. *Univ. of Texas At Dallas, Univ. of Texas At Dallas.*

9:00 LL30 **324.18** Neuronal stimulation triggers neuronal glycolysis and not lactate uptake. C. DÍAZ-GARCÍA; R. MONGEON; C. LAHMANN; D. KOVEAL; H. ZUCKER; G. YELLEN*. *Harvard Med. Sch., Harvard Med. Sch.*

10:00 LL31 **324.19** Ghrelin signaling regulates GABA neurons of the nucleus of the solitary tract. M. P. CORNEJO*; P. N. DE FRANCESCO; G. GARCIA ROMERO; E. PORTIANSKY; M. REYNALDO; J. M. ZIGMAN; M. PERELLO. *IMBICE, LAI, Universityof Texas-Southwestern Med. Ctr.*

11:00 LL32 **324.20** Sex-related differences in neonatal fluoxetine treatment in brainstem's mitochondrial bioenergetics. T. SILVA*; G. F. B. BRAZ; S. C. A. SILVA; C. M. FREITAS; A. I. DA SILVA; C. J. LAGRANHA. *Federal Univ. of Pernambuco, Federal Univ. of Pernambuco-CAV.*

8:00 LL33 **324.21** Fed and fasted brain glucose metabolism determined by imaging mass spectrometry. H. A. FERRIS*; A. KLEINRIDDERS; M. L. REYZER; M. RATH; M. SOTO; J. SPRAGGINS; R. M. CAPRIOLI; C. R. KAHN. *Univ. of Virginia, Joslin Diabetes Ctr., German Inst. of Human Nutr., Vanderbilt Univ.*

9:00 MM1 **324.22** Alpha-tocopherol exposure effect over weight and dyslípidaemia of obese infant rats induced by perinatal sucrose rich diet. I. ZARCO DE CORONADO*; M. A. HERRERA; M. J. GARCÏA. *UNAM, UNAM, UNAM.*

10:00 MM2 **324.23** The PACAP and VIP receptor, VPAC2R, regulates glucose and fat metabolism at rest and during psychogenic stress in adult female C57BL6 mice. E. KOZLOVA*. *Univ. of California Riverside, Univ. fo California Riverside.*

11:00 MM3 **324.24** Neuroenergetic metabolome adaptation upon glucose and oxygen reduction. K. WECKMANN*; J. M. ASARA; C. BEHL; C. W. TURCK; K. YUSIFLI; P. HAJIEVA. *Dept. For Pathobiochemistry, 3Division of Signal Transduction/Mass Spectrometry Core, Beth Israel Deaconess Med. Ctr., Dept. of Translational Res. in Psychiatry, Max Planck Inst. of Psychiatry.*

POSTER

325. Blood Flow: Assessment and Basic-Translational Relevance

Theme F: Integrative Physiology and Behavior

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 MM4 **325.01** Dissecting neuronal cell-type specific control of neurovascular coupling using DREADDs. C. ECHAGARRUGA*; Q. ZHANG; P. J. DREW. *The Pennsylvania State Univ., The Pennsylvania State Univ., Pennsylvania State Univ.*

9:00 MM5 **325.02** Optical coherence tomography reveals spatio-temporal dynamics of capillary stalls in awake mice. E. ERDENER*; J. TANG; A. SAJJADI; C. B. SCHAFFER; D. A. BOAS. *Massachusetts Gen. Hosp., Cornell Univ.*

10:00 MM6 **325.03** Microvascular effects following traumatic ocular injury. A. M. MELCHIADES NOZIMA*; J. I. CASTRO; M. LEDO; M. HARPER; S. MARTINEZ-CONDE; S. L. MACKNIK. *Adriana Nozima, SUNY Downstate Med. Ctr. Col. of Med., Univ. of Iowa, SUNY Downstate Med. Ctr. Col. of Med., SUNY Downstate Med. Ctr. Col. of Med.*

11:00 MM7 **325.04** ● Sex differences in changes in the vasculature of the subventricular zone niche with age. K. L. ZULOAGA*; C. S. BJORNSSON; E. WAIT; W. MANKOWSKI; Y. WANG; A. R. COHEN; S. TEMPLE. *Albany Med. Col., Neural Stem Cell Inst., Drexel Univ.*

8:00 MM8 **325.05** Optogenetic stimulation of pericytes lacking alpha smooth muscle actin produces a decrease in capillary blood flow *in vivo.* D. A. HARTMANN*; R. I. GRANT; S. A. HARRILL; T. NOONAN; A. Y. SHIH. *Med. Univ. of South Carolina, Col. of Charleston.*

9:00 MM9 **325.06** Oxygen-extractor, an efficient software to measure partial pressure of oxygen with 2-photon phosphorescence lifetime imaging. E. CHAIGNEAU*; M. ROCHE; M. BARRETT; B. WEBER; S. CHARPAK. *Inserm U1128, Inst. of Pharmacol. and Toxicology.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 MM10 **325.07** Coupling of dentate granule cell activity and micro-vessel hemodynamics *in vivo* regulates adult hippocampal neurogenesis. J. SHEN*; D. WANG; G. KIRSCHEN; Q. XIONG; J. XIA; S. GE. *State Univ. of New York At Stony Brook, Univ. at Buffalo.*

11:00 MM11 **325.08** Statistical modeling of cerebral vessel morphometry and blood flow in wildtype and tissue-plasminogen activator deficient mice. T. STEVENSON*; R. C. STEVENSON; L. FREDRIKSSON; E. J. SU; G. G. MURPHY; D. A. LAWRENCE. *Univ. of Michigan, Univ. of Michigan Med. Sch., Karolinska Inst., Univ. of Michigan.*

8:00 MM12 **325.09** Early progressive and preferential vulnerability and reorganization among subsets of cutaneous microvascular innervation in diabetic monkeys and humans especially involving different populations of sensory fibers that contain the vasodilatory calcitonin gene-related peptide. G. HOUK*; C. NOTO; P. J. ALBRECHT; J. P. WYMER; C. E. ARGOFF; B. C. HANSEN; F. L. RICE. *Integrated Tissue Dynamics, LLC, Yale Univ. Sch. of Med., Univ. of Florida Sch. of Med., Albany Med. Col., Univ. of South Florida Sch. of Med., Integrated Tissue Dynamics LLC.*

9:00 MM13 **325.10** The problem of inversion of coupling function-metabolism-blood flow in the brain. M. NEBIERIDZE*; M. DEVDARIANI; L. DAVLIANIDZE; N. SIKHARULIDZE; L. GUMBERIDZE; I. KVACHAKIDZE; N. MITAGVARIA. *I. Beritashvili Ctr. of Exptl. Biomedicine, I. Beritashvili Ctr. of Exptl. Biomedicine.*

10:00 MM14 **325.11** Structural and hemodynamic comparison of synthetic and anatomical cerebral capillary networks. A. SMITH*; M. PEYROUNETTE; A. LARUE; V. DOYEUX; Y. DAVIT; S. LORTHOIS. *Inst. De Mecanique Des Fluides De Toulouse.*

11:00 MM15 **325.12** How do capillary occlusions impact brain microcirculation in Alzheimer's disease? Numerical Simulations and Experimental validation. M. BERG*; M. PEYROUNETTE; J. C. HERNANDEZ; O. BRACKO; M. HAFT JAVAHERIAN; V. DOYEUX; A. SMITH; Y. DAVIT; M. QUINTARD; N. NISHIMURA; C. B. SCHAFFER; S. LORTHOIS. *CNRS, CNRS, Cornell Univ.*

8:00 MM16 **325.13** Hypoxia-induced vascular responses in the adult mouse brain. M. D. SWEENEY*; A. MONTAGNE; R. D. BELL; K. KISLER; A. J. BRUMM; B. V. ZLOKOVIC. *USC, Pfizer Res. Kendall Square, Nikon Instruments, Inc.*

9:00 MM17 **325.14** Perivascular macrophages mediate the cerebrovascular and cognitive dysfunction in DOCA-salt hypertension. M. M. SANTISTEBAN*; G. FARACO; G. RACCHUMI; J. ANRATHER; C. IADECOLA. *Weill Cornell Med. Col.*

10:00 MM18 **325.15** Increased cerebral blood flow response due to specific optgenetic stimulation of parvalbumin positive interneurons. M. K. DAHLQVIST; K. J. THOMSEN*; M. J. LAURITZEN. *Univ. of Copenhagen.*

11:00 MM19 **325.16** ● SUVN-I6107: A novel muscarinic M1 receptor positive allosteric modulator (M1-PAM) addresses cholinergic side effects. A. K. SHINDE*; S. YATHAVAKILLA; A. VUYYURU; R. MEDAPATI,; G. VENKATA RAMALINGAYYA; J. TADIPARTHI; N. GANUGA; N. MUDDANNA; S. DARPELLI; V. UTHUKAM; D. SISODAYA; N. PATIBANDLA; M. SRIRANGAVARAM; V. MEKALA; R. SUBRAMANIAN; V. GOYAL; K. BOJJA; S. KOMMINENI; S. MANCHINEELLA; R. NIROGI. *Suven Life Sci.*

8:00 MM20 **325.17** Acute administration of haloperidol increases evoked CBF and BOLD fMRI to the somatosensory stimulation in anesthetized rats. Y. KIM*; K. LEE; S. HAN; J. SON; S. KIM. *Inst. for Basic Sci. (IBS), Sungkyunkwan Univ.*

9:00 MM21 **325.18** Noradrenergic modulation of neurovascular coupling in awake behaving mice. Q. ZHANG*; K. W. GHERES; P. J. DREW. *The Pennsylvania State Univ., The Pennsylvania State Univ., The Pennsylvania State Univ.*

10:00 MM22 **325.19** Vasodilation induced by pinacidil are attenuated in early vascular injury after subarachnoid hemorrhage on rat cerebral penetrating arterioles. T. MURATA*; T. HORIUCHI; K. HONGO. *Shinshu Univ. Sch. of Med., Shinonoi Gen. Hosp.*

11:00 NN1 **325.20** Altered intracellular calcium reactivity of cerebral artery endothelial tubes with advancing age. M. A. HAKIM; J. N. BUCHHOLZ*; E. J. BEHRINGER. *Loma Linda Univ. Sch. of Med.*

8:00 NN2 **325.21** Uncovering the contribution of cortical interneurons to neurovascular coupling - an optogenetic approach. C. HOWARTH*; L. LEE; C. CHRISTMAS; N. VAUTRELLE; L. BOORMAN; P. SHARP; E. BRACCI; J. BERWICK. *Dept. of Psychology, Univ. of Sheffield.*

9:00 NN3 **325.22** Insights into anti-seizure mechanisms of focal cerebral cooling through multi-modal assessment of the interaction between cortical temperature and neurovascular function. L. W. BOORMAN*; S. S. HARRIS; M. PORT; T. H. SCHWARTZ; J. BERWICK. *Univ. Sheffield, Univ. of Sheffield, Joan and Sanford I Weill Med. Col. of Cornell Univ.*

POSTER

326. Metabolism Control and Obesity

Theme F: Integrative Physiology and Behavior

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 NN4 **326.01** Functional connectivity of the pituitary gland associated with body mass index. T. IKUTA*; P. RUCKER. *Univ. of Mississippi, Univ. of Mississippi Med. Ctr.*

9:00 NN5 **326.02** Glutamatergic neurons mediate the effects of Brs3 on regulation of energy metabolism. C. XIAO*; R. A. PINOL; J. CARLIN; A. SAHA; O. GAVRILOVA; M. REITMAN. *Natl. Inst. of Hlth. Office of Intramural, NIH, Natl. Inst. of Diabetes and Digestive, NIH, NIH, NIDDK, NIH.*

10:00 NN6 **326.03** Investigating the genetic structure of complex phenotypes in free-ranging rhesus macaques. S. MADLON-KAY*; M. J. MONTAGUE; N. SNYDER-MACKLER; J. E. HORVATH; L. J. N. BRENT; J. SKENE; M. L. PLATT. *Univ. of Pennsylvania, Univ. of Washington, North Carolina Central Univ., Univ. of Exeter, Duke Univ.*

11:00 NN7 **326.04** Nicotinic acetylcholine receptors containing the β2 subunit regulate body weight in mice. G. DEZFULI*; T. OLSON; B. SIEGARS; N. SAHIBZADA; R. GILLIS; K. J. KELLAR, 20057. *Georgetown Univ.*

8:00 NN8 **326.05** Transient and selective overexpression of dopamine 2 receptors in striatal medium spiny neurons promotes diet-induced obesity. M. A. LABOUESSE*; C. KELLENDONK; U. WEBER-STADLBAUER. *Columbia Univ., Physiol. and Behavior Laboratory, ETH Zurich, Inst. of Pharmacol. and Toxicology, Univ. of Zurich–Vetsuisse.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 NN9 **326.06** Investigating the role of ghsr signalling in the dmh and pmv on energy homeostasis. L. M. HYLAND*; S. PARK; A. EDWARDS; Y. ABDELAZIZ; B. WOODSIDE; A. ABIZAID. *Carleton Univ., Concordia Univ.*

10:00 NN10 **326.07** ▲ $p75^{NTR}$ involvement in metabolic control pathways. T. P. REMCHO*; L. M. SIPE; D. JOHNSON; J. EPHREM; C. DEPPMANN. *Univ. of Virginia, Univ. of Virginia.*

11:00 NN11 **326.08** Selective activation of regionally distinct catecholamine neurons in the ventrolateral medulla is sufficient for elicitation of key glucoregulatory responses in normoglycemic rats. S. RITTER*; Q. WANG; A. LI. *Washington State Univ.*

8:00 NN12 **326.09** The glucose sensitivity of mesencephalic cells: Effect on tyrosine hydroxylase regulation. A. C. REGO*; Y. PAES COLLI; D. BECKMAN; L. E. SANTOS; S. T. FERREIRA; F. DE MELLO; I. E. DE ARAUJO; R. D. REIS. *Lab. of Neurochemistry, Federal Univ. of Rio de Janeiro, UC Davis, UFRJ, The J. B. Pierce Lab. and Yale Univ. Sch. of Med.*

9:00 NN13 **326.10** Long-term sucrose consumption increases excitability of NPY neurons in the arcuate nucleus of the hypothalamus. K. O'CONNELL*; K. ABREU; W. WEI; A. SMITH; J. H. CARDOSO. *The Jackson Lab., State Univ. of Ceara, Univ. of Tennessee Hlth. Sci. Ctr., Univ. Estadual do Ceara.*

10:00 NN14 **326.11** ▲ Estradiol modulates gut microbiome in leptin deficient female mice on a high-fat diet. X. GAO; E. P. BLESS; K. D. ACHARYA; J. CHEN; M. J. TETEL*. *Wellesley Col., Mayo Clin.*

11:00 NN15 **326.12** A multifaceted approach to analyze the role of serotonin in comorbid depression and obesity. M. HERSEY*; C. A. GRILLO; V. A. MACHT; A. GREEN; J. R. FADEL; M. A. WILSON; P. HASHEMI; L. P. REAGAN. *Univ. of South Caroline Sch. of Med., Univ. of South Carolina Sch. of Med., Univ. of South Carolina, Univ. of South Carolina Sch. of Med., Univ. of South Carolina Sch. of Med., Univ. South Carolina, Sch. Med., Univ. of South Carolina, Univ. of South Carolina Sch. of Med.*

8:00 NN16 **326.13** ● Alternate-day fasting compared to calorie restriction in lean and obesity-prone rats. A. E. DAVIS*; A. TITUS; D. MEHTA; L. G. KOCH; S. L. BRITTON; C. M. NOVAK. *Kent State Univ., Kent State Univ., Kent State Univ., The Univ. of Michigan, The Univ. of Michigan, Kent State Univ.*

9:00 NN17 **326.14** Withdrawn

10:00 NN18 **326.15** Chronic moderate alcohol drinking alters glucose metabolism but spared behavior on elevated plus maze, sucrose preference and novel object recognition tests. N. G. NELSON*; F. A. SUHAIDI; W. X. LAW; N. LIANG. *Univ. of Illinois At Urbana-Champaign.*

11:00 NN19 **326.16** ▲ Interleukin-1β contributes to the development of hyperalgesia in overweight ovariectomized rats. O. A. JARAMILLO-MORALES*; J. V. ESPINOSA-JUÁREZ; F. J. LÓPEZ-MUÑOZ. *Cinvestav, Cinvestav-Sede sur.*

8:00 NN20 **326.17** Characterizing glucose-sensing neurons in the amygdala. K. DEVARAKONDA*; S. STANLEY. *Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai.*

9:00 NN21 **326.18** Pancreatic projections of glucose sensing CNS neurons. A. ALVARSSON*; M. BAYNE; S. STANLEY. *Icahn Sch. of Med. At Mount Sinai.*

10:00 NN22 **326.19** The estructure of GLUT2- and GLUT6-positive tanycytes is altered by acute hyperglycemia. F. A. MARTINEZ ACUÑA*; M. CIFUENTES; K. A. SALAZAR; N. A. JARA; L. TRIGUEROS; F. J. NUALART. *Univ. of Concepcion, Univ. de Málaga, Univ. De Concepción, Univ. de Concepcion, Univ. of Concepcion, Univ. de Concepción.*

11:00 NN23 **326.20** Obese mice exhibit increased motivation towards palatable food and physiological abnormalities in the ventral pallidum. Y. M. KUPCHIK*; D. INBAR; K. INBAR; L. LEVY; N. BERNAT; S. MENAHEM. *The Hebrew Univ.*

8:00 NN24 **326.21** Effects of high fat diet on anxiety-like behaviors and hippocampal-dependent learning: Roles of body weight and sex differences. K. CHAN*; A. BURDICK; K. RASEFSKE; J. MCGOVERN. *Hartwick Col.*

9:00 NN25 **326.22** Energy balance regulation and obesity in mice as a function of individual rearing and western style diet exposure. L. SCHIPPER; S. VAN HEIJNINGEN; E. M. VAN DER BEEK*; G. VAN DIJK. *Nutricia Reseach, Univ. of Groningen, Univ. of Groningen.*

10:00 NN26 **326.23** Effects of a GLP-1 agonist on hippocampal functioning underlying the learning mechanisms associated with energy regulation. S. JONES*; C. H. SAMPLE; A. HYDE; S. L. HARGRAVE; T. L. DAVIDSON. *American Univ., Natl. Inst. of Heath.*

11:00 NN27 **326.24** Psychological symptoms is a determinant of body mass index among patients with musculoskeletal pain: A link to vitamin D and calcium. K. K. ABDUL-RAZZAK*; M. KASSAB. *Jordan Univ. of Sci. and Technol.*

8:00 NN28 **326.25** Parasympathetic output contributes to the resolution of uncontrolled diabetic hyperglycemia by vertical sleeve gastrectomy in a murine model of type 1 diabetes. C. R. BOYCHUK; K. C. SMITH; B. N. SMITH*. *Univ. of Kentucky, Univ. of Kentucky, Univ. of Kentucky Dept. of Physiol.*

9:00 NN29 **326.26** The role of type 3 adenylyl cyclase in neuronal cilia. X. CHEN*; Y. ZHOU; L. QIU; M. STROBEL; A. STERPKA. *Univ. of New Hampshire, Univ. of New Hampshire.*

10:00 NN30 **326.27** Acetylation-based gene expression changes in the brain. N. PUTHILLATHU; J. R. MOFFET; J. J. K. KRISHNAN; P. ARUN; R. VENGILOTE; C. L. DALGARD; G. SUKUMAR; J. SINGH; M. WILKERSON; J. TE; A. NAMBOODIRI*. *USUHS, USUHS.*

11:00 NN31 **326.28** Impacts of stress on glucocorticoids and energy homeostasis: Interactions between liver glycogen, corticosterone, CBG, and glucose concentrations following inescapable tail shock in rat. M. A. CONOSCENTI*; N. M. WILLIAMS; T. R. MINOR. *UCLA.*

8:00 NN32 **326.29** Sub-chronic Oleoylethanolamide treatment differentially afftects body weight, gut microbiota composition and cytokines expression in normal and histamine deficient mice. G. PROVENSI*; M. DI PAOLA; E. BONECHI; A. COSTA; P. BLANDINA; G. CLARKE; C. BALLERINI; C. DE FILIPPO; M. B. PASSANI. *Univ. degli Studi di Firenze, Univ. Col. Cork, Consiglio Nazionale delle Ricerche, Univ. degli Studi di Firenze.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

327. Appetitive and Incentive Learning and Memory II

Theme G: Motivation and Emotion

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 NN33 **327.01** Muscarinic acetylcholine receptor antagonism decreases sign-tracking behavior in rats. C. J. FITZPATRICK*; J. D. MORROW. *Univ. of Michigan, Univ. of Michigan.*

9:00 OO1 **327.02** The effect of cholingergic interneuron ablation and delta-opioid receptor internalization in the nucleus accumbens shell on cue-guided choice. A. K. MORSE*; V. LAURENT; B. W. BALLEINE. *UCLA, Univ. of New South Wales.*

10:00 OO2 **327.03** Optogenetic probing of ventral pallidal neurons in motivated behaviors. C. BRAVO-RIVERA*; M. STEPHENSON-JONES; C. FERNANDES-HENRIQUES; B. LI. *Cold Spring Harbor Lab.*

11:00 OO3 **327.04** A direct comparison of neuronal firing in passive aversive and passive appetitive conditioning and extinction in the prelimbic and infralimbic cortices of the mPFC. B. KAMINSKA*; D. E. MOORMAN. *Univ. of Massachusetts, Univ. of Massachusetts Amherst.*

8:00 OO4 **327.05** Songbirds implement multiobjective reinforcement learning with action-specific cost functions. R. CHEN*; D. MURDOCH; J. H. GOLDBERG. *Cornell Univ.*

9:00 OO5 **327.06** Adaptive thermogenesis is increased by long term co-adimistration of central GLP-1 and GIP. Y. LEE*; D. CHUN; C. NAMKOONG; M. KIM; H. LEE; H. CHOI. *Seoul Natl. Univ., BK21Plus Biomed. Sci. Project Team, Neurosci. Res. Inst., Wide River Inst. of Immunol.*

10:00 OO6 **327.07** Genetically distinct ventral pallidal neurons encode the motivation for reward approach and punishment avoidance. M. STEPHENSON-JONES*; C. C. BRAVO-RIVERA; C. FERNANDES-HENRIQUES; B. LI. *Cold Spring Harbor Lab.*

11:00 OO7 **327.08** Effect of paternal obesity on the central nervous system reward circuitry in offspring. G. SINDI*. *Ohio Univ.*

8:00 OO8 **327.09** ▲ Effects of age, sex, and alcohol access on sign-tracking/goal-tracking and omission-contingency learning in rats. A. COOK; B. GAEDDERT; H. FISHER; C. L. PICKENS*. *Kansas State Univ., Kansas State Univ.*

9:00 OO9 **327.10** Studying temporal decision making in a free-operant foraging paradigm. C. CROUSE*; S. NICOLA. *Albert Einstein Col. of Med.*

10:00 OO10 **327.11** Bariatric surgery reduces effort to obtain a sweet drink. H. R. KISSILEFF*; G. M. PAYNE; J. D. HAMM; M. HERZOG; J. JANG; A. SHECHTER; B. LAFERRERE; F. X. PI-SUNYER; J. ALBU. *Columbia Univ. Med. Ctr., Columbia Univ. Med. Ctr., Columbia Univ. Med. Ctr., Mt. Sinai-St. Luke's Hosp.*

11:00 OO11 **327.12** Localization of npy/agrp and pomc neurons in hypothalamus arcuate nucleus (arc) using ihc and tissue clearing technique: Comparative study of human and mouse. K. MIN SUN*; H. SONG; C. NAMKOONG; Y. LEE; J. OH; Y. CHUNG; H. CHOI. *Seoul Natl. Univ., BK21Plus Biomed. Sci. Project Team, Neurosci. Res. Inst., Wide River Inst. of Immunol.*

8:00 OO12 **327.13** A novel role for acid sensing ion channels in pavlovian conditioning. A. GHOBBEH*; S. M. ALAM; R. FAN; R. J. TAUGHER; R. T. LALUMIERE; J. A. WEMMIE. *The Univ. of Iowa, Univ. of Iowa Dept. of Psychiatry, Univ. of Iowa, Univ. of Iowa, Univ. of Iowa.*

9:00 OO13 **327.14** Calorie information modulates reward and control activation in response to food images. A. L. COURTNEY*; K. M. RAPUANO; E. K. PECONGA; T. F. HEATHERTON; W. M. KELLEY. *Dartmouth Col.*

10:00 OO14 **327.15** *C. elegans* as a model system to identify novel pharmacotherapies for nicotine addiction. B. S. NEAL-BELIVEAU*; K. E. BREDHOLD; K. B. STEAGALL, II; S. N. KATNER; E. A. ENGLEMAN. *IUPUI, IUPUI, IU Sch. of Med.*

POSTER

328. Fear and Aversive Learning and Memory: Neural Circuits I

Theme G: Motivation and Emotion

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 OO15 **328.01** Disinhibitory amygdala microcircuits for aversive learning. E. PARADISO*; S. KRABBE; C. XU; S. D'AQUIN; M. MARKOVIC; J. GRÜNDEMANN; F. FERRAGUTI; A. LÜTHI. *Med. Univ. Innsbruck, Friedrich Miescher Inst. for Biomed. Res.*

9:00 OO16 **328.02** Noradrenergic modulation of aversive memory formation - from circuits to molecules. B. TAN*; J. JOHANSEN. *RIKEN Brain Sci. Inst.*

10:00 OO17 **328.03** Distinct long-range noradrenaline microcircuits control opposing emotional and flexible learning states. A. UEMATSU*; B. TAN; J. P. JOHANSEN. *RIKEN Brain Sci. Inst.*

11:00 OO18 **328.04** The bed nucleus of the stria terminals mediates fear expression to temporally unpredictable threats. T. D. GOODE*; G. M. ACCA; S. MAREN. *Texas A&M Univ.*

8:00 OO19 **328.05** Locus coeruleus modulation of extinction retrieval and fear renewal. T. F. GIUSTINO*; P. J. FITZGERALD; S. MAREN. *Texas A&M Univ., Texas A&M Univ.*

9:00 OO20 **328.06** The nucleus reuniens gates prefrontal-hippocampal modulation of extinction retrieval. J. JIN*; K. R. RAMANATHAN; S. MAREN. *Texas A&M Univ.*

10:00 OO21 **328.07** Nucleus reuniens mediates the acquisition of fear extinction. K. R. RAMANATHAN*; J. JIN; S. MAREN. *Texas A&M Univ., Texas A&M Univ.*

11:00 OO22 **328.08** Avoidance over-conditioning impairs extinction of fear, induces persistent avoidance, and increases use of safety cues: Implications for OCD. F. J. MARTINEZ*; M. J. SANCHEZ-NAVARRO; C. D. VELAZQUEZ-DIAZ; G. J. QUIRK. *Univ. of Puerto Rico, Med. Sci. Campus.*

8:00 OO23 **328.09** Time-dependent changes in conditioned responses of prelimbic neurons projecting to amygdala or thalamus. K. QUINONES-LARACUENTE*; A. VEGA-MEDINA; E. M. MEDINA-COLÓN; F. H. DO MONTE; G. J. QUIRK. *Univ. of Puerto Rico Sch. Med., Univ. of Puerto Rico, Sch. of Med., Univ. of Puerto Rico Sch. Med., Univ. of Texas Hlth. Sci. Ctr., Univ. Puerto Rico Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 OO24 **328.10** Hippocampal-prefrontal BDNF in the extinction of active avoidance. L. E. ROSAS-VIDAL*; V. LOZADA-MIRANDA; Y. CANTRES-ROSARIO; L. MELÉNDEZ; G. J. QUIRK. *Univ. of Puerto Rico, Univ. of Puerto Rico, Univ. of Puerto Rico.*

10:00 OO25 **328.11** Chronic social defeat stress impairs the ability to discriminate between threat and safety. I. S. GRUNFELD*; G. E. SCHAFE; E. LIKHTIK; N. S. BURGHARDT. *The Grad. Center, City Univ. of New York, Hunter Col., Hunter Col.*

11:00 OO26 **328.12** Differential activation of GABAergic and cholinergic basal forebrain neurons during threat and safety. M. B. HARNOIS*; M. LABKOVICH; R. RAVENELLE; I. NAHMOUD; R. ZHANG; E. LIKHTIK. *New York Univ., Hunter Col., The Grad. Center, CUNY, Hunter Col., Hunter Col.*

8:00 OO27 **328.13** ▲ Infralimbic and prelimbic inputs to BLA-projecting cell groups in the basal forebrain: An anatomical and functional investigation. M. LABKOVICH*; D. GOLDER; N. J. BURNEY; R. ZHANG; I. NAHMOUD; E. LIKHTIK. *Hunter Col., Hunter Col., The Grad. Center, CUNY.*

9:00 OO28 **328.14** Thalamic inputs onto the amygdala regulate fear memory retrieval. N. FERRARA*; P. K. CULLEN; S. E. PULLINS; F. J. HELMSTETTER. *Univ. of Wisconsin--Milwaukee.*

10:00 OO29 **328.15** ▲ The effects of methylene blue on trace fear memory and brain proteolytic activity in young and aged rats. W. CRUZ*; S. E. PULLINS; J. R. MOYER, JR.; F. J. HELMSTETTER. *Univ. of Wisconsin-Milwaukee, Univ. of Wisconsin-Milwaukee.*

11:00 OO30 **328.16** Contributions of the retrosplenial cortex to event-related and contextual fear memory formation in trace fear conditioning. S. E. PULLINS*; P. K. CULLEN; N. C. FERRARA; F. J. HELMSTETTER. *Univ. of Wisconsin - Milwaukee.*

8:00 OO31 **328.17** Neural activity in the ventrolateral periaqueductal gray provides a feedback mechanism to modulate fear network activity. P. K. CULLEN*; N. C. FERRARA; S. E. PULLINS; F. J. HELMSTETTER. *Univ. of Wisconsin, Milwaukee.*

9:00 OO32 **328.18** BAF53b, a neuron-specific nucleosome remodeling factor, is induced after learning and facilitates long-term memory consolidation. M. YOO*; K. CHOI; J. KIM; M. KIM; J. SHIM; J. CHOI; H. CHO; J. OH; H. KIM; B. KAANG; J. HAN. *Korea Advanced Inst. of Sci. and Technol., Korea Advanced Inst. of Sci. and Technol. (KAIST), Seoul Natl. Univ.*

10:00 OO33 **328.19** Ventrolateral periaqueductal gray neurons signal threat probability. K. M. WRIGHT*; M. A. MCDANNALD. *Boston Col., Boston Col.*

11:00 OO34 **328.20** Reactivation-mediated organization of associative memory engram in systems consolidation. J. OH*; J. KWON; Y. LEE; M. KANG; H. KIM; Y. JEONG; H. CHO; J. HAN. *Korea Advanced Inst. of Sci. and Technol.*

8:00 OO35 **328.21** Dissecting the contribution of auditory cortex to acquisition and expression of auditory fear memory. T. DALMAY*; E. ABS; R. B. POORTHUIS; J. J. LETZKUS. *Max Planck Inst. For Brain Res.*

9:00 OO36 **328.22** Ventrolateral periaqueductal gray neurons signal positive aversive prediction errors. M. A. MCDANNALD*; R. A. ZACHARIAS; K. M. WRIGHT. *Boston Col.*

10:00 PP1 **328.23** VTA dopamine transients reduce prediction error about aversive outcomes. A. MAHMUD*; M. COSSETTE; B. P. LAY; M. D. IORDANOVA. *Concordia Univ., Univ. of New South Wales.*

11:00 PP2 **328.24** Pathway-specific thalamic modulation of amygdalar circuits. K. KOCSIS*; B. BARSY; A. MAGYAR; Á. BABICZKY; V. KANTI; M. HORVÁTH; K. VARGA; T. A. FÖLDES; F. MÁTYÁS. *Res. Ctr. for Natural Sciences, HAS, Pázmány Péter Catholic Univ., Semmelweis Univ.*

8:00 PP3 **328.25** Activating glutamatergic projections from the perifornical hypothalamus to the basolateral amygdala enhances conditioned fear learning and persistence. E. T. DUSTRUDE*; J. L. LUKKES; A. R. R. ABREU; A. I. MOLOSH; A. SHEKHAR. *Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med.*

8:00 DP11/PP4 **328.26** (Dynamic Poster) Region-specific rearrangement of synapses as a consequence of fear conditioning in zebrafish. W. DEMPSEY*; Z. DU; T. V. TRUONG; K. CZAJKOWSKI; A. ANDREEV; G. G. GROSS; C. KESSELMAN; S. E. FRASER; D. B. ARNOLD. *USC, USC, USC.*

POSTER

329. Motivation: Neural Circuits II

Theme G: Motivation and Emotion

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 PP5 **329.01** ▲ Use of autoshaping measures to predict motivation for sucrose rewards. Z. E. BOND; M. MCWATERS; E. M. ANDERSON; L. MATUSZEWICH*. *Northern Illinois Univ., Northern Illinois Univ.*

9:00 PP6 **329.02** Influence of juvenile methylphenidate on motivational behavior in adulthood. M. MCWATERS*; Z. BOND; L. MATUSZEWICH. *Northern Illinois Univ.*

10:00 PP7 **329.03** Reward under stress: Striatum involvement in reward processing from early detection to reward delivery. C. GAILLARD*; M. GUILLOD; A. FEDERSPIEL; D. SCHOEBI; R. RECABARREN; X. OUYANG; C. MUELLER-PFEIFFER; A. HORSCH; G. HASLER; C. MARTIN-SOELCH. *Univ. of Fribourg, Univ. of Bern, Univ. Hosp. of Zurich, Univ. Hosp. of Lausanne.*

11:00 PP8 **329.04** ▲ Reward preference induced by optogenetic CeA stimulation persists despite competitive physiological motivation. O. M. LOFARO*; M. J. F. ROBINSON. *Wesleyan Univ.*

8:00 PP9 **329.05** ▲ The impact of junk-food on 'liking' responses to sucrose, saccharin and salt in obesity-prone and obesity-resistant rats. A. BEN-EZRA*; E. HALTER; C. FREELAND; C. L. POISSON; A. WANG; C. R. FERRARIO; M. J. F. ROBINSON. *Wesleyan Univ., Univ. of Michigan.*

9:00 PP10 **329.06** ▲ Effects of nicotine exposure and anxiety on motivation for gambling-like cues. T. I. RUSSELL*; M. J. ROBINSON. *Wesleyan Univ., Wesleyan Univ.*

10:00 PP11 **329.07** ▲ Distinguishing between predictive and incentive value of uncertain gambling-like cues in a Pavlovian autoshaping task. A. S. KNES*; T. I. RUSSELL; C. CLIBANOFF; J. R. COTE; M. J. F. ROBINSON. *Wesleyan Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 PP12 **329.08** Regulation of food reward by female gonadal hormones. K. E. YOEST*; K. E. SHASHLO; J. A. CUMMINGS; J. B. BECKER. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

8:00 PP13 **329.09** Chronic stress impairs reward responsiveness in a rat test of anhedonia. S. J. LAMONTAGNE*; M. C. OLMSTEAD. *Queen's Univ., Queen's Univ.*

9:00 PP14 **329.10** Deletion of Prkar2a, with its exclusive habenular brain expression, confers obesity resistance through decreased hedonic behavior and increased drive for voluntary exercise. E. LONDON*; J. C. WESTER; C. A. STRATAKIS. *NICHD, NIH.*

10:00 PP15 **329.11** An examination of the effects of D1, D2, and mu-opioid receptors of the nucleus accumbens on appetitive and consummatory motivation in a modified effort-related choice paradigm. H. N. CARLSON*; C. MURPHY; W. E. PRATT. *Wake Forest Univ.*

11:00 PP16 **329.12** Fenfluramine and lorcaserin inhibit the binge-like feeding induced by mu-opioid receptor stimulation of the nucleus accumbens in the rat. W. E. PRATT*; S. BLUMENTHAL. *Wake Forest Univ.*

8:00 PP17 **329.13** Anterior insula-Locus Coeruleus area inputs and α1-adrenergic receptors promote compulsion-like alcohol intake. K. LEI*; S. A. WEGNER; D. DAREVSKY; F. W. HOPF. *Univ. of California, San Francisco, UCSF.*

9:00 PP18 **329.14** Compulsion-like alcohol drinking involves more automatic licking: Evidence for the head down and push model of compulsive intake. F. W. HOPF*; D. DAREVSKY; S. WEGNER; K. LEI. *UCSF.*

10:00 PP19 **329.15** Age-related changes in licking microstructure and motivation for palatable rewards. I. A. MENDEZ*; N. P. MURPHY; S. B. OSTLUND; N. T. MAIDMENT. *UCLA, UCI Sch. of Med.*

11:00 PP20 **329.16** Response allocation in Pavlovian-to-instrumental transfer. A. T. MARSHALL*; C. N. MUNSON; S. B. OSTLUND. *Univ. of California - Irvine, UCI Sch. of Med.*

8:00 PP21 **329.17** Habit formation does not depend on the correlation between response rates and reward rates. E. GARR*; A. R. DELAMATER. *City Univ. of New York, Brooklyn Col. CUNY.*

9:00 PP22 **329.18** High-fructose corn syrup in alcoholic beverages? A study in laboratory rats. S. AYOUB*; M. MINHAS; F. LERI. *Univ. of Guelph.*

10:00 PP23 **329.19** Neural representations of observed appetitive actions encode information about reward. K. M. RAPUANO*; R. H. HYON; S. A. NASTASE; W. M. KELLEY. *Dartmouth Col., Dartmouth Col.*

11:00 PP24 **329.20** ▲ Endocannabinoids but not dopamine mediate the sexual behavior inhibition and drug hypersensitivity induced by copulation to satiety in male rats. E. GONZÁLEZ-MORALES*; G. RODRIGUEZ-MANZO. *Cinvestav-Sede Sur.*

8:00 PP25 **329.21** Does reward type matter? Examining differences in reward types in healthy weight vs. overweight adolescents. N. ROBERTS*; S. ADISE; V. BRITTAIN; K. L. KELLER; C. F. GEIER. *The Pennsylvania State Univ.*

9:00 PP26 **329.22** The effects of depletion and brain stimulation on motivation. S. BELL*; M. M. YEE. *1989, Univ. of Kentucky.*

10:00 PP27 **329.23** Pde-4 inhibitor, rolipram, partially reverses scopolamine-induces behavioral deficits. I. M. WHITE*; B. K. WARD; S. L. CASE; W. WHITE. *Morehead State Univ., Morehead State Univ.*

11:00 PP28 **329.24** Individual differences in palatable food consumption following GABA-mediated inhibition of the medial prefrontal cortex in female rats. E. B. SINCLAIR*; K. L. KLUMP; C. L. SISK. *Michigan State Univ., Michigan State Univ., Michigan State Univ.*

8:00 PP29 **329.25** ▲ The neural mechanism of interaction between intrinsic motivation and external incentives. L. QIU*. *Beijing Normal Univ.*

9:00 QQ1 **329.26** Compulsive addiction-like aggressive behavior in mice. S. A. GOLDEN*; C. HEINS; M. VENNIRO; D. CAPRIOLI; M. ZHANG; D. H. EPSTEIN; Y. SHAHAM. *Natl. Inst. on Drug Abuse.*

10:00 QQ2 **329.27** Between-person differences in sensation-seeking:Vulnerabilities for cigarette-smoking and opportunities for intervention. D. M. LYDON*; B. LUNA; C. F. GEIER. *The Pennsylvania State Univ., Lab. Of Neurocognitive Develop., The Pennsylvania State Univ.*

11:00 QQ3 **329.28** ▲ Effects of binge eating behavior on incentive motivation evaluated with two types of progressive ratio schedule. W. ZEPEDA-RUIZ*; N. V. VÁZQUEZ-HERRERA; D. N. VELAZQUEZ-MARTINEZ. *Univ. Nacional Autonoma De Mexico, Univ. Nacional Autónoma de México.*

8:00 QQ4 **329.29** Assessment of the corticosterone profile and anxiety-related behaviors in sign-trackers and goal-trackers. S. A. LOPEZ*; P. CAMPUS; M. KLUMPNER; S. B. FLAGEL. *Univ. of Michigan, Univ. of Michigan Dept. of Psychiatry, Univ. of Michigan, Univ. of Michigan.*

9:00 QQ5 **329.30** ▲ Effect of different intensities of food deprivation over the preference of sucrose and corn oil intake. S. ORTEGA-TINOCO*; N. V. VÁZQUEZ-HERRERA; W. A. ZEPEDA-RUIZ; D. N. VELAZQUEZ-MARTINEZ. *UNAM, UNIVERSIDAD NACIONAL AUTÓNOMA DE MÉXICO.*

POSTER

330. Animal Models for Affective Disorders: Mechanisms I

Theme G: Motivation and Emotion

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 QQ6 **330.01** A sucrose preference test modified for evaluation of depression-like behavior in macaque monkeys. H. YAMANAKA*; N. HOSAKA; M. TAKADA; H. ONOE. *Primate Res. Institute, Kyoto Univ., RIKEN Ctr. for Life Sci. Technologies, Kyoto Univ.*

9:00 QQ7 **330.02** Molecular and behavioral mechanisms mediating paclitaxel-induced changes in affect-like behavior in mice. J. A. MEADE*; W. TOMA; Y. ALKHLAIF; D. E. SELLEY; M. I. DAMAJ. *Virginia Commonwealth Univ. Hlth. Syst.*

10:00 QQ8 **330.03** Repeated corticosterone alters membrane protein clustering in lymphocytes along the lines seen in patients with depression. R. ROMAY-TALLON*; E. Y. FENTON; M. A. MITCHELL; L. E. KALYNCHUK; H. J. CARUNCHO. *Univ. of Saskatchewan, Ctr. for Drug Res. and Develop., Univ. of Saskatchewan, Univ. of Saskatchewan.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 QQ9 **330.04** ● Long-lasting behavioral & molecular alterations following social isolation during adolescence in rats. V. BEGNI; L. LONGO; S. ZAMPAR; M. A. RIVA*. *Univ. of Milan.*

8:00 QQ10 **330.05** Cognitive, emotional and microglial assessments of mice bearing mutations of prepro orphanin FQ/nociceptin (OFQ/N) or its receptor, ORL-1, maintained on C57BL/6 and 129S6 mouse strains: Applicability to chronic stress paradigms of resilience. A. W. KUSNECOV*; J. E. PINTAR; E. FRILING; E. B. UKPONG; L. WU; B. PENG; M. ANSONOFF; R. GLASS. *Rutgers Univ., Rutgers Robert Wood Johnson Med. Sch., Rutgers Univ., Mayo Clin.*

9:00 QQ11 **330.06** Mapping brain activity after CMS protocol through cytochrome c oxidase histochemistry. K. S. HOMEM*; A. DE TOLEDO RAMOS; C. M. DOMINGUEZ; M. M. SOARES; C. SCAVONE; L. R. P. TRONCONE. *Univ. of São Paulo - IPUSP, Univ. of Sao Paulo - Inst. of Biomed. Sci., Inst. Butantan.*

10:00 QQ12 **330.07** Cell-type specific SIRT1 signaling pathways in the nucleus accumbens modulate depression-like behaviors. H. KIM*; T. CALL; S. CAROTENUTO; R. JOHNSON; M. TANG; D. FERGUSON. *The Univ. of Arizona Col. of Med.*

11:00 QQ13 **330.08** ▲ The effects of medial prefrontal cortex inhibition on symptoms of depression in long evans rats. J. J. CORTRIGHT*; A. MILLER; B. PODGORSEK; A. BUTTERBRODT; A. WILLARD. *Univ. of Wisconsin River Falls.*

8:00 QQ14 **330.09** Assessing the antidepressant-like effects of the (R) and (S) isomers of the atypical antipsychotic amisulpride in C57BL/6 mice. R. RICE*; D. SMITH; H. NANGUNURI; S. RAMAN; C. FAIR; M. A. FRIAR; T. M. HILLHOUSE; T. J. DONAHUE; J. H. PORTER. *Virginia Commonwealth Univ., American Univ., Weber State Univ.*

9:00 QQ15 **330.10** ▲ Exploring differences in gene expression and relative cell-type balance in the hippocampus of a selectively bred rat model for internalizing and externalizing psychiatric disorders. I. BIRT*; M. HAGENAUER; C. AYDIN; P. BLANDINO, Jr.; R. THOMPSON; S. M. CLINTON; J. STEAD; H. AKIL; S. J. WATSON, Jr. *Univ. of Michigan, Virginia Tech. Univ., Carleton Univ.*

10:00 QQ16 **330.11** ● Fear extinction as a model of exposure therapy in rats: Developing a sub-maximally effective fear extinction procedure to test adjunct pharmacotherapies. D. PAREDES*; E. A. FUCICH; D. A. MORILAK. *Univ. of Texas Hlth. Sci. Ctr. San Anto.*

11:00 QQ17 **330.12** Psychiatric effect of MCFA via odorant receptor. D. KIM; J. KIM; N. KANG; N. LEE; Y. JAE; J. KOO*. *Dept. of Brain & Cognitive Sciences, DGIST, Dept. of New Biology, DGIST.*

8:00 QQ18 **330.13** Excitatory/inhibitory synaptic imbalance of hippcampus in mouse learned helplessness. G. CHANG*; D. LEE; J. KIM; H. LEE; G. KIM; G. HA; E. CHEONG. *Yonsei Univ.*

9:00 QQ19 **330.14** Role of CaV1-2 calcium channel in hippocampal neurons of animals with depressive like-behaviors. C. MORENO NARANJO*; P. HARDY; T. HERMOSILLA; D. VARELA; P. ROJAS. *Univ. De Santiago De Chile, Univ. de Chile.*

10:00 QQ20 **330.15** Modulation of adult neural plasticity sets behavioural response in an animal model of recurrent depression. N. D. ALVES*; J. CORREIA; P. PATRÍCIO; A. MATEUS-PINHEIRO; A. R. MACHADO-SANTOS; E. LOUREIRO-CAMPOS; M. MORAIS; J. BESSA; N. SOUSA; L. PINTO. *Life and Hlth. Sci. Res. Inst. (ICVS).*

11:00 QQ21 **330.16** ● Wistar Kyoto (WKY) rats exhibit memory deficits in addition to exaggerated depression-like behavior. Y. LI*; D. EYERMAN; C. SANCHEZ. *Alkermes, Inc.*

8:00 QQ22 **330.17** Role of ankyrin 3 in bipolar disorder. X. QI*; T. PETRYSHEN. *Massachusetts Gen. Hosp.*

9:00 RR1 **330.18** 'Spring' births induce anxiety/risk averse behavior in normal female mice, but resilience is seen in mice with reduced dopamine transporter expression. M. A. KWIATKOWSKI*; Z. A. COPE; L. A. LAVADIA; M. A. GEYER; D. DULCIS; J. W. YOUNG. *UCSD.*

10:00 RR2 **330.19** Sex-dependent effects of Cacna1c haploinsufficiency on juvenile social play and 50-kHz ultrasonic vocalizations in rats. T. M. KISKO; M. D. BRAUN; M. BARTZ; C. HOHMEYER; S. WITT; M. RIETSCHEL; R. K. SCHWARTING; M. WÖHR*. *Philipps-University of Marburg, Central Inst. of Mental Hlth.*

11:00 RR3 **330.20** Examining the role of cell adhesion molecules in emotional reactivity using the bred high-responder/bred low-responder model. A. V. STEFANOV*; K. L. HILDE; I. BIRT; M. H. HAGENAUER; E. K. HEBDA-BAUER; S. CLINTON; C. AYDIN; P. BLANDINO, Jr.; J. STEAD; R. C. THOMPSON; S. J. WATSON, Jr.; H. AKIL. *Univ. of Michigan, Virginia Polytechnic Inst. and State Univ., Carleton Univ.*

8:00 RR4 **330.21** ▲ Increased diversity in microbial communities after chronic social defeat stress in mice. K. MCGAUGHEY*; D. A. CRUZ; N. ELSAYED; T. YILMAZ-SWENSON; R. RODRIGUIZ; W. WETSEL; M. KRITZER-CHEREN; O. MUELLER; D. E. WILLIAMSON. *Duke Univ., Duke Univ., Duke Univ., Durham VA Med. Ctr.*

9:00 RR5 **330.22** Changed endocannabinoid signaling in the medial prefrontal cortex is related to chronic pain induced depression. B. PAN*; Z. ZHANG; C. J. HILLARD; Q. H. HOGAN. *Med. Col. of Wisconsin, Med. Col. Wisconsin, Med. Col. of Wisconsin.*

10:00 RR6 **330.23** Diet purity impacts on the cecum microbiome but not depressive-like behaviors and plasma corticosterone levels in C57Bl/6J mice. A. TOYODA*; H. SHIMONISHI; M. SATO; K. USUDA; K. NAGAOKA. *Ibaraki Univ., Tokyo Univ. of Agr. and Technol., United Grad. Sch. of Vet. Science, Gifu, Tokyo Univ. of Agr. and Technol.*

11:00 RR7 **330.24** Adult hippocampal neurogenesis increases preference for delayed rewards. D. R. SEIB*; D. ESPINUEVA; O. PRINCZ-LEBEL; E. CHAHLEY; R. QI YU; S. B. FLORESCO; J. S. SNYDER. *Univ. of British Columbia.*

8:00 RR8 **330.25** Reduced enkephalin signaling in the nucleus accumbens D2-MSN circuit regulates depression-like phenotype in social defeat stress. H. NAM*; R. CHANDRA; T. FRANCIS; M. LOBO. *Univ. of Maryland, Baltimore.*

9:00 RR9 **330.26** Age specific transcriptional changes in the neuronal cell types forming the canonical cortical microcircuit. R. SHUKLA*; T. D. PREVOT; L. FRENCH; B. ROCCO; M. BANASR; R. ISSERLIN; G. BADER; E. SIBILLE. *CAMH, Ctr. For Addiction and Mental Hlth., Camh, Ctr. For Addiction and Mental Hlth., Univ. of Toronto, CAMH - Univ. of Toronto.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 RR10 **330.27** Linking dynamic GABAergic, astroglial and synaptic dysfunctions to stress-induced depressive-like endophenotype: Importance of astroglial integrity. T. D. PREVOT*; K. A. MISQUITTA; C. J. FEE; D. NEWTON; H. OH; E. SIBILLE; M. BANASR. *Ctr. For Addiction and Mental Hlth., Univ. of Toronto, Univ. of Toronto.*

11:00 RR11 **330.28** Acute and chronic chemogenetic silencing of somatostatin-expressing GABA interneurons induces rapid, robust, and lasting elevation of depressive- and anxiety-like behaviors. C. J. FEE*; K. MISQUITTA; R. BRAD; T. D. PREVOT; M. BANASR; E. SIBILLE. *Ctr. For Addiction and Mental Hlth., Univ. of Toronto, Univ. of Toronto.*

8:00 RR12 **330.29** ● Behavioral, inflammatory and neurochemical disturbances in LPS and UCMS-induced mouse models of depression. J. MA*; K. FAN; X. YANG; G. LIU. *Dalian Med. Univ.*

9:00 RR13 **330.30** How the environment shapes our behavior: The role of LSD1 and SRF in adaptation and vulnerability. F. S. RUSCONI*; B. GRILLO; A. LONGARETTI; C. FORASTIERI; E. TOFFOLO; L. GEROSA; M. PASSAFARO; M. POPOLI; E. BATTAGLIOLI. *Univ. of Milan, Univ. of Milan, Univ. of Milan, CNR Inst. of Neurosci., Univ. of Milan.*

POSTER

331. Amphetamines: Reinforcement, Seeking, and Reinstatement

Theme G: Motivation and Emotion

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 RR14 **331.01** Depression like symptoms associated with acute and prolonged methamphetamine withdrawal in a mouse model for binge methamphetamine intake. S. SHABANI*; B. GHIMIRE; B. SCHMIDT; E. MOJICA; S. HOULTON; T. PHILLIPS-RICHARDS. *Minot State Univ., VA Med. Ctr., Oregon & Hlth. Sci. Univ.*

9:00 RR15 **331.02** ▲ Prescription stimulant misuse in undergraduate students: Prevalence and predictors. S. HOOD*; A. JONES-LAVALLÉE; N. VAN DEN BERG; M. LAFOREST; G. GOODING; C. GOLDFARB; S. LINDEN-ANDERSEN; A. MENDREK. *Bishop's Univ.*

10:00 RR16 **331.03** Comparison of the potency and efficacy of the novel cathinone α-PPP, α -PVP and pentedrone: Self-administration and locomotor stimulation in male and female rats. M. JAVADI PAYDAR*; S. VANDEWATER; M. TAFFE. *The Scripps Res. Inst.*

11:00 RR17 **331.04** ▲ Binge alcohol exposure attenuates both the development and extinction of amphetamine conditioned place preference. L. O'LOUGHLIN*; C. IRVING; L. NORENA; A. PAZMINO; A. SAPERSTEIN; E. WALSH; T. PHAN; R. DUSSAULT; J. SCHROEDER. *Connecticut Col., Connecticut Col., Wheeler High Sch.*

8:00 RR18 **331.05** CNS mechanisms underlying the suppression of stress-induced methamphetamine seeking by oxytocin in female rats. C. E. O'NEILL*; R. J. NEWSOM; J. L. HOPKINS; V. GRINEVICH; J. F. MCGINTY. *Med. Univ. of South Carolina, Med. Univ. of South Carolina, Med. Univ. of South Carolina, German Cancer Res. Ctr., Med. Univ. South Carolina.*

9:00 RR19 **331.06** ▲ Dose-dependent effects of methamphetamine on positive and negative affect in rats. B. C. CORTES*; A. ESCOBEDO; K. A. TRUJILLO. *California State University- San Marcos, California State Univ. San Marcos, California State Univ. San Marcos.*

10:00 RR20 **331.07** Does sensitization to the rewarding effects of methamphetamine develop with repeated administration? T. T. TOWNER*; V. GUTIERREZ; T. ZAFAR; K. A. TRUJILLO. *California State Univ. San Marcos.*

11:00 RR21 **331.08** ▲ Differences between adolescents and adults in the behavioral response to amphetamines. V. ESPINOZA*; A. ROCHA; K. A. TRUJILLO. *California State Univ. San Marcos, California State Univ. San Marcos.*

8:00 RR22 **331.09** Ketamine inhibits methamphetamine-induced ultrasonic vocalizations and locomotor activity in rats. A. ESCOBEDO*; A. ROCHA; C. GARCIA; K. A. TRUJILLO. *California State Univ. San Marcos, California State Univ. San Marcos, The Med. Affairs Co.*

9:00 RR23 **331.10** Prelimbic dopamine facilitates the extinction of amphetamine conditioned place preference. E. LATAGLIATA*; G. CHIACCHIERINI; F. FIOCCHI; G. COCCIA; S. PUGLISI-ALLEGRA. *Santa Lucia Fndn., Sapienza Univ., Santa Lucia Fndn.*

10:00 RR24 **331.11** Effects of a 5-HT1B receptor agonist on the acquisition and Expression of Methamphetamine-conditioned place preference in C57BL/6 MALE mice. J. L. NEISEWANDER*; T. DER-GHAZARIAN, 85282; D. CHARMCHI; S. NOUDALI; A. MAHMUD. *Arizona State Univ.*

11:00 RR25 **331.12** Integrins and focal adhesion kinase as a signaling pathway for MMP-9 induction of transient synaptic plasticity in cocaine relapse. C. GARCIA-KELLER*; D. NEUHOFER; M. SCOFIELD; A. BOBADILLA; S. SPENCER; S. VARANASI; C. MONFORTON; T. REEVES; P. W. KALIVAS. *Med. Univ. of South Caroline.*

8:00 RR26 **331.13** ▲ The effects of different environmental conditions and abstinence periods on sucrose seeking and glutamate receptors. B. A. HUMBURG*; E. J. GARCIA; A. N. BEESLEY; M. E. CAIN. *Kansas State Univ.*

9:00 RR27 **331.14** The effects of differential rearing and abstinence period on amphetamine seeking and glutamate receptors. E. J. GARCIA*; M. E. CAIN. *Kansas State Univ.*

10:00 RR28 **331.15** The impact of sex and exercise on methamphetamine preference in a rat animal model. M. PURPURA*; P. VIEIRA; C. BARKAS; J. ADAMS; T. E. KIPPIN. *Univ. of California Santa Barbara, California State University, Dominguez Hills, Univ. of California Santa Barbara, Univ. California, Santa Barbara.*

11:00 RR29 **331.16** Cue-Induced methamphetamine seeking behavior is reduced by disruption of memory reconsolidation through the NMDA receptor antagonist memantine. M. HANNA*; R. CARPENTER; M. JESKE; C. KEITH; L. RIZKALLA. *Vanguard Univ.*

8:00 RR30 **331.17** Effects of nicotine exposure on oral methamphetamine self-administration, extinction, and reinstatement in adolescent rats. Z. R. HARMONY*; E. M. ALDERSON; I. GARCIA; L. D. BITUIN; C. A. CRAWFORD. *California State Univ., California State Univ.*

9:00 RR31 **331.18** Neural basis of methamphetamine anticipation in a volitional self-administration paradigm. R. SILVER*; C. JUÁREZ-PORTILLA; R. D. KIM; M. PITTER; P. PATEL; R. A. LEDESMA; J. LESAUTER. *Columbia Univ., Univ. Veracruzana, Barnard Col., Columbia Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 RR32 **331.19** Co-administration of GABAB receptor agonist baclofen with 5-HT2C receptor agonist Ro 60-0175 has additive effects on the expression of amphetamine-induced locomotor sensitization in rats. L. N. CEDILLO ZAVALETA*; J. C. JIMENEZ; I. R. RUIZ-GARCIA; A. I. BARRIENTOS-NORIEGA; F. MIRANDA-HERRERA. *UNAM, FES Iztacala.*

11:00 RR33 **331.20** Methamphetamine exposure and withdrawal impact gut microbiota in rats. S. FOROUZAN; O. OHIA-NWOKO*; T. A. KOSTEN. *Univ. of Houston, Univ. of Houston.*

8:00 RR34 **331.21** ▲ Behavioral characterization of outbred mice for amphetamine withdrawal: A GWAS pilot study. J. T. DO*; R. AMBACHEW; P. KUMAR; E. MASIAS; K. SHARIF; M. THOMAS; K. WILSON; J. YUAN; C. C. PARKER. *Middlebury Col., Middlebury Col., Middlebury Col.*

9:00 RR35 **331.22** Voluntary physical exercise abolishes the development of conditioned hyperactivity and behavioral sensitization in mice. A. S. RAUHUT*; A. STASIOR. *Dickinson Col.*

10:00 RR36 **331.23** Investigation of the cellular mechanisms of the discriminative stimulus effects and hyperlocomotion induced by methamphetamine using the "On cell" analysis. T. MORI*; A. KAN; C. IWASAWA; M. SASAKI; M. WATANABE; Y. HAMADA; M. NARITA; N. KUZUMAKI; M. NARITA. *Hoshi University/Department of Pharmacol.*

11:00 SS1 **331.24** DREADD-mediated modulation of the subthalamic nucleus alters locomotor sensitization to amphetamine in rats. K. G. NAKATA*; E. YIN; S. M. FERGUSON. *Seattle Children's Res. Inst., Univ. of Washington, Univ. of Washington, Univ. of Washington.*

8:00 SS2 **331.25** Effects of estradiol and methamphetamine exposure on habit formation in rats. H. SCHOENBERG*; E. SOLA; J. MLCUCH; A. P. KIRSHENBAUM; D. J. TOUFEXIS. *Univ. of Vermont, St. Michael's Col.*

9:00 SS3 **331.26** Environmental enrichment: Role in anxiolysis and resilience to amphetamine. S. DONALDSON*; C. CALHOUN; S. FISCHER; S. KELSEY; B. PLOTKIN. *Univ. of Massachusetts Boston, Univ. of Massachusetts Boston.*

10:00 SS4 **331.27** ● Diazepam reverses anxiety-like behavior, social anhedonia and dopamine deficit following acute amphetamine withdrawal. M. RINCÓN-CORTÉS*; A. A. GRACE. *Univ. of Pittsburgh.*

11:00 SS5 **331.28** ▲ The effects of methamphetamine exposure on anxiety-like behavior and corticosterone levels in adolescent and adult mice. J. H. WEISS; K. H. STRUNTZ; J. A. SIEGEL*. *The Univ. of St. Thomas.*

POSTER

332. Cocaine and Behavior

Theme G: Motivation and Emotion

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 SS6 **332.01** Acute sleep deprivation accelerates the development of locomotor sensitization to cocaine. T. E. BJORNESS*; R. W. GREENE. *Univ. of Texas, Southwestern Med. Ctr., North Texas VAMC, Univ. of Tsukuba.*

9:00 SS7 **332.02** Contribution of sex chromosome complement to sex differences in cocaine induced locomotor sensitization. M. MARTINI*; W. J. LYNCH; E. F. RISSMAN. *NC State Univ., Univ. of Virginia.*

10:00 SS8 **332.03** Crack cocaine inhalation decreases the threshold for epileptic seizures in rats subjected to a subconvulsive dose of pilocarpine. C. D. CAVALCANTE*; J. F. SANTOS; A. L. D. PACHECO; I. S. MELO; M. A. COSTA; J. M. SILVA; S. S. MACHADO; A. U. BORBELY; O. W. CASTRO. *UFAL, Federal Univ. of Alagoas, Federal Univ. of Alagoas.*

11:00 SS9 **332.04** Dopamine transporter knockout rats as a model of dopamine transporter hypofunction. M. PARDO*; S. IZENWASSER; P. ILLIANO; R. R. GAINETDINOV; D. C. MASH. *Univ. of Miami, Univ. of Miami, St. Petersburg State Univ.*

8:00 SS10 **332.05** Sex differences in cocaine-induced ultrasonic vocalizations are modulated by the medial preoptic area. J. R. MARTZ*; N. MITTAL; C. L. ROBISON; C. L. DUVAUCHELLE; J. M. DOMINGUEZ. *The Univ. of Texas At Austin.*

9:00 SS11 **332.06** The antioxidant Tempol abolished the expression of cocaine conditioned reward. T. BEISER*; R. NUMA; R. KOHEN; R. YAKA. *The Hebrew Univ. of Jerusalem.*

10:00 SS12 **332.07** Neuropeptide Y blocks the expression of a Pavlovian-conditioned locomotor response in rats with a 3-week history of cocaine exposure. M. SUAREZ*; A. C. THOMPSON. *Univ. At Buffalo, Univ. at Buffalo.*

11:00 SS13 **332.08** Male offspring of cocaine-experienced sires have impaired cocaine-induced behavioral sensitization. A. S. ELLIS*; M. E. WIMMER; F. M. VASSOLER; S. L. WHITE; H. D. SCHMIDT; S. SIDOLI; Y. HAN; B. A. GARCIA; C. PIERCE. *Temple Univ., Tufts Univ. Cummings Sch. of Vet. Med., Perelman Sch. of Med. at the Univ. of Pennsylvania, Sch. of Nursing, Univ. of Pennsylvania, Perelman Sch. of Med. at the Univ. of Pennsylvania.*

8:00 SS14 **332.09** Fingolimod attenuate cocaine induced locomotor activity by decreasing PKA/DARPP32 signaling in striatal D_1-type medium spiny neurons. K. UEMATSU*; T. SHUTO; N. UCHIMURA; A. NISHI. *Kurume Univ. Sch. of Med., Kurume Univ. Sch. of Med.*

9:00 SS15 **332.10** ▲ The long-term effects of repeated cocaine exposure on impulse inhibition. N. MACK*; M. BLOSSON; C. COWAN; M. CREWE; K. PONDER; S. SEQUERIA; D. HOLT; J. DYCHE. *James Madison Univ.*

10:00 SS16 **332.11** Synaptic zinc modulates the effects of chronic cocaine exposure. S. E. THACKRAY*; S. S. BRYDEN; N. BIHELEK; R. H. DYCK; V. LOVIC. *Univ. of Calgary.*

11:00 SS17 **332.12** Error monitoring deficits in cocaine addicted individuals with high trait anger. M. A. PARVAZ*; R. Z. GOLDSTEIN; N. ALIA-KLEIN. *Icahn Sch. of Med. at Mount Sinai.*

8:00 SS18 **332.13** Cannabidiol attenuates expression of cocaine conditioned place preference with a U-shaped dose-response profile. G. E. WAGNER*; G. DE NESS; T. KERR; D. WATRY; A. LAQUE; N. SUTO; F. WEISS. *The Scripps Res. Inst., The Scripps Res. Inst.*

9:00 SS19 **332.14** Stress-induced cocaine bingeing in rats: Role of mesolimbic dopamine. M. Z. LEONARD*; M. H. DAWES; J. F. DEBOLD; K. A. MICZEK. *Tufts Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 SS20 **332.15** ▲ The emergence of negative affect as motivation for drug taking in rats chronically self-administering cocaine. S. D. KLEIN*; J. KULIK; N. BEACHER; A. P. PAWLAK; M. O. WEST. *Rutgers Univ., Rutgers Univ., Rutgers Univ.*

11:00 SS21 **332.16** Environmental enrichment during abstinence from cocaine self-administration alters cocaine-seeking behavior and addiction-related gene expression in female rats. G. L. POWELL*; M. ST. PETER; T. CHAUDHURY; D. ALCAZAR; R. M. BASTLE; R. J. OLIVER, JR; N. I. PERRONE-BIZZOZERO; J. L. NEISEWANDER. *Arizona State Univ., Arizona State Univ., Icahn Sch. of Med. at Mount Sinai, Univ. of New Mexico HSC, Univ. of New Mexico HSC.*

8:00 SS22 **332.17** Erk1/2 phosphatase (MKP3) expressed in dopaminergic neurons affects cocaine induced conditioned place preference and self-administration. S. LEWANDOWSKI*; D. L. BERNSTEIN; R. A. ESPAÑA; O. V. MORTENSEN. *Drexel Univ., Drexel Univ.*

9:00 SS23 **332.18** Retinoic acid signaling regulates medium spiny neuron activity in the nucleus accumbens shell and downstream targets regulate depression-like and addiction-related behaviors. E. J. CROFTON*; M. N. NENOV; Y. ZHANG; O. FOLORUNSO; S. KOSHY; D. LI; J. D. HOMMEL; F. LAEZZA; T. A. GREEN. *Univ. of Texas Med. Br., Univ. of Texas Med. Br., Univ. of Pennsylvania, The Univ. of Texas Med. Br., The Univ. of Texas Med. Br., Univ. of Texas Med. Br. at Galveston.*

10:00 SS24 **332.19** ● Acute cocaine evoked behavior develops independently from ventral tegmental area long term potentiation. A. VAQUER-ALICEA; J. C. VICENTY-PADILLA; R. VAZQUEZ-TORRES; K. BOSQUE-CORDERO; T. M. DOMÍNGUEZ- GONZÁLEZ; L. A. APONTE-COFRESI; T. M. ORTIZ-ITHIER; L. F. CENTENO-MATOS; C. A. JIMENEZ-RIVERA*. *UPR Med. Sci. Campus, UPR, Med. Sci. Campus-SOM, Univ. of Puerto Rico, Univ. of Puerto Rico, Rio Piedras Campus, Univ. of Puerto Rico, Rio Piedras Campus, Univ. Sagrado Corazón, Univ. of Puerto Rico Cayey Campus, Univ. of Puerto Rico, Physiol. Dept.*

11:00 SS25 **332.20** Inherent variability in dopamine uptake in the medial dorsal striatum is associated with subsequent motivation for cocaine. J. K. SHAW*; P. ALONSO; S. I. LEWANDOWSKI; R. A. ESPAÑA. *Drexel Univ. Col. of Med., Drexel Univ.*

8:00 SS26 **332.21** Role of acid-sensing ion channel-1a in cocaine-induced synaptic plasticity. S. C. GUPTA*; R. J. TAUGHER; J. A. WEMMIE; R. T. LALUMIERE. *Univ. of Iowa, Univ. of Iowa, Univ. of Iowa.*

9:00 SS27 **332.22** Using the intermittent access self-administration procedure to assess sex differences in the motivation for cocaine. A. KAWA*; T. E. ROBINSON. *Univ. of Michigan.*

10:00 SS28 **332.23** Relapse depends on the type of cue and the type of brain: A cue that signals cocaine availability reinstates drug-seeking more readily in goal-trackers than sign-trackers, and depends on basal forebrain cholinergic activity. K. PITCHERS*; K. B. PHILLIPS; J. L. JONES; T. E. ROBINSON; M. SARTER. *Univ. of Michigan.*

11:00 SS29 **332.24** Motivational-dopaminergic versus cognitive-cholinergic processing of a Pavlovian cocaine cue in sign-versus goal-tracking rats. L. F. KANE*; K. K. PITCHERS; Y. KIM; T. E. ROBINSON; M. SARTER. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan Dept. of Psychology, Univ. of Michigan Dept. of Psychology.*

8:00 SS30 **332.25** Environmental complexity increases tendency to attribute incentive salience to a food cue, but does not affect cocaine conditioned "cue" preference in Heterogeneous Stock (HS) rats. J. A. TRIPI*; A. M. GEORGE; C. D. MARTIN; K. ISHIWARI; A. A. PALMER; J. B. RICHARDS; P. J. MEYER. *Univ. at Buffalo Dept. of Psychology, Res. Inst. On Addictions, Univ. at Buffalo, UCSD, Univ. at Buffalo.*

9:00 SS31 **332.26** Effects of environmental complexity on novelty seeking, impulsivity and sustained effortful attention in heterogeneous stock (HS) rats. A. M. GEORGE*; C. D. MARTIN; K. ISHIWARI; P. J. MEYER; A. A. PALMER; J. B. RICHARDS. *Res. Inst. On Addictions, Univ. at Buffalo Dept. of Psychology, UCSD.*

POSTER

333. Cocaine and Neurotransmission

Theme G: Motivation and Emotion

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 SS32 **333.01** The essential role of DNA methylation and demethylation in cocaine withdrawal. K. ANIER*; M. URB; T. MATSALU; K. KIPPER; K. HERODES; T. TIMMUSK; A. ZHARKOVSKY; A. KALDA. *Univ. of Tartu, Tallinn Univ. Technol.*

9:00 SS33 **333.02** PKMz knockout enhances cocaine self-administration and reinstatement through sex dependent mechanisms. A. MCGRATH*; J. LENZ; L. BRIAND. *Temple Univ.*

10:00 SS34 **333.03** The effect of prefrontal GRIP deletion on drug-seeking behavior. M. M. WICKENS*; A. Q. FOSNOCHT; L. A. BRIAND. *Temple Univ.*

11:00 SS35 **333.04** Neural biomarkers of risk and reward predict problem stimulant use. M. A. BLAIR*; J. L. STEWART; A. C. MAY; M. RESKE; S. F. TAPERT; M. P. PAULUS. *Grad. Center, City Univ. of New York, Queens College, City Univ. of New York, UC San Diego, Julich Res. Ctr., Laureate Inst. For Brain Res.*

8:00 SS36 **333.05** Heterogeneous development of drug abuse: Individual differences and predisposition to addiction. N. J. BEACHER*; J. KULIK; J. STAMOS; S. KLEIN; D. ESTRIN; V. CHEN; A. LEONTE; A. P. PAWLAK; M. O. WEST. *Rutgers The State Univ. of New Jersey, Rutgers Robert Wood Johnson Med. Sch., Rutgers Univ.*

9:00 SS37 **333.06** Mimicking DBS with optogenetics in rats to identify the specific nucleus accumbens neurocircuits underlying relapse to cocaine. S. E. SWINFORD-JACKSON*; M. E. HOFMANN; R. C. PIERCE. *Univ. of Pennsylvania.*

10:00 SS38 **333.07** Differential regulation of Bdnf and behavior by HDAC and BET inhibition. G. C. SARTOR*; A. M. MALVEZZI; H. J. WIEDNER; J. M. WASSERMAN; C. R. WAHLESTEDT. *Univ. of Miami Miller Sch. of Med., Univ. of Miami Miller Sch. of Med.*

11:00 SS39 **333.08** Multiple system dysfunction in addiction: Evidence from model-based fMRI. J. YU*; V. G. FIORE; J. S. SPENCE; R. W. BRIGGS; J. BRAUD; B. ADINOFF; X. GU. *Univ. of Texas At Dallas, Univ. of Texas At Dallas, Univ. of Florida, Univ. of Texas Southwestern Med. Ctr., VA North Texas Hlth. Care Syst.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 SS40 **333.09** Perturbations of the gut microbiome affect drug seeking behaviors. D. D. KIRALY*; E. G. PECK; A. GODINO; N. L. MERVOSH; E. S. CALIPARI. *Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Mount Sinai Sch. of Med.*

9:00 SS41 **333.10** Granulocyte-colony stimulating factor mediates neuronal and behavioral responses to cocaine. A. GODINO*; E. S. CALIPARI; E. G. PECK; N. L. MERVOSH; J. A. LANDRY; S. J. RUSSO; Y. L. HURD; E. J. NESTLER; D. D. KIRALY. *Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai.*

10:00 SS42 **333.11** Exposure to novelty gates cocaine-evoked plasticity in dopamine neurons. G. R. FOIS*; C. MILIANO; S. CHAUQUET; X. NOGUES; J. M. BAUFRETON; S. CAILLE; F. E. GEORGES. *IMN, Univ. of Cagliari, Univ. of Bordeaux, CNRS UMR 5293 - Univ. Bordeaux 2, CNRS UMR 5287, IMN-UMR-CNRS-5293.*

11:00 SS43 **333.12** "I must avert my eyes": Cocaine patients with a heightened brain response to 33 msec subliminal cocaine cues are more likely to "look away" from cocaine cues in an attentional bias task. A. R. CHILDRESS*; K. JAGANNATHAN; P. REGIER; J. J. SUH; R. EHRMAN; Z. MONGE; S. DARNLEY; T. FRANKLIN; R. WETHERILL; D. D. LANGLEBEN; M. GAWRYSIAK; R. SZUCS-REED; K. YOUNG; K. KAMPMAN; C. P. O'BRIEN. *Univ. PENN Perelman Sch. Med., VA Med. Ctr., Duke Univ.*

8:00 SS44 **333.13** Effect of intra-nucleus accumbens shell infusion of the CB1 receptor antagonist AM251 on reinstatement of cocaine-seeking behavior. M. C. KNOUSE*; S. E. SWINFORD-JACKSON; M. E. HOFMANN; R. C. PIERCE. *Univ. of Pennsylvania.*

9:00 SS45 **333.14** $Ca_v1.2$ channels mediate extinction of cocaine-associated memories via its interaction with signaling mechanisms downstream of dopamine D1R activation. C. E. BURGDORF*; D. FISCHER; A. M. RAJADHYAKSHA. *Weill Cornell Med., Weill Cornell Med.*

10:00 SS46 **333.15** Cav1.2 channels underlie stress-induced relapse of cocaine-seeking. C. C. BAVLEY*; R. FETCHO; B. HALL; D. K. FISCHER; C. BURGDORF; C. LISTON; A. M. RAJADHYAKSHA. *Weill Cornell Med.*

11:00 SS47 **333.16** Impact of intra-nucleus accumbens MS-275, a class I HDAC inhibitor, on the histone post-translational landscape as well as cocaine reinstatement. A. S. THOMAS*; B. FANT; S. E. SWINFORD-JACKSON; N. V. BHANU; B. A. GARCIA; R. C. PIERCE. *Univ. of Pennsylvania, Univ. of Pennsylvania.*

8:00 SS48 **333.17** Caveolin-1 involvement in cocaine-induced locomotor sensitization. K. R. TONN*; J. C. DWORSKY; N. M. STEENROD; M. J. THOMAS; P. G. MERMELSTEIN. *Univ. of Minnesota.*

9:00 SS49 **333.18** Escalating, non-contingent cocaine exposure induces persisting changes in synaptic transmission and LTP in the mouse ventral hippocampus. C. PRESTON; J. J. WAGNER*. *Univ. of Georgia, Univ. of Georgia.*

10:00 SS50 **333.19** ▲ Intranasal oxytocin reduces cocaine conditioned locomotion and anxiety-like behaviors: Possible modulation of the endocannabinoid system within the mesolimbic system. G. C. MOLINA-CASTRO*; A. N. FIGUEROA-GONZALEZ; A. L. LOYOLA-VÉLEZ; A. V. MARTI-MENDOZA; E. TORRES-HERNÁNDEZ; C. S. MALDONADO-VLAAR. *Univ. of Puerto Rico, Rio Piedras Campus.*

11:00 SS51 **333.20** Kainate receptor expression and function in a rat model of cocaine self-administration. M. HOFMANN*; B. FANT; S. E. SWINFORD-JACKSON; M. C. KNOUSE; A. S. THOMAS; R. C. PIERCE. *Univ. of Pennsylvania.*

8:00 SS52 **333.21** Role of PT-type cortical neurons in locomotor sensitization, conditioned place preference, and reinstatement of drug-seeking to cocaine. A. F. GARCIA*; I. G. WEBB; S. M. FERGUSON. *Seattle Children's Res. Inst., Univ. of Washington, Univ. of Washington.*

9:00 SS53 **333.22** Behavioral effects of dietary zinc manipulation on zinc physiology and cocaine locomotor sensitization. L. A. RODRIGUEZ*; J. BONAVENTURA; J. L. GOMEZ; M. PIGNATELLI; R. J. ELLIS; R. D. ASH; W. F. MCDONOUGH; A. BONCI; M. MICHAELIDES. *Natl. Inst. On Drug Abuse, Natl. Inst. on Drug Abuse, Natl. Inst. on Drug Abuse, Univ. of Maryland Col. Park.*

10:00 SS54 **333.23** Conditioned taste avoidance and conditioned place preference induced by racemic and enantiomer forms of α-pyrrolidinopentiophenone. K. H. NELSON*; B. J. HEMPEL; M. M. CLASEN; C. J. WOLOSHCHUK; K. C. RICE; A. L. RILEY. *American Univ., NIH, NIDA & NIAAA.*

11:00 SS55 **333.24** Evaluating the role of mGluR5 in post-cocaine working memory deficits and persistent cocaine-seeking. C. M. GOBIN*; M. SCHWENDT. *Univ. of Florida.*

8:00 SS56 **333.25** Cocaine self-administration and extinction induces adaptations in NMDA receptor-mediated currents in the nucleus accumbens core. M. T. SEPULVEDA-ORENGO; K. L. HEALEY; K. J. REISSNER*. *Univ. of North Carolina At Chapel Hill, Univ. of North Carolina At Chapel Hill, Univ. of North Carolina at Chapel Hill.*

9:00 SS57 **333.26** Cocaine-induced histone methylation on Egr3 and Nab2 promoters. B. EVANS; R. CHANDRA; M. MCGLINCY; A. CHOW; K. K. COVER; M. ENGELN; T. C. FRANCIS; M. LOBO*. *Univ. of Maryland Sch. of Med., Univ. of Maryland Baltimore, Univ. of Maryland, Baltimore, Univ. of Maryland Sch. of Med.*

10:00 SS58 **333.27** Mitochondrial fission in nucleus accumbens D1 neuron subtypes mediates cellular and behavioral plasticity to cocaine. R. CHANDRA*; M. ENGELN; M. PATTON; J. A. MARTIN; C. WERNER; L. M. RIGGS; T. C. FRANCIS; S. DAS; K. GIRVEN; P. KONKALMATT; A. M. GANCARZ; S. A. GOLDEN; S. INIGUEZ; S. J. RUSSO; G. TURECKI; B. MATHUR; C. MEAGHAN; D. M. DIETZ; M. K. LOBO. *Univ. of Maryland Baltimore, State Univ. of New York At Buffalo, The George Washington Univ., Icahn Sch. of Med. at Mount Sinai, Univ. of Texas at El Paso, Douglas Mental Hlth. Univ. Institute, McGill Univ.*

11:00 SS59 **333.28** Cocaine self-administration causes a persistent reduction of Kv7 channel mediate intrinsic inhibition in the prefrontal cortex. J. PARRILLA-CARRERO; P. GOSWAMEE; W. BUCHTA; A. C. RIEGEL*. *Med. Univ. of South Carolina (MUSC).*

8:00 SS60 **333.29** Hypothalamic hypocretin/orexin within ventral midbrain of rat. S. J. SIMMONS*; R. M. MARTORANA; F. H. TRAN; T. A. GENTILE; J. W. MUSCHAMP. *Temple University, Lewis Katz Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 SS61 **333.30** Neurochemical, metabolomic, and behavioral changes arising from genetic elimination of the putative ceftriaxone target MBLAC1. C. RETZLAFF*; C. L. SNARRENBERG; M. J. GROSS; M. K. HAHN; J. WRIGHT; D. P. MORTLOCK; S. CODREANU; J. A. MCLEAN; R. D. BLAKELY. *Vanderbilt Univ., Vanderbilt Univ., Florida Atlantic Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Florida Atlantic Univ.*

POSTER

334. Brain Circuits Affected by Cocaine

Theme G: Motivation and Emotion

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 SS62 **334.01** Trim3 in the nucleus accumbens regulates cue-induced cocaine seeking following extended-access cocaine self-administration. C. T. WERNER*; J. A. MARTIN; A. LEPACK; Z. WANG; A. F. STEWART; R. VISWANATHAN; A. CACCAMISE; R. L. NEVE; I. S. MAZE; D. M. DIETZ. *State Univ. of New York at Buffalo, Icahn Sch. of Med. At Mount Sinai, MIT.*

9:00 SS63 **334.02** Examination of E3 ubiquitin ligase Smurf1 following abstinence from cocaine self-administration. R. VISWANATHAN*; C. T. WERNER; Z. WANG; J. A. MARTIN; D. M. DIETZ. *State Univ. of New York At Buffalo.*

10:00 SS64 **334.03** Cocaine regulates extracellular vesicle release in mouse midbrain. Y. NAKAMURA*; S. A. TSAI; T. SU. *NIDA IRP.*

11:00 SS65 **334.04** Sigma1 receptor modulates cocaine-induced endocannabinoid signaling in the mouse ventral tegmental area. D. I. DRYANOVSKI*; Y. NAKAMURA; T. SU; C. R. LUPICA. *Natl. Inst. On Drug Abuse, NIH, Natl. Inst. On Drug Abuse, NIH.*

8:00 SS66 **334.05** Circadian transcription factor NPAS2 and metabolic redox sensor SIRT1 interact in the mouse nucleus accumbens (NAc) to regulate cocaine reward-related behavior. D. D. BECKER-KRAIL*; P. K. PAREKH; R. W. LOGAN; J. YOSHINO; C. A. MCCLUNG. *Univ. of Pittsburgh, Washington Univ. Sch. of Med.*

9:00 TT1 **334.06** Regional differences in striatal neuronal ensemble excitability following cocaine and extinction memory retrieval in Fos-GFP mice. J. J. ZIMINSKI*; M. C. SIEBURG; G. MARGETTS-SMITH; H. S. CROMBAG; E. KOYA. *Univ. of Sussex, Univ. of Sussex, Univ. of Sussex, Univ. Sussex.*

10:00 TT2 **334.07** Linking developmentally-regulated genes with drug addiction in the nucleus accumbens of mice overexpressing the RNA-binding protein HuD. N. PERRONE-BIZZOZERO*; R. J. OLIVER; A. S. GARDINER. *Univ. of New Mexico HSC.*

11:00 TT3 **334.08** HuD regulation of circRNAs expression and localization during cocaine seeking behaviors. M. DELL'ORCO*; R. J. OLIVER; N. MELLIOS; N. PERRONE-BIZZOZERO. *Univ. of New Mexico HSC.*

8:00 TT4 **334.09** Projections from the nucleus accumbens to the ventral mesencephalon collateralize in the ventral pallidum. T. PARDO*; J. A. HEINSBROEK; P. W. KALIVAS. *Med. Univ. of South Carolina.*

9:00 TT5 **334.10** Cell type specific regulation of cocaine seeking in the ventral pallidum. J. A. HEINSBROEK*; A. BOBADILLA; D. N. NEUHOFER; P. W. KALIVAS. *Med. Univ. of South Carolina.*

10:00 TT6 **334.11** Nucleus accumbens core group I mGluR signaling after the incubation of methamphetamine craving. C. MURRAY*; M. MILOVANOVIC; J. A. LOWETH; M. E. WOLF. *Rosalind Franklin Univ. of Med. and Scien.*

11:00 TT7 **334.12** Dopamine neuromodulation and the regulation of protein translation in cultured nucleus accumbens neurons. M. T. STEFANIK*; C. MURRAY; M. E. WOLF. *Rosalind Franklin Univ. of Med. and Sci., Rosalind Franklin Univ. of Med. and Scien.*

8:00 TT8 **334.13** Biochemical and electrophysiological studies of NMDA receptors in the rat nucleus accumbens during incubation of methamphetamine craving. A. M. WUNSCH*; D. T. CHRISTIAN; M. MILOVANOVIC; M. E. WOLF. *Rosalind Franklin Univ.*

9:00 TT9 **334.14** Effects of cocaine and chronic stress exposure on BLA neuronal activity. J. A. LOWETH*; S. MUNSHI; A. CACCAMISE; J. A. ROSENKRANZ; M. E. WOLF. *Rosalind Franklin Univ. of Med. and Sci., Rosalind Franklin Univ. of Med. and Sci.*

10:00 TT10 **334.15** Extended access cocaine self-administration leads to increased GluN3-containing NMDA receptor function in the rat nucleus accumbens. D. T. CHRISTIAN*; K. Y. TSENG; M. E. WOLF. *Rosalind Franklin Univ. of Med. and Sci.*

11:00 TT11 **334.16** Interoception and relapse to cocaine addiction: Lo,g-term disruptions of the amygdala-insula pathway. P. BELUJON*; A. C. M. SALIN; M. SOLINAS. *Univ. Poitiers.*

8:00 TT12 **334.17** Cocaine increases permeability of the blood-brain-barrier in the hippocampus: Implications for drug use and abuse. M. M. CLASEN*; D. N. KEARNS; T. L. DAVIDSON; A. L. RILEY. *American Univ.*

9:00 TT13 **334.18** Cell type- and receptor type-specific mechanisms of cocaine-induced synaptic AMPAR depotentiation in the nucleus accumbens. A. E. INGEBRETSON*; M. J. THOMAS. *Univ. of Minnesota Dept. of Neurosci.*

10:00 TT14 **334.19** ▲ Lateral habenular norepinephrine contributes to anxiogenic behaviors in male rats. E. M. PURVIS*; A. KLEIN; L. COLLINS; A. GUILLEN; B. JAMES; K. LEE; M. MAYES; L. ZHOU; A. ETTENBERG. *Univ. of California, Santa Barbara.*

11:00 TT15 **334.20** Activation of serotonin $_{1B}$ receptors in the lateral habenula attenuates the negative/anxiogenic effects of cocaine. A. KLEIN*; E. M. PURVIS; K. AYALA; L. COLLINS; A. GUILLEN; B. JAMES; J. KRUG; K. LEE; M. MAYES; L. ZHOU; A. ETTENBERG. *UC Santa Barbara.*

8:00 TT16 **334.21** BDNF controls the ER stress response protein expression after repeated cocaine administration in the rat dorsal striatum. J. KIM; J. YANG; I. RYU; M. GHANG; S. SON; E. HAN; E. CHOE*. *Pusan Natl. Univ.*

9:00 TT17 **334.22** Effects of cocaine on spontaneous dopamine release varies across striatal regions. J. T. YORGASON*; C. FINUF; S. STEFFENSEN. *Brigham Young Univ.*

10:00 TT18 **334.23** Altered resting state functional connectivity of the lateral and medial hypothalamus in cocaine dependence. S. ZHANG*; C. R. LI. *Yale Univ. Sch. of Med., Yale Univ.*

11:00 TT19 **334.24** Thalamocortical connectivity and intrinsic thalamic connectivity associated with recency of cocaine use. A. S. HUANG*; R. Z. GOLDSTEIN. *Icahn Sch. of Med. at Mount Sinai.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 TT20 **334.25** Neuronal sub-type specific translational changes following long-access cocaine self-administration in mice. E. C. ANDRADE*; J. ALVAREZ; E. F. SCHMIDT; N. HEINTZ. *The Rockefeller Univ.*

9:00 TT21 **334.26** Dynamic remodeling of MSN connectivity upon cocaine self-administration. M. SALERY*; E. S. CALIPARI; A. GODINO; E. G. PECK; E. J. NESTLER. *Icahn Sch. of Med. at Mount Sinai.*

10:00 TT22 **334.27** Novel approaches to study the role of endogenous ΔFosB in the action of cocaine and morphine within the nucleus accumbens. C. K. LARDNER*; P. J. HAMILTON; H. M. CATES; D. M. WALKER; E. A. RIBEIRO; J. FENG; E. J. NESTLER. *Icahn Sch. of Med. at Mount Sinai, Weill Cornell Med. Sch., Florida State Univ.*

11:00 TT23 **334.28** Mechanisms of epigenetic priming in the nucleus accumbens underpin cocaine addiction. P. MEWS*; H. KRONMAN; E. S. CALIPARI; E. J. NESTLER. *Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. At Mount Sinai, Mount Sinai Sch. of Med., Icahn Sch. Med. At Mount Sinai.*

8:00 TT24 **334.29** History of cocaine self-administration alters transcriptome-wide responses to cocaine re-exposure throughout the brain's reward circuitry. D. M. WALKER*; E. S. CALIPARI; H. M. CATES; E. LOH; I. PURUSHOTHAMAN; A. GODINO; P. MEWS; E. J. NESTLER. *Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Weill Cornell Med. Col., Icahn Sch. of Med. at Mount Sinai, Icahn Sch. Med. At Mount Sinai.*

9:00 TT25 **334.30** Conditional deletion of the GABAA α4 subunit in D1 but not D2 expressing Medium Spiny Neurons affects cocaine-induced locomotor activity and associated neural ensembles. J. ROBERTSON*; T. MACPHERSON; D. N. STEPHENS; S. L. KING. *Univ. of Sussex.*

POSTER

335. Cortical and Allocortical Mechanisms of Attention

Theme H: Cognition

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 TT26 **335.01** Effect of social isolation during adolescence on behavior in adult mice. M. NOBACK*; N. WHITE; G. ZHANG; J. BARROW; G. CARR. *Johns Hopkins Sch. of Med.*

9:00 TT27 **335.02** Layer dependent attentional modulation of broad and narrow spiking cells in primate V1. A. THIELE; D. FERRO; M. BOYD; S. PANZERI*. *Newcastle Univ., ISTITUTO ITALIANO DI TECNOLOGIA, Newcastle Univ.*

10:00 TT28 **335.03** ▲ Effects of medial prefrontal cortical administration of the orexin-2 receptor antagonist, TCS-Ox2-29, on attentional performance in rats. A. TAPP*; E. B. MANESS; J. A. BURK. *Col. of William and Mary.*

11:00 TT29 **335.04** The role of basal forebrain orexin-2-receptors in attentional performance in rattus norvegicus. J. A. BURK*; A. P. VIJ; E. B. MANESS; J. R. FADEL. *Col. of William and Mary, Univ. of South Carolina Sch. of Med.*

8:00 TT30 **335.05** The role of noradrenaline in spatial attention. A. J. REYNAUD; M. FROESEL; S. BEN HADJ HASSEN; J. CLÉRY; M. L. MEUNIER; S. BEN HAMED*; F. HADJ-BOUZIANE. *Ctr. de Recherche en Neurosciences de Lyon, Inst. des Sci. Cognitives Marc Jeannerod, Inst. des Sci. Cognitives Marc Jeannerod, Ctr. de Recherche en Neurosciences de Lyon.*

9:00 TT31 **335.06** Neural coding of social gaze in the amygdala. S. GILARDEAU*; M. JAZAYERI; S. PINÈDE; S. WIRTH; J. DUHAMEL. *Inst. Des Sci. Cognitives.*

10:00 TT32 **335.07** The claustrum enables resilience to distraction through gain control of cortical sensory processing. G. ATLAN*; A. TEREM; N. PERETZ-RIVLIN; G. POZNER; K. SEHRAWAT; B. J. GONZALES; G. TASAKA; Y. GOLL; R. REFAELI; O. ZVIRAN; B. LIM; M. GROYSMAN; I. GOSHEN; A. MIZRAHI; I. NELKEN; A. CITRI. *Hebrew Univ. of Jerusalem, Hebrew Univ. of Jerusalem, UCSD, Canadian Inst. for Advanced Res.*

11:00 TT33 **335.08** Serotonergic efficiency underlies causal effect of 5-HTP on attention allocation. H. B. WEINBERG-WOLF*; N. FAGAN; O. DAL MONTE; M. TRINGIDES; G. ANDERSON; S. W. CHANG. *Yale Univ., Yale Univ., Yale Univ., Yale Univ.*

8:00 TT34 **335.09** Attentional control in young and aged rats following chemogenetic inhibition of prefrontal projection neurons. S. JOSHI*; M. DUGGAN; J. STRUPP; V. PARIKH. *Temple Univ.*

9:00 TT35 **335.10** Neuronal activity in primate area FST during covert spatial attention. A. R. BOGADHI*; L. N. KATZ; A. BOLLIMUNTA; R. J. KRAUZLIS. *Natl. Eye Inst.*

10:00 TT36 **335.11** Exogenous and endogenous control of visuospatial attention in freely behaving mice. W. YOU*; S. P. MYSORE. *The Johns Hopkins Univ., Johns Hopkins Univ.*

11:00 TT37 **335.12** Signatures of competition in an inhibitory nucleus in the midbrain attention network. H. M. SCHRYVER*; S. P. MYSORE. *Johns Hopkins Univ.*

8:00 TT38 **335.13** Neural mechanisms underlying categorization for stimulus selection. N. R. MAHAJAN*; S. P. MYSORE. *Johns Hopkins Univ.*

9:00 TT39 **335.14** ▲ Different patterns of neuronal infection in the rodent thalamus and temporal cortex revealed by retrograde transport of pseudorabies virus injected into the dorsal and ventral prefrontal cortex. M. PERKINS*; K. F. MESSANVI; Y. CHUDASAMA. *NIH.*

10:00 TT40 **335.15** Specific projections of the non-specific midline thalamus. G. LARYEA*; M. B. LEVENTHAL; Y. CHUDASAMA. *NIMH.*

11:00 TT41 **335.16** The neuropeptide galanin in the ventral medial prefrontal cortex modulates impulse control. K. MESSANVI*; M. PERKINS; J. DU HOFFMANN; Y. CHUDASAMA. *NIH.*

8:00 TT42 **335.17** Single-neuron correlates of spatial attention and choice in auditory and prefrontal cortex. C. R. CAMALIER*; M. MISHKIN; B. B. AVERBECK. *NIH, NIMH/NIH.*

9:00 TT43 **335.18** Impaired NRG1/ErbB4 signaling decreases the vHPC-mPFC synchrony and causes attention deficit. Z. TAN*; H. ROBINSON; Y. LIU; F. LIU; D. YIN; H. WANG; T. LIN; G. XING; W. XIONG; L. MEI. *Augusta Univ., East China Normal Univ.*

10:00 TT44 **335.19** Selective modulation of dopamine D3 receptors and norepinephrine transporters enhances sustained attention without the risk for abuse. C. MARSHALL*; Z. BRODNIK; D. BERNSTEIN; O. MORTENSEN; M. REITH; J. SHUMSKY; N. SNYDER; B. WATERHOUSE; R. ESPAÑA; S. KORTAGERE. *Drexel Univ., New York Univ. Sch. of Med., Rowan Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 TT45 **335.20** The effects of atomoxetine on distribution skew in a two choice reaction time task in the rat. Z. V. REDDING*; P. CHAWLA; K. E. SABOL. *Univ. of Mississippi.*

8:00 TT46 **335.21** The role of the intralaminar thalamic nuclei in attention and orienting. G. D. WATSON*; H. H. YIN. *Duke Univ.*

9:00 TT47 **335.22** Effects of 5-HT1B antagonists on behavior in dopamine transporter knockout mice. Y. H. SABER*; F. HALL; R. ELHAG; F. RESENDIZ. *Univesity of Toledo, Pharm. Col. and Pharmace, the university of toledo.*

10:00 TT48 **335.23** Single neuron correlates of ERP changes linked to spatial attentional shifts in behaving monkeys. C. LOCKWOOD*; W. VAUGHN; C. J. DUFFY. *Univ. of Rochester, Univ. of Rochester, Univ. Of Rochester Med. Ctr.*

11:00 TT49 **335.24** The prevalence of ON and OFF cortical states in macaque visual cortex. N. KHARAS*; S. R. DEBES; A. R. ANDREI; V. DRAGOI. *Uthouston Med. School-Md Anderson Cancer Ctr., Univ. of Texas At Houston, McGovern Med. Sch., Univ. of Texas at Houston Dept. of Neurobio. and Anat.*

8:00 TT50 **335.25** ▲ Phase-relationships of High-Threshold bursting Thalamocortical neurons and their role in modulating Alpha oscillations. P. RAMAKRISHNA*; R. SHARMA; S. NADKARNI. *IISER Pune.*

POSTER

336. Cortical Systems and Mechanisms of Disease

Theme H: Cognition

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 TT51 **336.01** Modulation of neural activity in the parafascicular thalamic nucleus alters beta oscillations in the basal ganglia-cortical motor circuits and modifies motor function in hemiparkinsonian rats. E. BRAZHNIK; N. NOVIKOV; A. J. MCCOY; J. R. WALTERS*. *NIH NINDS.*

9:00 TT52 **336.02** The cognitive role of theta, beta, and gamma band oscillatory activity in the basal ganglia-thalamocortical circuit in the awake, behaving hemiparkinsonian rat. A. R. WEISS*; E. BRAZHNIK; N. NOVIKOV; M. J. PRESTON; J. R. WALTERS. *NINDS.*

10:00 TT53 **336.03** Arrangement of multisynaptic inputs from the basal ganglia to the dorsal and ventral premotor cortical areas in macaques: retrograde transneuronal double labeling with fluorescent rabies viral vectors. K. INOUE*; M. FUJIWARA; S. UEZONO; S. TANABE; H. ISHIDA; E. HOSHI; M. TAKADA. *Primate Res. Institute, Kyoto Univ., Tokyo Metropolitan Inst. of Med. Sci.*

11:00 TT54 **336.04** Phase-specific closed loop optogenetic stimulation in behaving mice. Y. KIM*; D. Y. JUNG; S. HAN; N. S. NARAYANAN. *Univ. of Iowa.*

8:00 TT55 **336.05** Striatal D1-medium spiny neurons in levodopa-induced dyskinesias. S. L. ALBERICO*; Y. KIM; N. S. NARAYANAN. *Univ. of Iowa, Univ. of Iowa, Univ. of Iowa Roy J and Lucille A Carver Col. of Med.*

9:00 TT56 **336.06** The effect of alpha-synuclein overexpression on dendritic spines of the prefrontal cortex in a mouse model of Dementia with Lewy Bodies. G. M. ALDRIDGE*; C. S. LALONDE; Q. ZHANG; N. S. NARAYANAN. *Univ. of Iowa, Univ. of Iowa Roy J and Lucille A Carver Col. of Med.*

10:00 TT57 **336.07** A human prefrontal-subthalamic circuit for cognitive control. R. KELLEY*; O. FLOUTY; E. EMMONS; Y. KIM; J. KINGYON; J. R. WESSEL; H. OYA; J. D. GREENLEE, M.D.; N. S. NARAYANAN. *Univ. of Iowa, Univ. of Iowa Hosp. and Clinics, Univ. of Iowa, Univ. of Iowa, Univ. Iowa, Univ. of Iowa Roy J and Lucille A Carver Col. of Med.*

11:00 TT58 **336.08** Frontostriatal ensembles learn during interval timing. E. EMMONS*; B. DE CORTE; N. NARAYANAN. *Univ. of Iowa.*

8:00 TT59 **336.09** ● ORY-2001, a dual LSD1/MAOB inhibitor in development for neurodegenerative diseases, normalizes aggressive behavior in SAMP-8 mice and social avoidance in isolated rats. D. ROTLLANT; M. LUFINO; C. MASCARÓ; C. GRIÑAN; M. PALLÀS; R. NADAL; A. ARMARIO; T. MAES*. *ORYZON GENOMICS S.A., Univ. of Barcelona, Psychobiology Unit, Sch. of Psychology, Univ. Autònoma de Barcelona.*

9:00 TT60 **336.10** Towards a computational account of theta band (4-8 Hz) power modulation in the subthalamic nucleus under response conflict. P. MOOLCHAND*; S. R. JONES; M. J. FRANK. *Brown Univ., Brown Inst. for Brain Sci.*

8:00 DP08/TT61 **336.11** (Dynamic Poster) Distribution and morphology of transplanted human neural stem cells in rats with penetrating ballistic-like brain injury. S. GAJAVELLI*; S. W. LEE; M. S. SPURLOCK; Z. HU; K. N. RIVERA; L. QUESADA; G. R. GAJAVELLI*; C. J. ALVAREZ*; A. MAHAVADI; D. A. SHEAR; T. G. HAZEL; R. M. BULLOCK. *Univ. Miami, Univ. of Miami, Walter Reed Army Inst. of Res., Neuralstem, Inc.*

POSTER

337. Executive Function: Inhibitory Control

Theme H: Cognition

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 TT62 **337.01** Primary motor cortex modulation during reactive and proactive response inhibition. W. D. BYBLOW*; M. J. COWIE; J. CIRILLO; H. J. MACDONALD. *Univ. of Auckland, Univ. of Auckland, Univ. of Birmingham.*

9:00 TT63 **337.02** Modulation of putative dopamine neuron firing in rat ventral tegmental area during performance of a stop-change task. S. TENNYSON*; D. BRYDEN; N. WOYTOWITZ; N. HRICZ; M. R. ROESCH. *Univ. of Maryland, Univ. of Maryland Col. Park, Univ. of Maryland at Col. Park.*

10:00 TT64 **337.03** Clonidine mildly reduces impulsive behavior at sub-sedating doses that also impair sustained attention in male rats. P. J. MCLAUGHLIN*; M. C. NORMANN; J. E. JAGIELO-MILLER; T. M. PROPER; R. M. HARDY. *Edinboro Univ. of Pennsylvania.*

11:00 TT65 **337.04** Involvement of hippocampal, orbitofrontal and subthalamic oscillations in behavioural inhibition in the stop signal task in rats. A. BANSTOLA*; C. K. YOUNG; N. MCNAUGHTON. *Univ. of Otago.*

8:00 TT66 **337.05** A cross-species neurophysiological assay of cognitive control: Development of a touchscreen-based rodent analog of the Flanker Task. M. A. ROBBLE*; S. NICKELS; L. WOOLDRIDGE; S. PERLO; E. CÁRDENAS; B. KANGAS; J. BERGMAN; W. A. CARLEZON, Jr; D. A. PIZZAGALLI. *McLean Hospital, Harvard Univ. Med. Sch., McLean Hospital, Harvard Med. Sch.*

9:00 UU1 **337.06** ▲ Neuronal correlates of motivated inhibition in monkey motor cortices. M. GIAMUNDO*; F. GIARROCCO; E. BRUNAMONTI; M. MATTIA; P. PANI; S. FERRAINA. *Sapienza Univ., 'PhD Program in Behavioral Neuroscience, Sapienza Univ. of Rome, Inst. Superiore Sanità.*

10:00 UU2 **337.07** Study of global and selective inhibition of upper and lower limb by a stop signal task. E. BRUNAMONTI*; P. DE SIMONE; M. PAOLONI; P. PANI; S. FERRAINA. *Sapienza Univ.*

11:00 UU3 **337.08** Premotor neuronal correlates of voluntary limb movement initiation. P. PANI*; F. GIARROCCO; M. GIAMUNDO; E. BRUNAMONTI; S. FERRAINA. *Sapienza Rome Univ.*

8:00 UU4 **337.09** The nigrostriatal dopamine pathway transmits a stop signal during the performance of a saccadic countermanding task in monkeys. T. OGASAWARA*; M. TAKADA; M. MATSUMOTO. *Univ. of Tsukuba, Primate Res. Institute, Kyoto Univ., Univ. of Tsukuba.*

9:00 UU5 **337.10** Insular cortex activity is implicated in appetitive inhibitory conditioning. K. R. LIGHT*; Z. TEK; R. BOWLER; V. WINIGER; A. WANAR; B. COTTEN; M. R. BAILEY; A. KALMBACH; E. H. SIMPSON; P. D. BALSAM. *Barnard Col., Columbia Univ.*

10:00 UU6 **337.11** Two forms of circadian disruption impact response inhibition and attention in adult long-evans rats. R. C. BALACHANDRAN*; M. L. SIEG; K. M. HATCHER; M. M. MAHONEY; P. A. EUBIG. *Univ. of Illinois At Urbana Champaign, Univ. of Illinois at Urbana Champaign.*

11:00 UU7 **337.12** Microcircuitry of agranular frontal cortex: Laminar organization of saccade performance monitoring signals in supplementary eye field. A. SAJAD*; J. D. SCHALL. *Vanderbilt Univ.*

POSTER

338. Human Long-Term Memory: Medial Temporal Lobe

Theme H: Cognition

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 UU8 **338.01** Dynamic striatal and medial temporal lobe interactions are mediated by varying demands on pattern separation. A. FRITHSEN*; S. M. STARK; S. NIKOLOVA; C. E. STARK. *Univ. of California Irvine, Univ. of California, Irvine, Univ. of California, Irvine, Univ. of California Irvine.*

9:00 UU9 **338.02** Dynamics of sharp wave/ripple-triggered cortical and subcortical high frequency local field potential in humans. I. SKELIN*; J. ZHENG; B. L. MCNAUGHTON; J. J. LIN. *Univ. of Lethbridge, Univ. of California Irvine, Univ. of California Irvine, Univ. of California Irvine.*

10:00 UU10 **338.03** Interaction between the hippocampus and neocortical regions during associative memory formation: An fMRI study. T. ISHII*; T. ASO; K. NAKAMURA. *Human Brain Res. Center, Kyoto Univ. Grad. Sch. of Med.*

11:00 UU11 **338.04** Resting-state medial temporal connectivity with reward centers predicts how motivation impacts learning. L. FRANK*; A. R. PRESTON; D. ZEITHAMOVA. *Univ. of Oregon, The Univ. of Texas At Austin, Univ. of Oregon.*

8:00 UU12 **338.05** Changes in memory representations are related to features in prior night's sleep. E. COWAN*; A. A. LIU; S. KOTHARE; O. DEVINSKY; L. DAVACHI. *Ctr. For Neural Science/ New York Univ., New York Univ. Sch. of Med., NYU.*

9:00 UU13 **338.06** Measuring neural activity in the MTL using simultaneous BOLD and functional MR spectroscopy. C. E. STARK*; S. NIKOLOVA; S. M. STARK. *Univ. of California Irvine, Univ. of California, Irvine.*

10:00 UU14 **338.07** Functional connectivity segregation along the long-axis of the hippocampus. A. MENDELSOHN*; S. GABAY. *Univ. of Haifa, Univ. of Haifa.*

11:00 UU15 **338.08** Travelling waves along the long-axis of the hippocampus. M. YEBRA*; O. JENSEN; N. AXMACHER; B. A. STRANGE. *CTB, Univ. of Birmingham, Inst. of Cognitive Neurosci., Alzheimer's Dis. Res. Centre, Reina Sofia-CIEN Fndn.*

8:00 UU16 **338.09** Preferential viewing of old scenes reflects conscious memory for which scenes are old or new and is impaired after medial temporal lobe damage. C. N. SMITH*; Z. URGOLITES; L. R. SQUIRE. *Veterans Affairs San Diego Healthcare Syst., Univ. of California San Diego, Univ. of California San Diego, Univ. of California San Diego.*

9:00 UU17 **338.10** Mnemonic discrimination tuning: A potential mechanism underlying the other-race effect. J. YAROS*; D. A. SALAMA; M. A. YASSA. *UC Irvine, Univ. of California Irvine Dept. of Neurobio. and Behavior.*

10:00 UU18 **338.11** Acute mild exercise improves memory by enhancing hippocampal-neocortical connectivity. K. SUWABE*; K. BYUN; K. HYODO; Z. REAGH; K. SAOTOME; G. OCHI; M. A. YASSA; H. SOYA. *Univ. of Tsukuba, Univ. of Tsukuba, Univ. of Tsukuba, Univ. of California Irvine Dept. of Neurobio. and Behavior, Univ. of Tsukuba, Lab. of Exerc Biochem & Neurosci, Univ. of Tsukuba, Univ. of California Irvine Dept. of Neurobio. and Behavior, Univ. Tsukuba.*

8:00 DP12/UU19 **338.12** (Dynamic Poster) Amygdala-hippocampal-orbitofrontal network dynamics support contextual modulation of facial expression. J. ZHENG; S. VADERA; R. T. KNIGHT; J. LIN*. *Univ. of California, Irvine, Univ. of California, Irvine, Univ. of California at Berkeley, Univ. of California, Irvine.*

8:00 UU20 **338.13** Gamma and theta activity in the human medial temporal and prefrontal cortices predicts performance on a spatial learning task. R. F. STEVENSON*; J. ZHENG; A. S. MOON; S. VADERA; R. T. KNIGHT; J. J. LIN; M. A. YASSA. *UC Irvine, UC Berkeley.*

9:00 UU21 **338.14** Performance on object pattern separation task predicts cognitive status and is linked to anterolateral entorhinal cortical thinning in cognitively normal older adults. J. A. NOCHE*; F. MARQUEZ; N. TUSTISON; D. DELISLE; E. MURRAY; V. KAPOOR; M. WITBRACHT; S. SIRIVONG; J. R. STONE; J. GRILL; Z. REAGH; M. A. YASSA. *Univ. of California Irvine Dept. of Neurobio. and Behavior, UC Irvine, Univ. of Virginia, Univ. of California, Irvine, Univ. of California Irvine Dept. of Neurobio. and Behavior.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 UU22 **338.15** Hippocampal integration and separation processes are driven by the strength of memory reactivation during learning. R. J. MOLITOR*; K. R. SHERRILL; N. W. MORTON; A. R. PRESTON. *Univ. of Texas At Austin.*

11:00 UU23 **338.16** The role of sleep in generalizing across disjointly presented information. A. C. SCHAPIRO*; M. BAYDA; E. CHO; R. COX; R. STICKGOLD. *Beth Israel Deaconess Med. Ctr. / Harvard Med.*

8:00 UU24 **338.17** The medial temporal lobe and topographical memory. Z. J. URGOLITES*; R. O. HOPKINS; L. R. SQUIRE. *UCSD, Veterans Affairs San Diego Healthcare Syst., Brigham Young Univ., Intermountain Med. Ctr., UCSD, UCSD.*

9:00 UU25 **338.18** Human hippocampal pre-activation predicts behavior. A. JAFARPOUR*; V. PIAI; J. LIN; R. T. KNIGHT. *Helen Wills Neurosci. Instutite, Donders Ctr. for Cognition, Univ. of California, Irvine, Univ. of California Berkeley.*

10:00 UU26 **338.19** Acute physical exercise improves memory consolidation in humans via BDNF and endocannabinoid signaling. K. IGLOI*; B. MARIN BOSCH; A. BRINGARD; G. FERRETTI; S. SCHWARTZ. *Univ. of Geneva.*

11:00 UU27 **338.20** Neural substrates of mnemonic discrimination: A whole-brain fMRI investigation. I. J. BENNETT*; J. KLIPPENSTEIN; S. M. STARK; C. E. STARK. *Univ. of California, Riverside, Univ. of California Irvine.*

8:00 UU28 **338.21** Increased aerobic fitness is related to increased anterior dentate gyrus/CA3 volume in healthy young adults following exercise training. R. K. NAUER*; M. F. DUNNE; T. W. STORER; C. E. STERN; K. SCHON. *Boston Univ., Boston Univ., Boston Univ. Sch. of Med., Harvard Med. Sch.*

9:00 UU29 **338.22** Simulated memory impairment: Neural correlates of memory decisions made in the face of conflict. E. J. MAHONEY*; D. E. HANNULA. *Univ. of Wisconsin - Milwaukee, Univ. of Wisconsin, Milwaukee.*

10:00 UU30 **338.23** The role of spatial context representations in medial temporal lobe regions in fear generalization: A virtual reality approach. L. D. DE VOOGD*; Y. P. J. MURRAY; R. M. BARTE; A. VAN DER HEIDE; G. FERNÁNDEZ; C. F. DOELLER; E. J. HERMANS. *Donders Inst. For Brain, Cognition and Behaviour, Kavli Inst. for Systems Neuroscience, NTNU.*

11:00 UU31 **338.24** Reward modulates memory encoding for objects and scenes in the medial temporal lobe. H. SCHULTZ*; J. YOO; D. MESHI; H. R. HEEKEREN. *Univ. of Birmingham, Freie Univ. Berlin, Michigan State Univ.*

8:00 UU32 **338.25** Anterolateral entorhinal cortex volume affects both intra-item and inter-item configural processing. L. YEUNG*; R. K. OLSEN; H. E. P. BILD-ENKIN; B. HONG; V. MIHAJLOVIC; M. C. D'ANGELO; A. KACOLLJA; D. A. MCQUIGGAN; A. KESHABYAN; J. D. RYAN; M. D. BARENSE. *Univ. of Toronto, Rotman Res. Inst.*

9:00 UU33 **338.26** Changes in item representations following category learning. S. ASHBY*; C. R. BOWMAN; D. ZEITHAMOVA. *Univ. of Oregon.*

10:00 UU34 **338.27** Withdrawn

POSTER

339. Computational Approaches to Understanding Interactions Between Short- and Long-Term Memory

Theme H: Cognition

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 UU35 **339.01** Opportunity to link related memories during encoding reveals adolescent-specific neural strategy. M. L. SCHLICHTING*; K. F. GUARINO; H. E. ROOME; A. R. PRESTON. *Univ. of Toronto, Loyola Univ. Chicago, The Univ. of Texas at Austin.*

9:00 UU36 **339.02** Withdrawn

10:00 UU37 **339.03** Memory load modulates the dynamics of visual working memory. M. F. PANICHELLO*; B. D. DEPASQUALE; J. W. PILLOW; T. J. BUSCHMAN. *Princeton Neurosci. Inst., Princeton Univ.*

11:00 UU38 **339.04** Medial prefrontal cortex compresses concept representations through learning. M. L. MACK*; A. R. PRESTON; B. C. LOVE. *Univ. of Toronto, The Univ. of Texas At Austin, Univ. Col. London.*

8:00 UU39 **339.05** Neural bases of automaticity. M. SERVANT; G. D. LOGAN; G. F. WOODMAN*. *Vanderbilt Univ.*

9:00 UU40 **339.06** Dependence of facial attractiveness perception on categorization induced informational constraints: A Bayesian Statistical account. C. K. RYALI*; A. J. YU. *UC San Diego, UC San Diego.*

10:00 UU41 **339.07** Drift diffusion modeling of interactions between episodic and working memory. A. NOVICK*; A. M. BORNSTEIN; K. A. NORMAN; J. D. COHEN. *Princeton Univ.*

11:00 UU42 **339.08** Efficient learning: Manipulating context to enhance (or diminish) memory. J. R. MANNING*; K. ZIMAN; A. C. HEUSSER. *Dartmouth Col., Dartmouth Col., Dartmouth Col.*

8:00 UU43 **339.09** Prototype model correlates in the VMPFC during concept generalization. C. R. BOWMAN*; D. ZEITHAMOVA. *Univ. of Oregon.*

9:00 UU44 **339.10** Adaptive cognitive flexibility improves both prospective and long-term remembering. S. KOSLOV*; J. A. LEWIS-PEACOCK. *Univ. of Texas, Inst. for Neurosci.*

10:00 UU45 **339.11** Rational use of long-term and working memory in goal-directed behavior: A normative account of prospective memory. I. MOMENNEJAD*; K. NORMAN; J. D. COHEN; S. SINGH; R. L. LEWIS. *Princeton Univ., Princeton Univ., Univ. of Michigan, Univ. of Michigan.*

11:00 UU46 **339.12** The precision of context-based prediction biases memory pruning. H. KIM*; M. L. SCHLICHTING; A. R. PRESTON; J. A. LEWIS-PEACOCK. *Univ. of Texas At Austin, Univ. of Toronto, Univ. of Texas at Austin, Univ. of Texas at Austin.*

8:00 UU47 **339.13** Contributions of working memory and across-trial probability learning to context-based decisions. O. LOSITSKY*; M. SHVARTSMAN; J. D. COHEN; R. C. WILSON. *Princeton Univ., Univ. of Arizona.*

9:00 UU48 **339.14** A Bayesian approach to inferring latent connectivity patterns from spike trains reveals that working memory maintenance induces rapid synaptic plasticity. E. SPAAK*; C. CONSTANTINIDIS; J. DUNCAN; T. BUSCHMAN; E. K. MILLER; M. G. STOKES. *Oxford Univ., Wake Forest Univ. Sch. of Med., Med. Res. Council, Princeton Univ., Massachusetts Inst. Technol.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 UU49 **339.15** Memory reactivation modulates encoding and retrieval of relational memories. N. W. MORTON*; A. R. PRESTON. *The Univ. of Texas at Austin.*

POSTER

340. The Human Language Singularity

Theme H: Cognition

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 UU50 **340.01** Sensitivity to written word structure is associated with diffusivity in ventral white matter pathways. M. YABLONSKI; K. RASTLE; J. S. H. TAYLOR; M. BEN-SHACHAR*. *Bar Ilan Univ., Royal Holloway, Univ. of London, Aston Univ.*

9:00 UU51 **340.02** Neural dynamics of verbal working memory in sentence comprehension. T. KAMBARA*; E. C. BROWN; Y. NAKAI; E. ASANO. *Children'S Hosp. of Michigan, Wayne State Unive, Japan Society for the Promotion of Sci. (JSPS), Oregon Hlth. and Sci. Univ., Children's Hosp. of Michigan, Wayne State Univ.*

10:00 UU52 **340.03** Searching for the categorical structure of abstract concepts. C. WALSH*; S. J. GOTTS; A. MARTIN. *Natl. Inst. of Mental Hlth.*

8:00 DP13/UU53 **340.04** (Dynamic Poster) Decoding how the human brain parses continuous speech into linguistic representations. L. GWILLIAMS*; J. KING; D. POEPPEL. *New York Univ.*

8:00 UU54 **340.05** Processing syntactic and prosodic information during sentence comprehension. C. L. VAN DER BURGHT*; T. GOUCHA; A. D. FRIEDERICI; J. KREITEWOLF; G. HARTWIGSEN. *Max Planck Inst. For Human Cognitive and Brain Sci., Univ. of Lübeck.*

9:00 UU55 **340.06** The neural bases of syntactic processing in American Sign Language: Evidence from fMRI and MEG. A. K. VILLWOCK*; W. MATCHIN; A. ROTH; D. ILKBASARAN; M. HATRAK; E. HALGREN; R. MAYBERRY. *UCSD.*

10:00 UU56 **340.07** Cerebellar Crus I and caudate nucleus volumes are associated with deficits in verbal working memory in FOXP2 point mutation. G. P. ARGYROPOULOS*; K. SCHULZE; M. MISHKIN; F. VARGHA-KHADEM. *UCL Great Ormond Street Inst. of Child Hlth., Inst. of Psychology, Heidelberg Univ., NIMH, Great Ormond Street Hosp. for Children Natl. Hlth. Fndn. Trust.*

11:00 UU57 **340.08** The effect of overt and covert speech on visual word recognition. C. KOHEN*; K. WINSLER; K. J. MIDGLEY; P. J. HOLCOMB. *San Diego State Univ.*

8:00 UU58 **340.09** Dynamics of start and stop signals during language production. N. JANSSEN*. *Univ. De La Laguna.*

9:00 UU59 **340.10** Neural entrainment to acoustic edges in native and foreign speech. M. CUCU*; N. KAZANINA; C. HOUGHTON. *Univ. of Bristol.*

10:00 UU60 **340.11** Effects of language proficiency on cognitive control: Evidence from Resting-State functional connectivity. X. SUN*; L. LI; G. DING; P. LI; R. WANG. *South China Normal Univ., Beijing Normal Univ., Pennsylvania State Univ.*

11:00 UU61 **340.12** Spatial multiscale fMRI analysis of the human cortical language system. P. KELLMEYER*; R. BERKEMEIER; T. BALL. *Univ. of Freiburg, Med. Ctr.*

8:00 UU62 **340.13** Modular reconfiguration of brain networks underlying word masking. S. GAO*; Y. YIN; D. YAO. *UESTC.*

9:00 UU63 **340.14** The role of social cognition on pragmatic language comprehension: A meta-analysis of fMRI studies. M. GIORDANO*; E. VALLES-CAPETILLO; A. REYES-AGUILAR. *Univ. Nacional Autónoma De México.*

10:00 UU64 **340.15** Phonological but not orthographic awareness is related to oral performance in post-stroke aphasia. Z. CHEN*; J. CAO; Y. CAI; W. QIU. *The Third Affiliated Hosp. of Sun Yat-Sen Unive, The Third Affiliated Hosp. of Sun Yat-Sen Unive, Sun Yat-Sen Mem. Hosp.*

11:00 UU65 **340.16** Structural connectivity subserving verbal fluency revealed by lesion-behavior mapping in stroke patients. M. LI*; J. DING; Y. FANG; Y. XU; Z. HAN. *Beijing Normal Univ.*

8:00 UU66 **340.17** A quantitative analysis of speech kinematics during word learning in children with autism. J. V. JOSE*; D. WU; L. GOFFMAN; L. BROWN; A. GLADFELTER. *Indiana Univ., Indiana Univ., Indiana Univ. Sch. of Med., Indiana Univ. Bloomington, Univ. of Texas at Dallas, Purdue Univ., Northern Illinois Univ.*

9:00 UU67 **340.18** Amplitude, latency and theta phase coherence of event-related source generators differ during visual processing for nonverbal/minimally-verbal children with autism and their controls. S. ORTIZ-MANTILLA*; T. REALPE-BONILLA; A. A. BENASICH. *Rutgers The State Univ. of New Jersey.*

10:00 UU68 **340.19** Investigating neural bias to speech using auditory event-related potentials in children. A. WHITTEN*; A. P. KEY; A. S. MEFFERD; J. W. BODFISH. *Vanderbilt Univ.*

11:00 UU69 **340.20** Resting state alpha oscillations correlate with language ability in young children. E. KWOK*; J. ORAM CARDY; B. ALLMAN; P. ALLEN; B. HERRMANN. *Univ. of Western Ontario.*

8:00 UU70 **340.21** Evidence of maturational processes in linguistic brain (fNIRS) and physiological emotional (Thermal IR) responses in hearing infants to signing virtual humans. B. MANINI*; G. KARTHEISER; A. STONE; A. MERLA; L. PETITTO. *Brain and Language Lab. For Neuroimaging, Gallaudet Univ., Universita' Gabriele D'Annunzio, Next2U s.r.l.*

9:00 UU71 **340.22** ● Using inter-subject correlation to probe the neural response to article readability during natural reading. Y. LIU*; W. KUO; F. LIN. *Natl. Taiwan Univ., Natl. Yang-Ming Univ., Natl. Taiwan Univ.*

10:00 UU72 **340.23** A reexamination of click detection during statistical learning. T. OVERATH*; D. L. MURPHY. *Duke Univ., Duke Univ.*

11:00 UU73 **340.24** Neural synchronization of syntactic priming during face-to-face communications. W. LIU*; X. BAI, 100875; H. ZHAO, 100875; Y. LONG; L. ZHENG; C. LU. *BEIJING NORMAL UNIVERSITY.*

8:00 UU74 **340.25** Neural networks for understanding the intention of a speaker in discourse with explicit and implicit contexts. S. TOKIMOTO*; N. TOKIMOTO; Y. MIYAOKA. *Mejiro Univ., Shobi Univ., Hiroshima Univ. of Econ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

341. Pharmacology in Schizophrenia Models

Theme H: Cognition

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 UU75 **341.01** Environmental stresses and psychiatric disorders based on genetic dysfunction of cannabinoid CB2 receptor. H. ISHIGURO*; K. TABATA; C. MOCHIZUKI; E. S. ONAIVI. *Univ. of Yamanashi, William Paterson Univ.*

9:00 UU76 **341.02** Neural CaMKIIa is lost in NMDAR hypofunction schizophrenia; putative opposing roles of IGF-1R and TLR4. O. M. OGUNDELE*; C. C. LEE. *Louisiana State Univ., Louisiana State Univ. Sch. of Vet. Med.*

10:00 UU77 **341.03** Clozapine activates autophagy through AMPK-ULK1-beclin1 signal pathway in the rat frontal cortex. S. KIM*; Y. KIM; S. PARK. *Dongguk Univ. Intl. Hosp.*

11:00 UU78 **341.04** Identification of long-term gene expression changes in adult rat frontal cortex after neonatal treatment of NMDA receptor antagonist. Y. KIM*; H. PARK; S. KIM. *Dongguk Univ. Med. Sch., Burke Med. Res. Inst.*

8:00 UU79 **341.05** ● Mismatch negativity (MMN) in rats - A translational model in schizophrenia research. N. UPTON*; G. WADSWORTH; D. R. ANDERSON; T. PISER; S. C. LESIER. *TRANSPHARMATION LTD, CADENT THERAPEUTICS.*

9:00 UU80 **341.06** Simultaneous array recording in monkey MD thalamus, DLPFC, and the ACC related to cognitive control in a task measuring deficits in schizophrenia. A. L. DENICOLA*; M. PARK; J. L. ZICK; K. SCHULTZ; D. A. CROWE; M. V. CHAFEE. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota, Augsburg Col., Univ. Minnesota.*

10:00 UU81 **341.07** Whole-brain mapping analysis of the NMDAR antagonist-induced neuronal activation. K. SEIRIKI*; A. KASAI; T. KUWAKI; M. NIU; Y. NAKA; H. IGARASHI; T. NAKAZAWA; S. YAMAGUCHI; Y. AGO; H. HASHIMOTO. *Osaka Univ., Grad. Sch. of Pharmaceut. Sciences, Osaka Univ., Grad. Sch. of Dentistry, Osaka Univ., Grad. Sch. of Medicine, Gifu Univ.*

11:00 UU82 **341.08** COMT inhibitors improve cognitive flexibility in a modified version of the rat attentional set-shifting task. S. T. BYERS; I. BUCHLER; M. DEPASQUALE; J. C. BARROW; G. V. CARR*. *Lieber Inst. for Brain Develop., Lieber Inst., Johns Hopkins Univ. Sch. of Med., Lieber Inst. For Brain Develop.*

8:00 UU83 **341.09** Novel brain-penetrant COMT inhibitors alter peripheral and central dopamine metabolism. G. CARR; G. ZHANG*; S. T. BYERS; M. DEPASQUALE; I. BUCHLER; J. C. BARROW. *Lieber Inst. for Brain Develop.*

9:00 VV1 **341.10** Tegmental GABA receptor expression in a model for tardive dyskinesia. S. E. BACHUS*. *Univ. of Maryland Baltimore County.*

10:00 VV2 **341.11** Translational utility of the mismatch negativity: Implementing MMN in rats for drug discovery. D. BREGNA*; D. R. ANDERSON; T. M. PISER; S. C. LEISER. *Psychogenics, Cadent Therapeut.*

11:00 VV3 **341.12** ● Rapastinel, a novel NMDA receptor modulator, produces prolonged rescue of subchronic phencyclidine - induced deficits in episodic memory as well as other beneficial effects on cognitive function in a rapamycin sensitive manner. L. RAJAGOPAL*; M. HUANG; J. LI; W. HE; D. SONI; P. BANERJEE; H. Y. MELTZER. *Northwestern Univ. Feinberg Sch. of Med., Allergan Inc.*

8:00 VV4 **341.13** The effect of inactivation of amygdalar GABAergic neurons on behaviors associated with schizophrenia in rats. N. PREM*; L. T. RAO; J. P. JOHN; B. M. KUTTY. *Natl. Inst. of Mental Hlth. & Neurosci., Natl. Inst. of Mental Hlth. & Neurosci.*

9:00 VV5 **341.14** ● The metabolites clozapine-N-oxide (CNO) and N-desmethylclozapine (NDMC, norclozapine) both share discriminative stimulus properties with the parent compound clozapine in mice and rats. J. H. PORTER*; D. F. MANVICH; K. A. WEBSTER; S. L. FOSTER; C. J. HERTING; S. N. BRAMLETT; M. S. FARRELL; D. WEINSHENKER. *Virginia Commonwealth Univ., Emory Univ. Sch. of Med., Emory Univ. Sch. of Med., Univ. of North Carolina at Chapel Hill Sch. of Med.*

10:00 VV6 **341.15** A critical role for NF-κB in the HDAC2-dependent control of synaptic remodelling and antipsychotic-related behaviours. D. IBI*; M. DE LA FUENTE REVENGA; J. GONZÁLEZ-MAESO. *Meijo Univ., Virginia Commonwealth Univ. Sch. of Med., Icahn Sch. of Med. at Mount Sinai.*

11:00 VV7 **341.16** Gamma frequency oscillations are altered by a novel Kv3 channel modulator in rodent and human neocortical slices. T. MODEBADZE*; C. GILLOUGLEY; C. H. LARGE; G. S. ALVARO; F. LEBEAU; M. CUNNINGHAM. *Newcastle Univ., Autifony Therapeut. Limited.*

8:00 VV8 **341.17** Modulation of fast network oscillations in the anterior cingulate cortex (ACC) *in vitro* by NMDA antagonists. F. E. LEBEAU*; J. HOWDEN; D. LOPEZ; N. MANZANZA; C. LARGE; M. CUNNINGHAM; T. MODEBADZE. *Newcastle Univ., Autifony Therapeut. Ltd.*

9:00 VV9 **341.18** Effects of Intranasal Orexin-A on MK-801-induced attentional deficits. E. B. MANESS*; J. R. FADEL; J. A. BURK. *Col. of William and Mary, Univ. of South Carolina Sch. of Med.*

10:00 VV10 **341.19** Finasteride rescues some schizophrenia-like behaviours of the dopamine transporter knockout and MK-801-treated mice. P. WONG*; D. GROENEWOUD; L. MAK. *Natl. Univ. of Singapore, Natl. Univ. of Singapore.*

11:00 VV11 **341.20** Effect of tianeptine on the offspring of adult mice with maternal immune activation. H. LEE; Y. KIM; S. LEE; I. CHO; S. LEE; H. KIM; J. KWON; H. KIM*. *Soonchunhyang Univ., Rural Admin., Chung-Ang Univ., Kyung Hee Univ.*

8:00 VV12 **341.21** Region specific effects of astrocyte DISC1 on cognitive behaviors in mice. C. TERRILLION*; J. A. CRAWFORD; A. V. SHEVELKIN; S. KIM; D. FUKUDOME; A. SAWA; A. KAMIYA; M. V. PLETNIKOV. *Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ. Sch. Med.*

9:00 VV13 **341.22** Oxytocin effects on social behavior are genetically modulated by cortical functioning. M. NIGRO*; S. BRUNI; V. FERRETTI; F. PAPALEO. *Inst. Italiano Di Tecnologia, Baylor Col. of Med., Inst. Italiano di Tecnologia, Fondazione Inst. Italiano Di Tecnologia.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

342. Connectomics: Anatomical Techniques

Theme I: Techniques

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 VV14 **342.01** Light sheet theta microscopy for high-resolution quantitative imaging of large biological systems. B. MIGLIORI*; M. S. DATTA; M. C. APAK; O. HERMANSON; R. TOMER. *Columbia UNIVERSITY, Columbia Univ., Columbia Univ., Dept. of Neuroscience, Karolinska Institutet.*

9:00 VV15 **342.02** Rapid high-resolution mapping of mammalian brain architecture. M. S. DATTA*; B. MIGLIORI; M. C. APAK; R. TOMER. *Columbia Univ., Karolinska Institutet, Columbia Univ.*

10:00 VV16 **342.03** Automated neuron tracing with deep learning and random sample consensus. S. WANG*; S. MOUSAVI KAHAKI; A. STEPANYANTS. *Northeastern Univ.*

11:00 VV17 **342.04** Automated registration of light microscopy image stacks designed for whole-brain imaging experiments. S. MOUSAVI KAHAKI*; S. WANG; A. B. STEPANYANTS. *Northeastern Univ.*

8:00 VV18 **342.05** Computational anatomy methods for registration of high resolution mouse brain histology images using multichannel LDDMM. B. LEE*; D. J. TWARD; D. D. FERRANTE; K. RAM; P. P. MITRA; M. I. MILLER. *Johns Hopkins Univ., Johns Hopkins Univ., Cold Spring Harbor Lab., IIT Madras, Cold Spring Harbor Lab.*

9:00 VV19 **342.06** Tape-transfer enabled 3D digital histology for whole human brains with MRI co-registration. A. S. TOLPYGO*; Z. LODATO; A. GRIFFIN; B. C. LEE; M. M. MILLER; L. LATOUR; P. P. MITRA. *Cold Spring Harbor Lab., Natl. Inst. of Neurolog. Disorders and Stroke, Johns Hopkins Univ.*

10:00 VV20 **342.07** Scalable volumetric imaging at subcellular resolution for high-speed brain mapping. H. WANG*; Q. ZHU; L. DING; Y. SHEN; Q. YANG; C. SHU; H. HAN; Z. XIONG; J. ZHOU; F. WU; P. LAU; G. BI. *Univ. of Sci. and Technol. of China, Univ. of Sci. and Technol. of China, Inst. of Automation Chinese Acad. of Sci.*

11:00 VV21 **342.08** Hybridization chain reaction based fluorescence *in situ* hybridization in iDISCO cleared brain tissues. V. KUMAR*; D. M. KROLEWSKI; B. MARTIN; H. AKIL; S. J. WATSON, Jr. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

8:00 VV22 **342.09** ● Novel variants of adeno-associated virus type 2 provide enhanced anterograde trans-synaptic gene delivery. A. PLANUL*; M. DEROSIERS; C. NGUYEN; F. MARTI; D. DALKARA. *Inst. De La Vision, Inst. de Biologie Paris-Seine.*

9:00 VV23 **342.10** Dendritic anatomy analysis using oblique light sheet tomography. A. NARASIMHAN*; U. SÜMBÜL; K. UMADEVI VENKATARAJU; D. F. ALBEANU; P. OSTEN. *Cold Spring Harbor Lab., Columbia Univ.*

10:00 VV24 **342.11** A spherical aberration free microscopy system for live brain imaging. Y. UE*; H. MONAI; K. HIGUCHI; D. NISHIWAKI; T. TAJIMA; K. OKAZAKI; H. HAMA; H. HIRASE; A. MIYAWAKI. *OLYMPUS Corp., RIKEN BSI-Olympus Collaboration Ctr., RIKEN BSI.*

11:00 VV25 **342.12** Contributions of lipid extraction, RI-matching and size expansion in tissue clearing. J. KIM*; J. CHOI; E. LEE; W. SUN. *Col. of Medicine, Korea Univ., Brain Korea 21, Korea Univ.*

8:00 VV26 **342.13** Novel modernisation of Golgi-Cox stain and its optimisation of tissue clearing. M. KULIGOWSKI*; M. KASSEM; S. FOK; K. SMITH; B. BALLEINE. *Univ. of Sydney, Univ. of New South Wales, Univ. of New South Wales, The Univ. of Sydney.*

9:00 VV27 **342.14** Improved uDISCO clearing for 3D imaging of the nervous system. A. J. PARRA-DAMAS*; R. CAI; C. PAN; M. TODOROV; B. FÖRSTERA; A. ERTÜRK. *Inst. for Stroke and Dementia Res.*

10:00 VV28 **342.15** Lipid-preserving index matching for prolonged imaging depth. Y. LIU*; A. M. ROLLINS; M. WATANABE; M. W. JENKINS. *Case Western Reserve Univ., Case Western Reserve Univ.*

11:00 VV29 **342.16** ● Parafilm assisted microdissection: An alternative and effective technique for the microdissection of the mice nucleus accumbens. M. F. PAGLIUSI*, JR; A. D. BRANDÃO; I. J. M. BONET; C. R. SARTORI; A. S. VIEIRA. *UNICAMP.*

8:00 VV30 **342.17** FAST, High-speed serial-sectioning imaging for whole brain analysis with high scalability. A. KASAI*; K. SEIRIKI; T. HASHIMOTO; M. NIU; S. YAMAGUCHI; Y. NAKA; H. IGARASHI; M. TANUMA; T. NAKAZAWA; K. INOUE; M. TAKADA; K. FUJITA; H. HASHIMOTO. *Osaka Univ., Osaka Univ., Shizuoka Univ., Gifu Univ. Grad. Sch. of Med., Osaka Univ., Primate Res. Inst., Kyoto Univ., Osaka Univ., Osaka Univ., Osaka Univ.*

9:00 VV31 **342.18** Brain mapping and stainless staining for computed digital histopathology using vibrational hyperspectral imaging. N. SPEGAZZINI; S. DEB; J. W. MITCHELL*; K. YEH; S. TIWARI; K. FALAHKHEIRKHAH; C. KAUFMAN; E. K. NEUMANN; T. J. COMI; S. S. RUBAKHIN; J. V. SWEEDLER; M. U. GILLETTE; R. BHARGAVA. *Univ. of Illinois At Urbana-Champaign, Univ. of Illinois At Urbana-Champaign, Univ. of Illinois At Urbana-Champaign, Univ. of Illinois At Urbana-Champaign, Univ. of Illinois At Urbana-Champaign.*

10:00 VV32 **342.19** Determining and documenting the anatomical location of experimental neuroscience data: Best practice recommendations. I. E. BJERKE*; K. A. ANDERSSON; M. ØVSTHUS; M. A. PUCHADES; J. G. BJAALIE; T. B. LEERGAARD. *Univ. of Oslo.*

11:00 VV33 **342.20** ▲ The visualization of spinal cord glioma using the mitochondrial translocator protein (TSPO)-ligand PET. T. YUJI*; Y. NISHIYAMA; O. TSUJI; N. NAGOSHI; N. NITTA; S. SHIBATA; I. AOKI; T. YAMASAKI; Z. MING-RONG; M. MATSUMOTO; Y. FUJIBAYASHI; M. JINZAKI; H. OKANO; M. NAKAMURA. *Dept. of Orthopaedic Surgery, Keio Univ., Mol. Imaging Center, Natl. Inst. of Radiological Sci., Dept. of Radiology, Keio Univ. Sch. of Med., Dept. of Physiology, Keio Univ. Sch. of Med.*

8:00 VV34 **342.21** The Janelia MouseLight Database: Complete axonal reconstructions from hundreds of individual long-range projecting neurons. J. WINNUBST*; E. BAS; J. DUDMAN; C. GERFEN; A. HANTMAN; W. KORFF; S. MURPHY; N. SPRUSTON; S. STERNSON; K. SVOBODA; J. CHANDRASHEKAR. *HHMI Janelia Res. Campus.*

9:00 VV35 **342.22** ● ▲ Reversible clearing of rat brains for interrogation of histopathology using visikol histo approach. X. E. FLOWERS; T. VILLANI; G. GARDNER; M. JOHNSON; N. CRIDER; J. H. GOODMAN*. *Col. of Staten Island - CUNY, Visikol Inc., NYS Inst. For Basic Res., SUNY Downstate Med. Ctr.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 VV36 **342.23** Towards unified mouse brain atlas anatomical segmentation: Paxinos label on Allen common coordinate framework. U. CHON*; Y. KIM. *Pennsylvania State Univ. Col. of Med., Penn State Univ. Col. of Med.*

11:00 VV37 **342.24** Identification of specific brain regions by triple fluorescent images and Voronoi tessellation. S. INOUE*; K. HOTTA; K. OKA. *Keio Univ.*

8:00 VV38 **342.25** Multi-scale volumetric imaging of whole mouse brains using correlated x-ray microtromography, magnetic ressonance imaging and electron microscopy. R. VESCOVI*; V. DE ANDRADE; S. FOXLEY; M. DU; K. FEZZAA; H. LI; P. LA RIVIERE; D. GURSOY; S. MIKULA; C. JACOBSEN; N. B. KASTHURI. *Univ. of Chicago, Argonne Natl. Lab., Univ. of Chicago, Northwestern Univ., Univ. of Chicago, Max-Planck Inst. For Neurobio., Univ. of Chicago.*

9:00 VV39 **342.26** An internet based histological atlas of the Göttingen minipig brain. D. ORLOWSKI*; A. N. GLUD; N. PALOMERO-GALAGHER; J. SORENSEN; C. R. BJARKAM. *Dept. of Clin. Medicine, Aarhus Univ., Inst. of Clin. Medicine, Aarhus Univ., Res. Ctr. Julich, Aarhus Univ. Hospital, Head-Neuro Ctr., Aalborg Univ. Hosp.*

10:00 VV40 **342.27** Methods and applications for magnetic resonance imaging in hamsters: Characterization of sex differences through DTI and T2-weighted imaging. T. R. MORRISON*; S. C. IRIAH; X. CAI; P. P. KULKARNI; C. F. FERRIS. *Northeastern Univ., Northeastern Univ., Northeastern Univ. Dept. of Psychology, Northeastern University, Ctr. for Translational NeuroImaging.*

POSTER

343. Electrophysiological Techniques

Theme I: Techniques

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 VV41 **343.01** Development and characterization of primary neuronal-glia networks. H. A. ENRIGHT*; D. LAM; S. K. G. PETERS; J. OSBURN; C. HUANG; D. SOSCIA; A. SALES; K. KULP; E. K. WHEELER; N. O. FISCHER. *Lawrence Livermore Natl. Lab.*

9:00 VV42 **343.02** *Ex vivo* electrical imaging of retinal and hippocampal layers using CMOS-based high-density microelectrode arrays. G. ZECK*; F. JETTER; M. LEE; L. CHANNAPPA; T. HERRMANN; F. HELMHOLD. *NMI at the Univ. Tübingen, Inst. of Med. Psychology and Behavioural Neurobiology, Eberhard Karls Univ. Tübingen.*

10:00 VV43 **343.03** Human Cerebrospinal fluid promotes long-term neuronal viability and network function in human neocortical organotypic brain slice cultures. H. KOCH*; N. SCHWARZ; U. HEDRICH; F. BEDOGNI; H. SCHWARZ; N. DAMMEIER; E. AUFENBERG; H. LERCHE; H. PA; J. B. HONEGGER; T. V. WUTTKE. *Univ. Tübingen, San Raffaele Res. Inst.*

11:00 VV44 **343.04** Feasibility of brain slice electrophysiology in the swine. J. G. ROHAN*; S. M. MCINTURF; M. K. MIKLASEVICH; N. M. GARGAS; P. M. SHERMAN; K. L. ARMSTRONG; K. L. MUMY. *Naval Med. Res. Unit Dayton, Henry Jackson Fndn. for Military Res., 59 MDW - USAFSAM/FH, AFMC 711 HPW/RHDV, Naval Med. Researh Unit Dayton.*

8:00 VV45 **343.05** ● Simultaneous multiwell optogenetic stimulation and microelectrode array recording for neural electrophysiology assays. M. BEAUMONT*; H. B. HAYES; A. M. NICOLINI; C. A. ARROWOOD; I. P. CLEMENTS; D. C. MILLARD. *Columbia Univ. Med. Ctr., Axion BioSystems.*

9:00 VV46 **343.06** Investigation of primary rat neuronal-glial networks on hydrogel scaffolds using a 2D cell culture system. D. LAM*; H. A. ENRIGHT; J. OSBURN; S. K. G. PETERS; D. A. SOSCIA; K. KULP; E. K. WHEELER; N. O. FISCHER. *Lawrence Livermore Natl. Lab., Lawrence Livermore Natl. Lab.*

10:00 VV47 **343.07** Multi-region recordings from the hippocampus of free-moving rats with a Parylene-based multi-electrode array. H. XU*; A. HIRSCHBERG; K. SCHOLTEN; E. MENG; T. W. BERGER; D. SONG. *USC, USC.*

11:00 VV48 **343.08** A 512 channels CMOS-based neural probe for acute high-density *in vivo* intracortical recordings. L. BERDONDINI*; G. ANGOTZI; F. BOI; M. MALERBA; E. MIELE; G. MANDELBAUM; A. CASILE; S. ZUCCA; T. FELLIN; J. ASSAD; B. L. SABATINI. *Fondazione Inst. Italiano Di Tecnologia, Inst. Italiano Di Tecnologia, Harvard Med. Sch., Inst. Italiano di Tecnologia and Harvard Medica, Inst. Italiano Di Tecnologia, Inst. Italiano di Tecnologia, Harvard Med. Sch. Dept. of Neurobio.*

8:00 VV49 **343.09** *In situ* recordings of brain activity using organic electrochemical transistor-depth probes. L. KERGOAT*; M. DONAHUE; P. QUILICHINI; A. GHESTEM; A. WILLIAMSON; I. UGUZ; G. MALLIARAS; C. BERNARD. *Aix-Marseille Univ., Ecole des Mines de Saint-Etienne.*

9:00 VV50 **343.10** Laser-printed porous graphene microelectrodes with high charge injection capacity for cortical stimulation. D. KUZUM*; Y. LU; A. G. RICHARDSON; T. H. LUCAS, JR. *Univ. of California San Diego, Univ. of Pennsylvania.*

10:00 VV51 **343.11** Fabrication and validation of a low pitch and high channel count carbon fiber electrode array using a minimal and stackable silicon support structure. P. R. PATEL*; D. EGERT; E. J. WELLE; J. D. BERKE; C. A. CHESTEK. *Univ. of Michigan, UCSF.*

11:00 VV52 **343.12** A bilayer insulation scheme for carbon nanotube fiber neural microelectrodes. S. PAMULAPATI*; F. VITALE; R. G. BRYANT; C. KEMERE; M. PASQUALI. *Rice Univ., Univ. of Pennsylvania, NASA Langley Res. Ctr., Rice Univ.*

8:00 VV53 **343.13** Nanofabricated fMRI probes for the detection of neuronal electrical signaling. A. HAI*; E. A. LIMA; B. P. WEISS; Y. LIN; A. JASANOFF. *MIT, MIT, MIT.*

9:00 VV54 **343.14** Conductive polymer based silk electrode for bio-activity measurement. K. TORIMITSU*; Y. TAKIZAWA; K. MIURA; H. TAKAHASHI. *Tohoku Univ.*

10:00 VV55 **343.15** ● A distributed real time multiple processor system to capture neural data from 40,000 channels or 300 imager devices over long times from behaving animals. D. J. WOODWARD*; J. CHANG. *Neurosci. Res. Inst. of North Carolina, Neurosci Res. Inst. North Carolina.*

11:00 VV56 **343.16** Microfluidic actuation of flexible microelectrodes for neural recording and stimulation. A. V. RODRIGUEZ*; D. G. VERCOSA; F. VITALE; E. M. LEWIS; S. PAMULAPATI; J. S. YAN; M. PASQUALI; C. KEMERE; J. T. ROBINSON. *Rice Univ., Rice Univ., Univ. of Pennsylvania, Rice Univ., Rice Univ., Rice Univ., Rice Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 VV57 **343.17** ● Electrode designs for reducing the edge effect in transcranial electical stimulation (TES). M. P. WEISEND*; L. F. BURCH; C. L. DUCKETT; D. P. MARSHALL; M. J. VILARDO. *Rio Grande Neuroscience, Inc., Wright State Univ.*

9:00 VV58 **343.18** Novel algorithm to discriminate bursts and tonic activity in spike trains: Extended Hill-Valley method. B. CHUNG*; D. H. EDWARDS. *Emory Univ., Georgia State Univ.*

10:00 VV59 **343.19** ● Characterization of carbon fiber electrode coatings using a complex impedance model. E. J. WELLE*; P. R. PATEL; F. POURDANESH; F. DEKU; D. EGERT; A. GHAZAVI; A. JOSHI-IMRE; J. D. WEILAND; J. D. BERKE; C. A. CHESTEK. *Univ. of Michigan, Univ. of Texas at Dallas, Univ. of Michigan, Univ. of Texas at Dallas, Univ. of California, San Francisco.*

11:00 VV60 **343.20** ● Nearly equidistant spacing of EEG electrodes on a scalp surface coverage area. M. E. PFLIEGER*; A. M. THIRAKUL; L. T. SMITH. *Cortech Solutions, Inc., San Diego State Univ., Cortech Solutions, Inc.*

8:00 VV61 **343.21** Evaluation of amorphous silicon carbide multielectrode arrays in rodent motor cortex. F. DEKU*; E. SHIH; A. KANNEGANTI; A. JOSHI-IMRE; J. J. PANCRAZIO; S. F. COGAN. *Univ. of Texas At Dallas.*

9:00 VV62 **343.22** Chronic tracking of neuronal clusters using ultraflexible electrode arrays. H. ZHU*; X. LI; Z. ZHAO; X. WEI; L. LUAN; C. XIE. *The Univ. of Texas At Austin, The Univ. of Texas At Austin, The Univ. of Texas at Austin.*

10:00 VV63 **343.23** Probing brain function with a novel combination of optogenetics and neuroimaging. E. ROGERS*; G. ALBERTO; D. KLORIG; J. R. STAPLETON-KOTLOSKI; V. POPLI; C. CONSTANTINIDIS; J. B. DAUNAIS; D. W. GODWIN. *Wake Forest Sch. of Med., Wake Forest Sch. of Med., Wake Forest Sch. of Med.*

11:00 VV64 **343.24** Large-scale microelectrode array for closed-loop cellular-resolution electrophysiology of the retina. D. TSAI*; D. SAWYER; A. BRADD; R. YUSTE; K. L. SHEPARD. *Columbia Univ., Columbia Univ.*

8:00 VV65 **343.25** Design and validation of a 0.75 cc networked implantable neuromodulation device with 32 channels of sensing and stimulation. J. J. WHEELER*; J. R. LACHAPELLE; C. K. BJUNE; C. A. SEGURA. *Draper Lab., Draper laboratory.*

9:00 VV66 **343.26** ● jULIEs: ultra-low impedance neural probes for minimally invasive *in vivo* recordings in the mouse olfactory bulb. R. R. RÁCZ*; M. KOLLO; W. WRAY; G. RACZ; A. T. SCHAEFER. *The Francis Crick Inst.*

10:00 VV67 **343.27** Isotropic recording of whole mouse brains by light sheet microscopy breaking the diffraction limit. H. DODT*; S. SAGHAFI; K. BECKER; M. PENDE; C. HAHN; I. SABDYUHSEVA-LITSCHAUER; M. WANIS. *Tech. Univ. Vienna, Med. Univ. Vienna.*

11:00 VV68 **343.28** SEURAT: A semi-automated pipeline to localize and visualize intracranial electrodes. Y. PATHAK*; T. G. DYSTER; J. OH; E. H. SMITH; S. SRINIVASAN; N. FELDSTEIN; C. A. SCHEVON; G. MCKHANN, II; S. A. SHETH. *Columbia Univ., Robert Wood Johnson Med. Sch.*

POSTER

344. Large-Scale, Deep, and High-Speed Functional Light Microscopy

Theme I: Techniques

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 VV69 **344.01** Miniscope.org: An open-source imaging platform and online resource focused on developing the next generation of miniature fluorescence microscopes. D. AHARONI*; T. SHUMAN; D. J. CAI; C. LEE; B. S. KHAKH; A. SILVA; P. GOLSHANI. *UCLA, Univ. of California Los Angeles, UCLA, UCLA, Univ. of California Los Angeles Dept. of Physiol., UCLA Med. Ctr., UCLA Dept. of Neurol.*

9:00 VV70 **344.02** Overlapping retrosplenial cortical ensembles encode memories close in time. M. SEHGAL*; S. HUANG; S. MARTIN; A. LAVI; D. J. CAI; A. SILVA. *Univ. of California Los Angeles, UCLA, UCLA, UCLA Med. Ctr.*

10:00 VV71 **344.03** Breakdown of spatial coding and neural synchronization in epileptic mice. T. SHUMAN*; D. AHARONI; D. J. CAI; C. LEE; I. TAXIDIS; S. E. FLORES; K. CHENG; M. JAVAHERIAN; J. LOU; C. C. KABA; M. SHTRAHMAN; M. A. HOWARD; K. BAKHURIN; S. C. BARABAN; S. C. MASMANIDIS; B. S. KHAKH; A. SILVA; P. GOLSHANI. *Univ. of California Los Angeles, UCLA, UCLA, UCLA, UCSD Sch. of Med., Univ. of Texas At Austin, Univ. of California Los Angeles, Univ. California San Francisco, Univ. of California Los Angeles Dept. of Physiol., UCLA Med. Ctr., UCLA Dept. of Neurol.*

11:00 VV72 **344.04** The Crystal Skull: A chronic mouse preparation providing long-term optical access to neurons across the dorsal neocortex. T. KIM*; Y. ZHANG; J. LECOQ; J. JUNG; J. LI; H. ZENG; C. M. NIELL; M. SCHNITZER. *Stanford Univ., Allen Inst., Univ. of Oregon.*

8:00 VV73 **344.05** Cortex wide, multi-modal, cellular resolution neural interfacing via digitally generated skeletal prostheses. L. GHANBARI*; R. E. CARTER; G. JOHNSON; M. RYNES; L. HALTOM; J. J. HU; G. M. SHULL; M. LAROQUE; T. J. EBNER; S. B. KODANDARAMAIAH. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota.*

9:00 VV74 **344.06** Open source computer numerical control neurosurgery platform for automated craniotomies in small animals. G. JOHNSON*; L. GHANBARI; J. HU; M. LAROQUE; G. SHULL; J. DOMINGUEZ; M. RYNES; S. KODANDARAMAIAH. *Univ. of Minnesota, Univ. of Minnesota.*

10:00 VV75 **344.07** ● Miniature fluorescence imaging microscope for the study of spinal cord sensory processing. I. LECKER*; Y. SOUDAGAR; R. P. BONIN. *Univ. of Toronto, Neurescence Inc.*

11:00 VV76 **344.08** Three-dimensional imaging of neural activity in freely-behaving mice by a head-mounted two-photon fiber-coupled microscope with electrically tunable focus. B. OZBAY*; G. L. FUTIA; M. MA; E. G. HUGHES; D. RESTREPO; E. A. GIBSON. *Univ. of Colorado Anschutz Med. Campus, Univ. of Colorado Anschutz Med. Campus.*

8:00 VV77 **344.09** Ultrafast two-photon microscopy for high-speed brain imaging in awake mice. O. HERNANDEZ*; R. CHRAPKIEWICZ; T. ZHANG; A. S. SHAI; M. J. WAGNER; Y. ZHANG; C. WU; J. ZHONG LI; Y. GONG; M. INOUE; H. BITO; M. J. SCHNITZER. *Stanford Univ., The Univ. of Tokyo.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 VV78 **344.10** Multifocal two-photon microscopy for high speed functional circuit imaging. P. QUICKE*; A. J. FOUST; T. KNOPFEL; M. NEIL; S. R. SCHULTZ. *Imperial Col.*

10:00 VV79 **344.11** A head-mounted two-photon fiberscope for high-resolution imaging in freely-moving mice. Y. A. GAU*; W. LIANG; X. LI; D. E. BERGLES. *Johns Hopkins Univ.*

11:00 VV80 **344.12** High yield cranial window technique for imaging cortical neuron activity with head-mounted miniaturized microscopes. X. LI*; V. CAO; W. ZHANG; S. MASTWAL; Q. LIU; S. OTTE; K. WANG. *NIH, Inscopix Inc.*

8:00 VV81 **344.13** Rapid whole brain imaging of neural activities in freely behaving larval zebrafish. K. WANG; L. CONG; Z. WANG; Y. CHAI; W. HANG; C. SHANG; W. YANG; L. BAI; J. DU; Q. WEN*. *Inst. of Neurosci., Univ. of Sci. and Technol. of China.*

9:00 VV82 **344.14** *In vivo* scattering compensation with increased FOV using conjugate F-SHARP microscopy. I. N. PAPADOPOULOS; D. I. KAPLAN; M. E. LARKUM; B. JUDKEWITZ*. *Charite Berlin / Humboldt Univ., Charité Univ. Hosp. Berlin, Humboldt Univ. of Berlin.*

10:00 VV83 **344.15** Characterization and application of a quadruple labelled mouse line. J. GAIRE*; H. LEE; R. WARD; S. CURRLIN; E. W. ATKINSON; A. WOOLLEY; J. E. COLEMAN; K. J. OTTO. *Univ. of Florida, Univ. of Texas Southwestern Med. Ctr., Symic Bio, Inc.*

11:00 VV84 **344.16** Two-photon calcium imaging of medial prefrontal cortex and hippocampus without cortical invasion. M. KONDO*; K. KOBAYASHI; J. NAKAI; M. OHKURA; M. MATSUZAKI. *The Univ. of Tokyo, Natl. Inst. for Basic Biol., Natl. Inst. For Physiological Sci., Brain Sci. Inst.*

8:00 VV85 **344.17** ▲ Optical coherence tomography reveals depth-resolved responses during functional cerebral activation by infrared neural stimulation. P. LI*; P. LI; W. XI; E. AKSHAY; A. W. ROE. *Zhejiang Univ., zhejiang university, ZIINT, zhejiang university, Zhejiang Univ.*

9:00 VV86 **344.18** ● Multimodal two-photon random access pointing and scanning to any 3D position or direction at high speed in awake animals using a compact Acousto-Optic Lens (AOL). V. GRIFFITHS; T. FERNANDEZ-ALFONSO*; G. KONSTANTINOU; N. NADELLA; P. KIRKBY; A. M. VALERA; H. ROSS; F. LANORE; A. SILVER. *Univ. Col. London.*

10:00 VV87 **344.19** Large volume functional imaging in the mouse brain. S. WEISENBURGER*; R. PREVEDEL; A. VAZIRI. *The Rockefeller Univ., European Mol. Biol. Lab. (EMBL).*

11:00 VV88 **344.20** ● High-content functional imaging reveals differential effects of inflammation on two distinct populations of human nociceptive neurons. A. GHETTI*; Y. MIRON; J. ZHANG; G. PAGE; C. GHETTI; B. A. COPITS; S. DAVIDSON; R. W. GEREAU, IV; P. E. MILLER. *Anabios Corp., Washington University, Sch. of Med., Univ. of Cincinnati.*

8:00 VV89 **344.21** Three-dimensional (3D) volumetric Ca^{2+} imaging of astrocytes reveals novel properties of brain networks. A. VOLTERRA; I. A. SAVTCHOUK*; E. BINDOCCI; N. LIAUDET; D. BECKER; G. CARRIERO. *Univ. De Lausanne.*

9:00 VV90 **344.22** Purkinje cell ensemble dynamics in freely moving mice. M. KISLIN*; B. CHO; J. MANLEY; J. W. SHAEVITZ; S. S. WANG. *Princeton Univ., Princeton Univ., Princeton Univ., Princeton Univ.*

10:00 VV91 **344.23** Non-degenerate 2-photon excitation for increased fluorophore brightness and deep tissue imaging. M. YANG; C. G. L. FERRI; M. THUNEMANN; P. SAISAN; E. A. RODRIGUEZ; S. R. ADAMS; S. VINOGRADOV; Y. FAINMAN; A. DEVOR*. *UCSD, UCSD, UCSD, UCSD, UCSD, Univ. of Pennsylvania, UCSD, Harvard Med. Sch.*

11:00 VV92 **344.24** A novel multisite confocal system for rapid Ca^{2+} imaging from submicron structures in brain slices. M. CANEPARI*; L. FILIPIS; K. AIT OUARES; P. MOREAU; D. TANESE; V. ZAMPINI; V. EMILIANI. *LIPhy, CNRS UMR 5588, Wavefront-Engineering Microscopy Group, Neurophotonics Laboratory, Ctr. Natl. de la Recherche Scientifique UMR8250, Paris Descartes Univ.*

8:00 WW1 **344.25** ▲ Correcting micro-positioning artifacts for 3D microscopy. J. L. LIN*; M. A. NAVARRO; J. V. K. HIBBARD; L. S. MILESCU. *Univ. of Missouri, Univ. of Texas.*

8:00 DP14/WW2 **344.26** ● (Dynamic Poster) Skeleton scanning: A method for imaging 3D dendritic trees at high speed. A. M. VALERA*; G. EVANS; P. KIRKBY; G. KONSTANTINOU; V. GRIFFITHS; B. MARIN; S. K. M. N. NADELLA; A. R. SILVER. *Univ. Col. London.*

10:00 WW3 **344.27** Quantifying wide-field maps of the human corneal subbasal nerve plexus. Y. VAISHNAV*; S. RUCKER; K. SAHARIA; N. MCNAMARA. *UCSF Proctor Eye Fndn., Phillips Exeter Acad., TechLab Educ.*

POSTER

345. Methods: Physiology and Circuitry I

Theme I: Techniques

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 WW4 **345.01** Image-guided automated patch-clamp electrophysiology *in vitro*. I. KOLB*; J. LEE; A. FELOUZIS; W. A. STOY; E. S. BOYDEN; C. J. ROZELL; C. R. FOREST. *Georgia Inst. of Technol., Georgia Inst. of Technol., MIT, Georgia Inst. of Technol.*

9:00 WW5 **345.02** Capping patch clamp pipettes for improved gigaseal yield. W. STOY*; I. KOLB; G. L. HOLST; G. B. STANLEY; C. FOREST. *Georgia Inst. of Technol., Georgia Inst. of Technol.*

10:00 WW6 **345.03** Cell membrane tracking in live brain tissue with differential interference contrast (DIC) microscopy. J. LEE*; I. KOLB; C. R. FOREST; C. J. ROZELL. *Georgia Inst. of Technol.*

11:00 WW7 **345.04** Design and assessment of stimulation parameters for a novel peripheral nerve interface. A. KUNDU; E. PATRICK; A. FAHMY; R. MADLER; F. DELGADO; S. W. CURRLIN; K. J. OTTO; J. PRINCIPE; A. GUNDUZ*; N. MAGHARI; M. OP DE BEECK; D. BRAEKEN; R. BASHIRULLAH. *Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida, IMEC.*

8:00 WW8 **345.05** Novel approaches to optimize neuronal computational models. R. BEN-SHALOM*; K. KIM; K. J. BENDER. *UCSF, Sandler Neurosciences Building.*

9:00 WW9 **345.06** Topological classification of pyramidal cells in juvenile rat somatosensory cortex. L. KANARI*; Y. WANG; Y. SHI; S. RAMASWAMY; R. PERIN; J. SHILLCOCK; K. HESS; H. MARKRAM. *EPFL, Blue Brain Project, EPFL, Blue Brain Project, Tufts Univ., Brain Mind Institute, EPFL, EPFL.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 DP15/WW10 **345.07** (Dynamic Poster) ACQ4: An open-source software platform for developing patch-clamp experiments. L. CAMPAGNOLA*; M. B. KRATZ; S. SEEMAN; P. A. DAVOUDIAN; A. HOGGARTH; J. F. PERKINS; D. D. REID; T. JARSKY; P. B. MANIS. *Allen Inst. for Brain Sci., Univ. N Carolina-Chapel Hill.*

11:00 WW11 **345.08** A method for cardiac pacing together with local field potential recordings from the brain in a freely moving rat. Y. SHIKANO*; T. SASAKI; Y. IKEGAYA. *Pharmaceut. Sci., Univ. of Tokyo.*

8:00 WW12 **345.09** Meso-scale structure and quotidian variation of neuronal networks estimated from two-photon imaging of mouse auditory cortex. R. BETZEL*; K. C. WOOD; C. F. ANGELONI; M. N. GEFFEN; D. S. BASSETT. *Univ. of Pennsylvania, Univ. of Pennsylvania.*

9:00 WW13 **345.10** Microcoil-driven responses induced by magnetic stimulation spatially restricted to the local surface of the mouse auditory cortex *in vivo.* H. OSANAI*; S. MINUSA; T. TATENO. *Hokkaido Univ.*

10:00 WW14 **345.11** Implication of synchronous spiking to the auditory steady-state response interpretation: An EEG study. I. GRISKOVA-BULANOVA*; A. VOICIKAS; C. PACORET. *Vilnius Univ., Vilnius Univ., Univ. of Geneva.*

11:00 WW15 **345.12** Chronic recording of single units in rodent auditory cortex using carbon nanotube coated tetrodes. K. TAKAGAKI*; Z. XIA; G. ARIAS GIL; M. T. LIPPERT; F. W. OHL. *Leibniz Inst. for Neurobio., Otto-von-Guericke Univ., Ctr. for Behavioral Brain Sci. (CBBS).*

8:00 WW16 **345.13** A real-time processing technique for 40 Hz auditory steady-state response: The parameters and effect of surgical interventions. S. HIRANO*; Y. NISHIKAWA. *Osaka Dent. Univ.*

9:00 WW17 **345.14** Wireless flexible neural clip achieves deep visceral nerve targeting for micturition in rats. N. V. THAKOR*; S. LEE; W. PEH; S. YEN; C. LEE. *Johns Hopkins Univ., Singapore Inst. for Neurotechnology (SiNAPSE), Natl. Univ. of Singapore.*

10:00 WW18 **345.15** Recapitulation of the neurovascular unit (NVU) in a microfluidic platform using primary human cells. A. M. ANDREWS*; S. H. RAMIREZ. *Temple Univ., Temple Univ. Sch. of Med.*

11:00 WW19 **345.16** ● Thin-film softening multi-contact cuff electrodes: current steering and sub-chronic neuromodulation. M. A. GONZÁLEZ GONZÁLEZ*; A. G. HERNANDEZ REYNOSO; G. S. BENDALE; L. PATIL; A. KANNEGANTI; R. MODI; A. JOSHI IMRE; W. VOIT; M. I. ROMERO-ORTEGA. *Univ. of Texas At Dallas.*

8:00 WW20 **345.17** Characterization of cerebral organoid activity using two-photon calcium imaging and acute electrophysiology techniques. A. NEMES*; D. JGAMADZE; J. T. LIM; M. SCHAFF; C. ADAM; J. A. WOLF; H. I. CHEN. *The Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania Dept. of Neurosurg.*

POSTER

346. Data Analysis and Statistics: Neuronal Networks

Theme I: Techniques

Mon. 8:00 AM – *Walter E. Washington Convention Center*, Halls A-C

8:00 WW21 **346.01** Pyloric rhythm extraction using signal processing tools. F. DOS SANTOS*; K. LAM; P. ANDRAS. *Keele Univ.*

9:00 WW22 **346.02** Mesoscopic inter-areal connectivity of marmoset cortex: Comparison with mouse and macaque monkey. P. MAJKA; P. THEODONI*; D. H. RESER; M. G. ROSA; X. WANG. *Nencki Inst. of Exptl. Biol. PAS, Australian Res. Council Ctr. of Excellence for Integrative Brain Function, New York Univ. Shanghai, NYU-ECNU Inst. of Brain and Cognitive Sci. at NYU Shanghai, Monash Univ., Monash Univ., New York Univ.*

10:00 WW23 **346.03** Distinct structure-function dependencies across different connectivity scales in the rat brain. M. STRAATHOF*; M. R. T. SINKE; T. J. M. ROELOFS; E. L. A. BLEZER; O. SCHMITT; W. M. OTTE; R. M. DIJKHUIZEN. *Univ. Med. Ctr. Utrecht, Univ. Med. Ctr. Utrecht, Universitätsmedizin Rostock, Univ. Med. Ctr. Utrecht.*

11:00 WW24 **346.04** Mild blast injury acutely changes intracellular calcium in hippocampal neurons and reduces the coding ability of the neuronal network. K. R. HANSEN*; G. DEWALT; A. I. MOHAMMED; H. TSENG; V. SALIGRAMA; B. NAZER; W. D. ELDRED; X. HAN. *Boston Univ.*

8:00 WW25 **346.05** Selective modulation of neural population *in vivo* by ultrasound stimulation. H. TSENG*; A. MOHAMMED; S. BENSUSSEN; K. R. HANSEN; X. HAN. *Boston Univ.*

9:00 WW26 **346.06** Cholinergic and parvalbumin interneurons coordinate distinct aspects of dorsal striatal network dynamics during voluntary movement. M. ROMANO*; W. HOWE; H. GRITTON; D. ZEMEL; M. BUCKLIN; X. HAN. *Boston Univ., Icahn Sch. of Med. at Mt Sinai, Boston Univ.*

10:00 WW27 **346.07** Discrete networks of neurons differentially track conditioned and unconditioned stimuli in the hippocampus through the process of learning and extinction. M. ABDULKERIM*; K. R. HANSEN; A. I. MOHAMMED; H. TSENG; H. GRITTON; X. HAN. *Boston Univ.*

11:00 WW28 **346.08** Automatic fluorescence intensity based adaptive thresholding (FIBAT) for rapid image segmentation of large scale calcium imaging datasets. H. TSENG; S. SHEN; K. R. HANSEN; R. WU; J. SI; X. HAN*. *Boston Univ., Arizona State Univ., Boston Univ.*

8:00 WW29 **346.09** Low-dimensional representations of learning in multi-trial datasets. A. H. WILLIAMS*; B. POOLE; N. MAHESWARANATHAN; T. H. KIM; F. WANG; S. VYAS; K. V. SHENOY; M. J. SCHNITZER; T. G. KOLDA; S. GANGULI. *Stanford Univ., Stanford Univ. Dept. of Biol., Sandia Natl. Labs.*

9:00 WW30 **346.10** Detection of rodent social behavior using machine learning based method with convolutional neural network. H. MUKAI*; I. YABE; Y. OKADA; T. INOUE. *Meiji Univ.*

10:00 WW31 **346.11** A novel probabilistic framework for estimating of neural connections from partially observed neural spikes. T. IWASAKI*; H. HINO; M. TATSUNO; S. AKAHO; N. MURATA. *Waseda Univ., Univ. of Tsukuba, Univ. Lethbridge, Natl. Inst. of Advanced Industrial Sci. and Technol.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 WW32 **346.12** An efficient modeling approach for brain connectivity analysis of saltatory pneumotactile velocity stimulus. K. JUNG*; H. OH; J. LEE; S. M. BARLOW. *Texas Tech. Univ., Baylor Col. of Med., Univ. of Nebraska, Univ. of Nebraska.*

8:00 WW33 **346.13** Unsupervised latent variable extraction from neural data to characterize processing across states. R. CHAUDHURI*; B. GERCEK; B. PANDEY; I. R. FIETE. *Univ. of Texas at Austin, The Univ. of Texas at Austin.*

9:00 WW34 **346.14** Determination of awake and sleep stages using objective detection criteria and analyses of long-term continuous intrahippocampal LFP recordings and video activity measures in mice. L. MOLNÁR; I. FERANDO; I. MODY*. *Sapientia Hungarian Univ. of Transylvania, UCLA, David Geffen Sch. of Med., UCLA Sch. Med.*

10:00 WW35 **346.15** Toward a common, extensible cloud architecture for images to graphs. N. DRENKOW*; P. ADAIR; D. HILL; J. LI; R. NORMAN-TENAZAS; R. RAIS; K. TORGAS; B. A. WESTER; W. R. GRAY RONCAL. *JHU/APL, Johns Hopkins Univ., Johns Hopkins Univ. Applied Physics Lab., Johns Hopkins Univ. Applied Physics Lab.*

11:00 WW36 **346.16** Single-subject source analysis from continuous resting state EEG. A. C. TANG*; W. R. FUNG; Y. HUA; L. QIN. *The Univ. of Hong Kong.*

8:00 WW37 **346.17** Novelty reduces trial-to-trial variability in the latency of cortical neuronal responses. G. OUYANG*; Y. HUA; W. R. FUNG; C. ZHOU; A. C. TANG. *Ernst-moritz-arndt-Universität Greifswald, The Univ. of Hong Kong, Hong Kong Baptist Univ.*

9:00 WW38 **346.18** Online unsupervised spike sorting using an artificial STDP neural network. M. BERNERT; B. YVERT*. *INSERM Braintech Lab., CEA.*

10:00 WW39 **346.19** ● Dynamic neural stitching: Learning consistent neural population dynamics from separately recorded neural populations across months using LFADS. D. J. O'SHEA*; C. PANDARINATH; J. COLLINS; R. JOZEFOWICZ; E. TRAUTMANN; S. D. STAVISKY; J. C. KAO; M. M. CHURCHLAND; M. T. KAUFMAN; J. M. HENDERSON; K. V. SHENOY; L. ABBOTT; D. SUSSILLO. *Stanford Univ., Stanford Univ., Emory Univ. / Georgia Tech., Google Brain, Stanford Univ., Stanford Univ., Columbia Univ., Cold Spring Harbor Lab., Stanford Univ. Dept. of Neurosurg., Howard Hughes Med. Inst. - Stanford Univers, Stanford Univ., Columbia Univ.*

11:00 WW40 **346.20** NETCAL: An interactive platform for large-scale, NETwork and population dynamics analysis of CALcium imaging recordings. J. G. ORLANDI*; S. FERNÁNDEZ-GARCÍA; A. COMELLA-BOLLA; M. MASANA; G. GARCÍA-DÍAZ BARRIGA; M. YAGHOUBI; J. CANALS; M. A. COLICOS; J. DAVIDSEN; J. ALBERCH; J. SORIANO. *Univ. of Calgary, Univ. de Barcelona, Univ. de Barcelona, Inst. d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS), Ctr. de Investigación Biomédica en Red sobre Enfermedades Neurodegenerativas (CIBERNED), Univ. of Calgary, Univ. of Calgary, Univ. de Barcelona.*

8:00 WW41 **346.21** ● Detection of irregularly firing inspiratory neurons in the pre-Bötzinger complex based on spatio-temporal optical imaging data analysis. F. MIWAKEICHI*. *The Inst. of Statistical Mathematics.*

9:00 WW42 **346.22** A fast image registration framework for light-sheet fluorescence microcopy of neural activities. H. HUI*; H. MENG; C. HU; X. YANG; J. TIAN. *Inst. of Automation, Chinese Acad. of Scienc, Key Lab. of Mol. Imaging, CAS.*

10:00 WW43 **346.23** LFADS: A deep learning technique to precisely estimate neural population dynamics on single trials. C. PANDARINATH*; D. J. O'SHEA; J. COLLINS; R. JOZEFOWICZ; S. D. STAVISKY; J. C. KAO; E. TRAUTMANN; M. M. CHURCHLAND; M. T. KAUFMAN; S. RYU; J. M. HENDERSON; K. V. SHENOY; L. ABBOTT; D. SUSSILLO. *Emory Univ. / Georgia Tech., Stanford Univ., Google Brain, Stanford Univ., Stanford Univ., Columbia Univ., Cold Spring Harbor Lab., Palo Alto Med. Fndn., Stanford Univ. Dept. of Neurosurg., Howard Hughes Med. Inst. - Stanford Univers, Columbia Univ.*

11:00 WW44 **346.24** Automated 3D EM and functional brain image co-registration using deep learning. F. LONG*; A. BLECKERT; J. REIMER; E. FROUDARAKIS; A. TOLIAS; R. YOUNG; D. NUNO; C. REID; L. NG. *Allen Inst. For Brain Sci., Baylor Col. of Med., Rice Univ.*

8:00 WW45 **346.25** Deep convolution neural networks and multi-scale inputs better classify suspicious breast masses. A. J. LONSBERRY*; S. PICKARD; R. QUINN. *Case Western Reserve Univ.*

9:00 WW46 **346.26** ● Bayesian inference about the brain's effective connectivity using intracranial EEG data. T. ZHANG*. *Univ. of Virginia.*

10:00 WW47 **346.27** Effects of global signal regression and head movement on connectivity analysis using resting state functional magnetic resonance imaging. T. IIDAKA*; T. KOGATA; E. BAGARINAO. *Nagoya University, Grad. Sch. of Med., Nagoya Univ.*

11:00 WW48 **346.28** Longitudinal graph analysis of functional connectivity of mild cognitive impairment and AD patients. G. CASTELLANO*; S. I. C. GUZMÁN; M. WEILER; M. L. F. BALTHAZAR. *Univ. of Campinas - UNICAMP, Univ. of Campinas - UNICAMP.*

8:00 WW49 **346.29** The local functional connectivity of the seizure onset and peri-seizure onset areas. H. P. ZAVERI*; S. M. PINCUS; I. I. GONCHAROVA; R. MUNBODH; M. R. ALKAWADRI; J. L. GERRARD; R. B. DUCKROW; L. J. HIRSCH; D. D. SPENCER; S. S. SPENCER. *Yale Univ., 990 Moose Hill, Yale Univ., 500 Prospect.*

9:00 WW50 **346.30** Graph Theory network analysis of functional connectivity in Mild Cognitive Impairment. A. V. MEDVEDEV*; R. S. TURNER. *Georgetown Univ. Med. Ctr., Georgetown Univ. Med. Ctr.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

SYMPOSIUM *Walter E. Washington Convention Center*

347. Neural Mechanisms of Voluntary Action Control: From Habits to Intentionality in Animals and Humans — CME

Mon. 1:30 PM - 4:00 PM — Ballroom A

Chair: I. FRIED

The capacity for internally-generated, voluntary action characterizes the motor systems of humans and some animals. Recent experimental and modelling advances have rekindled neuroscientific interest in this classic topic. Animal models have identified mechanisms for habitual and intentional action, while human studies have both recorded and manipulated frontal processes underlying conscious volition. These advances are enabling the first computational models of volition.

1:30 **347.01** Introduction.

1:35 **347.02** From habitual to voluntary action in corticostriatal networks. R. M. COSTA. *Champalimaud Fndn.*

2:10 **347.03** Converging on volition: Reducing neural variability preceding voluntary action in humans. P. HAGGARD. *Univ. Col. London.*

2:45 **347.04** Fifty years without free will: The role of stochastic fluctuations in the initiation of voluntary action. A. SCHURGER. *INSERM U992 / Neurospin / Cea-Saclay.*

3:20 **347.05** Modulating conscious movement intention with noninvasive brain stimulation. B. J. HE. *NYU.*

3:55 **347.06** Closing Remarks.

SYMPOSIUM *Walter E. Washington Convention Center*

348. From Salient Experience to Learning and Memory: Instructive Signals for Aversion and Reward — CME

Mon. 1:30 PM - 4:00 PM — Ballroom B

Chair: J. P. JOHANSEN

Aversive and rewarding experiences are translated by the nervous system into instructive signals that alter brain connectivity, producing learning and changes in behavior. Using modern circuit mapping, manipulation, and recording approaches, great progress has been made in understanding the neural mechanisms of instructive signaling. This symposium will provide an updated and interactive view on how aversive and rewarding instructive signals are constructed, coded, and transmitted.

1:30 **348.01** Introduction.

1:35 **348.02** Neuronal circuit mechanisms for associative fear conditioning. A. LUTHI. *Friedrich Miescher Inst. for Biomed. Res.*

2:10 **348.03** Projection-specific signals in dopamine neurons during reinforcement learning. I. WITTEN. *Princeton Univ.*

2:45 **348.04** Cue-directed behavior and reinforcement: Distinct roles of mesolimbic and nigrostriatal dopamine projections. P. H. JANAK. *Johns Hopkins Univ.*

3:20 **348.05** Feedback circuits for calibrating aversive learning signals. J. P. JOHANSEN. *RIKEN Brain Sci. Inst.*

3:55 **348.06** Closing Remarks.

MINISYMPOSIUM *Walter E. Washington Convention Center*

349. *In Vivo* Imaging of CNS Injury and Disease — CME

Mon. 1:30 PM - 4:00 PM — Ballroom C

Chair: B. ZHENG
Co-Chair: K. AKASSOGLOU

In vivo optical imaging with advanced microscopy (e.g., multiphoton) has emerged as a powerful tool to study cellular responses to injury and disease in the mammalian CNS. Important new insights have been gained on axon degeneration and regeneration, glial responses, changes in the neurovascular unit, and neural transplants. This minisymposium will present recent advances in understanding the neuronal, glial, and other cellular responses to CNS injury and disease with *in vivo* imaging of the brain or spinal cord.

1:30 **349.01** Introduction.

1:35 **349.02** Subcellular dynamics during reversible axon damage in CNS injury and disease. T. MISGELD. *Tech. Univ. of Munich.*

1:55 **349.03** *In vivo* imaging reveals regrowth of serotonin axons following injury in the adult brain. D. J. LINDEN. *Johns Hopkins Univ. Dept. of Neurosci.*

2:15 **349.04** *In vivo* imaging of microglia and neurovascular unit in CNS disease and injury. K. AKASSOGLOU. *Univ. of California San Francisco.*

2:35 **349.05** Axonal branching impacts the degenerative and regenerative fate of injured spinal axons. B. ZHENG. *Univ. of California San Diego.*

2:55 **349.06** Imaging structural and functional changes in human iPSC-derived neurons transplanted *in vivo.* V. DE PAOLA. *Imperial Col. London.*

3:15 **349.07** Visualizing neural activity in the lateral geniculate nucleus of the thalamus of awake mice. L. LIANG. *Boston Children's Hosp.*

3:35 **349.08** Closing Remarks.

MINISYMPOSIUM *Walter E. Washington Convention Center*

350. State-Dependent Cortical Processing — CME

Mon. 1:30 PM - 4:00 PM — 145B

Chair: Y. NIR
Co-Chair: K. WIECH

How do behavioral states and cognitive factors affect cortical processing? States of wakefulness, sleep, and anesthesia affect neuronal excitability, perception, and plasticity. Vigilance, attention, expectation, and task context dynamically affect local cortical circuits during wakefulness. This minisymposium will discuss recent findings, highlight governing principles, and explore whether behavioral states and cognitive factors may locally modulate cortical processing via common mechanisms.

1:30 **350.01** Introduction.

1:35 **350.02** State-dependent organization of population activity across the brain. K. D. HARRIS. *Univ. Col. London.*

1:55 **350.03** Modulation of cortical state by global arousal and selective attention. T. ENGEL. *Cold Spring Harbor Lab.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:15 **350.04** Contextual modulation of cortico-striatal activity in audition. A. M. ZADOR. *Cold Spring Harbor Lab.*

2:35 **350.05** Perceptual inference and neural oscillations: Predicting 'what' and 'when'. L. MELLONI. *Max Planck Institute for Brain Research.*

2:55 **350.06** State-dependent sensory processing across wakefulness, sleep deprivation, sleep, and anesthesia. Y. NIR. *Tel Aviv Univ.*

3:15 **350.07** How expectations shape the experience of pain: Insights from functional neuroimaging in humans. K. WIECH. *Univ. of Oxford.*

3:35 **350.08** Closing Remarks.

MINISYMPOSIUM *Walter E. Washington Convention Center*

351. Neuroethology of Listening: Learning, Perception and Preference in Female Songbirds — CME

Mon. 1:30 PM - 4:00 PM — 146A

Chair: L. S. PHILLMORE
Co-Chair: S. C. WOOLLEY

Songbirds are a diverse order known for producing learned vocalizations. Young songbirds must learn from a tutor to produce species-typical vocalizations as an adult. Early research on the neurobiology of song learning focused primarily on males, presumably because males of many species tend to sing more than the females. More recently, researchers have recognized the importance of females beyond response to male song. This symposium will highlight the neuroethology of new female songbird research.

1:30 **351.01** Introduction.

1:35 **351.02** Understanding receiver psychology in reproductive contexts. K. LYNCH. *Hofstra Univ.*

1:55 **351.03** Females as offspring of single mothers: Does rearing condition affect perception? L. S. PHILLMORE. *Dalhousie Univ.*

2:15 **351.04** Zenk expression in response to tutor song and during sleep in juvenile females. S. MOORMAN. *Tufts Univ.*

2:35 **351.05** Female song, motivational state, and reward induced by hearing male courtship song. L. RITERS. *Univ. of Wisconsin.*

2:55 **351.06** Neuromodulation of song preferences in female zebra finches. S. C. WOOLLEY. *McGill Univ.*

3:15 **351.07** Are there sex differences in the use of spatial cues for reorientation by birds? D. KELLY. *Univ. of Manitoba.*

3:35 **351.08** Closing Remarks.

MINISYMPOSIUM *Walter E. Washington Convention Center*

352. Innovative Approaches for Multimodal Neural Interfaces — CME

Mon. 1:30 PM - 4:00 PM — 151B

Chair: F. VITALE
Co-Chair: S. R. SANTACRUZ

The generation and transmission of neural potentials involves multiple chemical and physical processes. Traditional neurotechnologies interact with neural circuits electrically, and many issues in their implementation still exist, such as achieving a stable tissue interface and adequate spatiotemporal resolution. Focusing on emergent principles for recording and manipulating neural activity, this minisymposium will present the state-of-the-art multimodal neural interfaces.

1:30 **352.01** Introduction.

1:35 **352.02** Magnetogenetics: Optimization and rational design. J. T. ROBINSON. *Rice Univ.*

1:55 **352.03** Microfluidic actuated electrodes for mapping epileptic networks. F. VITALE. *Univ. of Pennsylvania.*

2:15 **352.04** Engineered axonal tracts as 'living electrodes' for synaptic-based modulation of neural circuitry. D. K. CULLEN. *Univ. of Pennsylvania.*

2:35 **352.05** Concurrent *in vivo* calcium imaging and large-scale electrophysiology using transparent electrode arrays in mice. D. KUZUM. *Univ. of California San Diego.*

2:55 **352.06** Large-scale recording and intervention in neural circuity of learned behaviors. S. R. SANTACRUZ. *Univ. of California, Berkeley.*

3:15 **352.07** A large-scale interface for optogenetics in non-human primates with application to sensorimotor cortical plasticity. A. YAZDAN-SHAHMORAD. *Univ. of California San Francisco.*

3:35 **352.08** Closing Remarks.

LECTURE *Walter E. Washington Convention Center*

353. • ALBERT AND ELLEN GRASS LECTURE: On Balance: Fine-Tuning Protein Levels for Neurological Health — CME

Mon. 3:15 PM - 4:25 PM — Hall D

Speaker: H. Y. ZOGHBI, *Baylor Col. of Med. and Howard Hughes Med. Inst.*

Support contributed by: The Grass Foundation

When we think of the genetics of neurodevelopmental and neurodegenerative disorders, we tend to think about mutations that alter a protein's function. An emerging theme among both classes of disorders, however, is the vulnerability of neurons to modest increases or decreases in protein levels — even when those proteins are wild type. This sensitivity to protein levels provides a new avenue to understanding pathogenesis and suggests we should search for regulators of disease-driving proteins that could provide therapeutic entry points for various neuropsychiatric disorders.

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

LECTURE *Walter E. Washington Convention Center*

354. PRESIDENTIAL SPECIAL LECTURE: The Gut Microbiota and Childhood Undernutrition: Looking at Human Development From a Microbial Perspective — CME

Mon. 5:15 PM - 6:30 PM — Hall D

Speaker: J. I. GORDON, *Washington Univ. Sch. of Med.*

Human postnatal development is typically viewed from the perspective of our 'human' organs. As we come to appreciate how our microbial communities are assembled following birth, there is an opportunity to determine how this microbial facet of our developmental biology is related to healthy growth, as well as to the risk for and manifestations of disorders that produce abnormal growth. This lecture will describe how this hypothesis is being examined in the context of childhood undernutrition.

NANOSYMPOSIUM

355. Presynaptic Mechanisms

Theme B: Neural Excitability, Synapses, and Glia

Mon. 1:00 PM – *Walter E. Washington Convention Center*, 147B

1:00 **355.01** Neuronal depolarization drives increased dopamine synaptic vesicle loading via VGLUT. Z. FREYBERG*; J. AGUILAR; M. DUNN; S. MINGOTE; C. KARAM; Z. FARINO; M. SONDERS; Y. ZHANG; B. J. MCCABE; D. KRANTZ; J. A. JAVITCH; D. SULZER; D. SAMES; S. RAYPORT. *Univ. of Pittsburgh, Vanderbilt Univ., Columbia Univ., Columbia University/New York State Psychiatric Inst., Columbia Univ., Univ. of Pittsburgh, EPFL, UCLA, Columbia Univ., Columbia Univ.*

1:15 **355.02** The primed SNARE-complexin-synaptotagmin complex for neuronal exocytosis. Q. ZHOU*; P. ZHOU; T. C. SUDHOF; A. T. BRUNGER. *Stanford Univ. / HHMI, HHMI, Stanford Univ.*

1:30 **355.03** Distinct functions of cGMP-dependent protein kinase in synaptic growth, synaptic vesicle exocytosis and endocytosis. J. S. DASON*; A. M. ALLEN; O. E. VASQUEZ; M. B. SOKOLOWSKI. *Univ. of Windsor, Univ. of Toronto, Univ. of Oxford.*

1:45 **355.04** Munc13s - presynaptic regulators of short-term synaptic plasticity in physiology and pathology. N. LIPSTEIN*; B. COOPER; F. E. MICHELASSI; G. R. MONROE; O. JAHN; J. S. DITTMAN; T. SAKABA; J. RHEE; H. TASCHENBERGER; J. J. JANS; N. BROSE. *Dept. of Mol. Neurobio., Max Plank Inst. of Exptl. Med., Weill Cornell Med. Col., Univ. Med. Ctr. Utrecht, Max Planck Inst. of Exptl. Med., Joan and Sanford I Weill Med. Col. of Cornell Univ., Doshisha Univ., Mx Plank Inst. of Exptl. Med., Max Planck Inst. of Exptl. Med.*

2:00 **355.05** Presynaptic loss of dynamin-related protein 1 profoundly alters synaptic vesicle release and recycling at the calyx of Held. M. SINGH; H. DENNY; C. SMITH; J. GRANADOS; R. B. RENDEN*. *Univ. of Nevada, Reno Sch. of Med.*

2:15 **355.06** Synaptotagmin-7 mediated asynchronous release boostshigh-fidelity synchronous transmission at a central synapse. F. LUO*; T. C. SUDHOF. *Hhmi/Stanford Univ., Stanford Univ.*

2:30 **355.07** The pathological influences of excess α-synuclein and its mutants on synaptic transmission at calyx of Held synapses. K. EGUCHI*; Z. TAOUFIQ; T. TAKAHASHI. *Inst. of Sci. and Technol. Austria, Okinawa Inst. of Sci. and Technol. Grad. Univ.*

NANOSYMPOSIUM

356. APP and Tau: Animal and Cellular Models

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *Walter E. Washington Convention Center*, 147A

1:00 **356.01** Roles of plexin-B3+ oligodendrocyte progenitor cells in the pathogenesis of Alzheimer's disease. Y. TATEBAYASHI*; N. KIKUCHI-NIHONMATSU; Y. MATSUDA; T. UCHIHARA; K. AOOI; M. WATANABE. *Tokyo Metropolitan Inst. of Med. Sci., Tokyo Metropolitan Inst. for Med. Sci., Tokyo Metropolitan Inst. for Med. Sci.*

1:15 **356.02** ▲ Decoupling the effects of the amyloid precursor protein and plaque on neuronal transport in the mouse brain. C. MEDINA*; F. L. CHAVES; R. E. JACOBS; E. L. BEARER. *Univ. of New Mexico Hlth. Sci. Ctr., USC Keck Sch. of Med., UNM Sch. of Med., Caltech.*

1:30 **356.03** Back translating human Alzheimer's disease neuroimmune signatures to APP mouse models and high-content primary microglial screens. V. MAHADOMRONGKUL; K. Q. TANIS; S. ROTHMAN; P. GANDHI; C. WARE; J. GILLIAND; J. N. MARCUS; M. PEARSON; B. HOWELL; J. KLAPPENBACH; M. E. KENNEDY; C. MIRESCU*. *Merck & Co., Merck Res. Labs., Merck & Co., Merck & Co., Merck Res. Labs., Merck Res. Labs, Merck Res. Labs, Merck Res. Labs., Merck Res. Labs., Merck Res. Labs.*

1:45 **356.04** Changes in cerebrospinal fluid and neuroimaging biomarkers in a non-human primate model of Alzheimer's disease. S. E. BOEHNKE*; R. G. WITHER; J. Y. NASHED; D. J. COOK; R. LEVY; F. G. DE FELICE; D. P. MUNOZ. *Queen's Univ., Queen's Univ., Queen's Univ., Fed Univ. Rio De Janeiro, Queens Univ.*

2:00 **356.05** Calpain activation and ER stress in the 5XFAD mouse model of Alzheimer's disease. K. R. SADLEIR*; R. VASSAR. *Northwestern Univ.*

2:15 **356.06** Tau-independent effects of beta amyloid on primary neurons and in an Alzheimer's disease mouse model. S. KEMAL*; K. R. SADLEIR; R. VASSAR. *Northwestern Univ.*

2:30 **356.07** The eye as a window on the brain: Alzheimer disease-related protein aggregates in the retina. S. DI ANGELANTONIO*; A. GRIMALDI; C. BRIGHI; M. BOMBA; S. SENSI; G. RUOCCO. *Inst. Italiano Di Tecnologia IIT, Sapienza Univ. of Rome, "G. d'Annunzio" Univ. of Chieti-Pescara, "G. d'Annunzio" Univ. of Chieti-Pescara.*

2:45 **356.08** Modulation of voltage gated L-type calcium channels in hypothalamic NPY/AgRP neurons as a molecular mechanism for body weight dysregulation in Alzheimer's disease and neuropsychiatric disorders. M. ISHII*; G. WANG; L. PHAM; R. HART; C. IADECOLA. *Weill Cornell Med., Univ. of Exeter.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 **356.09** Single App knock-in mouse model of Alzheimer's disease: Behavioral and neurochemical characterization. J. MEHLA*; S. LACOURSIERE; E. STUART; S. SINGH; S. INAYAT; H. PATEL; T. SAITO; R. J. MCDONALD; M. H. MOHAJERANI. *CCBN, Univ. of Lethbridge, Lab. for Proteolytic Neuroscience, RIKEN Brain Sci. Inst.*

3:15 **356.10** Neurogenic effect of the anti-aggregant Tau repeat domain in the hippocampus. M. JOSEPH*; M. ANGLADA-HUGUET; K. PAESLER; E. M. MANDELKOW. *DZNE, German Ctr. for Neurodegenerative Dis., Max-Planck Inst. for Metabolism Research, Hamburg Outstation, CAESAR Res. Ctr.*

3:30 **356.11** Consequences of nucleoplasmic reticulum expansion in tauopathy: A possible role for aberrant nuclear RNA export in tau pathogenesis. G. L. CORNELISON*; B. FROST. *UT Hlth. Sci. Ctr. At San Antonio, UT Hlth. Sci. Ctr. At San Antonio.*

3:45 **356.12** ● Knock-down of endogenous mouse tau by intracranial delivery of zinc-finger protein transcription factors *in vivo.* S. WEGMANN*; B. ZEITLER; S. DEVOS; K. MARLEN; D. MACKENZIE; Q. YU; C. COMMINS; H. NGUYEN; A. B. ROBBINS; M. C. HOLMES; B. RILEY; S. ZHANG; B. T. HYMAN, MD,PhD. *Mass Gen. Hosp. / Harvard Med. Sch., Sangamo Therapeutics, Inc., Massachusetts Gen. Hosp.*

4:00 **356.13** Receptor mediated prion-like propagation of PH-tau. V. MOROZOVA; A. ALONSO*. *Col. of Staten Island, Col. of Staten Island, CUNY.*

4:15 **356.14** Chronic sleep loss degeneration of locus coeruleus neurons is tau-dependent. S. C. VEASEY*; Y. ZHU; P. FENIK; G. ZHAN; P. BELL. *Univ. of Pennsylvania, Perelman Sch. of Med., Univ. of Pennsylvania.*

NANOSYMPOSIUM

357. Amyloid-Beta Tau Interaction

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *Walter E. Washington Convention Center*, 152A

1:00 **357.01** Somatodendritic accumulation of Tau is promoted by local protein translation. J. GOETZ*; G. LEINENGA, C. LI. *Queensland Brain Inst., The Univ. of Queensland, Brisbane (St Lucia Campus), Australia.*

1:15 **357.02** Investigation of Aβ-driven hyperexcitability and tau spread *in vivo.* G. A. RODRIGUEZ*; S. A. HUSSAINI; K. E. DUFF. *Columbia Univ. Med. Ctr., Columbia Univ. Med. Ctr., Taub Inst. at Columbia Univ/ NYSPI.*

1:30 **357.03** ● Site-specific phosphorylation of tau inhibits amyloid-beta toxicity in Alzheimer's mice. A. ITTNER*; S. CHUA; J. BERTZ; A. VOLKERLING; J. VAN DER HOVEN; A. GLADBACH; M. PRZYBYLA; M. BI; A. VAN HUMMEL; C. H. STEVENS; S. IPPATI; L. S. SUH; A. MACMILLAN; G. SUTHERLAND; J. J. KRIL; A. P. G. SILVA; J. P. MACKAY; A. POLJAK; F. DELERUE; Y. D. KE; L. M. ITTNER. *Univ. of New South Wales, UNSW Australia, Univ. of Sydney, Univ. of Sydney, Univ. of New South Wales, Univ. of New South Wales, Neurosci. Res. Australia.*

1:45 **357.04** ● Cryo-EM structures of Tau filaments from Alzheimer disease brain. B. GHETTI*; A. W. FITZPATRICK; B. FALCON; S. HE; A. G. MURZIN; G. MURSHUDOV; H. J. GARRINGER; R. CROWTHER; M. GOEDERT; S. H. W. SCHERES. *Indiana Univ., Med. Res. Council.*

2:00 **357.05** Neuronal excitation enhances tau release *in vitro* and the spread to distal anatomically connected regions *in vivo.* M. K. SCHULTZ*, JR; R. C. GENTZEL; S. PARMENTIER-BATTEUR; J. SCHACHTER; H. A. ZARIWALA. *Merck & Co., Merck & Co., Merck Res. Labs.*

2:15 **357.06** Ozone exposure induces tau pathology and cognitive deficits in wildtype and amyloidogenic mice. K. T. DINELEY*; I. CORTEZ; E. ISHIMWE; L. DENNER; L. M. HALLBERG; R. KAYED; B. T. AMEREDES. *Univ. of Texas Med. Br. Dept. of Neurol., Univ. of Texas Med. Br., Univ. of Texas Med. Br. Dept. of Neurol.*

2:30 **357.07** Bilateral and intermittent infusions of Aβ oligomers into the brain parenchyma induces Aβ deposits, tau aggregation, extraneuronal neurofibrillary tangle formation and cognitive impairment in older cynomolgus monkeys. Z. ZHANG*; F. YUE; Y. AI; R. GRONDIN; C. LU; G. QUINTERO; G. GERHARDT; D. GASH. *Univ. of Kentucky, GLP Neurosci. Service Center, Univ. of Kentucky, Wincon TheraCells Biotechnologies Co., Ltd, Univ. of Kentucky.*

2:45 **357.08** Effects of oxidative stress on transgenic mice: An Alzheimer's disease behavioral model. K. S. STEED*; K. BARKDULL; T. HANCOCK; J. J. WISCO. *Brigham Young Univ., Univ. of Utah Sch. of Med.*

NANOSYMPOSIUM

358. Synaptic Signaling Deficits in Alzheimer's Disease I

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *Walter E. Washington Convention Center*, 150B

1:00 **358.01** Monitoring microtubule dynamics at synaptic contacts in hippocampal neurons challenged with oligomeric $A\beta_{1\text{-}42}$. X. QU*; F. BARTOLINI. *Columbia Univ.*

1:15 **358.02** Deficiencies in basal forebrain cholinergic neurons from Alzheimer's disease patients. T. ZANG*; M. LIU; C. REN; C. ZHANG. *UT South Med. Ctr.*

1:30 **358.03** ● Increased electrical activity in Alzheimer patient hiPSC-derived cortical neurons with presenilin 1 mutation vs. isogenic controls. S. GHATAK; N. DOLATABADI; D. TRUDLER; A. SULTAN; M. V. TALANTOVA; R. AMBASUDHAN; S. A. LIPTON*. *Scintillon Inst., Scintillon Inst., Scintillon Inst., Scintillon Inst. & UC San Diego, The Scripps Res. Inst.*

1:45 **358.04** Nanoscale distribution of APP at an excitatory synapse. D. KUMARAN NAIR*; S. KEDIA; V. RAVINDRANATH. *Indian Inst. of Sci., Ctr. for brain Res.*

2:00 **358.05** The synaptic binding and dysfunctional impact of amyloid beta and tau oligomers is modulated by near infrared light treatment. M. M. COMEROTA*; G. TAGLIALATELA. *Univ. of Texas Med. Br.*

2:15 **358.06** Amyloid plaques accumulation in the entorhinal cortex mechanistically links defective mitochondrial structure with working memory dysfunction in mito-CFP-3xTg-AD mice. S. N. SARKAR*; J. Z. CAVENDISH; D. QUINTANA; S. JUN; E. ENGLER-CHIURAZZI; J. W. SIMPKINS. *WEST VIRGINIA UNIVERSITY.*

2:30 **358.07** CYFIP2: Altered local protein synthesis regulates Alzheimer's disease pathology. A. GHOSH*; S. TIWARI; K. MIZUNO; K. P. GIESE. *King's Col. London.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:45 **358.08** Interactions between epilepsy and Alzheimer's disease: novel therapeutic strategies. S. GOURMAUD*; D. TALOS; L. JACOBS; M. HANDY; R. J. VASSAR; F. E. JENSEN. *Univ. of Pennsylvania, Northwestern Univ. Feinberg Sch. of Med.*

3:00 **358.09** Oligomers of Amyloi-beta and Tau impair synaptic plasticity and memory in an APP dependent fashion. D. PUZZO*; R. PIACENTINI; M. FA; W. GULISANO; D. D. LI PUMA; A. STANISZEWSKI; H. ZHANG; M. TROPEA; S. COCCO; A. PALMERI; P. FRASER; L. D'ADAMIO; O. ARANCIO. *Univ. of Catania, Univ. Cattolica, Med. Sch., Columbia Univ. Press, Univ. of Catania, Columbia Univ., Univ. Cattolica, Med. Sch., Univ. of Toronto, Einstein Col. of Med., Columbia Univ.*

3:15 **358.10** Reduced gliotransmitter release from astrocytes mediates tau-induced synaptic dysfunction in cultured hippocampal neurons. R. PIACENTINI*; D. D. LI PUMA; M. MAINARDI; G. LAZZARINO; B. TAVAZZI; O. ARANCIO; C. GRASSI. *Univ. Cattolica, Med. Sch., Univ. Cattolica, Med. Sch., Columbia Univ.*

3:30 **358.11** Recurrent Herpes Simplex type-1 (HSV-1) infections trigger progressive Alzheimer's disease-related neuropathology in mice. G. DE CHIARA*; M. FABIANI; R. PIACENTINI; A. MASTRODONATO; M. E. MARCOCCI; D. LIMONGI; I. CELESTINO; C. GRASSI; A. T. PALAMARA. *Natl. Res. Council, Sapienza Univ. of Rome, Univ. Cattolica, Med. Sch., San Raffaele Pisana, IRCCS, Telematic Univ., Sapienza Univ. of Rome, Pasteur Inst. – Cenci-Bolognetti Foundation, Sapienza Univ. of Rome.*

NANOSYMPOSIUM

359. LRRK2 Mechanisms, Targets, and Pathways

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *Walter E. Washington Convention Center*, 152B

1:00 **359.01** Role of the retromer complex in mediating neurotoxicity induced by Parkinson's disease-linked LRRK2. L. A. CUNNINGHAM*; A. PODHAJSKA; A. TRAN NGUYEN; R. BANDOPADHYAY; D. J. MOORE. *Van Andel Res. Inst., Van Andel Res. Inst., Swiss Federal Inst. of Technol. (EPFL), Univ. Col. of London Inst. of Neurol.*

1:15 **359.02** Progressive dopamine transporter dysfunction and Serine129 phospho-α-synuclein overload in G2019S LRRK2 mice. S. NOVELLO*; D. MERCATELLI; F. LONGO; F. VINCENZI; I. RUSSO; G. BERTI; O. S. MABROUK; L. BUBACCO; E. GREGGIO; K. VARANI; M. MORARI. *Univ. of Ferrara, New York Univ., Univ. of Padova, Univ. of Michigan.*

1:30 **359.03** Implications for LRRK2 and auxilin in Parkinson's disease pathogenesis. M. NGUYEN*; L. ALI; J. SAVAS; D. KRAINC. *Northwestern Univ.*

1:45 **359.04** Lrrk2-r1441g mutation increases oxidative stress in substantia nigra dopamine neurons. H. ZHANG*; Y. X. CHEN; L. T. ZHI; B. GOU. *Dept. of Neurosci., Thomas Jefferson Univ.*

2:00 **359.05** ● In silico simulation of LRRK2 related Pathways: A search for druggable targets. B. BEHROUZ*; J. W. RYAN; D. A. DODDS; L. E. VINCENT; A. D. LEE. *Neuroinitiative.*

2:15 **359.06** Autophosphorylated LRRK2 in cerebral spinal fluid as a biomarker for Parkinson disease. S. WANG*; J. AASLY; A. B. WEST. *Univ. of Alabama At Birmingham, Norwegian Univ. of Sci. and Technol.*

2:30 **359.07** Signalling pathway changes in LRRK2 G2019S knock-in mouse model. K. HARVEY*; A. WETZEL; M. HUGHES; T. MCKAY; S. WADDINGTON; A. RAHIM. *Univ. Col. London, UCL, Manchester Metropolitan Univ., Univ. Col. London, Univ. Col. London.*

2:45 **359.08** ● Chronic in diet administration of the selective LRRK2 inhibitors, MLi-2 and PFE-360, produces a mild and reversible effect on lung morphology in mice. R. HODGSON; T. PARKKARI; A. BRADLEY; D. K. BRYCE; P. GALATSIS; T. HEIKKINEN; C. HOULE; L. A. HYDE; S. KURUVILLA; T. N. MARTINEZ; A. J. NURMI; A. STEPAN; M. J. FELL*; M. A. BAPTISTA. *Charles River Labs., Charles River Discovery, Charles River Labs. Edinburgh Ltd., Merck Neurosci. Discovery, Pfizer Inc., Pfizer Inc, Merck Res. Labs., Merck Res. Labs., The Michael J. Fox Fndn. For Parkinson's Res., Michael J. Fox Fndn.*

NANOSYMPOSIUM

360. Neuro-Immune Interactions in Pain, Migraine, and Itch

Theme D: Sensory Systems

Mon. 1:00 PM – *Walter E. Washington Convention Center*, 146C

1:00 **360.01** Intercellular redox signaling between macrophage AT2R and sensory neuron TRPA1 in neuropathic pain. D. P. MOHAPATRA*; B. COPITS; A. D. MICKLE; S. KADUNGANATTIL; S. M. TADINADA; A. DE KLOET; P. R. RAY; M. V. VALTCHEVA; T. D. SHEAHAN; L. A. MCILVRIED; S. JAIN; G. O. DUSSOR; E. G. KRAUSE; T. J. PRICE; R. W. GEREAU, IV; A. J. SHEPHERD. *Washington Univ. Sch. of Med., Univ. of Iowa Carver Col. of Med., Univ. of Florida, Univ. of Texas at Dallas, Washington Univ. Sch. of Med., Univ. of Florida.*

1:15 **360.02** Macrophage angiotensin II Type-2 receptor is critical for neuropathic pain. A. J. SHEPHERD*; A. D. MICKLE; P. KARLSSON; J. P. GOLDEN; M. R. MACK; S. HAROUTOUNIAN; V. K. SAMINENI; Y. M. USACHEV; B. S. KIM; R. W. GEREAU, IV; D. P. MOHAPATRA. *Washington University, Sch. of Med., Washington Univ., Danish Pain Res. Ctr., Washington Univ., Washington Univ. Sch. of Med., Washington Univ. Sch. of Med., Univ. of Iowa Dept. of Pharmacol., Washington Univ. Sch. Med., Washington Univ. Sch. of Med.*

1:30 **360.03** Mechanisms of thermal and mechanical hyperalgesia induced by the complement system component C5a: The role of macrophages and TRPV1. C. WARWICK*; C. A. WARWICK*; L. P. SHUTOV; X. SHI; A. GNANASEKARAN; A. J. SHEPHERD; D. P. MOHAPATRA; T. M. WOODRUFF; D. CLARK; Y. M. USACHEV. *Univ. of Iowa, Veterans Admin. Palo Alto Healthcare Syst. and Stanford Univ., Washington Univ. Sch. of Med., Univ. of Queensland.*

1:45 **360.04** Paclitaxel-induced neuropathic pain relies on TLR4 on macrophages in males only. M. D. BURTON*; I. CRUZ; T. A. SZABO-PARDI; S. MEGAT; P. BARRAGAN-IGLESIAS; J. K. MOY; T. J. PRICE. *Univ. of Texas At Dallas.*

2:00 **360.05** Sex-dependent mechanisms of ischemia/reperfusion-induced peripheral sensitization. J. L. ROSS*; L. F. QUEME; J. E. LAMB; Z. K. FORD; B. KATRAGADDA; M. P. JANKOWSKI. *Cincinnati Children's Hosp. Med. Ctr.*

2:15 **360.06** Educated $CD8^+$ t cells prevent chemotherapy-induced peripheral neuropathy (CIPN). G. O. LAUMET*; J. D. EDRALIN; R. DANTZER; C. J. J. HEIJNEN; A. KAVELAARS. *Univ. of Texas MD Anderson Cancer Ctr.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:30 **360.07** Altered glial glutamate transporter expression in descending circuitry and the emergence of pain chronicity. W. GUO*; S. IMAI; S. ZOU; J. YANG; M. WATANABE; J. WANG; F. WEI; R. DUBNER; K. REN. *Univ. of Maryland, Kyoto Univ. Hosp., Hiroshima Univ. Inst. of Biomed. & Hlth. Sci., Inst. of Orthopedics, the Second Hosp. of Lanzhou Univ.*

2:45 **360.08** Contribution at the spinal level of innate and adaptive immunity to the development of persistent post-inflammatory mechanical allodynia in arthritic mice. S. A. WOLLER; J. JIMENEZ-ANDRADE*; T. L. YAKSH; M. CORR. *UCSD, Univ. Autónoma De Tamaulipas, Univ. of California San Diego, UCSD.*

3:00 **360.09** Disruption of the nociceptive system alters resolution of sterile cutaneous inflammation *in vivo.* F. LA RUSSA*; D. H. L. BENNETT; S. B. MCMAHON. *King's Col. London, Univ. of Oxford.*

3:15 **360.10** Genetic deletion of microglial pannexin-1 attenuates morphine withdrawal, but not analgesic tolerance or hyperalgesia. N. E. BURMA*; H. LEDUC-PESSAH; T. TRANG. *Univ. of Calgary, Hotchkiss Brain Inst.*

3:30 **360.11** Novel rat monoclonal antibody against P2RY12 for specific detection and isolation of microglia. A. CARTIER*; L. DISSING-OLESEN; H. ZHANG; K. COHANE; M. A. TAM; B. A. STEVENS; M. TAYLOR. *Biolegend, Childrens Hosp., Biolegend.*

NANOSYMPOSIUM

361. Gating Olfactory Information

Theme D: Sensory Systems

Mon. 1:00 PM – *Walter E. Washington Convention Center*, 140A

1:00 **361.01** Stimulus induced LFP oscillations in the accessory olfactory bulb. Y. BEN-SHAUL*; A. KAHAN; M. YOLES-FRENKEL; N. HORESH; Q. CHENG. *Dept. of Med. Neurobio., Hebrew Univ.*

1:15 **361.02** Behavioral readout of spatiotemporal codes dissected by holographic optogenetics. J. V. GILL*; G. M. LERMAN; S. SHOHAM; D. RINBERG. *New York Univ., New York Univ. Sch. of Med., Technion, New York Univ.*

1:30 **361.03** Neuronal representation of social information in the medial amygdala of awake behaving mice. Y. LI*; A. MATHIS; B. F. GREWE; M. J. SCHNITZER; V. N. MURTHY; C. G. DULAC. *Harvard Univ., Harvard Univ., ETH Zurich, Stanford Univ. Dept. of Biol., Harvard Univ.*

1:45 **361.04** Diverse roles of the serotonergic system on olfactory behavior in mice. V. KAPOOR*; L. D. GUARNIERI; V. N. MURTHY. *Harvard Univ., Harvard Univ., Inst. de Ciências Biológicas.*

2:00 **361.05** ▲ Context dependent olfactory generalization depends on anterior olfactory nucleus. M. LEVINSON; D. SMITH; T. CLELAND; C. LINSTER*. *Cornell Univ., Cornell Univ.*

2:15 **361.06** Implementation of a robust odor identification algorithm using olfactory cortical feedback. G. H. OTAZU*; P. MASSET; D. ALBEANU. *Cold Spring Harbor Lab.*

2:30 **361.07** Nasal breathing modulates rhythmic activity in the prefrontal cortex and fear behavior. A. H. MOBERLY*; M. MA. *Univ. of Pennsylvania.*

2:45 **361.08** State-dependent competition between bottom-up and top-down inputs to olfactory cortex. D. A. WILSON*; M. JUVENTIN; M. ILINA; B. EAST; J. OLOFSSON. *New York Univ. Sch. of Med., Nathan S Kline Inst. for Psychiatric Res., Nathan S Kline Inst. for Psychiatric Res., NYU Sch. of Med., Stockholm Univ.*

3:00 **361.09** Mental whisking - Concurrent respiratory phase shapes Human task performance and its neural underpinning. O. PERL*; A. EISEN; T. WEISS; T. SOROKA; S. LUBLINSKY; L. SECUNDO; N. SOBEL. *Weizmann Inst. of Sci.*

3:15 **361.10** Sleep-deprivation enhances processing of food odors in olfactory cortex. S. BHUTANI*; J. D. HOWARD; J. A. GOTTFRIED; T. KAHNT. *Northwestern Univ.*

NANOSYMPOSIUM

362. Cerebellum: Circuitry to Function

Theme E: Motor Systems

Mon. 1:00 PM – *Walter E. Washington Convention Center*, 144A

1:00 **362.01** Adaptive cerebellar learning deficits and abnormal *in vivo* Purkinje cell physiology in a mouse model of premature birth injury. A. SATHYANESAN*; S. KUNDU; V. GALLO. *Children's Natl. Med. Ctr.*

1:15 **362.02** Neural evidence of the cerebellum as a state predictor. H. TANAKA*; T. ISHIKAWA; S. KAKEI. *Japan Advanced Inst. of Sci. and Technol., Tokyo Metropolitan Inst. of Med. Sci., Tokyo Metropolitan Inst. of Med. Sci.*

1:30 **362.03** Diverging projection patterns of glutamatergic neuron in the interposed anterior nucleus. A. Y. LOW*; J. KIM; G. J. AUGUSTINE; A. I. CHEN. *Nanyang Technological Univ., LKC Med. School-NTU, Lee Kong Chian Sch. of Med., Nanyang Technological Univ.*

1:45 **362.04** Glutamatergic projection neutrons of the Interposed anterior nucleus facilitate accurate of skilled reaching. A. R. THANAWALLA*; A. CHEN. *Nanyang Technological Univ., Nanyang Technological Univ.*

2:00 **362.05** The cerebellar double/triple representation hypothesis: An fMRI study using the Human Connectome Project dataset. X. GUELL*; J. D. E. GABRIELI; J. D. SCHMAHMANN. *MIT, Massachusettes Gen. Hosp. and Harvard Med. Sch.*

2:15 **362.06** The effect of split-belt treadmill training on functional connectivity within the cortico-thalamic-cerebellar network. A. J. FARRENS*; S. M. MORTON; J. E. GALGIANI; F. SERGI. *Univ. of Delaware, Univ. of Delaware.*

2:30 **362.07** Tandem internal model predicts two types of cerebellar patients. T. HONDA*. *Tokyo Metropolitan Inst. of Med. Sci.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

NANOSYMPOSIUM

363. Corticolimbic Circuits in Emotion and Psychiatric Disorders

Theme G: Motivation and Emotion

Mon. 1:00 PM – *Walter E. Washington Convention Center*, 150A

1:00 **363.01** Immunohistochemical analyses of paraventricular thalamic nucleus in human postmortem brains. M. KUBOTA-SAKASHITA*; N. MECHAWAR; T. SHIMOGORI; G. TURECKI; T. KATO. *RIKEN Brain Sci. Inst. - Wako, Douglas Mental Hlth. Univ. Inst., RIKEN, McGill Univ.*

1:15 **363.02** Reliability of reward processing and prediction error neural correlates in young ages. H. KEREN*; B. BENSON. *NIH.*

1:30 **363.03** ● Hypothalamic pituitary adrenal axis genetic polymorphism & limbic functional connectivity patterns in depression. K. D. SUDHEIMER*; J. KELLER; R. O'HARA; N. HANTKE; R. KARNA; D. DUVIO; S. BEAUDREAU; E. HEINEMEYER; G. MURPHY; R. GOMEZ; A. GARRETT; L. TENNAKOON; A. SCHATZBERG. *Stanford Univ. Dept. of Psychiatry and Behavioral Sci., Stanford Univ., Palo Alto Univ., Univ. of Texas Hlth. Sci. Ctr.*

1:45 **363.04** Induced neuronal cells as a model system to study complex psychiatric disorder. R. SRIVASTAVA*; K. ISHIZUKA; A. SAWA. *Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ.*

2:00 **363.05** Sex-specific transcriptional signature in human depression. B. LABONTÉ*; O. ENGMAN; I. PURUSHOTHAMAN; C. MÉNARD; J. WANG; C. TAN; J. R. SCARPA; G. MOY; E. LOH; M. E. CAHILL; Z. S. LORSCH; P. J. HAMILTON; E. S. CALIPARI; G. E. HODES; O. ISSLER; H. KRONMAN; M. L. PFAU; A. OBRADOVIC; Y. DONG; R. L. NEVE; S. J. RUSSO; A. KAZARSKIS; C. A. TAMMINGA; N. MECHAWAR; G. TURECKI; B. ZHANG; L. SHEN; E. J. NESTLER. *Laval Univ., Icahn Sch. of Med. at Mount Sinai, Univ. of Pittsburgh, UT Southwestern Med. Ctr., Icahn Sch. of Med. at Mount Sinai, Virginia Tech., Univ. of Pittsburgh, MIT, Univ. of Texas Southwestern Med. Ctr. at Dallas, McGill Univ.*

2:15 **363.06** Transcriptional regulatory network analysis reveals a role for POU3F2 in bipolar disorder and schizophrenia. S. A. AMENT*; J. R. PEARL; D. E. BERGEY; C. FUNK; B. BASU; L. HOOD; C. COLANTUONI; N. D. PRICE. *Univ. of Maryland Baltimore, Univ. of Washington, Inst. for Systems Biol., Johns Hopkins Univ. Sch. of Med., Univ. of Maryland Baltimore.*

2:30 **363.07** Molecular profiling in olfactory neurons at single-cell resolution: Neural markers associated with state changes in brain disorders. K. ISHIZUKA*; Y. CHUNG; Y. C. WU; N. GAMO; S. NARAYAN; J. LAVOIE; A. SAWA. *Johns Hopkins Univ.*

2:45 **363.08** 1-norm support vector machine on single-trial EEG and ECG data to identify neural oscillatory features in the ketamine model for schizophrenia: Using your head and following your heart. X. YANG; C. A. CHEN*; A. PALMER; L. S. KEGELES; C. RODRIGUEZ; J. BI; J. K. JOHANNESEN. *Univ. of Connecticut, Univ. of Connecticut, Columbia Univ., Stanford Univ., Yale Sch. of Med.*

3:00 **363.09** ▲ Waking the sleeping beauty: An improved high-throughput method for studying NMDAR receptors with sensitivity to stimulation with glutamate and glycine. F. YEBOAH*; H. GUO; M. E. DIGAN; H. NIU; Y. PAN; S. REILING; G. SOLER-LLAVINA; W. A. WEIHOFEN; H. WANG; G. SHANKER; T. STAMS; L. M. CAMARGO; A. BILL. *Novartis Inst. For Biomed. Res.*

NANOSYMPOSIUM

364. Network, Synaptic, and Molecular Mechanisms of Learning and Memory

Theme H: Cognition

Mon. 1:00 PM – *Walter E. Washington Convention Center*, 143A

1:00 **364.01** An *Aplysia* neurotrophin acts cooperatively in the pre- and postsynaptic neurons through both anterograde and retrograde signaling during the induction of learning-related intermediate-term facilitation. I. JIN*; H. UDO; H. ZHU; E. R. KANDEL; R. R. HAWKINS. *Columbia Univ., Kyushu Univ.*

1:15 **364.02** Ras is a memory suppressor affecting multiple types of consolidated memory in *Drosophila.* N. NOYES*. *The Scripps Res. Inst.*

1:30 **364.03** A novel role for APC in modulating the translation of mRNA's required for synaptic plasticity. J. ALEXANDER*; S. JIN; L. A. FEIG; M. H. JACOB. *Tufts Univ., Tufts Univ., Tufts Univ. Sch. Med., Tufts Univ. Sch. Med.*

1:45 **364.04** Behavioral genetics reveals an unexpected role for channel palmitoylation in regulating learning. J. C. NELSON*; E. S. WITZE; K. C. MARSDEN; K. E. HAYER; M. GRANATO. *Univ. of Pennsylvania.*

2:00 **364.05** Dopamine neurons mediate learning and forgetting through bidirectional modulation of output neuron synapses in *Drosophila.* J. A. BERRY*; R. L. DAVIS, Prof. *The Scripps Res. Institute, Neurosci. Dept.*

2:15 **364.06** Parallel memory units in the mushroom body. Y. ASO*; G. M. RUBIN. *Janelia Res. Campus.*

2:30 **364.07** Connectome-driven study of the associative learning circuit in *Drosophila larva.* C. ESCHBACH*; A. FUSHIKI; B. COCANOUGHER; B. AFONSO; G. SI; J. VALDES ALEMAN; M. GERSHOW; A. D. SAMUEL; J. TRUMAN; A. CARDONA; M. ZLATIC. *Janelia Res. Campus, Harvard Univ., NYU.*

2:45 **364.08** ▲ Transcriptional correlates of savings memory for long-term sensitization in *Aplysia californica.* L. PEREZ; U. PATEL; I. E. CALIN-JAGEMAN; R. CALIN-JAGEMAN*. *Dominican Univ., Dominican Univ., Dominican Univ.*

NANOSYMPOSIUM

365. Perception and Imagery: Visual Awareness

Theme H: Cognition

Mon. 1:00 PM – *Walter E. Washington Convention Center*, 156

1:00 **365.01** Human single unit activity in middle temporal and frontal lobes precedes the reported emergence of a visual percept. H. GELBARD-SAGIV*; L. MUDRIK; C. KOCH; I. FRIED. *Tel Aviv Univ., Tel Aviv Univ., UCLA Sch. Med., Caltech, Tel Aviv Univ., Allen Inst. for Brain Sci., Tel Aviv Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:15 **365.02** Effect of internal reference on angle perception: Computational models and human psychophysics. Z. XU*; Y. CHEN; S. KUAI. *East China Normal Univ., Key Lab. of Brain Functional Genomics, Ministry of Education, Shanghai Key Lab. of Brain Functional Genomics, Inst. of Cognitive Neurosci.*

1:30 **365.03** ● The “eyes wide shut” illusion. S. HOCHSTEIN*. *Hebrew Univ. Jerusalem.*

1:45 **365.04** ● Statistical averaging and deviant detection may share mechanisms. M. B. PAVLOVSKAYA*; N. SOROKER; Y. BONNEH; S. HOCHSTEIN. *Loewenstein Hosp., Loewenstein Rehabil. Hosp., Bar-Ilan Univ., Hebrew Univ. Jerusalem.*

2:00 **365.05** Efficient encoding of ensemble statistics in the visual periphery. M. X. LOWE*; J. RAJSIC; J. S. CANT; S. FERBER. *Univ. of Toronto, Univ. of Toronto Scarborough, Rotman Res. Institute, Baycrest.*

2:15 **365.06** Neural representations of ensemble coding for visual features in the early visual and frontoparietal cortex. K. TARK*; M. KANG; S. CHONG; W. SHIM. *Ctr. for Neurosci. Imaging Research, IBS, Sungkyunkwan Univ. (SKKU), Yonsei Univ., Yonsei Univ., Sungkyunkwan Univ. (SKKU).*

2:30 **365.07** To bind or not to bind? Neural coding of color and shape. J. TAYLOR*; Y. XU. *Harvard Univ., Harvard Univ. Dept. of Psychology.*

2:45 **365.08** The spatiotemporal deconvolution of natural images: Distinct neural trajectories for objects and scenes. S. KHALIGH-RAZAVI*; C. MULLIN; D. PANTAZIS; A. OLIVA. *MIT, MIT, MIT, MIT.*

3:00 **365.09** The neural dynamics of category-based attention. E. J. WARD*; F. P. DE LANGE. *Univ. of Wisconsin Madison, Radboud Univ. Nijmegen.*

3:15 **365.10** Prestimulus EEG power predicts visual awareness but not discrimination sensitivity, whilst prestimulus phase predicts neither. C. S. BENWELL*; C. F. TAGLIABUE; D. VENIERO; R. CECERE; S. SAVAZZI; G. THUT. *Univ. of Glasgow, Univ. degli Studi di Trento, Univ. of Verona.*

3:30 **365.11** Visual awareness: the gradual build-up and sharp stabilization of visual percepts. M. VERNET*; S. JAPEE; V. ZACHARIOU; S. AHMED; S. LOKEY; L. G. UNGERLEIDER. *NIMH/NIH/DHHS.*

3:45 **365.12** What do we continue liking: Gauging sustained human interest using explicit and implicit measures. B. R. SHETH*; K. H. FUNG; M. H. ISMAIL. *Univ. of Houston, Univ. Houston, Univ. Houston.*

POSTER

366. Fate Specification and Development of Glia

Theme A: Development

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 A1 **366.01** Differing cell-intrinsic properties between forebrain and spinal cord oligodendroglial lineage cells. M. HORIUCHI*; Y. S. HORIUCHI; T. AKIYAMA; A. ITOH; D. E. PLEASURE; E. E. CARSTENS; T. ITOH. *Lewis Katz Sch. of Med. at Temple Univ., Univ. of Pennsylvania, Sch. of Med., Univ. of Miami, Univ. of California, Davis, Univ. of California Davis Dept. of Neurol., Univ. of California Davis, Univ. California Davis.*

2:00 A2 **366.02** Prospective identification and regulation of Glast positive cells in the mouse hypothalamus. L. TIROU; M. DAYNAC; H. FAURE; M. MOUTHON; F. BOUSSIN; M. RUAT*. *CNRS, CEA DSV iRCM SCSR.*

3:00 A3 **366.03** Pdgfra^{+} progenitor cells differentiate in both oligodendrocytes and pericytes in the developing mammalian central nervous system. E. M. FLORIDDIA*; D. DIAS; S. MARQUES; C. GÖRITZ; G. CASTELO-BRANCO. *Karolinska Institutet.*

4:00 A4 **366.04** Postnatal development of Gli1 astrocytes in the mammalian cortex. E. C. GINGRICH*; B. TING; O. OLUKOYA; M. WALOGORSKY; C. HARWELL; A. D. R. GARCIA. *Drexel Univ., Harvard Univ., Drexel Univ.*

1:00 A5 **366.05** FGF signaling directs neural stem cells in the subventricular zone toward oligodendrocyte lineage and improve cell regeneration after demyelination. W. KANG*; J. M. HEBERT, 10461. *Albert Einstein Col. of Med., Albert Einstein Col. of Med.*

2:00 A6 **366.06** Deletion of integrin linked kinase in neural progenitor cells disturbs neuron/glia balance during early spinal cord development. R. HUSSAIN*; W. B. MACKLIN. *Univ. of Colorado Sch. of Med., Univ. of Rochester, Univ. Colorado Med. Sch.*

3:00 A7 **366.07** Impact of growth factors on human neuroglial cell morphology. V. B. KNIGHT*; T. M. NUNN; E. E. SERRANO. *New Mexico State Univ.*

4:00 A8 **366.08** Generation of cortical oligodendrocytes from dorsal forebrain radial glia requires Shh signaling during embryonic development. C. WINKLER*; S. FRANCO. *Univ. of Colorado Sch. of Med.*

1:00 A9 **366.09** Barx2 can drive expression of astrocytic and neuronal markers similar to glioma “asteron” cells. C. RUSSO; K. MCKAY; M. K. TAYLOR*. *LabMate, Central Michigan Univ., Grand Valley State Univ.*

2:00 A10 **366.10** Investigating the role of astrocytes in BOLD fMRI signal. Z. SKACHOKOVA*; F. SCHLEGEL; A. SCHROETER; M. RUDIN. *ETH.*

3:00 B1 **366.11** ▲ Regulated control of glial cell outgrowth in primary rodent neuronal cultures by CultureOne™ supplement. M. DERR; D. BEACHAM; N. KAUR; Y. YAN*; D. KUNINGER. *Thermo Fisher Scientific.*

POSTER

367. Dendrite Growth and Branching

Theme A: Development

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 B2 **367.01** ● Regulation of Reelin function by specific proteolysis. M. HATTORI*; H. OGINO; E. OKUGAWA; Y. YAMAKAGE; T. KOHNO. *Grad. Sch. Pharmaceuti. Sci., Nagoya City Univ.*

2:00 B3 **367.02** Dendritic expansion and spine formation regulated by signaling pathways of unfolded protein response. A. SAITO*; K. IMAIZUMI. *Hiroshima Univ., Hiroshima Univ.*

3:00 B4 **367.03** Function of the actin nucleators Spire and Capu in dendrite organisation in *Drosophila.* T. STÜRNER*; H. CUNTZ; E. KERKHOFF; G. TAVOSANIS. *DZNE E.V. Bonn, Ernst Strüngmann Inst. (ESI), Univ. Hosp. Regensburg.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract’s submitting author

4:00 B5 **367.04** ▲ A novel role for Notch in mechanosensory neuron connectivity in *C. elegans.* G. W. BROWN*, V; R. EL BEJJANI. *Davidson Col.*

1:00 B6 **367.05** ▲ The conserved microtubule-associated protein mini spindles regulates dendrite branching and self-avoidance in *Drosophila* c4da neurons. C. KITTOCK*; N. ANVERY; M. MISRA. *Colgate Univ.*

2:00 B7 **367.06** Pink1 regulates brain derived neurotrophic factor signaling to stimulate dendrite outgrowth and mitochondrial function. R. K. DAGDA*; T. DAS BANERJEE; M. DAGDA; M. SWAIN; R. Y. DAGDA. *Univ. of Nevada Sch. of Med.*

3:00 B8 **367.07** ● Contribution of ADMATS family members to Reelin inactivation in the postnatal brain. M. KATO*; T. KOHNO; M. HATTORI. *Grad. Sch. Pharmaceuti. Sci., Nagoya City Univ., Grad. Sch. Pharmaceuti. Sci., Nagoya City Univ.*

1:00 DP01/B9 **367.08** (Dynamic Poster) *In vivo* dendritic development of cerebellar Purkinje cells. Y. TAKEO*; E. MIURA; M. YUZAKI. *Keio Univ. Sch. of Med.*

1:00 B10 **367.09** Premature birth reduces CA1 hippocampal dendrite branching, spine density, and neurocognitive function. D. KLEBE; M. TIBREWAL; B. CHENG; P. DOHARE; P. R. MOUTON; K. DOBRENIS; J. VELISKOVA; P. BALLABH*. *Albert Einstein Col. of Med., New York Med. Col., USF Hlth. Byrd Alzheimer's Inst., Albert Einstein Col. of Med., Albert Einstein Col. of Med.*

2:00 B11 **367.10** The γ-Protocadherins regulate dendrite arborization in the cerebral cortex through both common and isoform-specific intracellular signaling mechanisms. K. MAH; A. M. GARRETT; R. W. BURGESS; J. A. WEINER*. *Univ. of Iowa, The Jackson Lab., Jackson Lab., The Univ. of Iowa.*

3:00 B12 **367.11** Effects of antipsychotics and NMDA receptor agonists on expression and function of NOS1AP, a protein encoded by a schizophrenia susceptibility gene. K. SVANE*; E. ASIS; B. L. FIRESTEIN. *Rutgers Univ.*

4:00 B13 **367.12** The role of adaptor complex AP2 in formation of dendritic arbors of hippocampal neurons. A. KOSCIELNY; A. MALIK; E. LISZEWSKA; J. ZMORZYNSKA; A. TEMPES; B. TARKOWSKI; J. JAWORSKI*. *Intl. Inst. of Mol. and Cell Biol.*

1:00 B14 **367.13** Identifying new molecular cues that guide development of retinal direction-selective circuitry. C. L. PRIGGE*; J. N. KAY. *Duke Univ.*

2:00 B15 **367.14** Characterizing cell surface receptor multimeric complexes for homotypic recognition in developing retinal circuits. J. WANG*; J. N. KAY. *Duke Univ.*

3:00 B16 **367.15** Neuron dendrograms are produced by an asymmetrical process. R. FARHOUDI*; D. ROLNICK; P. RAMKUMAR; K. P. KORDING. *Sharif Univ., Massachusett Inst. of Technol., Northwestern Univ., Northwestern Univ.*

4:00 B17 **367.16** Choline supplementation ameliorates dendrite complexity impairments in developing iron-deficient hippocampal neurons. T. W. BASTIAN*; W. C. VON HOHENBERG; L. M. LANIER; M. K. GEORGIEFF. *Univ. of Minnesota, Univ. of Minnesota.*

1:00 B18 **367.17** Investigating the role of Csmd2 in Reelin-mediated dendrite formation and synaptogenesis. M. A. GUTIERREZ*; S. J. FRANCO. *Univ. of Colorado Denver, Anschutz Med., Univ. of Colorado Sch. of Med.*

2:00 B19 **367.18** A penetrable nuclear/nucleolar protein, mLLP, is regulator of neural development and its synaptic transmission. S. LEE*; N. YU; H. KIM; J. SHIM; S. KIM; D. KIM; C. KWAK; S. SIM; J. CHOI; S. AHN; J. YOO; S. CHOI; D. JANG; C. LIM; Y. LEE; C. KANG; S. CHOI; B. KAANG. *Seoul Natl. Univ., UCSD, Sungkyunkwan Univ., Hallym Univ., Kyungpook Natl. Univ., Chung-Ang Univ., Kyung Hee Univ.*

3:00 B20 **367.19** Neurodevelopmental consequences of reducing gamma-protocadherin isoform diversity with CRISPR/Cas9 genome editing. A. M. GARRETT*; J. A. WEINER; R. W. BURGESS. *The Jackson Lab., The Univ. of Iowa.*

4:00 B21 **367.20** Early life vitamin C deficiency does not alter CA1 neuronal morphology or markers of synaptic plasticity in a guinea pig model. S. N. HANSEN*; J. R. NYENGAARD; J. LYKKESFELDT; P. TVEDEN-NYBORG. *Univ. of Copenhagen, Aarhus Univ.*

1:00 B22 **367.21** Trafficking of the TrkA signaling endosome. K. A. BARFORD*; K. MCDANIEL; C. YAP; C. DEPPMANN; B. R. WINCKLER. *Univ. of Virginia, Univ. of Virginia Sch. of Med., Univ. of Virginia, Univ. of Virginia Dept. of Neurosci.*

2:00 B23 **367.22** Ultrasound modulate on axonal function. R. R. ZHANG1*; Z. QIU; S. KALA; L. SUN. *The Hong Kong Polytechnic Univ.*

3:00 B24 **367.23** ▲ Neuromorphological characterization of CA1 pyramidal cells expressing chimeric NMDAR GluN2 subunits: Changes during hippocampal development. C. HUNG*; M. J. KEITH; R. E. KEITH; M. F. BADAKHSH; T. C. DUMAS. *Krasnow Inst. For Advanced Study, Northern Virginia Community Col., George Mason Univ. Krasnow Inst. for Advanced Study, George Mason Univ. Krasnow Inst. for Advanced Study, George Mason Univ. Krasnow Inst. for Advanced Study.*

4:00 B25 **367.24** Single cell analysis of Purkinje cell death induced by diphtheria toxin. T. R. IQBAL; L. MA*. *Thomas Jefferson Univ.*

POSTER

368. Synapse Formation

Theme A: Development

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 B26 **368.01** Caffeine exposure during hippocampal synaptogenesis alters network circuitry and hippocampal-dependent memory. S. LÉVI*; J. C. PRESSEY; F. G. CASTRO; M. GOUTIERRE; M. RUSSEAU; J. PONCER. *INSERM.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 B27 **368.02** Adenosine A_{2A} receptor: A molecular switch to stabilize/eliminate inhibitory synapses during development. S. ZAPPETTINI*; F. GOMEZ-CASTRO; C. G. SILVA; J. C. PRESSEY; M. RUSSEAU; E. EUGÈNE; P. M. CANAS; F. Q. GONÇALVES; S. ALÇADA-MORAIS; E. SZABÓ; R. J. RODRIGUES; P. AGOSTINHO; A. R. TOMÉ; C. LETTERRIER; B. TESSIER; B. DARGENT; S. K. TYAGARAJAN; O. THOUMINE; R. A. CUNHA; M. ESCLAPEZ; S. LÉVI; C. BERNARD. *INSERM U1106 INS, INSERM UMR-S 839, Univ. Pierre et Marie Curie, Inst. du Fer a Moulin, CNC-Center for Neurosci. and Cell Biology, Univ. of Coimbra, Inst. of Biochemistry, Fac. of Medicine, Univ. of Coimbra, Axonal Domains Architecture, Aix Marseille Université, CNRS, CRN2M UMR7286, Interdisciplinary Inst. for Neuroscience, UMR CNRS 5297- Univ. of Bordeaux, Inst. of Pharmacol. and Toxicology, Univ. of Zürich.*

3:00 B28 **368.03** Functional mapping of neuronal activity in the facial nucleus of the rat embryo: Optical recording with a voltage-sensitive dye. K. SATO*; Y. MOMOSE-SATO. *Komazawa Women's Univ, Fac. of Human Hlth., Kanto Gakuin University, Col. of Nutr.*

4:00 B29 **368.04** In ovo blockade of the spontaneous depolarization wave inhibits the formation of synaptic networks in the embryonic brainstem. Y. MOMOSE-SATO*; K. SATO. *Kanto Gakuin University, Col. of Nutr., Komazawa Women's Univ, Fac. of Human Hlth.*

1:00 B30 **368.05** Molecular dissection of Neuroligin2 and Slitrk3 reveals an essential framework for GABAergic synapse development. J. LI*; W. HAN; X. MAO; Y. WANG; L. DONG; R. S. PETRALIA; W. LU. *NINDS, NIH, NIDCD/NIH, NEI/NIH.*

2:00 B31 **368.06** Trans-synaptic regulation of sensory circuit connectivity in the spinal cord by neurexins and neuroligins. B. A. COPITS*; K. C. MCKENZIE; J. J. YOO; S. K. VOGT; R. W. GEREAU, IV. *Washington Univ. Sch. of Med.*

3:00 B32 **368.07** A MIG-15/JNK-1 MAP kinase cascade opposes RPM-1 signaling in synapse formation and learning. B. GRILL*; A. C. GILES; R. BIRNBAUM; S. KASHYAP; O. CRAWLEY. *Scripps Res. Inst.*

4:00 B33 **368.08** Roles of the Rac1 activator Farp1 in mammalian synapse and dendrite development. A. J. COLEMAN*; L. LI; J. COTTRELL; T. BIEDERER. *Tufts Univ. - Sackler Sch., Broad Inst. of MIT and Harvard, Tufts Univ. Sch. of Med.*

1:00 B34 **368.09** The carbonic anhydrase-related proteins ca10 and ca11 are conserved pan-neurexin cis-ligands. F. H. STERKY*; J. H. TROTTER; S. LEE; T. C. SUDHOF. *Univ. of Gothenburg, Stanford Univ., Stanford Univ.*

2:00 B35 **368.10** Lissencephaly heterotopia and effects on the development of cellular microcircuitry. J. D'AMOUR*; T. G. EKINS; C. J. MCBAIN. *NIH, NIH/Brown Univ., NIH.*

3:00 B36 **368.11** A novel cell polarity program during innervation of a non-laminar nucleus in the auditory brainstem. P. S. HOLCOMB*; A. N. BRANDEBURA; D. R. KOLSON; S. H. BERZINGI; D. R. JACKSON; T. J. DEERINCK; M. H. ELLISMAN; G. A. SPIROU. *West Virginia Univ. Sch. of Med., Univ. of California San Diego.*

4:00 B37 **368.12** NRX assembles synapses independent of NL and tunes synaptic plasticity by antagonizing NL *in vivo.* P. KURSHAN*; K. SHEN. *Stanford Univ.*

1:00 B38 **368.13** Inhibitory synapse differentiation promoted by a novel neurexin2α-interacting cell adhesion molecule IgSF21. Y. NAITO*; Y. TANABE; C. VASUTA; A. K. LEE; Y. SOUMOUNOU; M. W. LINHOFF; H. TAKAHASHI. *Inst. de Recherches Cliniques de Montreal, Mcgill Univ., Mcgill, Washington Univ. Sch. of Med., Univ. of British Columbia, Oregon Hlth. and Sci. Univ., Univ. de Montréal, McGill Univ.*

2:00 B39 **368.14** Expression analysis of miRNA-26b involved in synaptogenesis in embryonic neural stem cells from diabetic mice. S. RAMYA*; S. SHYAMASUNDAR; B. BOON HUAT; S. T. DHEEN. *Natl. Univ. of Singapore, Natl. university of Singapore.*

3:00 B40 **368.15** Investigating the structural role of GABAA receptors in inhibitory synapse formation and circuitry of the basal ganglia. J. N. JOVANOVIC*; J. E. ARAMA; S. K. TYAGARAJAN; P. PANZANELLI; J. FRITSCHY. *UCL Sch. of Pharmacy, Univ. Col. London, Univ. Zurich/ Inst. Pharmacol Toxicol, Univ. of Turin.*

4:00 B41 **368.16** Prenatal stress induces excitatory-inhibitory imbalance in hippocampus of KCNH2-3.1 transgenic mice. Z. HU*; J. WU; Y. LI; M. REN; J. L. HILL; S. QIN; S. ZHU; Q. TIAN; K. MARTINOWICH; D. R. WEINBERGER; F. YANG. *Lieber Inst. for Brain Develop., Col. of Basic Medicine, Chongqing Med. Univ.*

1:00 B42 **368.17** Combining RNA-seq and somatic CRISPR mutagenesis to study mouse neural development *in vivo.* S. SARIN*; *. E. ZUNIGA-SANCHEZ; Y. KURMANGALIYEV; H. COUSINS; M. PATEL; K. ZHANG; M. A. SAMUEL; M. MOREY; S. ZIPURSKY; J. R. SANES. *Harvard Univ., UCLA, Harvard Univ., Baylor Col. of Med.*

2:00 B43 **368.18** Alpha2delta1-mediated synaptogenesis *in vitro* and during adult neurogenesis. K. A. BEESON; G. L. WESTBROOK; E. SCHNELL*. *Oregon Hlth. and Sci. Univ., Vollum Inst., Portland VA Med. Ctr.*

3:00 B44 **368.19** Presynaptic LRP4 promotes synapse number and function of excitatory CNS neurons. T. J. MOSCA*; D. LUGINBUHL; I. WANG; L. LUO. *Thomas Jefferson Univ., Stanford Univ., Stanford Univ.*

4:00 B45 **368.20** The synaptic organizer neurexin coordinates cholinergic connectivity with GABAergic neurons. M. L. LEMONS*; A. PHILBROOK; S. RAMACHANDRAN; D. OLIVER; C. LAMBERT; M. M. FRANCIS. *Assumption Col., Univ. of Massachusetts Med. Sch.*

1:00 B46 **368.21** Ultrasonic vocalization and sociability deficits in mice lacking SRPX2. B. SOTEROS*; G. SIA. *UT Hlth. San Antonio, Univ. of Texas Hlth. Sci. Ctr. at San Antonio.*

2:00 B47 **368.22** The Ig transmembrane protein Borderless is required for synaptic development and function in the *Drosophila* visual system. H. S. SHAW*; S. A. CAMERON; W. CHANG; Y. RAO. *McGill Univ. Hlth. Ctr.*

3:00 B48 **368.23** Proteolytic regulation of GABAergic synapse formation by neuroligin-2. T. TOMITA*; Y. NAO; R. NAGATOMO; K. YAMASHITA; M. KIMURA. *The Univ. of Tokyo.*

4:00 B49 **368.24** Highly selective cell-type programs regulate synaptic target specificity. R. DEOGRACIAS; E. FAVUZZI; A. MARQUES-SMITH; D. EXPOSITO-ALONSO; P. MAESO; B. RICO*. *King's Col. London.*

1:00 B50 **368.25** Withdrawn

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 B51 **368.26** Shunting $GABA_A$ transmission restrains glutamtergic synapse formation in the developing hippocampus. C. K. SALMON*; H. PRIBIAG; G. QUESSEVEUR; M. A. WOODIN; K. K. MURAI. *Ctr. For Res. In Neurosci., UCSD, Ctr. for Res. in Neurosci., Univ. of Toronto.*

3:00 B52 **368.27** Decreased cohesin in the brain leads to defective synapse development and anxiety-related behavior. Y. FUJITA*; T. YAMASHITA. *Dept Mol Neurosci, Grad Sch. Med, Osaka Univ.*

4:00 B53 **368.28** Development of a novel designer synapse connector and control of synapse formation and behavior *in vivo.* K. SUZUKI*; W. KAKEGAWA; E. MIURA; J. ELEGHEERT; A. CLAYTON; R. KAUSHIK; A. DITYATEV; R. A. ARICESCU; M. YUZAKI. *Keio Univ. Sch. of Med., Univ. of Oxford, German Ctr. for Neurodegenerative Dis., MRC Lab. of Mol. Biol.*

1:00 B54 **368.29** Neurexin, neuroligin and wishful thinking in synaptic cytoarchitecture and growth at NMJ. S. BANERJEE*. *UT Hlth. Sci. Ctr. At San Antonio.*

2:00 B55 **368.30** Compartmentalized regulation of the InR/PI3K pathway by the Prl phosphatase directs spatial specificity of CNS synaptogenesis. O. URWYLER*; A. IZADIFAR; S. VANDENBOGAERDE; K. VINTS; A. KREMER; D. SCHMUCKER. *Univ. of Zürich, VIB & KU Leuven, VIB BioImaging Core.*

POSTER

369. Autism: Physiology and Systems

Theme A: Development

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 B56 **369.01** Electrophysiological correlates of simulated language acquisition in autism spectrum disorder. E. ISENSTEIN*; A. KEY; J. H. FOSS-FEIG. *Seaver Autism Ctr., Kennedy Ctr. for Res. on Human Develop.*

2:00 B57 **369.02** ▲ Microstructure and morphometry of the pons in response to balance training in individuals with autism. I. GALLAGHER*; A. GOMEZ; O. DADALKO; K. MCLAUGHLIN; O. J. SURGENT; B. KOEHN; B. TRAVERS. *Waisman Ctr., Occup. Therapy Program in the Dept. of Kinesiology, Univ. of Wisconsin-Madison.*

3:00 B58 **369.03** Comparative study of supression of neuroinflammation by resveratrol and curcumin in the experimental paradigm of autism spectrum disorders. R. BHANDARI*; A. KUHAD. *Panjab Univ., Panjab Univ.*

4:00 B59 **369.04** Sensory challenges in autism are associated with microstructural atypicalities in the brainstem. B. TRAVERS*; O. DADALKO; K. AUSDERAU; K. MCLAUGHLIN. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

1:00 B60 **369.05** Generation of microglial developmental index: Bridging the gap between mice and humans. R. HANAMSAGAR*; M. ALTER; C. L. BLOCK; H. SULLIVAN; J. L. BOLTON; S. D. BILBO. *Massachusetts Gen. Hosp., Univ. of Pennsylvania, Duke Univ., Duke Univ., Univ. of California-Irvine, Harvard Med. School/MGH.*

2:00 B61 **369.06** ▲ Age-related cortical thickness differences in adults with autism spectrum disorder. C. RIECKEN*; B. B. BRADEN. *Col. of Hlth. Solutions, Arizona State Univ. - Tempe Campus.*

3:00 B62 **369.07** Age-related developmental changes in the neural response to faces from childhood through adolescence in autism spectrum disorder. D. YANG*; A. WESTPHAL; K. A. PELPHREY. *The George Washington Univ., Children's Natl. Hlth. Syst., Yale Univ., The George Washington Univ.*

4:00 B63 **369.08** Neurofunctional properties of cognitive reappraisal for circumscribed interests in autism. L. D. ANTEZANA*; M. C. COFFMAN; J. A. RICHEY. *Virginia Tech.*

1:00 B64 **369.09** Convergent pathobiology in human iPSCs from individuals with idiopathic autism uncovered by transcriptomic and neurophysiological analysis. M. W. NESTOR*; B. DEROSA; J. EL HOKAYEM; E. ARTIMOVICH; C. GARCIA-SERJE; A. W. PHILLIPS; M. L. CUCCARO; H. N. CUKIER; J. M. VANCE; M. A. PERICAK-VANCE; D. DYKXHOORN. *The Hussman Inst. For Autism, The Univ. of Maryland, Sch. Of Med., Univ. of Miami Miller Sch. of Med., John P. Hussman Inst. for Human Genomics, The Hussman Inst. for Autism, John T. Macdonald Fndn. Dept. of Human Genet., Dept. of Neurol.*

2:00 B65 **369.10** Reassessing the autistic phenotype using big-data from the autism brain imaging data exchange repository. C. CABALLERO*; S. MISTRY; C. WHYATT; E. B. TORRES. *Rutgers University. Psychology Dept., Rutgers Univ., Rutgers Univ. - Busch Campus, Rutgers Univ. Dept. of Psychology.*

3:00 C1 **369.11** Early electrophysiological markers of neural network development in infants at risk for autism spectrum disorder (ASD). A. DICKINSON*; E. LIN; A. SCHEFFLER; D. SENTURK; M. DAPRETTO; S. S. JESTE. *UCLA, UCLA.*

4:00 C2 **369.12** Functional connectivity predicts language ability in infants at risk for ASD. X. A. TRAN*; C. KURE LIU; A. DICKINSON; M. DAPRETTO; S. S. JESTE. *UCLA, UCLA, UCLA Semel Inst. of Biobehavioral Sci.*

1:00 C3 **369.13** Hemispheric and developmental differences in the neural processing of mutual eye contact in individuals with autism spectrum disorder. K. A. MCNAUGHTON*; A. NAPLES; T. C. DAY; M. J. ROLISON; A. CHANG; T. MCALLISTER; J. MCPARTLAND. *Child Study Center, Yale Univ.*

2:00 C4 **369.14** Sex differences in the brain surface area of children with autism spectrum disorders. C. CHEN*; J. VAN HORN. *USC.*

3:00 C5 **369.15** Impact of the enriched environment on the multiunitary activity of the cerebellum in the autistic rat. O. E. CRUZ MAGOS*; G. HERRERA MEZA; J. MANZO; L. I. GARCIA; P. PACHECO; J. A. PEREZ, SR. *UNIVERSIDAD VERACRUZANA, Unidad De Investigaciones Alimentarias (UNIDA) Ins, Univ. Veracruzana, Ctr. de Investigaciones Cerebrales, Univ. Nacional Autonoma de México, UV.*

4:00 C6 **369.16** Sex differences in the resting-state functional connectivity of the cerebellum in autism spectrum disorders. R. E. SMITH*; J. AVERY; L. KENWORTHY; S. J. GOTTS; A. MARTIN. *Natl. Inst. of Mental Hlth., Children's Natl. Hlth. Syst., Lab. of Brain and Cognition, NIMH/NIH, Natl. Inst. of Mental Hlth.*

1:00 C7 **369.17** Brain-wide mapping of the developmentally regulated expression of the oxytocin receptor in mice. Z. T. NOLAN*; S. HIDEMA; K. NISHIMORI; Y. KIM. *Penn State Col. of Med., Grad. Sch. of Agr. Sciences/Tohoku Un, Tohoku Univ., Col. of Medicine, Penn State Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 C8 **369.18** Cyclic adp-ribose and heat regulate oxytocin release via cd38 and trpm2 in the hypothalamus during social or psychological stress in mice. S. AMINA*; H. HIGASHIDA. *Univ. of California, Davis, Univ. of California, Davis, Kanazawa Univ.*

3:00 C9 **369.19** Discriminating between attention deficit hyperactivity disorder and autism spectrum disorder using surface-base resting state functional connectivity. M. JUNG*; Y. TU; C. LANG; J. KONG. *Harvard Med. Sch.*

4:00 C10 **369.20** Sex-related patterns of intrinsic brain function in females with autism. D. FLORIS*; M. LAI; M. P. MILHAM; A. DI MARTINO. *NYU, Child and Youth Mental Hlth. Collaborative at the Ctr. for Addiction and Mental Hlth. and The Hosp. for SIck Children, Child Mind Inst.*

1:00 C11 **369.21** Atypical functional connectome gradients in autism. S. HONG*; R. VOS DE WAEL; S. L. VALK; D. S. MARGULIES; B. C. BERNHARDT. *Multimodal Imaging and Connectome Analysis Lab., Montreal Neurolog. Inst., Max Planck Inst. for Human Cognitive and Brain Sci., Max Planck Inst. For Human Cognitive and Brain Sci.*

2:00 C12 **369.22** Analyzing functional connectivity underlying social/communicative deficits in an autism mouse model. B. AN*; E. THOMSON; L. JARED; A. H. SUGI; A. J. PADILHA; C. BAKISKAN; M. NICOLELIS. *Duke Univ., Duke Univ.*

3:00 C13 **369.23** Subclinical markers of autism affect low-level visual information processing. A. ALINK*; N. HASSAN; F. BOXFORD; A. RUNGAPILLAY; S. ONAT*; C. BÜCHEL; I. CHAREST. *Univ. Med. Ctr. Hamburg-Eppendorf, Univ. of Birmingham.*

POSTER

370. Rett Syndrome and MECP2

Theme A: Development

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 C14 **370.01** CDKL5 controls postsynaptic localization of GluN2B-containing NMDA receptors in the hippocampus, and regulates seizure susceptibility, as well as emotional behaviors and memory. T. TANAKA*; K. OKUDA; S. KOBAYASHI; M. FUKAYA; K. TAKAO; A. WATANABE; T. MURAKAMI; M. HAGIWARA; S. KOMANO-INOUE; H. MANABE; M. YAMAGUCHI; H. SAKAGAMI; T. MIYAKAWA; M. MIZUGUCHI; T. MANABE. *Grad Sch. of Medicine, The Univ. of Tokyo, Inst. Med. Sci, Univ. Tokyo, Dept. of Anatomy, Kitasato Univ. Sch. of Med., Univ. of Toyama, The Univ. of Tokyo Grad. Sch. of Med., Fujita Hlth. University, ICMS, Div. Syst. Med.*

2:00 C15 **370.02** Towards epigenomic editing using CRISPR/Cas9 as a putative therapy in CDKL5-deficiency. J. A. HALMAI*; P. DENG; H. O'GEEN; N. COGGINS; J. NOLTA; D. SEGAL; K. FINK. *UC Davis Med. Ctr., UC Davis.*

3:00 C16 **370.03** MECP2 mutation causes abnormal effect of D2R agonist on locomotor and thermoregulation in mice. B. LU*; Z. XIONG. *Inst. of Neurosci.*

4:00 C17 **370.04** Neuronal redox imbalance in Rett syndrome: A key player in neuronal network dysfunction and altered neurotransmitter responsiveness? K. CAN; K. FESTERLING; S. KÜGLER; M. MUELLER*. *Univ. Goettingen.*

1:00 C18 **370.05** Defective mechanisms of corticogenesis in MeCP2 null cerebral cortexes. F. BEDOGNI*; C. COBOLLI GIGLI; L. SCARAMUZZA; A. MORIN; R. ROSSI; N. LANDSBERGER. *San Raffaele Hosp., Inst. Nazionale Genetica Molecolare, Univ. of Milan.*

2:00 C19 **370.06** Innovative pregnenolone-based therapeutic approaches for neurological disorders linked to mutations in X-linked Cyclin dependent kinase-like 5 (CDKL5). I. BARBIERO*; D. PERONI; M. TRAMARIN; L. RUSCONI; P. MOTTA; P. SINISCALCHI; N. LANDSBERGER; M. BIANCHI; C. KILSTRUP-NIELSEN. *Univ. of Insubria, Univ. of Milan, Transpharmation Ireland Limited.*

3:00 C20 **370.07** ● Efficacy of ANAVEX 2-73, a Sigma-1 receptor agonist, in the MECP2 mouse model of Rett syndrome. J. S. SPROUSE*; N. REBOWE; D. KLAMER; C. MISSLING. *Anavex Life Sci.*

4:00 C21 **370.08** Impact of arousal on visual processing in Rett syndrome. P. ARTONI*; G. A. EWALL; G. RANKIN; C. CHEN; T. K. HENSCH; M. FAGIOLINI. *Boston Children's Hospital, Harvard Med. Sch., Harvard Univ.*

1:00 C22 **370.09** Replication and comprehensive evaluation of neurobehavioral outcomes in a rat model of Mecp2. S. VEERARAGAVAN*; S. G. HUANG ; C. S. WARD ; R. C. SAMACO . *Baylor Col. of Med.*

2:00 C23 **370.10** Microglia phenotype varies regionally in in a Mecp2-heterozygous model of Rett Syndrome. C. O'FERRALL*; A. FOWLER; E. S. SMITH; M. S. LANGE; G. E. HOFFMAN; M. E. BLUE; S. KANNAN. *Johns Hopkins Univ., Morgan State Univ., Kennedy Krieger Inst., Johns Hopkins Univ.*

3:00 C24 **370.11** ● Ketamine treatment rapidly reverses cortical synaptic spine deficits in a mouse model of Rett syndrome. C. J. HOWELL, 44120; S. U. LAD; F. E. ABOUELSOUD; D. M. KATZ*. *Case Western Reserve Univ., Case Western Reserve Univ., Case Western Reserve Univ.*

4:00 C25 **370.12** Methyl-CpG binding domain protein 2 is a master regulator of neuronal gene pathways and behavior. E. M. LAX*; S. DO-CARMO; Y. ENUKA; N. MAHMOOD; S. RABBANI; C. A. CUELLO; Y. YARDEN; M. SZYF. *McGill Univ.*

POSTER

371. Imaging of Human Brain Maturation and Mental Health

Theme A: Development

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 C26 **371.01** Data-driven assessment of structural image quality. A. F. ROSEN*; D. R. ROALF; K. RUPAREL; J. BLAKE; K. SEELAUS; L. VILLA; P. A. COOK; C. DAVATZIKOS; M. A. ELLIOT; A. GARCIA DE LA GARZA; E. D. GENNATAS; M. QUARMLEY; J. SCHMITT; R. T. SHINOHARA; M. TISDALL; R. CRADDOCK; R. E. GUR; R. C. GUR; T. D. SATTERTHWAITE. *Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania, Child Mind Inst., Nathan S. Kline Inst.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 C27 **371.02** In-scanner head motion systematically impacts estimates of structural connectivity: Implications for studies of structural brain network development. G. L. BAUM*; D. R. ROALF; P. A. COOK; R. CIRIC; A. ROSEN; M. A. ELLIOT; P. RUPERT; M. QUARMLEY; K. RUPAREL; R. C. GUR; R. E. GUR; D. S. BASSETT; T. D. SATTERTHWAITE. *Univ. of Pennsylvania, Univ. of Penssylvania, Univ. of Pennsylvania.*

3:00 C28 **371.03** Investigating postnatal human brain development using diffusion tensor based morphometry (DTBM). A. NAYAK; M. IRFANOGLU; N. SADEGHI; C. PIERPAOLI*. *NIH.*

4:00 C29 **371.04** Age ain't nothing but a number: Salience and central executive network connectivity in high school and college students. N. A. PADGAONKAR*; L. E. SHERMAN; L. M. HERNANDEZ; M. DAPRETTO. *UCLA, Temple Univ.*

1:00 C30 **371.05** Multivariate pattern analysis shows that age-specific brain activity is shared by a broad range of cognitive tasks. P. STIERS*; M. BIRKISDÓTTIR; E. H. H. KEULERS. *Fac. of Psychology and Neuroscience, Maastricht Univ., Maastricht Univ.*

2:00 C31 **371.06** Development of visual P3 components from childhood to adulthood and associations with cortical structure: A study combining electrophysiology and MRI. K. OVERBYE*; R. J. HUSTER; K. B. WALHOVD; A. M. FJELL; C. K. TAMNES. *Univ. of Oslo.*

3:00 C32 **371.07** Visual search becomes faster during adolescence. R. BURGGRAAF WINGENS*, ESQ; J. N. VAN DER GEEST; M. A. FRENS; I. HOOGE. *Erasmus MC, Erasmus MC - Dept Neurosci. (ee12), Erasmus MC Rotterdam, Ignace Hooge.*

4:00 C33 **371.08** Context-dependent neurodevelopment of vta-accumbens connectivity: A longitudinal fmri study. V. P. MURTY*; D. F. MONTEZ; W. F. FORAN; F. J. CALABRO; B. LUNA. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh, Lab. Of Neurocognitive Develop.*

1:00 C34 **371.09** Association of sex and pubertal status on cortical thickness in typically-developing children. J. BARONE*; K. M. REDING; J. S. KIPPENHAN; S. WEI; T. NASH; M. ZAWADZKI; A. BOROSHOK; S. MURRAY; H. RAAB; P. MARTINEZ; D. E. BOYLE; E. ROBINSON; P. KOHN; L. NIEMAN; P. J. SCHMIDT; K. F. BERMAN. *Natl. Inst. of Mental Hlth., Natl. Inst. of Mental Hlth., NIH, Natl. Inst. of Diabetes and Digestive and Kidney Dis.*

2:00 C35 **371.10** Socioeconomic status and brain structure and function across development: A multimodal investigation. M. L. ROSEN*; M. A. SHERIDAN; K. A. SAMBROOK; A. N. MELTZOFF; K. A. MCLAUGHLIN. *Univ. of Washington, Univ. of North Carolina, Chapel Hill, Univ. of Washington.*

3:00 C36 **371.11** Socioeconomic status and minority status effects on brain structure and cognitive function: A multivariate analysis of the PING study dataset. C. CARDENAS-INIGUEZ*; M. G. BERMAN. *Univ. of Chicago.*

4:00 C37 **371.12** Developmental stabilization of neural gain signals improves mean behavioral performance and behavioral variability. D. F. MONTEZ*; B. LUNA. *Univ. of Pittsburgh, Lab. Of Neurocognitive Develop.*

1:00 C38 **371.13** Pubertal stage and body weight inversely affect activation in inhibitory areas during food choice in children. F. VAN MEER*; L. N. VAN DER LAAN; R. A. ADAN; G. EIBEN; L. LISSNER; M. WOLTERS; S. RACH; M. HERRMANN; P. ERHARD; D. A. MOLNAR; E. KOVACS; G. ORSI; P. A. M. SMEETS. *Univ. Med. Ctr. Utrecht, Univ. Med. Ctr. Utrecht, Univ. of Gothenburg, Leibniz- Inst. für Präventionsforschung und Epidemiologie - BIPS, Univ. of Bremen, Univ. of Pécs, Pécs Diagnos. Ctr.*

2:00 C39 **371.14** The association between cortical maturation and the development of impulsive choice in binge-drinking adolescents. S. A. JONES*; A. MORALES; B. J. NAGEL. *Oregon Hlth. and Sci. Univ., Oregon Hlth. & Sci. Univ., Oregon Hlth. and Sci. Univ.*

3:00 C40 **371.15** Early adolescent striatal and midbrain resting state connectivity correlate with impulsivity, sensation-seeking, and body mass index. R. J. SHARKEY*; J. BOURQUE; K. LARCHER; Y. ZHANG; A. ALTINKAYA; A. SADIKOT; P. CONROD; A. C. EVANS; H. GARAVAN; M. LEYTON; J. R. SEGUIN; R. PIHL; A. DAGHER. *Montreal Neurolog. Inst., Univ. de Montreal, Montreal Neurolog. Inst., Montreal Neurolog. Inst., Kings Col. London, Univ. of Vermont, Montreal Neurolog. Inst., Montreal Neurolog. Inst.*

4:00 C41 **371.16** Sexual dimorphism of the effect of DRD2 AUD-risk genotype on gray matter volume (GMV) and adolescent substance initiation. R. A. SCHROEDER*; B. W. STEVENS; V. L. DARCEY; E. J. ROSE; D. H. FISHBEIN; J. W. VANMETER. *Georgetown Univ., Georgetown Univ., The Pennsylvania State Univ.*

1:00 C42 **371.17** ▲ Dimensional relationships between basal ganglia iron and psychosis-spectrum symptoms in youth. L. M. BEARD*; A. ROSEN; M. A. ELLIOT; D. R. ROALF; K. PRABHAKARAN; R. CIRIC; M. E. CALKINS; T. M. MOORE; K. RUPAREL; R. GUR; R. C. GUR; D. H. WOLF; T. D. SATTERTHWAITE. *Brain Behavior Laboratory, Hosp. of the Univers, Univ. of Pennsylvania, Univ. of Pennsylvania, Pomona Col., Univ. Pennsylvania.*

2:00 C43 **371.18** Abnormal gyrification and cortical thickness in the schizophrenia prodrome: A developmental perspective. K. DAMME*; T. D. GUPTA, 60208; J. BERNARD; D. DEAN; R. NUSSLOCK; V. MITTAL. *Northwestern Univ., Northwestern Univ., Univ. of Colorado.*

3:00 C44 **371.19** ● Prenatal exposure to population-wide folic acid fortification impacts cortical maturation and psychosis risk in youth. H. ERYILMAZ*; F. C. HUNTINGTON; A. RODRIGUEZ-THOMPSON; T. W. SOARE; K. F. DOWLING; J. C. BLOSSOM; R. L. GOLLUB; E. SUSSER; R. C. GUR; M. E. CALKINS; R. E. GUR; T. D. SATTERTHWAITE; J. L. ROFFMAN. *Massachusetts Gen. Hosp., Ctr. for Geographic Analysis, Columbia Univ., Univ. Pennsylvania.*

4:00 C45 **371.20** ▲ Brain maturation effect on functional network graph metrics of patients with attention deficit hyperactivity disorder differs from normal children and adolescents. Assortativity as a measure of brain maturation. B. MOHAJER*; N. ABBASI; A. ABDOLALIZADEH. *Student Scientific Res. Ctr. of Tehran Unive, Tehran Univ. of Med. Sci.*

1:00 C46 **371.21** Amygdala response to distress cues and callous-unemotional traits; moderation by trauma. H. MEFFERT*; P. M. TYLER; M. L. BOTKIN; A. K. ERWAY; V. KOLLI; L. C. THORNTON; K. POPE; S. F. WHITE; J. R. BLAIR. *Boys Town Natl. Res. Hosp.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 C47 **371.22** ▲ Age-related changes in amygdala functional connectivity in children. T. IARAJULI*; A. ROY. *Fordham Univ.*

3:00 C48 **371.23** Regional developmental patterns within components of grey-/white matter intensity contrast and modulatory effects of mental health in youth. L. C. NORBOM*; N. T. DOAN; D. ALNÆS; T. KAUFMANN; L. T. WESTLYE; C. K. TAMNES. *NORMENT, NORMENT, Univ. of Oslo.*

POSTER

372. Insights Into Developmental Vulnerabilities

Theme A: Development

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 C49 **372.01** Circadian perturbation reveals time sensitivity to reward-related behavior during adolescence. M. A. HILDEBRAND*; C. A. VADNIE; R. W. LOGAN; M. M. TORREGROSSA; C. A. MCCLUNG. *Univ. of Pittsburgh, Univ. of Pittsburgh, UNIVERSITY OF PITTSBURGH, Univ. of Pittsburgh Med. Sch.*

2:00 C50 **372.02** Investigating the role of CXCR-4 in the adolescent sensitization to amphetamine. B. M. MASON*; S. DONALDSON; C. CALHOUN; V. WOYTOWICZ; L. PINA; R. KANDA. *Univ. of Massachusetts Boston.*

3:00 C51 **372.03** IL-1b promotes investment in present versus future outcomes. J. GASSEN*. *Texas Christian Univ.*

4:00 C52 **372.04** Dopamine development to the orbital prefrontal cortex is protracted and sensitive to amphetamine in adolescence. D. HOOPS*; L. REYNOLDS; J. RESTREPO-LOZANO; C. FLORES. *McGill Univ., McGill Univ.*

1:00 C53 **372.05** ▲ Social stress and the dietary environment affect infant brain volumes in macaques: Modulation by maternal factors. M. H. KYLE*; M. PINCUS; J. GODFREY; Y. SHI; M. STYNER; L. LI; B. R. HOWELL; K. ETHUN; M. E. WILSON; M. SANCHEZ. *Emory Univ., Yerkes Natl. Primate Res. Ctr., Univ. of North Carolina, Inst. of Child Develop., Ctr. for Behavioral Neurosci.*

2:00 C54 **372.06** Environmental Enrichment alters the behavioral phenotype of a unique animal model of mood disorders. A. M. O'CONNOR*; C. A. TURNER; E. L. AURBACH; E. K. HEBDA-BAUER; S. J. WATSON; H. AKIL. *MBNI Univ. of Michigan.*

3:00 C55 **372.07** ▲ Transgenerational effects of early life stress: DNA methylation in brain and blood. E. COLEY*; P. GANGULY; M. S. TRIVEDI; H. C. BRENHOUSE. *Northeastern Univ., Nova Southeastern Univ., Northeastern Univ.*

4:00 C56 **372.08** The developmental relationship between microglia and dopamine d1 receptors in the nucleus accumbens is altered by adolescent morphine exposure. A. M. KOPEC*; N. R. AYRE; S. C. SWEAT; S. D. BILBO. *Harvard Med. School/Massachusetts Gen. Hospi, Duke Univ.*

1:00 C57 **372.09** Parental alcohol exposure in binge pattern during puberty in rodent model impairs offspring development through puberty. A. ASIMES*; A. CUARENTA; C. K. KIM; A. P. AUGER; T. R. PAK. *Loyola Univ. Chicago Dept. of Cell and Mol. Physiol., Univ. of Wisconsin, Univ. Wisconsin, Madison.*

2:00 C58 **372.10** Stress during adolescence does not alter the total number or morphology of microglia in the male or female mPFC in adulthood. C. DRZEWIECKI*; J. WILLING; L. CORTES; J. M. JURASKA. *Univ. of Illinois at Urbana/Champaign, Univ. of Illinois, Univ. of Illinois.*

3:00 C59 **372.11** Transcriptome and cellular analyses in the human dorsolateral prefrontal cortex: associations with adolescent cannabis use. S. MUKHERJEE*; S. PARK; B. GADAD; S. PAWAR; D. DURAKOGLUGIL; I. DOZMOROV; K. GLEASON; C. TAMMINGA; T. HWANG; S. GHOSE. *UT Southwestern Med. Ctr., UT Southwestern Med. Ctr., UT Southwestern Med. Ctr.*

POSTER

373. Regulation and Function of Neurotrophic Factors

Theme B: Neural Excitability, Synapses, and Glia

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 C60 **373.01** ● Identification of cell type-specific ErbB4 isoform expression using a novel sensitive *in situ* hybridization approach. L. M. ERBEN*; M. HE; A. LAEREMANS; E. PARK; A. BUONANNO. *Section on Mol. Neurobiology, NICHD, NIH, Univ. of Bonn, Advanced Cell Diagnostics.*

2:00 C61 **373.02** Neuronal processing and axonal targeting of neuregulin 3. D. VULLHORST*; T. AHMAD; A. BUONANNO. *NICHD, NIH.*

3:00 C62 **373.03** Direct neuregulin-ErbB4 signaling in dopaminergic axonal projections regulates extracellular dopamine levels and cognitive-related behaviors. M. SKIRZEWSKI*; I. D. KARAVANOVA; A. SHAMIR; L. M. ERBEN; J. GARCIA-OLIVARES; J. SHIN; D. VULLHORST; V. A. ALVAREZ; S. G. AMARA; A. L. BUONANNO. *NIH/NICHD, NIH-NICHD, Mazra Mental Hlth. Ctr., Section on Mol. Neurobiology, NICHD, NIH, Natl. Inst. of Mental Hlth., The Natl. Inst. of Hlth., NICHD, NIH, Natl. Inst. on Alcohol Abuse and Alcoholism, Natl. Inst. of Mental Hlth., Chief of Sect Mol Neurobiol (SMN), NICHD, NIH.*

4:00 C63 **373.04** Neuregulin-2 regulates dopamine homeostasis, NMDA receptor synaptic currents and behaviors relevant to psychiatric disorders. A. L. BUONANNO*; L. YAN; A. SHAMIR; E. LEIVA-SALCEDO; O. KWON; I. D. KARAVANOVA; D. PAREDES; O. MALKESMAN; K. R. BAILEY; J. N. CRAWLEY; D. VULLHORST; M. SKIRZEWSKI. *Chief of Sect Mol Neurobiol (SMN), NICHD, NIH, NICHD, Mazra Mental Hlth. Ctr., Univ. de Santiago, DGMIF, NIH-NICHD, Lieber Inst. /John Hopking Univ., HHMI, Susquehanna Univ., Univ. of California Davis Sch. of Med., NICHD, NIH, NIH/NICHD.*

1:00 D1 **373.05** ▲ An ErbB antagonist injected into the substantia nigra decreases dopamine release in the striatum and inhibits feeding behavior. M. M. RAMIREZ; L. R. BETANCOURT*; D. PAREDES; L. F. HERNANDEZ; P. RADA. *Univ. of Los Andes, Univ. of Los Andes, Univ. of Denver, Univ. of Miami.*

2:00 D2 **373.06** TrkB regulates activity-dependent translocation of ZDHHC8 to dendrites through its phosphorylation by PKC. A. YOSHII*; K. P. KOSTER; Y. MURATA. *UIC, Univ. of Illinois at Chicago, George Washington Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 D3 **373.07** TrkB deletion from serotonergic neurons leads to impairment in memory and antidepressant efficacy. M. PRIYADARSHINI SAHU*; A. STEINZEIG; O. BOROWIECKI; V. VOIKAR; E. CASTREN. *Univ. of Helsinki, Neurosci. Center, Univ. of Helsinki, Neurosci. Ctr.*

4:00 D4 **373.08** Whole transcriptome analysis of the BDNF-induced JAK/STAT response in neurons and in a TLE model of epilepsy. K. M. HIXSON*; M. COGSWELL; A. BROOKS-KAYAL; S. J. RUSSEK. *BUSM Pharmacol., Boston Univ., Children's Hosp, Boston Univ. Sch. Med.*

1:00 D5 **373.09** Effects of the JAK2/STAT3 activator CNTF on Arc expression in the rat orbitofrontal cortex. M. GIROTTI*; D. A. MORILAK. *Univ. of Texas Hlth. Sci. Ctr. at San Antonio, Univ. of Texas Hlth. Sci. Ctr. at San Antonio.*

2:00 D6 **373.10** Genetic variants in scaffold proteins ARMS/KIDINS220 and RHO-GEF TRIO lead to altered plasma membrane expression and decreased dendritic transport in primary cortical neurons. T. M. KRANZ*; A. FOMITCHOVA; D. KAMINSKI; M. CAMMER; A. HEGUY; R. C. FROEMKE; D. MALASPINA; M. V. CHAO. *New York Univ. Med. Ctr., New York Univ. Med. Ctr., New York Univ. Med. Ctr., New York Univ. Med. Ctr.*

3:00 D7 **373.11** Role of Nerve growth factor and Brain derived neurotrophic factor in regulation of central nervous system myelination. J. M. LANGHNOJA*; L. BUCH; P. PILLAI. *The Maharaja Sayajirao Univ. of Baroda.*

4:00 D8 **373.12** Frequency of the BDNF Val66Met polymorphism in Brazilian healthy subjects. M. SCHULTZ*; D. FONTES; L. S. SANTOS; M. PEDRAZZOLI. *Univ. of Sao Paulo.*

1:00 D9 **373.13** Microglia-derived neuregulin expression in psychiatric disorders. D. IKAWA*; M. MAKINODAN; T. YAMAUCHI; Y. YAMASHITA; T. KOMORI; T. KISHIMOTO. *Nara Med. Univ.*

2:00 D10 **373.14** Exercise combined with low-level $GABA_A$ receptor inhibition modulates the expression of BDNF in the hippocampus accompanied by changes in epigenetic regulation. H. MAEJIMA*; S. NINUMA; A. OKUDA; T. INOUE; M. HAYASHI. *Hokkaido Univ., Hokkaido Univ., Hokkaido Univ.*

3:00 D11 **373.15** Aging and an immune challenge lead to reduced levels of BDNF and cholinergic receptor mRNAs in hippocampal synapses in a rodent model of delirium. N. TANAKA*; S. L. PATTERSON. *Temple Univ.*

4:00 D12 **373.16** Molecular basis of Obsessive-Compulsive Disorder: Involvement of TrkB/Slitrk5 in corticostriatal dysfunction. M. SONG*; A. LI; I. DINCHEVA; S. SHMELKOV; I. NINAN; F. LEE. *Korea Brain Res. Inst., Weill Cornell Med. Col., Columbia Univ., NYU Sch. of Med., New York Univ. Sch. of Med., Weill Cornell Med. Col.*

1:00 D13 **373.17** Intrahippocampal injection of Ouabain triggers dendritic branching in neurons and memory improvement in adult rats. C. SCAVONE*; A. M. M. ORELLANA; J. A. LEITE; P. F. KINOSHITA; A. R. VASCONCELOS; M. M. CARARO; D. Z. ANDREOTTI; L. S. LIMA; G. F. XAVIER; E. M. KAWAMOTO. *Univ. of Sao Paulo.*

2:00 D14 **373.18** Developmental and synaptic roles for FRS adapter proteins: Implications for neurotrophin and FGF signaling in the hippocampus. S. NANDI*; K. ALVINA; P. J. LITUMA; P. E. CASTILLO; J. M. HEBERT. *Albert Einstein Col. of Med., Albert Einstein Col. of Med.*

3:00 D15 **373.19** Blocking BDNF-TrkB signaling reduces taste function, particularly, to sour stimuli. J. RIOS-PILIER*; A. CLEMENTS; R. LUNDY; R. F. KRIMM. *Univ. of Louisville.*

POSTER

374. NMDA Receptors I

Theme B: Neural Excitability, Synapses, and Glia

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 D16 **374.01** Role of Wnt-5a on GluN2B expression. E. RAMOS*; N. C. INESTROSA. *Pontificia Univ. Católica, Ctr. for Aging and Regeneration.*

2:00 D17 **374.02** Postsynaptic serine racemase regulates NMDA receptors. J. M. WONG*; E. V. BARRAGAN; J. A. GRAY. *Univ. of California Davis, Univ. of California Davis, Univ. of California Davis.*

3:00 D18 **374.03** Adenosine A2A - D2 dopamine receptor modulation of NMDA responses in rat substantia nigra dopaminergic neurones. R. AL-HOSNI; F. CHERCHI; X. CAI; W. LEI; Z. HUANG; E. COPPI; A. J. GIBB*. *Univ. Col. London, Univ. of Florence, UCSD, Yale Univ., Beijing Univ., Univ. Col. London.*

4:00 D19 **374.04** ● Positive allosteric modulation as a potential therapeutic strategy in anti-NMDA receptor encephalitis. N. WARIKOO; S. BRUNWASSER; A. BENZ; J. J. DOHERTY; M. C. LEWIS; M. QUIRK; S. M. PAUL; L. PICCIO; C. F. ZORUMSKI; G. DAY; S. J. MENNERICK*. *Washington Univ. Sch. of Med., Sage Therapeut., Washington Univ. Sch. of Med., Washington Univ. Sch. of Med.*

1:00 D20 **374.05** Effects of amines on GluN1/GluN2A and GluN1/GluN2B subtypes of NMDA receptor. Y. YAMADA*; T. YABUKI; K. NISHII. *Fac. of Engineering, Kindai.Univ.*

1:00 DP02/D21 **374.06** ● (Dynamic Poster) Computer simulations of NMDA receptors with all-atom resolution: A new tool to study the dynamics of NMDARs. A. SINITSKIY*; V. S. PANDE. *Stanford Univ.*

3:00 D22 **374.07** Regulation of NMDAR trafficking by protein phosphatase 1. A. M. CHIU*; L. W. BARSE; A. SANZ-CLEMENTE. *Northwestern Univ.*

4:00 D23 **374.08** Bortezomib induces neuropathic pain through PKC-mediated activation of presynaptic nmda receptors in spinal cords. H. PAN*; S. CHEN. *Univ. Texas-MD Anderson Cancer Ctr., Univ. of Texas MD Anderson Cancer Ctr.*

1:00 D24 **374.09** Memantine inhibition of native synaptic NMDA receptors is Ca^{2+}-dependent. N. V. POVYSHEVA*; N. G. GLASGOW; J. W. JOHNSON. *Univ. of Pittsburgh Dept. of Neurosci., Univ. of Pittsburgh Dept. of Neurosci.*

2:00 D25 **374.10** Molecular insight into the N-methyl-D-aspartate receptor channel gating. M. LADISLAV*; J. CERNY; J. KRUSEK; K. SKRENKOVA; M. HORAK; A. BALIK; L. VYKLICKY JR. *Inst. of Physiol. CAS, Inst. of Physiol. CAS, Inst. of Biotech. CAS.*

3:00 D26 **374.11** Epilepsy-related mutations of GluN2A subunit of NMDA receptors. D. A. SIBAROV*; N. BRUNEAU; S. M. ANTONOV; P. SZEPETOWSKI; N. BURNASHEV; R. GINIATULLIN. *IEPHB RAS, INMED, Aix-Marseille Univ., Univ. of Eastern Finland.*

4:00 D27 **374.12** ● The A, B, C and D of NMDA receptor modulation. A. R. OBERGRUSSBERGER*; C. T. BOT; I. RINKE-WEIß; S. STÖLZLE-FEIX; N. BECKER; E. DRAGICEVIC; C. HAARMANN; A. BRÜGGEMANN; M. GEORGE; N. FERTIG. *Nanion Technologies GmbH, Nanion Technologies Inc.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 D28 **374.13** Ca^{2+}/calmodulin mediates strong negative coupling of NMDA receptor gating. G. IACOBUCCI*; G. K. POPESCU. *State Univ. of New York At Buffalo, Univ. at Buffalo, SUNY.*

2:00 D29 **374.14** Characteristics of NMDA receptor inhibition by the novel channel blockers RL-202 and RL-208. M. B. PHILLIPS*; R. LEIVA; S. VÁZQUEZ; J. W. JOHNSON. *Univ. of Pittsburgh, Univ. of Barcelona and IBUB.*

3:00 D30 **374.15** PSD<->95 deficiency alters glutamatergic transmission in the prefrontal cortex during development. A. A. COLEY*; W. GAO. *Drexel Univ. Col. of Med.*

4:00 D31 **374.16** Chicken embryo nerve cells culture from forebrain is a useful *in vitro* model to screen compounds aimed at glutamate receptor ion channels. M. F. FJELLDAL*; J. E. JAKOBSSON; P. RISS; A. RING; I. SYLTE; L. M. EVENSETH; R. E. PAULSEN. *Univ. of Oslo, Norwegian Def. Res. Establishment, Realomics Strategic Res. Initiative, Univ. of Oslo, Realomics Strategic Res. Initiative, UiT - The Arctic Univ. of Norway, UiT - The Arctic Univ. of Norway, Realomics Strategic Res. Initiative.*

1:00 D32 **374.17** Development of glutamatergic synapses onto layer 2/3 PV interneurons in the visual cortex during the critical period. R. C. FERRER FIERRO*; A. BAEZ; H. HSIEH; L. P. WOLLMUTH. *Stony Brook Univ., Stony Brook Univ. Hosp., Stony Brook Univ.*

2:00 D33 **374.18** Modulation of NMDA receptors by group I mGlu receptors delivered via two different pathways. S. SYLANTYEV*; N. O'NEIL; N. KOMIYAMA; M. STEFAN. *Univ. of Edinburgh.*

3:00 D34 **374.19** ● The NMDA receptor modulator NYX-2925 demonstrates therapeutic potential in preclinical models for the treatment of neuropathic pain. N. GHOREISHI-HAACK*; J. PRIEBE; J. DUNNING; J. BURGDORF; T. MADSEN; M. KHAN; C. CEARLEY; J. MOSKAL. *Aptinyx Inc., Northwerstern Univ., Northwestern Univ.*

4:00 D35 **374.20** ● Subunit-specific enhancement by 24S-hydroxycholesterol of NMDAR-mediated tonic currents in mouse dentate gyrus granule cells. X. WEI*; T. NISHI; S. KONDO; H. KIMURA; I. MODY. *The David Geffen Sch. of Med. at UCLA, Research, Takeda Pharmaceut. Co. Ltd, The David Geffen Sch. of Med. at UCLA.*

1:00 D36 **374.21** How NMDA receptor disruption affects prefrontal cortical neurophysiology essential for executive function. M. A. BINKO*; C. A. MIELNIK; A. J. RAMSEY; E. K. LAMBE. *Univ. of Toronto, Univ. of Toronto.*

2:00 D37 **374.22** GluN2B subunit selective NMDAR antagonist enhances the excitation/inhibition balance and disinhibits CA1 pyramidal cells only when estrogen is present in female rats. A. J. WIDMAN*; L. L. MCMAHON. *Univ. of Alabama at Birmingham (UAB), UAB.*

3:00 D38 **374.23** Asymmetrical pH-dependence in the activation of GluN1 and GluN2A N-methyl-D-aspartate receptor subunits. N. N. JACKSON*; K. S. JONES. *Univ. of Michigan Med. Sch.*

4:00 D39 **374.24** Static magnetic field modulates cortical synaptic plasticity *in vitro* through an NMDA receptor-dependent pathway. Y. SUN; P. A. ROSENBERG; A. PASCUAL-LEONE; A. ROTENBERG*. *Boston Children's Hosp., Boston Children's Hosp., Harvard Med. Sch., Beth Israel Deaconess Med. Center, Harvard Med. Sch.*

POSTER

375. Potassium Channels I

Theme B: Neural Excitability, Synapses, and Glia

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 D40 **375.01** SLK-01, a novel blocker of slack Na+-activated K+ channels. D. P. JENKINS*; V. GRIBKOFF; L. K. KACZMAREK. *Yale Univ., Yale Univ., Yale Univ. Sch. Med.*

2:00 D41 **375.02** Lithium may block the delay current (I_D) in olfactory projection neurons. P. KANTHAKUMAR; B. I. HYLAND*; P. HEYWARD. *Univ. of Otago.*

3:00 D42 **375.03** ● Kv3.3 potassium channel subunits are required to maintain fast synaptic transmission in the auditory brainstem. A. RICHARDSON; S. NEWTON; N. PILATI; C. H. LARGE; V. MARRA; I. D. FORSYTHE*. *Univ. of Leicester, Autifony Srl Labratories, Autifony Therapeut. Limited, Univ. of Leicester.*

4:00 D43 **375.04** TBK1/ ubiquitination/autophagy pathways are activated by Kv3.3 channels. Y. ZHANG*; L. VARELA; T. L. HORVATH; L. K. KACZMAREK. *Yale Univ. Sch. Med., Yale Univ., Yale Univ.*

1:00 D44 **375.05** Behavioral deficits following withdrawal from chronic ethanol are influenced by slo channel function in *C. elegans.* J. T. PIERCE*; L. SCOTT; S. DAVIS; S. NORDQUIST; G. ORDEMANN. *Univ. of Texas at Austin.*

2:00 D45 **375.06** The potassium channel Kv4.2 regulates seizure susceptibility in mouse models. D. TIWARI*; L. SCHROEDER; R. DANZER; A. BUNK; S. C. DANZER; C. GROSS. *Cincinnati Children's Hosp. Med. Ctr., Cincinnati Children's Hosp. Med. Ctr., Univ. of Cincinnati, Cincinnati Childrens Hosp. Med. Ctr., Univ. of Cincinnati.*

3:00 D46 **375.07** Regulation of ether-à-go-go potassium channel expression by RING E3 ubiquitin ligases. Y. FANG*; C. TANG; C. JENG. *Natl. Yang-Ming Univ., Natl. Taiwan Univ.*

4:00 D47 **375.08** A Cav2.3-Kv4.2 ion channel complex imparts local Ca^{2+} enhancement of A-type K^+ current. J. G. MURPHY*; L. LIN; E. E. GRAY; J. GUTZMANN; J. HU; D. A. HOFFMAN. *NIH.*

1:00 D48 **375.09** Activity dependent phosphorylation of Kv4.2. J. HU*; G. TABOR; Y. LIU; D. A. HOFFMAN. *NICHD.*

2:00 D49 **375.10** DPP6 loss results in behavioral impairments in recognition, learning and memory. L. LIN; J. G. MURPHY; R. KARLSSON; R. S. PETRALIA; H. A. CAMERON; D. A. HOFFMAN*. *NIH, NIH, NIH, NIDCD/NIH.*

3:00 D50 **375.11** SUMOylation of the mouse voltage-gated potassium channel Kv4.2 decreases the maximal conductance of the A-type potassium current (I_A). M. A. WELCH*; L. A. FORSTER; D. J. BARO. *Georgia State Univ., Georgia State Univ.*

4:00 D51 **375.12** BK channels are structurally and functionally coupled with NMDA receptors and postsynaptically regulate synaptic transmission and plasticity. X. GUAN; J. ZHANG; Q. LI; A. MEREDITH; H. PAN; J. YAN*. *Univ. of Texas MD Anderson Cancer Ctr., Univ. of Maryland Sch. of Med.*

1:00 D52 **375.13** Temperature-sensitive outward currents through two-pore domain K^+ channels in nociceptive-like primary afferent neurons. V. VIATCHENKO-KARPINSKI*; F. EROL; J. LING; J. G. GU. *Univ. of Alabama At Birmingham.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 D53 **375.14** ● 17β-Estradiol potentiates TREK-1 activity through G protein-coupled estrogen receptor. N. CHOUDHURY*; S. K. SIKDAR. *Indian Inst. of Sci.*

3:00 D54 **375.15** The functional modulation of sodium-activated potassium (Slack) channels by Phactr1. S. R. ALI*; L. KACZMAREK. *Yale Univ.*

4:00 D55 **375.16** ● Mouse model of slack-associated epilepsy. I. H. QURAISHI*; M. MERCIER; Y. ZHANG; D. P. JENKINS; K. P. MANGAN; L. K. KACZMAREK. *Yale Sch. of Med., Yale Sch. of Med., Yale Univ. Sch. Med., Yale Univ., Cell. Dynamics, Intl.*

1:00 D56 **375.17** The effects of organophosphate flame retardants on the M-current in NPY neurons in adult mice. G. VAIL*; T. A. ROEPKE. *Rutgers Univ., Rutgers, The State Univ. of New Jersey.*

2:00 D57 **375.18** Loss of Kv1.3 potassium channels impairs auditory function. L. EL-HASSAR*; L. SONG; V. R. GAZULA; D. NAVARATNAM; J. SANTOS-SACCHI; L. K. KACZMAREK. *Yale Univ. Sch. of Med., Yale Sch. of Med., Yale Sch. of Med.*

3:00 D58 **375.19** Upregulation of microglial Kv1.3 potassium channels in neuroinflammatory disorders. H. M. NGUYEN*; Y. CHEN; H. WULFF; I. MAEZAWA; L. JIN. *Univ. of California Davis, UC Davis, M.I.N.D. Inst, UC Davis, M.I.N.D. Inst. UC Davis.*

4:00 D59 **375.20** Synaptic activation tunes action potential shape through a BK-channel-mediated feedback pathway. E. S. NIKITIN*; M. V. ROSHCHIN; M. MATLASHOV; V. N. IERUSALIMSKY; P. M. BALABAN; V. BELOUSOV; G. KEMENES; K. STARAS. *Inst. Higher Nervous Activity, Shemyakin-Ovchinnikov Inst. of Bioorganic Chem., Sussex Neuroscience, Sch. of Life Sciences, Univ. of Sussex.*

1:00 D60 **375.21** Cav2.3 contributes to hippocampal excitability through activation of calcium-dependent potassium channels. J. J. GUTZMANN*; D. A. HOFFMAN. *NIH.*

2:00 D61 **375.22** Activation of Slack potassium channels triggers an increase in mRNA translation. T. J. MALONE*; P. LICZNERSKI; E. A. JONAS; L. K. KACZMAREK. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Yale Univ. Sch. of Med.*

3:00 D62 **375.23** Evidence for the participation of TASK potassium channels in formalin induced acute and chronic inflammatory pain. R. NORIEGA*; G. GARCÍA; V. A. MARTÍNEZ-ROJAS; J. MURBARTIÁN. *Cinvestav.*

4:00 D63 **375.24** Facile conjugation of the peptide margatoxin to luminescent quantum dots for targeted delivery towards the voltage-gated potassium channel Kv1.3 in the olfactory bulb. A. SCHWARTZ*; A. KAPUR; Z. HUANG; R. ANANGI; Z. DEKAN; E. FARDONE; G. PALUI; G. F. KING; H. MATTOUSSI; D. A. FADOOL. *Florida State University, Mol. Biophysics Program, Florida State Univ., Florida State Univ., The Univ. of Queensland, Florida State Univ.*

1:00 E1 **375.25** Structure-activity relationship studies of SK channel positive allosteric modulators. Y. NAM; R. ORFALI; A. VIEGAS; M. ZHANG*. *Chapman Univ. Sch. of Pharm.*

2:00 E2 **375.26** The effects of single nucleotide polymorphisms (SNPs) on human BK channel currents. A. PLANTE*; B. MCNALLY; M. LAI; A. MEREDITH. *Univ. of Maryland, Baltimore.*

3:00 E3 **375.27** Decreased expression of Kir K^+ channel in iPSC-derived astrocytes in subjects with Monge's disease. W. WU; H. YAO*; J. WANG; G. G. HADDAD. *UCSD, UCSD, Rady Children's Hospital-San Diego.*

4:00 E4 **375.28** ● Differential regulation of delayed-rectifying voltage-gated potassium channel dynamics by the mutant sigma1-receptor underlying ALS16. M. J. ABRAHAM*; A. Y. WONG; R. BERGERON. *Univ. of Ottawa, Ottawa Hosp. Res. Inst.*

1:00 E5 **375.29** Phosphorylation-specific interaction of potassium channels with Fragile X mental retardation protein tunes inhibitory neurotransmission. Y. YANG*; J. ARSENAULT; A. BAH; M. KRZEMINSKI; A. FEKETE; L. PACEY; A. WANG; J. FORMAN-KAY; D. HAMPSON; L. WANG. *Univ. of Minnesota, SickKids Res. Inst., Univ. of Toronto, SickKids Res. Inst., Univ. of Toronto, Univ. of Toronto, Univ. of Toronto.*

2:00 E6 **375.30** Expression of potassium channels in compulsive methamphetamine-seeking & abstinent rats using a punishment model. S. JAYANTHI*; L. CONTU; B. LADENHEIM; M. T. MCCOY; M. JOB; B. CAMPBELL; C. BLACKWOOD; J. CADET. *NIDA-IRP, NIDA-IRP.*

POSTER

376. Potassium Channels II

Theme B: Neural Excitability, Synapses, and Glia

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 E7 **376.01** Phosphatidylinositol 4,5-bisphosphate (PIP_2) regulates afterhyperpolarizations by modulating voltage-gated Ca^{2+} channels in oxytocin neurons of the supraoptic nucleus. M. KIRCHNER*; R. C. FOEHRING; W. E. ARMSTRONG. *Univ. of Tennessee Hlth. Sci. Ctr., Univ. Tennessee Hlth. Sci. Ctr., Univ. of Tennessee Hlth. Sci. Ctr.*

2:00 E8 **376.02** Regulation of sodium-dependent potassium channel slack by 14-3-3 zeta (YWHAZ) in dorsal root ganglion neurons. R. G. POWELL*; K. D. PRYCE; S. GURURAJ; A. BHATTACHARJEE. *SUNY Univ. At Buffalo, State Univ. of New York At Buffalo, Univ. at Buffalo - The State Univ. of New York.*

3:00 E9 **376.03** PKA-induced Slack channel internalization from the neuronal membrane occurs by AP-2 Clathrin mediated endocytosis. A. BHATTACHARJEE*; S. GURURAJ; K. EVELY; K. D. PRYCE. *Univ. at Buffalo - The State Univ. of New York, Univ. At Buffalo - Downtown Campus, State Univ. of New York At Buffalo.*

4:00 E10 **376.04** Characterization of a novel mouse model of KCNT1 epileptic encephalopathy. L. E. BURBANO*; M. LI; N. JACOVSKI; K. L. RICHARDS; E. GAZINA; S. MALJEVIC; C. REID; S. PETROU. *Florey Inst. of Neurosci. and Mental Hlth., Univ. of Melbourne.*

1:00 E11 **376.05** Inhibition of Kv3.4 channels is implicated in the potentiation of excitatory synaptic transmission in superficial dorsal horn neurons. T. MUQEEM*; V. PINTO; B. CHARSAR; E. BROWN; A. C. LEPORE; M. COVARRUBIAS. *Thomas Jefferson Univ., Univ. of Minho.*

2:00 E12 **376.06** KCNQ channels regulate firing properties of the calyx of Held. Y. ZHANG; L. O. TRUSSELL; H. HUANG*. *Tulane Univ., Oregon Hlth. and Sci. Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 F1 **376.07** KCNQ/K_V7 potassium channels contribute to the control of mouse nodose airway C-fiber excitability. H. SUN*; S. MEEKER; B. J. UNDEM. *Johns Hopkins Univ.*

4:00 F2 **376.08** Novel drugs that augment KCNQ (Kv7,"M-type") potassium channels as a post-event treatment for Traumatic Brain Injury. M. HOBBS*; F. A. BORGES-VIGIL; E. BOZDEMIR; R. J. VERAZA; V. BUGAY; L. ESPINOZA; D. M. HOLSTEIN; S. M. SPRAGUE; I. SANCHEZ; J. CARVAZOS; S. H. CHUN; R. BRENNER; J. LECHLEITER; M. S. SHAPIRO. *UT Hlth. Sci. Ctr. SA, UT Hlth. Sci. Ctr. SA, UT Hlth. Sci. Ctr. SA, UT Hlth. Sci. Ctr. SA.*

1:00 F3 **376.09** Ablation of KCNQ2/3 from either pyramidal neurons or interneurons leads to increased excitatory transmission in mouse hippocampus. H. SOH; K. SPRINGER; A. TZINGOUNIS*. *Univ. of Connecticut, Storrs, Univ. of Connecticut, Storrs, Univ. of Connecticut.*

2:00 F4 **376.10** Suppressive effects of amyloid peptide fragments (1-42) and the toxic "core" (25-35) on Kv1.1 channel activity. K. DEBOEUF*; M. ISLAM; N. THELEN; J. FARLEY. *Indiana Univ. Bloomington.*

3:00 F5 **376.11** ● Validation of human iPSC models of psychiatric diseases for target ID and phenotypic screening. M. NAUJOCK; V. KIZNER; S. FELK; A. SPEIDEL; S. JAEGER; G. LEPERC; K. FUNDEL-CLEMENS; T. HILDEBRANDT; C. DORNER-CIOSSEK; B. SOMMER*; F. GILLARDON. *Boehringer Ingelheim Pharma GmbH & Co. KG.*

4:00 F6 **376.12** Sorting Nexin 27 in midbrain dopamine neurons regulates addictive behavior to cocaine. R. RIFKIN*; J. CALLENS; J. LANDRY; G. EGERVARI; Y. HURD; P. A. SLESINGER. *Icahn Sch. of Med. at Mount Sinai.*

POSTER

377. Synaptic and Dendritic Integration

Theme B: Neural Excitability, Synapses, and Glia

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 F7 **377.01** Synaptic failure and functional network activity. M. BUDAK*; M. R. ZOCHOWSKI. *Univ. of Michigan Ann Arbor, Univ. of Michigan.*

2:00 F8 **377.02** Co-transmission by a basal forebrain cholinergic projection to the olfactory bulb. S. D. BURTON; D. T. CASE; J. GEDEON; S. G. WILLIAMS; N. N. URBAN; R. P. SEAL*. *Univ. of Utah, Univ. of Pittsburgh.*

3:00 F9 **377.03** Summation of metabotropic $GABA_B$ receptor mediated postsynaptic potentials in the supragranular layer of the neocortex. A. OZSVÁR*; G. KOMLÓSI; J. SZABADICS; G. OLÁH; G. MOLNÁR; G. TAMÁS. *Res. Group For Cortical Microcircuits, Lab. of Thalamus Res., Lab. of Cell. Neuropharm.*

4:00 F10 **377.04** Dendritic integration in human cortical pyramidal neurons. M. LAFOURCADE; L. BEAULIEU-LAROCHE; M. VAN DER GOES; E. N. ESKANDAR; M. P. FROSCH; S. S. CASH; M. T. HARNETT*. *MIT, Massachusetts Gen. Hosp., MGH, Mass Genl Hosp.*

1:00 F11 **377.05** Voltage-dependence of spatial coding in hippocampal pyramidal neurons supported by persistent sodium current. C. HSU*; X. ZHAO; A. D. MILSTEIN; N. SPRUSTON. *Janelia Res. Campus, HHMI, Stanford Univ. Sch. of Med.*

2:00 F12 **377.06** ▲ Coexpression of AMPA and NMDA receptors reduces variability in synaptic transmission. C. LI*; A. T. GULLEDGE. *Dartmouth Col., Geisel Sch. of Med. At Dartmouth Col.*

3:00 G1 **377.07** Excitation/inhibition dendritic integration in fast spiking interneurons of the dentate gyrus. C. ELGUETA*; M. BARTOS. *Freiburg Univ.*

4:00 G2 **377.08** Backpropagating action potentials boost dendritic inhibition. G. TESTA-SILVA*; M. HAUSSER; G. J. STUART. *The Australian Natl. Univ., UCL.*

1:00 G3 **377.09** Behavioral timescale synaptic plasticity underlies place selectivity in CA1. C. GRIENBERGER*; K. C. BITTNER; A. D. MILSTEIN; S. ROMANI; J. C. MAGEE. *HHMI/ Janelia Res. Campus, Stanford Univ. Sch. of Med.*

2:00 G4 **377.10** CA1 pyramidal neurons receive spatially clustered synaptic inputs during sharp waves/ripples *ex vivo.* T. ISHIKAWA*; Y. IKEGAYA. *Keio Univ., Grad Sch. Pharma Sci, Univ. Tokyo.*

3:00 G5 **377.11** The effect of extracellular calcium on the E/I -ratio in pyramidal neurons in the hippocampus. M. FORSBERG*; H. SETH; A. BJOREFELDT; E. L. HANSE. *Univ. of Gothenburg, Univ. of Gothenburg, Inst. of Neurosci. and Physiol., Goteborg Univ.*

4:00 G6 **377.12** A computational model of two-photon calcium imaging with a genetically encoded calcium indicator in spines and dendrites. B. SCHNEIDERS; A. ABOUZEID*; W. L. KATH. *Northwestern Univ., Northwestern Univ., Northwestern Univ.*

1:00 G7 **377.13** Electrical structure of dendritic spines: A voltage imaging study with patterned illumination based on computer-generated holography (CGH). J. WENG; D. ZECEVIC*; D. TANESE; V. ZAMPINI; V. DE SARS; M. CANEPARI; V. EMILIANI. *Yale Univ. Sch. Med., Paris Descartes Univ., Univ. Grenoble Alpes.*

2:00 G8 **377.14** Electrical compartmentalization of dendritic spines prevents synaptic voltage-clamp. L. BEAULIEU-LAROCHE*; M. T. HARNETT. *MIT, MIT.*

3:00 G9 **377.15** Effects of focal ischemia on cortical excitation in the UCH-L1 knock-in mice. N. V. POVYSHEVA; F. ZHANG; M. E. ROSE; J. S. BANTON; S. GRAHAM; G. BARRIONUEVO*. *Univ. Pittsburgh, Univ. Pittsburgh.*

POSTER

378. Neuronal Physiology

Theme B: Neural Excitability, Synapses, and Glia

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 G10 **378.01** Differential regulation of calcium sensors involved in asynchronous release by $G_{i/o}$-coupled GPCRs. Z. ZURAWSKI; B. PAGE; S. T. ALFORD; H. E. HAMM*. *Vanderbilt Univ., Univ. of Illinois at Chicago, Univ. of Illinois at Chicago, Vanderbilt Univ. Sch. of Med.*

2:00 H1 **378.02** 2D and 3D neuronal cultures exhibit significantly different spontaneous activity patterns. M. HASAN*; Y. BERDICHEVSKY. *Lehigh Univ., Lehigh Univ.*

3:00 H2 **378.03** Stimulus-evoked Ca^{2+} influx at a single active zone varies through a variable and small population of voltage-gated Ca^{2+} channels. S. RODRIGUEZ*; S. RAMACHANDRAN; E. C. CHURCH; S. T. ALFORD. *Univ. of Illinois At Chicago, Univ. Illinois, Chicago, Univ. of Illinois At Chicago, Univ. of Illinois at Chicago.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 H3 **378.04** Neuron-Specific Gene 2 (NSG2) regulates excitatory synaptic transmission via modulation of AMPAR surface expression. P. CHANDER*; J. P. WEICK. *Univ. of New Mexico, Univ. of New Mexico.*

1:00 H4 **378.05** Voltage-sesitive dye signal analysis of inhibitory components in mouse perirhinal-entorrhinal cortical slices. Y. WAKAYAMA*; S. KAMADA; Y. YAMADA; T. TOMINAGA; R. KAJIWARA. *Meiji Univ., Meiji Univ., Inst. of Neuroscience, Tokushima Bunri Univ.*

2:00 H5 **378.06** The glutamatergic synaptic cleft alkalinizes, rather than acidifies, during neurotransmission, a phenomenon that ameliorates depression during burst firing. M. STAWARSKI*; R. HERNANDEZ; G. T. MACLEOD. *Florida Atlantic Univ., Florida Atlantic Univ.*

3:00 H6 **378.07** Localization of glycinergic neurons in the mouse thalamus. P. A. LOZANO*. *The Univ. of Texas At El Paso.*

4:00 H7 **378.08** $nNOS^+$ interneurons contribute to inhibition and neurogenesis in the dentate gyrus. A. F. MANUEL*; J. C. GONZALEZ; R. J. VADEN; E. W. ADLAF; A. J. NIVER; J. I. WADICHE; L. OVERSTREET-WADICHE. *Univ. of Alabama At Birmingham.*

1:00 H8 **378.09** Habenula-driven protracted feed-forward inhibition mediated by $5\text{-}HT_{1A}$ receptors in the dorsal raphe nucleus. M. B. LYNN*; S. D. GEDDES; S. MAILLÉ; D. LEMELIN; R. BERGERON; S. HAJ-DAHMANE; J. BÉÏQUE. *Univ. of Ottawa, Univ. of Ottawa, Univ. at Buffalo.*

2:00 H9 **378.10** Elevated O-GlcNAcylation modulates inhibitory neurotransmission in hippocampal area CA1. L. T. STEWART*; J. C. CHATHAM; L. L. MCMAHON. *Univ. of Alabama At Birmingham, Univ. of Alabama At Birmingham, Univ. of Alabama At Birmingham.*

3:00 H10 **378.11** ● Presynaptic actions of isovaline reduce inhibitory and excitatory postsynaptic currents in thalamic neurons. K. A. ASSERI*; B. A. MACLEOD; S. K. W. SCHWARZ; E. PUIL. *Univ. of British Columbia, King Khalid Univ., Dept of APT UBC, The Univ. of British Columbia.*

4:00 H11 **378.12** Inhibitory neurotransmission drives endocannabinoid degradation during memory consolidation. C. DUBOIS*; J. LIU. *LSUHSC.*

1:00 H12 **378.13** Faulty mGluR activation of the inhibition, a mechanism for homeostatic control of somatosensory cortex hyperexcitability in fragile X syndrome. C. A. CEA-DEL RIO*; A. F. NUNEZ-PARRA; S. FREEDMAN; D. RESTREPO; M. M. HUNTSMAN. *Univ. de Santiago de Chile, Univ. Autonoma de Chile, Univ. of Colorado at Denver - Anschutz Med. Campus, Univ. of Colorado Anschutz Med. Campus.*

2:00 I1 **378.14** *In vivo* detection of endogenous octopamine and serotonin upon conditioning-training stimuli in *Drosophila* mushroom bodies. S. I. HIDALGO*; N. FUENZALIDA-URIBE; D. F. MOLINA-MATEO; J. M. CAMPUSANO. *Pontificia Univ. Católica De Chile.*

3:00 I2 **378.15** L-proline,a metabolite linked to neuropsychiatric disorders and associated with the22q11.2 deletion syndrome, specifically disrupts high-frequency GABA-ergictransmission. G. W. CRABTREE*; J. A. GOGOS. *Columbia Univ. Press, Columbia Univ., Columbia Univ. Med. Ctr.*

4:00 I3 **378.16** Modulating effects of MDMA on spontaneous firing of the subthalamic nucleus neurons: A quantitative study. C. MAHAPATRA*; R. MANCHANDA. *IIT Bombay, Indian Inst. of Technol. Bombay.*

1:00 I4 **378.17** An outward potassium current (M-current) is an estimate of the neuron's input. A. R. ASILADOR*; E. C. JOHNSON; R. RATNAM. *Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Illinois at Singapore Pte Ltd.*

2:00 I5 **378.18** Light-induced activation of dopamine, glutamate and GABA release on striatal medium spiny neurons in brain slices. E. MCKIMM*; T. PASTIKA; M. B. SINGH; J. A. WHITE; S. D. ANTIC. *Univ. of Connecticut Hlth.*

3:00 I6 **378.19** ● A new $GABA_A$ anesthetic that discriminates between tonic, fast and slow synaptic inhibition. N. S. CAYLA*; B. A. DAGNE; M. F. DAVIES; Y. WU; E. R. GROSS; M. B. MACIVER; E. J. BERTACCINI. *Stanford Sch. of Med., VA Hlth. Care system, VA Hlth. Care system.*

4:00 I7 **378.20** Towards a maximalist α-amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid receptor-centric biochemical model of the synapse and its application in neurodevelopmental disease research. R. FITZPATRICK*; U. S. BHALLA; M. I. STEFAN. *Univ. of Edinburgh, Natl. Ctr. For Biol. Sci.*

1:00 I8 **378.21** Adenosine A1 receptor agonist induces gene expression changes in light induced retinal degeneration. M. SOLIÑO; I. M. LARRAYOZ; E. M. LÓPEZ; M. REY-FUNES; A. MARTÍNEZ; E. GIRARDI; J. J. LOPEZ-COSTA*. *IBCN, Univ. De Buenos Aires-Conicet, Ctr. for Biomed. Res. of La Rioja (CIBIR).*

2:00 I9 **378.22** A dynamic clamp on every rig. N. S. DESAI*; R. GRAY; D. JOHNSTON. *Univ. of Texas at Austin.*

3:00 I10 **378.23** Fast-scan cyclic voltammetry to differentiate structurally similar monoamines. A. M. BELLE*; B. J. BELMONT; A. M. YORITA; C. SUPIN. *Lawrence Livermore Natl. Lab.*

4:00 J1 **378.24** Reconstructing circuit development in the zebrafish embryonic spinal cord at the single-cell level. Y. WAN*; Z. WEI; S. DRUCKMANN; P. KELLER. *HHMI Janelia Res. Campus, Janelia Res. Campus, Howard Hughes Med. Inst. Janelia Farm Res. Campus, HHMI Janleia Res. Campus.*

1:00 J2 **378.25** Imaging membrane potential of the endoplasmic reticulum with a genetically-encoded voltage indicator. M. SEPEHRI RAD*; L. B. COHEN; B. J. BAKER. *Korea Inst. of Sci. and Technol., Yale Univ. Dept. of Cell. and Mol. Physiol.*

2:00 J3 **378.26** ● Human iPS cells-derived neurons as platforms for drug discovery and screening. J. FAN*; T. ZOU; Q. LIU; Y. MEI. *Hopstem Biotech. Ltd. Co.*

3:00 J4 **378.27** Establishment of stable, expandable and safe iPSCs derived-human neural stem cell lines suitable for cell therapies and disease modeling. J. ROSATI; D. FERRARI; F. ALTIERI; S. TARDIVO; C. RICCIOLINI; C. FUSILLI; C. ZALFA; D. C. PROFICO; L. BERNARDINI; E. VALENTE; E. BINDA; M. COPETTI; G. LAMORTE; T. MAZZA; M. GELATI; A. SIMEONE; A. L. VESCOVI*. *I.R.C.C.S Casa Sollievo della Sofferenza, Univ. of Milan Bicocca, Lab. Cellule Staminali, Cell Factory and Biobanca, Hosp. Santa Lucia, Inst. of Genet. and Biophysics.*

4:00 J5 **378.28** ▲ Differential input resistance underlies asymmetrical electrical coupling between identified cardiorespiratory neurons. G. Z. ZHU; A. AZIZ; Y. GU; N. S. MAGOSKI*. *Queen's Univ., Queen's Univ.*

Mon. PM

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 J6 **378.29** A synthetic neurotransmission system to selectively modulate synaptic strength with intrinsic encoding and connectivity. C. MCKENZIE*; H. JANOVJAK. *IST Austria.*

2:00 J7 **378.30** Reduction of the crayfish caudal photoreceptor firing rate during anesthesia. J. R. DEARWORTH*, Jr.; S. C. NESBIT. *Lafayette Col.*

POSTER

379. Homeostatic Synaptic Plasticity: Cellular and Model Systems

Theme B: Neural Excitability, Synapses, and Glia

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 J8 **379.01** Integrated plasticity in dopaminergic neurons. E. GALLIANO*; V. N. MURTHY; M. S. GRUBB. *King's Col. London, Harvard Univ., Harvard Univ., Harvard Univ., MRC Ctr. Dev. Neurobiol.*

2:00 J9 **379.02** Cell-autonomous homeostatic mechanisms activated by activity deprivation. V. VALAKH*; S. NELSON. *Brandeis.*

3:00 J10 **379.03** Metaplasticity at CA1 synapses by homeostatic control of presynaptic release dynamics. J. BEIQUE*; C. SOARES; K. F. LEE. *Univ. of Ottawa, Univ. of Ottawa, Univ. of Ottawa.*

4:00 J11 **379.04** GABAergic and AMPAergic synaptic scaling appear to have different trigger mechanisms in mouse cortical neurons. C. E. GONZALEZ-ISLAS*; P. BUELOW; P. A. WENNER. *Emory Univ. Sch. of Med., Univ. Autonoma de Tlaxcala, Emory Univ., Emory Univ. Sch. of Med.*

1:00 J12 **379.05** Binding of calcium/calmodulin to PSD-95 N-terminus mediates homeostatic synaptic downscaling. D. CHOWDHURY*; M. TURNER; T. PATRIARCHI; C. CHEN; J. B. AMES; J. W. HELL. *Univ. of California Davis, Univ. of California Davis, Univ. of California Davis.*

2:00 K1 **379.06** PRG1 acts as a modulator of lipid signaling at the dendritic spine. G. PAYRHUBER*; W. FAN; A. STROH; R. NITSCH; J. VOGT. *Univ. Med. Ctr. Mainz, Univ. Med. Ctr. Münster.*

3:00 K2 **379.07** The long-term maintenance of homeostatic synaptic plasticity is reversible, temperature sensitive, and controlled by an intracellular calcium-handling pathway. C. FRANK*; T. D. JAMES; C. J. NEFF. *Univ. of Iowa, Univ. of Iowa, Univ. of Iowa.*

4:00 K3 **379.08** ▲ Considerations in repetitive activation of light sensitive ion channels for long-term studies: Channel rhodopsin in the *Drosophila* model. M. X. MATTINGLY*; J. HIGGINS; C. HERMANNS; R. COOPER. *Univ. of Kentucky.*

1:00 K4 **379.09** Coordination of short and long-term homeostatic plasticity by an innate immune signaling pathway. N. HARRIS*; D. J. BRASIER; R. D. FETTER; A. TONG; G. W. DAVIS. *UCSF, Carnegie Mellon Univ.*

2:00 K5 **379.10** Post-synaptic PI3-kinase controls the set point for presynaptic homeostatic plasticity. A. G. HAUSWIRTH*; K. J. FORD; A. TONG; G. W. DAVIS. *Univ. of California, San Francisco.*

3:00 K6 **379.11** Evidence for involvement of glia and epigenetic signaling in presynaptic homeostatic plasticity. T. WANG*; N. HARRIS; R. WERCBERGER; G. DAVIS. *Univ. of California, San Francisco.*

4:00 K7 **379.12** Genetic intersection of autism gene mutations and homeostatic plasticity. O. GENC*; G. W. DAVIS. *UCSF.*

1:00 K8 **379.13** Circadian genes, sleep, and alcohol in *Drosophila.* A. GHEZZI*; M. E. RAMIREZ; J. L. AGOSTO; N. S. ATKINSON. *Univ. of Puerto Rico, Rio Piedras, The Univ. of Texas at Austin.*

POSTER

380. Dendritic Properties and Activity

Theme B: Neural Excitability, Synapses, and Glia

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 K9 **380.01** Membrane depolarisation, inactivation of A-type K^+ channels and transient saturation of Ca^{2+} buffers, mediated by mGluR1, synergistically control the spatial segregation of climbing fibre signalling in cerebellar Purkinje neurons. K. AIT OUARES*; L. FILIPIS; M. CANEPARI. *Liphy.*

2:00 K10 **380.02** Action potential-induced calcium responses actively backpropagate in spinal cord lamina I neurons. E. K. HARDING*; M. W. SALTER. *Hosp. For Sick Children, Univ. of Toronto.*

3:00 K11 **380.03** Multiscale model of feedback and activity modulation in stimulus sequence recognition by chemical signaling in dendrites. U. S. BHALLA*. *Natl. Ctr. For Biol. Sci.*

4:00 K12 **380.04** Fast 3D imaging of dendritic activity in pyramidal cells of visual cortex. T. J. YOUNTS*; C. BARAGLI; A. SILVER. *Univ. Col. London.*

1:00 L1 **380.05** Optimal signal transfer from dendrite to soma in mouse L5 pyramidal neurons. E. P. COOK*; R. A. GRAY; D. JOHNSTON; B. E. KALMBACH. *McGill Univ., The Univ. of Texas At Austin, The Univ. of Texas At Austin, Allen Inst. for Brain Sci.*

2:00 L2 **380.06** Active dendrites broaden membrane bandpass filtering and decrease temporal synchrony in a looming-sensitive neuron. R. B. DEWELL*; F. GABBIANI. *Baylor Col. of Med., Baylor Col. Med.*

3:00 L3 **380.07** Finding thresholds in active dendrites. W. L. KATH*. *Northwestern Univ.*

4:00 L4 **380.08** The role of dendritic spikes in inducing timing dependent plasticity in CA1 pyramidal neurons. T. BOCK*; S. A. SIEGELBAUM. *Columbia Univ., Columbia Univ. Coll P & S.*

1:00 L5 **380.09** Neuronal responses to distributed synaptic inputs are generally independent of dendritic length and branching structure. H. CUNTZ*; A. D. BIRD; M. BEINING; F. Z. HOFFMANN; S. PLATSCHEK; T. DELLER; P. JEDLICKA. *Ernst Strüngmann Inst. (ESI), Frankfurt Inst. for Advanced Studies, Inst. of Clin. Neuroanatomy, Goethe Univ.*

2:00 L6 **380.10** Input pattern dependent cooperative synaptic plasticity in dendrites of hippocampal CA1 pyramidal cells. A. MAGO; J. WEBER; J. K. MAKARA*. *Inst. of Exptl. Med.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 L7 **380.11** Back- and forward- propagating action potentials in dendrites of human layer 3 cortical pyramidal neurons. A. GIDON*; T. A. ZOLNIK; F. BOLDUAN; P. FIDZINSKI; M. HOLTKAMP; I. VIDA; M. E. LARKUM. *Humboldt Univ. zu Berlin, Charité - Universitätsmedizin Berlin, Inst. for Integrative Neuroanatomy, Charité - Universitätsmedizin Berlin, Charité - Universitätsmedizin Berlin, NeuroCure Cluster, Charité - Universitätsmedizin Berlin.*

4:00 L8 **380.12** Cellular mechanisms for multimodal integration in retrosplenial cortex. M. VAN DER GOES*; M. LAFOURCADE; D. BARNAGIAN; M. T. HARNETT. *MIT, McGovern Inst. for Brain Res.*

1:00 L9 **380.13** Hierarchical input integration at glutamatergic synapses of the nucleus accumbens. M. DEROCHE*; F. MICHEL; O. MANZONI. *Inserm Unit 901, Inmed, Aix-Marseille Univ.*

2:00 L10 **380.14** Dendritic plateau generation model in cortical pyramidal neurons: A link to cortical ensembles. P. GAO*; J. W. GRAHAM; S. ANGULO; S. DURA-BERNAL; W. W. LYTTON; S. D. ANTIC. *Univ. of Connecticut Hlth. Ctr., SUNY Downstate.*

POSTER

381. Network Interactions: Other

Theme B: Neural Excitability, Synapses, and Glia

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 M1 **381.01** Pinging the network - Causal modulation of pairwise correlations using optogenetics. A. R. ANDREI*; S. POJOGA; R. JANZ; V. DRAGOI. *Univ. of Texas Hlth. Sci. Ctr. At Houston.*

2:00 M2 **381.02** Morphofunctional interrogation of *in vitro* neuronal networks exposes modulators of synaptic connectivity. P. VERSTRAELEN*; M. VERSCHUUREN; J. DETREZ; R. M. NUYDENS; A. EBNETH; J. TIMMERMANS; W. H. DE VOS. *Univ. of Antwerp, Janssen Res. & Development, A Div. of Janssen Pharmaceutica NV.*

3:00 M3 **381.03** ● Two oscillatory modes of introducing cortical plasticity in human motor cortex: A transcranial alternating current stimulation study. M. TAKEMI*; J. KESSELHEIM; M. G. JØNSSON; H. R. SIEBNER. *The Univ. of Tokyo, Copenhagen Univ. Hosp. Hvidovre, Copenhagen Univ. Hosp. Bispebjerg.*

4:00 M4 **381.04** Effect of higher alfaxalone anesthesia on brain functional connectivity in rhesus monkeys. C. LI*; D. KEMPF; L. HOWELL; X. ZHANG. *Emory Univ., Emory Univ.*

1:00 M5 **381.05** Mutations causing alternating hemiplegia of childhood disrupt normal neural network activity patterns. K. MCSWEENEY*; E. HEINZEN; M. BOLAND; D. GOLDSTEIN. *Columbia Univ., Columbia Univ.*

2:00 M6 **381.06** Subthreshold divisive normalization controls gain and timing in hippocampus. S. MOZA*; A. BHATIA; U. S. BHALLA. *Natl. Ctr. For Biol. Sci.*

3:00 M7 **381.07** Spontaneous neural dynamics and functional connectivity in cortical circuits across timescales. R. FERNANDEZ GALAN*; N. KODAMA; T. FENG; J. J. ULLETT, 44106; S. S. SIVAKUMAR. *Case Western Reserve Univ., Case Western Reserve Univ., Case Western Reserve Univ.*

4:00 M8 **381.08** The role of local excitatory networks in the lateral amygdala in emotional memory learning. M. ABATIS*; R. NIU; R. PERIN; G. GIOBELLINA; H. BITO; H. MARKRAM; R. STOOP. *Dept. of Psychiatry, CHUV, Brain Mind Institute, EPFL, Univ. Tokyo Grad Sch. Med., EPFL, Blue Brain Project.*

1:00 M9 **381.09** Changes of intracellular calcium concentrations induced by oxytocin and vasopressin on dorsal horn cells from spinal cord slices: Implications in nociception modulation. I. TELLO-GARCÍA*; G. MARTÍNEZ-LORENZANA; A. GONZÁLEZ-HERNÁNDEZ; J. PÉREZ-ORTEGA; J. BARGAS; M. CONDÉS-LARA. *Univ. Nacional Autónoma De México, Inst. De Fisiología Celular - Univ. Nacional Autónoma De México.*

2:00 M10 **381.10** ● Hierarchical heterogeneity of circuit properties across human cortex shapes multiple temporal scales of spontaneous dynamics. M. DEMIRTAS*; M. HELMER; J. B. BURT; J. JI; S. SOTIROPOULOS; A. ANTICEVIC; J. D. MURRAY. *Yale Univ., Yale Univ., Yale Univ., Univ. of Oxford, Yale Univ.*

3:00 N1 **381.11** ● Hierarchical organization of microcircuit specialization across human cortex captured by myelin topography. J. B. BURT*; M. DEMIRTAS; W. J. ECKNER; J. WANG; N. NAVEJAR; L. JI; A. BERNACCHIA; A. ANTICEVIC; J. D. MURRAY. *Yale Univ., Tulane Univ., Univ. of Cambridge.*

4:00 N2 **381.12** Functional connectivity of the human claustrum. F. A. BARRIOS*; L. RODRÍGUEZ; S. ALCAUTER. *Univ. Nacional Autonoma de Mexico.*

1:00 N3 **381.13** Rhythmic activity of astrocytes synchronized with alternating motor output during fictive locomotion. I. YAZAWA*; S. OKAZAKI; S. YOKOTA; K. TAKEDA; H. MIKAMI; I. FUKUSHI; H. ONIMARU; Y. OKADA. *Hoshi Univ. Sch. of Pharm. & Pharmaceut. Sc, Waseda Univ., Murayama Med. Ctr., Shimane Univ. Sch. of Med., Fujita Hlth. Univ., Showa Univ. Sch. of Med.*

2:00 N4 **381.14** Effect of induced hippocampal knockout of Ryanodine Receptor 2 on CA1 cellular activity. M. MITTAG*; L. WISCHHOF; F. BERTAN; L. SOSULINA; S. REMY; D. BANO; P. NICOTERA; M. FUHRMANN. *German Ctr. of Neurodegenerative Dis. (DZNE).*

3:00 N5 **381.15** A chemogenetic-rsfMRI study in awake rats revealed the inactivation of anterior cingulate cortex in the brain functional network. W. TU*; Z. MA; Y. MA; D. CHAU; Y. LIU; N. ZHANG. *Pennsylvania State Univ. Main Campus, The Huck Inst. of the Life Sci.*

4:00 N6 **381.16** Behavior dependent antagonistic synchronization of beta and low frequency hub neurons in the macaque fronto-parietal grasping network. S. SHESHADRI*; B. DANN; H. SCHERBERGER. *German Primate Ctr.*

1:00 N7 **381.17** Steady-state visual stimulation frequency modulates functional networks. Y. CHAI*; D. A. HANDWERKER; J. GONZALEZ-CASTILLO; P. A. BANDETTINI. *Section on Functional Imaging Methods, NIMH, NIH.*

2:00 N8 **381.18** The neural circuit mechanism of spatial orientation in *Drosophila* -- connectomic analysis and modeling. C. LO*; T. SU, 300; W. LEE; Y. HUANG; C. WANG. *Natl. Tsing Hua Univ., Natl. Tsing Hua Univ., Natl. Tsing Hua Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 N9 **381.19** Preliminary investigation of pain-related changes in cerebral blood volume in patients with neuropathic pain after scrambler therapy. S. JOO*; C. SEO. *Hangang Sacred Heart Hosp.*

4:00 N10 **381.20** Parvalbumin interneurons control spike output in deep layer principal neurons in the *in vitro* mouse perirhinal - entorhinal cortex. N. L. CAPPAERT*; J. G. WILLEMS; W. J. WADMAN. *Univ. Amsterdam, Univ. of Amsterdam, Univ. Amsterdam.*

1:00 N11 **381.21** Slow-wave cortical activity within local circuits during REM-like state revealed by fast Voltage-Sensitive Dye imaging. M. NAZARIAHANGARKOLAEE*; J. KARIMI; M. TATSUNO; M. H. MOHAJERANI. *CCBN, Univ. of Lethbridge.*

2:00 N12 **381.22** Cortical ensembles based on dendritic plateau generation in the prefrontal cortex. S. ANGULO*; J. W. GRAHAM; P. GAO; S. DURA-BERNAL; S. A. NEYMOTIN; S. D. ANTIC; W. W. LYTTON. *SUNY Downstate Med. Ctr., Univ. Connecticut Hlth. Ctr., Brown Univ.*

3:00 O1 **381.23** Functional and effective connectivity in a motor control center. R. FOLLMANN*; C. J. GOLDSMITH; W. STEIN. *Illinois State Univ.*

4:00 O2 **381.24** Patterns of coherence and incoherence driven by structural connectivity in human connectome. K. BANSAL*; G. LIEBERMAN; T. D. VERSTYNEN; J. M. VETTEL; S. F. MULDOON. *Univ. at Buffalo, SUNY, US Army Res. Lab., Carnegie Mellon Univ., Univ. of Pennsylvania, Univ. of California.*

1:00 O3 **381.25** Hallmarks of criticality under subsampling. Y. KARIMIPANAH*; D. PLENZ. *NIH.*

2:00 O4 **381.26** A brain imaging study of functional MRI using ASSR in bipolar disorder. K. TAKAO*. *Natl. Hosp. Organization Hizen Psychiatric C.*

3:00 O5 **381.27** The role of parvalbumin- and cholecystokinin expressing interneurons in CA3 pattern completion vs. separation. S. K. RASHID*; M. A. DUFOUR; R. ZEMLA; J. BASU. *New York Univ. Sch. of Med., New York Univ. Sch. of Med.*

4:00 O6 **381.28** ● Human iPSC-derived neuronal cultures form synchronously bursting cultures and display a seizurogenic response to excitatory pharmacology. K. MANGAN; B. D. ANSON*; L. HARMS; E. ENGHOFER; C. CARLSON; C. KANNEMEIER. *Ceullar Dynamics.*

1:00 O7 **381.29** Cerebrospinal fluid from Dementia With Lewy body patients alters neuronal network function *in vitro.* S. THEISS*; H. KOCH; G. ELSEN; C. NITURAD; W. MAETZLER; C. DEUSCHLE; H. LERCHE; M. DIHNÉ. *Univ. of Duesseldorf, Univ. of Tübingen, Univ. of Tübingen.*

2:00 O8 **381.30** Amacrine cells influence the regenerative capacity of adult retinal ganglion cells. Q. FENG*; Y. LI; S. PETERSON; H. GILBERT; A. BURGESS; L. I. BENOWITZ. *Boston Children's Hospital/Harvard Med. Sch., MIT.*

POSTER

382. Epilepsy: Networks - Human and Animal Studies

Theme B: Neural Excitability, Synapses, and Glia

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 O9 **382.01** ● Functional connectivity from medial and dorsal parietal areas: A cortico-cortical evoked potential study. M. TOGO*; R. MATSUMOTO; T. NAKAE; H. TAKEYAMA; K. KOBAYASHI; K. USAMI; A. SHIMOTAKE; T. KIKUCHI; K. YOSHIDA; T. KUNIEDA; S. MIYAMOTO; R. TAKAHASHI; A. IKEDA. *Dept. Neurology, Kyoto Univ. Grad. Sch. of Med., Kyoto Univ. Hosp., Kyoto Univ., Johns Hopkins Univ., Kyoto Univ. Grad. Sch. of Med., Ehime Univ. Grad. Sch. of Med.*

1:00 DP03/O10 **382.02** (Dynamic Poster) Network-wide changes in effective connectivity and synaptic dynamics during epileptic seizures in the larval zebrafish brain. R. E. ROSCH*; P. HUNTER; T. BALDEWEG; K. J. FRISTON; M. MEYER. *Univ. Col. London, King's Col. London.*

3:00 P1 **382.03** Exercise induced altered functional connectivity in resting state networks in patients with benign epilepsy at alpha band. G. R. KOIRALA; H. KIM; N. KIM; D. LEE*. *Kwangwoon Univ., Yonsei Univ. Col. of Med., Yonsei Univ. Col. of Med.*

4:00 P2 **382.04** Neocortical loss of PGC-1a protects against *in vitro* epileptiform activity. C. MACKENZIE-GRAY SCOTT; R. R. PARRISH; R. M. COWELL; C. RACCA*; A. J. TREVELYAN. *Newcastle Univ., Univ. of Alabama At Birmingham.*

1:00 P3 **382.05** ▲ Mechanisms of norepinephrine and serotonin in prevention of seizure-induced respiratory arrest. S. W. KRUSE*; K. G. DAYTON; B. S. PURNELL; N. K. LEIBOLD; G. F. BUCHANAN. *Univ. of Iowa Col. of Engin., Univ. of Iowa, Univ. of Iowa Carver Col. of Med.*

2:00 P4 **382.06** ● Maturation of motor cortex excitability in children with focal epilepsy as measured by navigated transcranial magnetic stimulation. H. L. KAYE*; G. BLOCK; A. JANNATI; C. VEGA, III; K. RAKESH; K. KAPUR; L. M. OBERMAN; R. GERSNER; A. BOES; A. PASCUAL-LEONE; A. ROTENBERG. *Boston Children's Hosp., Beth Israel Deaconess Med. Ctr., Boston Children's Hosp., Bradley Hosp., Univ. of Iowa, Boston Children's Hosp.*

3:00 P5 **382.07** Human induced pluripotent stem cell (hiPSC) -derived neurons respond to convulsant drugs when co-cultured with hiPSC-derived astrocytes. M. N. ISHII*; K. YAMAMOTO; M. SHOJI; A. ASAMI; Y. KAWAMATA. *Takeda Pharmaceut. Co. Limited, Takeda Pharmaceut. Co. Limited.*

4:00 P6 **382.08** Alterations in pre-ictal oscillation of pilocarpine model of epilepsy and the effects of MGE-grafted precursor cells. M. VENDRAMIN PASQUETTI*; S. A. A. ROMARIZ; Í. F. MESSIAS; B. MONTEIRO LONGO; M. E. CALCAGNOTTO. *Univ. Federal Do Rio Grande Do Sul, Univ. Federal de São Paulo.*

1:00 P7 **382.09** Disruption of seizures with high resolution targeted optical stimulation *in vitro.* K. P. LILLIS*; K. J. STALEY. *Harvard Med. Sch. Dept. of Neurol., Massachusetts Gen. Hosp.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 P8 **382.10** Stress testing cortical networks: Using simple pharmacological challenges to understand the effects of genetic mutations on cortical network excitability. A. J. TREVELYAN*; N. CODADU; R. R. PARRISH; D. C. DE VIVO; M. TANG; C. A. SCHEVON; U. MONANI; W. N. FRANKEL. *Newcastle Univ., Univ. of Newcastle, Columbia Univ. CPS, Columbia Univ., Columbia Univ., Columbia Univ. Med. Ctr.*

3:00 P9 **382.11** *In vitro* slow moving focus in the epileptic hippocampus mimics propagation of human seizures. C. CHIANG*; X. WEI; A. ANANTHAKRISHNAN; D. M. DURAND. *Case Western Reserve Univ., Case Western Reserve Univ., Case Western Res. Univ.*

4:00 P10 **382.12** Distinct inhibitory regulation of dentate granule and semilunar granule cells. M. AFRASIABI*; V. SANTHAKUMAR. *Rutgers, New Jersey Med. Sch.*

1:00 Q1 **382.13** Reduced voltage-gated K^+ channel function in gabaergic nts neurons in a murine model of acquired TLE and SUDEP. I. DERERA*; B. N. SMITH. *Univ. of Kentucky, Univ. of Kentucky.*

POSTER

383. Epilepsy: EEG signatures and Animal models

Theme B: Neural Excitability, Synapses, and Glia

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 Q2 **383.01** ● ▲ Seizure characterization and electroencephalographic features in TLR379 triple knockout mice. N. SALEH-SUBAIE*; O. ARIAS-CARRION. *UNAM, Trastornos Del Movimiento Y Sueño (TMS), Hosp.*

2:00 Q3 **383.02** Calpain/STEP pathway contributes prenatal stress-induced epileptic spasms in infant rat. H. KWON; J. HONG; D. KIM; J. KANG*. *Chungnam Natl. Univ. Sch. of Med., Chungnam Natl. Univ., Chungnam Natl. Univ. Sch. Med., Chungnam Natl. Univ.*

3:00 Q4 **383.03** Pharmacoresponsivness of seizures and sleep-wake patterns of Kcna1-null mice, a model of temporal lobe epilepsy with co-morbid sleep disorders to conventional anti-seizure drugs (ASDs). M. DEODHAR*; B. THOMAS; L. ADAMIAN; S. MATTHEWS; K. A. SIMEONE; T. A. SIMEONE. *CREIGHTON UNIVERSITY, Creighton UNiversity, Creighton Univ., Creighton Univ. Sch. of Med., Creighton Univ. Sch. of Med.*

4:00 Q5 **383.04** Temporal dynamics of high-frequency oscillations in a pilocarpine rat model using a novel automated detector. J. SCOTT*; S. REN; S. GLISKE; H. LUNA-MUNGUIA; W. STACEY. *Univ. of Michigan.*

1:00 Q6 **383.05** Change in electroencephalography pattern in a rat model of Neurocysticercosis. A. D. DELGADO*; R. P. CARMEN OROZCO; R. H. GILMAN; L. E. BAQUEDANO; D. G. DÁVILA VILLACORTA; G. CASTILLO; J. MORALES; N. CHILE; R. H. CELÍZ; M. R. VERASTEGUI. *Univ. Peruana Cayetano Heredia, Johns Hopkins Univ.*

2:00 Q7 **383.06** Excess GIRK2 activity is necessary but not sufficient to confer susceptibility to Infantile Spasms. K. JOSHI*; L. SHEN; M. A. CORTEZ; O. SNEAD. *The Hosp. For Sick Children, Hosp. for Sick Children.*

3:00 Q8 **383.07** Model-guided neurostimulation reduces epileptiform activity in mice. J. MODOLO*; F. MINA; P. BENQUET; F. WENDLING. *INSERM U1099.*

4:00 Q9 **383.08** Preliminary characterization of a new genetic mouse model of adult-onset epilepsy. T. N. FERRARO*; L. YOUNG; R. DACI; I. SALEM; A. BATTERMAN; D. MILLER; F. PARDO-MANUEL DE VILLENA; R. J. BUONO; L. D. SIRACUSA. *Cooper Med. Sch. of Rowan Univ., Thomas Jefferson Univ., Univ. of North Carolina.*

1:00 Q10 **383.09** Theta and high-frequency oscillation phase-amplitude coupling in stress-induced seizures following traumatic brain injury. P. S. JUNG*; C. NARLA; F. BAUTISTA; J. C. MARTINEZ-TRUJILLO; M. O. POULTER. *Western Univ., Robarts Res. Inst.*

2:00 Q11 **383.10** Exacerbated epileptic phenotype in miR-22 knockout mice. L. F. ALMEIDA SILVA*; C. R. RESCHKE; T. ENGEL; D. C. HENSHALL. *Royal Col. of Surgeons In Ireland.*

3:00 Q12 **383.11** Role of dorsal medial hypothalamus (DMH) in phenotype of spasms. C. CHERN*; L. VELISEK. *New York Med. Col.*

4:00 R1 **383.12** Decrease of gamma event coupling in hippocampal-prefrontal cortex associated with epileptogenesis. L. LI*; J. ALMAJANO; J. ENGEL; A. BRAGIN. *Univ. of California Los Angeles, Univ. of California Los Angeles, Univ. of California Los Angeles.*

1:00 R2 **383.13** Characteristics of evolving epileptiform activity in different cortical areas in brain slices. N. CODADU*; A. TREVELYAN. *Newcastle Univ., Newcastle Univ.*

2:00 R3 **383.14** Transhemispheric network interaction for hippocampal ictogenesis revealed by combined optogenetic and chemogenetic interrogation *in vivo*. F. BERGLIND*; M. S. ANDERSSON; M. KOKAIA. *Epilepsy Center, Lund Univ.*

3:00 R4 **383.15** Bilateral evolution of fast-ripples and interictal spikes during epileptogenesis. P. BENQUET*; J. MODOLO; M. VERIN; F. WENDLING. *INSERM U1099 -LTSI, Univ. of Rennes 1, INSERM U1099-LTSI.*

POSTER

384. Astrocytes

Theme B: Neural Excitability, Synapses, and Glia

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 R5 **384.01** Astrocyte remodeling alters short- and long-term excitatory synaptic transmission in the mouse hippocampus. J. MCCAULEY*; A. M. SWEENEY; K. E. FLEMING; M. F. RODRIGUEZ; E. T. MARTIN; A. A. SOUSA; R. D. LEAPMAN; A. SCIMEMI. *Univ. At Albany State Univ. of New York, Univ. at Rochester, Univ. at Albany, SUNY, SUNY Oneonta, Univ. at Albany, SUNY, Univ. of San Paulo, NIH, Univ. at Albany State Univ. of New York.*

2:00 R6 **384.02** Astrocytes are a primary target for neuronal BDNF: Implications for the regulation of astrocyte morphological complexity. L. HOLT*; M. L. OLSEN. *Virginia Tech., Univ. of Alabama at Birmingham, Virginia Tech.*

3:00 R7 **384.03** Role of NAD^+ availability and Sirt6 expression in the regulation of antioxidant defenses in astrocytes. B. HARLAN*; K. M. KILLOY; M. PEHAR; M. R. VARGAS. *Med. Univ. of South Carolina.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 R8 **384.04** Downregulation of Sonic hedgehog in reactive astrocytes after injury. R. ALLAHYARI*; P. SAKTHIVEL; K. L. CLARK; A. D. R. GARCIA. *Drexel Univ.*

1:00 R9 **384.05** Optogenetic regulation of cyclic AMP in brain cells *in vivo*. Z. ZHOU*; J. ONODERA; T. HIRAGI; M. ANDOH; K. F. TANAKA; R. KOYAMA; Y. IKEGAYA. *Grad Sch. Pharma Sci, Univ. Tokyo, Keio Univ. Sch. of Med. Dept. of Neuropsychiatry.*

2:00 R10 **384.06** Nanostructered silicon nanowire and electrospun nonofibre polymer to promote astrocytes differentiation and recording *in vitro.* E. SARACINO*; A. I. BORRACHERO-CONEJO; V. CIRILLO; V. GUARINO; A. CONVERTINO; L. MAIOLO; M. MARRESE; M. CAPRINI; A. BORRIELLO; L. AMBROSIO; G. FORTUNATO; R. ZAMBONI; V. BENFENATI. *Consiglio Nazionale Delle Ricerche Area Della Rice, CNR-Istituto per lo studio dei materiali nanostrutturati ISMN, CNR-Istituto dei Polimeri, Composti e Biomateriali IPCB, CNR- Inst. per elettronica e magnetismo IMEM, CNR- Inst. dei Polimeri, Composti e Biomateriali IPCB, Univ. di Bologna, CNR-Istituto per la sintesi organica e la fotoreattività ISOF.*

3:00 S1 **384.07** Effect of Zinc ions on astrocytic calcium oscillations in mice. Y. A. CHO*; S. KIM; S. HWANG; K. NOH; W. CHO; E. BARCELON; S. YOON; S. LEE; S. JUN. *Ewha Womans Univ., Ewha Womans Univ., Seoul Natl. Univ.*

4:00 S2 **384.08** Automated analysis of *in vivo* astrocyte activities from large-scale calcium imaging data. G. YU*; Y. WANG; K. POSKANZER. *Virginia Tech., Univ. of California, San Francisco.*

1:00 S3 **384.09** Self administration of cocaine or heroin reduces S-glutathionylation of cofilin and enhances glial fine process motility. A. KRUYER*; M. SCOFIELD; J. UYS; P. W. KALIVAS. *Med. Univ. of South Carolina.*

2:00 S4 **384.10** Hippocampus-based contextual memory alters the morphological characteristics of astrocytes in the dentate gyrus. M. CHOI*. *Seoul Natl. Univ.*

3:00 T1 **384.11** Investigating the underlying mechanisms of programmed cell death in human hippocampal astrocyte cell line following exposure to hypoxia. J. M. ABDULLAH*, Prof; S. MUTHURAJU; N. BINTI M.NOR NAZLI; A. MOHAMED YUSOFF; F. AHMAD; M. MUSTAFA; H. JAAFAR; S. SHAMSUDDIN. *P3Neuro,Universiti Sains Malaysia, Sch. of Med. Sciences, Universiti Sains Malaysia, Sch. of Med. Sciences, Universiti Sains Malaysia, Sch. of Med. Sciences, Universiti Sains Malaysia.*

4:00 T2 **384.12** Aryl hydrocarbon receptor mediates feedback regulation of lipopolysaccharide-induced proinflammatory astrogliosis to maintain cognitive functions in mice. Y. GAN*; S. WU; C. LIN; Y. HUANG; F. SHIE; H. LIN; C. JENG; Y. LEE. *Natl. Yang-Ming Univ., Dept. of Nursing, Univ. of Kang Ning, Ctr. For Neuropsychiatric Research, Natl. Hlth. Res. Inst., Brain Res. Center, Natl. Yang-Ming Univ., Inst. of Anat. & Cell Biology, Natl. Yang-Ming University, Taipei, Taiwan.*

1:00 T3 **384.13** Layer specific cortical astroglia regulate dendritic branching and spine density. S. J. MILLER*; J. D. ROTHSTEIN. *Johns Hopkins Sch. of Med.*

2:00 T4 **384.14** Measurement of H^+ fluxes from cultured mouse hippocampal astrocytes using self-referencing H^+ selective microelectrodes. J. CHOI*; R. P. MALCHOW. *Univ. of Illinois at Chicago, Univ. of Illinois at Chicago Dept. of Biol. Sci.*

3:00 T5 **384.15** Cathepsin D activity in the mouse hippocampus in various developmental stages, revealed by the cleavage of prolactin into vasoinhibins. E. ARNOLD*; F. MACÍAS; R. M. AROÑA; C. CLAPP; G. MARTÍNEZ DE LA ESCALERA. *Univ. Nacional Autónoma de México (UNAM), Inst. de Neurobiología, Univ. Nacional Autónoma de México (UNAM).*

4:00 T6 **384.16** KIR4.1 potassium channel in hyperglycemic conditions: Downregulation via MIR-205 overexpression in astrocytes. D. E. RIVERA-APONTE*; M. P. MENDEZ-GONZALEZ; K. MELNIK-MARTINEZ; C. MALPICA-NIEVES; F. TEJEDA-BAYRON; S. SKATCHKOV; M. J. EATON. *Univ. Central Del Caribe, Univ. Central del Caribe, Univ. of Puerto Rico Aguadilla, Univ. Central del Caribe.*

1:00 T7 **384.17** Kir4.1, a novel target for MeCP2. U. KAHANOVITCH*; V. A. CUDDAPAH; N. L. PACHECO; L. M. HOLT; A. K. PERCY; M. L. OLSEN. *Virginia Tech., Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham, Virginia Tech, Sch. of Neurosci.*

1:00 DP04/T8 **384.18** (Dynamic Poster) Glial heterogeneity in the molecular layer of hippocampal dentate gyrus. G. NASERI KOUZEHGARANI*; M. U. GILLETTE. *Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign.*

3:00 T9 **384.19** ▲ Establishment of a direct induction method toward astrocytic cells using non-viral polycistronic vector as a neurological disease modeling platform. R. TOMOOKA*; Z. ZHOU; T. SANOSAKA; S. BANNO; I. KOYA; M. CHAI; R. SHIMAMURA; T. ANDO; H. OKANO; J. KOHYAMA. *Keio Univ. Sch. of Med., E-WAY Res. Laboratory, Discovery, Med. Creation, Neurol. Business Group.*

4:00 T10 **384.20** Functional and molecular characterization of human pluripotent stem cell-derived regional astrocytes. R. A. BRADLEY*; J. SHIREMAN; C. MCFALLS; J. CHOI; Y. DONG; S. G. CANFIELD; M. CHIANG; J. JONES; A. PETERSEN; S. PALACEK; E. SHUSTA; C. KENDZIORSKI; Y. YANG; S. ZHANG. *Univ. of Wisconsin - Madison, Univ. of Wisconsin - Madison, Univ. of Wisconsin, Univ. of Wisconsin Madison, Tufts Univ., Univ. of Wisconsin-Madison Wasiman Ctr., Univ. of Wisconsin Madison, Tufts Univ. Sch. of Med.*

1:00 T11 **384.21** Spatiotemporal modulation of neuronal activity by astrocytic second phase calcium oscillation. T. KIKUCHI*; Y. SHINDO; K. HOTTA; K. OKA. *Keio Univ.*

2:00 T12 **384.22** Focal stimulation and network activation of astrocytes and glial networks using microfluidics. L. J. MILLET*; A. JAIN; M. U. GILLETTE. *Joint Inst. Biol. Sci., Univ. of Tennessee., Univ. of Illinois at Urbana-Champaign, Univ. of Illinois.*

3:00 U1 **384.23** Dopamine exposure induces phenotypic changes in rat hippocampal astrocytes. A. GALLOWAY*; A. ADELUYI; S. MATHEW; J. R. TURNER; P. I. ORTINSKI. *Univ. of South Carolina Sch. of Med., Univ. of South Carolina, South Carolina Col. of Pharm.*

4:00 U2 **384.24** Fibroblast growth factor receptor 1 expression in animal models of chronic stress and injury. K. M. SMITH*; J. C. COLLETTE; H. TORRES; L. B. RUBIN. *Univ. of Louisiana At Lafayette, Univ. of Louisiana At Lafayette.*

1:00 U3 **384.25** Calcium signals in LC axons and astrocytes in the hippocampus during navigation. A. KAUFMAN*; W. LI; J. BOWLER; E. M. BALOUGH; A. LOSONCZY. *Columbia Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 U4 **384.26** Stretch induced ATP release in hippocampal astrocytes. Z. ZHOU*; Y. XIONG; S. TENG; S. SUN; N. GUO; M. LI; F. ZHU; C. WANG; L. ZHENG; Z. RAO. *Inst. Mol. Med, Peking Univ., Inst. of Mol. Med., Inst. of Neurosciences, Affiliated Hosp. of Air Force Inst. of Aeromedine.*

3:00 U5 **384.27** Identification of a novel regulator of astrocyte development and maturation. K. T. BALDWIN*; J. A. STOGSDILL; R. ESTEVEZ; C. EROGLU. *Duke Univ., Univ. of Barcelona.*

4:00 U6 **384.28** ▲ Ng2 knock-out in the neu7 reactive astrocyte cell line to promote neuronal regeneration. S. M. CIOMBOR*; A. HAY; M. HABERMAN; M. FALLERT; D. R. COOK-SNYDER. *Carthage Col.*

1:00 U7 **384.29** The role of astrocytic GABA transport during sensory processing in visual cortex. G. O. SIPE*; R. GARCIA; R. V. RIKHYE; J. C. PETRAVICZ; M. SUR. *MIT, MIT.*

2:00 U8 **384.30** Ultrastructural association of astrocytes with other constituents in the brain. C. M. KIYOSHI*; A. T. TAYLOR; K. N. BONI; S. A. GARCIA SERRANO; R. KUMAR; A. N. DRAKE; A. M. HEGAZI; Y. DU; B. MA; W. WANG; D. TERMAN; M. ZHOU. *The Ohio State Univ. Wexner Med. Ctr., The Ohio State Univ., Metro Early Col. High Sch., Huazhong Univ. of Sci. and Technol.*

POSTER

385. Brain Wellness and Aging

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 U9 **385.01** Estimation of metabolic energy balance in neurons by using fluorescent imagings. M. IIZUMI*; R. SUZUKI; R. YAMANAKA; Y. SHINDO; K. HOTTA; K. OKA. *Keio Univ.*

2:00 U10 **385.02** Impairments in both brain and liver glucose metabolism are restored by fructose 1,6-bisphosphate administration in the chronic pilocarpine-SE mouse model. T. MCDONALD*; M. P. HODSON; K. BORGES. *Univ. of Queensland, Australian Inst. for Bioengineering and Nanotechnology, Univ. of Queensland.*

3:00 U11 **385.03** Sirtuins confer the neuroprotective activity of the ketogenic diet and the ketone body β-hydroxybutyrate. H. OH; S. MA; A. J. SHACKELFORD; J. M. RHO; D. KIM*. *Barrow Neurolog. Institute, St. Joseph's Hosp. & Med. Ctr., A.T. Still Univ., Alberta Children's Hospital, Univ. of Calgary.*

4:00 U12 **385.04** Ketogenic diet produces rapid, region-specific alterations in brain NAD^+/NADH. M. ELAMIN*; D. N. RUSKIN; S. A. MASINO; P. SACCHETTI. *Univ. of Hartford, Trinity Col.*

1:00 V1 **385.05** Ketogenic diet shifts cerebrospinal fluid metabolome and has differential effects in responsive vs. non-responsive pediatric epilepsy patients. D. N. RUSKIN*; M. LINDEFELDT; N. FREEDGOOD; M. DAHLIN; S. A. MASINO. *Trinity Col., Karolinska Hosp.*

2:00 V2 **385.06** Glycolytic inhibition with 2-deoxyglucose attenuates epileptiform activity following traumatic brain injury. C. G. DULLA*; D. CANTU; J. KOENIG. *Tufts Univ. Sch. of Med., Tufts Univ. Sch. of Med.*

3:00 V3 **385.07** ▲ Correlation between tryptophan catabolism and cognitive decline in old women. L. A. RAMOS*; P. CARRILLO-MORA; B. GARCÍA; D. GONZÁLEZ-ESQUIVEL; D. RAMÍREZ-ORTEGA; C. RIOS; V. PÉREZ-DE LA CRUZ; B. PINEDA; G. ROLDÁN-ROLDÁN. *Univ. Nacional Autónoma de México, Facultad de Medicina, Univ. Nacional Autónoma de México, México, Inst. Nacional de Rehabilitación, Inst. Nacional de Neurología y Neurocirugía Manuel Velasco Suárez, S.S.A., Inst. Nacional de Neurología y Neurocirugía Manuel Velasco Suárez, S.S.A.*

4:00 V4 **385.08** Inhalation anesthetics induce abnormal locomotor activity in mice. H. TON*; L. YANG; Z. XIE. *Massachusetts Gen. Hosp., Massachusetts Gen. Hospital-Harvard Med. Sch., Massachusetts Gen. Hosp. and Harvard Med. Sch.*

1:00 V5 **385.09** Altered levels of neurotrophic factors and neurotransmitters in the brain as the probable causes of decreased longevity of WNIN obese rats. S. GHOSH*; J. K. SINHA; N. GIRIDHARAN; M. RAGHUNATH. *NATIONAL INSTITUTE OF NUTRITION, CSIR-CENTRE FOR CELLULAR AND MOLECULAR BIOLOGY.*

2:00 V6 **385.10** Adiponectin receptor 1 regulates AKT-FOXO mediated cell survival via facilitating insulin signaling. M. KIM*; G. YOON; M. JO; F. U. AMIN; M. IDREES; M. KIM. *Gyeongsang Natl. Univ.*

3:00 V7 **385.11** Oxidative stress: Possible modulator of hormone replacement therapy action. P. DUONG*; C. MCCUISTON; R. CUNNINGHAM. *UNT Hlth. Sci. Ctr., UNT Hlth. Sci. Ctr.*

4:00 V8 **385.12** Curcuma treatment prevents alteration ofneuronal morphology in the limbic system of aging rats. R. A. VAZQUEZ*, SR; B. VIDAL; B. FLORAN; D. GNECCO; G. FLORES. *Inst. De Fisiología Benemérita Univ. Autónoma De Puebla, Benemerita Univ. Autonoma de Puebla, Ctr. de investigaciones y estudios avanzados IPN, Benemerita Univ. Autonoma de Puebla, Benemerita Univ. Autonoma de Puebla.*

1:00 V9 **385.13** Age-dependent vulnerability of axons to aglycemia is not caused by a decline in the astrocyte-neuronal lactate shuttle. C. BASTIAN*; C. DOHERTY; C. FRANKE; A. FARIS; S. BRUNET; S. BALTAN. *Cleveland Clin. Fndn.*

2:00 V10 **385.14** C-terminus of HSC70-Interacting Protein (CHIP) is a functional homologue of Atg5. B. N. LIZAMA-MANIBUSAN*; A. M. PALUBINSKY; J. W. MCLAUGHLIN; D. D. SZYMKIEWICZ; V. A. RAVEENDRAN; A. M. MOORE; B. MCLAUGHLIN. *Vanderbilt Univ. Med. Ctr., Vanderbilt Univ. Med. Ctr., Vanderbilt Univ., Vanderbilt Univ.*

3:00 V11 **385.15** High-fat diet-induced insulin disruption in CX3CR1 knockout mice on dementia-related pathology. A. S. MURTISHAW*; M. M. BOLTON; A. J. BOREN; A. M. SALAZAR; J. E. TOUGHLIAN; A. A. ORTIZ; J. W. KINNEY. *UNLV Neurosci. Doctoral Student, Univ. of Nevada Las Vegas Dept. of Psychology.*

4:00 V12 **385.16** HDAC2 and associated co-repressor sin3a regulate synaptic plasticity gene expression and memory consolidation during scopolamine-induced amnesia. S. SRIVAS*; M. K. THAKUR. *Inst. of Science, BHU.*

1:00 V13 **385.17** Optogenetic function is maintained through late aging (25 mo) in neurons from ChR2-eyfp (vGlut2 and vGAT) BAC mice. D. W. DUBOIS*; K. S. MONTGOMERY; A. S. FINCHER; E. A. BANCROFT; V. E. PROVASEK; E. A. MIGUT; D. A. MURCHISON; W. H. GRIFFITH. *Texas A&M Univ. Hlth. Sci. Ctr.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 V14 **385.18** Utilization of KKA_y diabetic model to elucidate the role of metabolic dysfunction in the development of Alzheimer's disease pathology. J. GRIZZANTI*; S. SAHU; P. RAMAN; H. LEE; G. CASADESUS. *Kent State Univ., Northeast Ohio Med. Univ., Univ. of Texas at San Antonio.*

3:00 V15 **385.19** The influence of childhood trauma, major depressive disorder and telomere length on HIV-associated neurocognitive disorders. J. S. WOMERSLEY*; G. SPIES; G. TROMP; S. HEMMINGS; S. SEEDAT. *Univ. of Stellenbosch.*

4:00 V16 **385.20** Regulation of glucose metabolism in neurons by Wnt signaling and a possible molecular link with the adipokines in the context of Alzheimer disease and obesity interaction. P. CISTERNAS*; N. C. INESTROSA. *CARE-UC, Pontificia Univ. Católica de Chile, Ctr. For Aging and Regeneration (CARE),P. Catholic Univ. of Chile.*

1:00 V17 **385.21** Effect of phycoerythrin-derived tryptic peptide of Pyropia yezoensis on glutamate-induced endoplasmic reticulum stress and neuronal senescence. J. OH*. *Pukyong Natl. Univ.*

2:00 V18 **385.22** Determination of Cholesterol 24 Hydroxylase (CYP46A1) in hippocampus of rats with obesity induced by different hypercaloric diets. N. GOMEZ-CRISOSTOMO*; E. MARTÍNEZ-ABUNDIS; E. DE LA CRUZ-HERNÁNDEZ. *UNIVERSIDAD JUAREZ AUTONOMA DE TABASCO (DIVISION A, UNIVERSIDAD JUAREZ AUTONOMA DE TABASCO (DIVISION A.*

3:00 V19 **385.23** ▲ Changes in hippocampal protein expression following diet supplementation of Kale, Arugula, or Dandelion in diet induced obese pre-diabetic C57BL/6 mice. D. HICKS*; A. A. OYETUNDE; D. FOSTER; B. TENG; L. R. BANNER. *California State Univ. Northridge, California State Univ. Northridge.*

4:00 V20 **385.24** Impaired synaptic mitochondrial spare respiratory capacity in aging and age-related neurodegenerative disease. K. L. STAUCH*; K. EMANUEL; B. LAMBERTY; B. MORSEY; H. FOX. *Univ. of Nebraska Med. Ctr.*

1:00 V21 **385.25** Impact of chronic stress on sex-divergent CRF1 expression and behavioral deficits in APP/PS1 mouse model of Alzheimer's disease. H. DONG*; Y. YAN; G. RODRIGUEZ; R. GAO; J. G. CSERNANSKY. *Northwestern Univ. Feinberg Sch. of Med., Zunyi Med. Univ.*

2:00 V22 **385.26** The role of Dnmt3a2 in regulating neuronal and age-associated cognitive functions. D. CUI; S. NEUBER; I. INGO VOIGT; Y. YAYOI OBATA; X. XU*. *Max Planck Inst. For Biol. of Ageing, Tokyo Univ. of Agr., Max Planck Inst. For Biol. of Aging, Yale Univ. Sch. of Med.*

3:00 V23 **385.27** Nuclear pore complex composition in the mammalian cns: Regional and cell type specific differences. J. C. GRIMA*; S. VIDENSKY; A. N. COYNE; T. PHILIPS; J. G. DAIGLE; K. ZHANG; M. MATUNIS; J. D. ROTHSTEIN. *The Johns Hopkins Univ. Sch. of Med.*

4:00 V24 **385.28** Age-dependent differences in TNFR1 response after global cerebral ischemia. E. FONT BELMONTE*; B. ANUNCIBAY SOTO; M. SANTOS GALDIANO; D. PEREZ-RODRIGUEZ; P. GONZALEZ-RODRIGUEZ; M. REGUEIRO-PURRIÑOS; A. FERNANDEZ-LOPEZ. *Univ. de Leon, Inst. de Biomedicina, Univ. Leon. Inst. De Biomedicina, Univ. de Leon. Inst. de Biomedicina, Hosp. Veterinario de León. Univ. de León.*

1:00 V25 **385.29** Stroke 1-2-0 fills the gap for prehospital delay for stroke victims in China. J. ZHAO*. *Fudan University,Minhang Hosp.*

POSTER

386. Alzheimer's Disease: Genetics and Functional Genomics

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 V26 **386.01** Model-ad: Genetic models of late-onset Alzheimer's disease. A. OBLAK*; G. CARTER; G. R. HOWELL; B. LOGSDON; L. MANGRAVITE; K. NHO; L. OMBERG; K. D. ONOS; V. PHILIP; C. PREUSS; S. J. SUKOFF RIZZO; M. SASNER; L. SHEN; A. J. SAYKIN; P. TERRITO; A. UYAR; H. WILLIAMS; B. T. LAMB. *Indiana Univ. Sch. of Med., The Jackson Lab., Jackson Lab., Sage Bionetworks, Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., Stark Neurosciences Res. Inst.*

2:00 W1 **386.02** Preclinical drug screening in new generation Alzheimer's disease mouse models: The MODEL-AD Consortium Strategy. P. R. TERRITO*; S. J. SUKOFF RIZZO; K. D. ONOS; J. A. MEYER; J. PETERS; S. PERSOHN; B. MCCARTHY; A. RILEY; S. QUINNEY; D. JONES; M. SASNER; G. R. HOWELL; H. WILLIAMS; A. OBLAK; B. T. LAMB. *Indiana Univ. Sch. of Med., The Jackson Lab., Jackson Lab., Indiana Univ. Sch. of Med., Stark Neurosciences Res. Inst.*

3:00 W2 **386.03** ● Novel candidate loci for Alzheimer's disease from whole-genome and whole-exome sequencing. G. CARTER*; X. WANG; C. PREUSS; V. PHILIP; G. ANANDA; C. J. ACKLIN; K. KARUTURI; M. SASNER; G. R. HOWELL. *The Jackson Lab., Eisai Andover Innovative Medicines (AiM) Inst., The Jackson Lab. for Genomic Med.*

4:00 W3 **386.04** ● Model-ad: Bioinformatics and data management core. B. T. LAMB*; M. SASNER; A. J. SAYKIN; L. MANGRAVITE; G. CARTER. *Stark Neurosciences Res. Inst., The Jackson Lab., Indiana Univ. Sch. of Med., Sage Bionetworks.*

1:00 W4 **386.05** MODEL-AD: The disease modeling project. M. SASNER*; A. OBLAK; H. WILLIAMS; G. HOWELL; B. T. LAMB. *The Jackson Lab., Stark Neurosciences Res. Inst.*

2:00 W5 **386.06** Comparison of gene expression profile in Alzheimer's disease using a novel stratifying algorithm. S. CANCHI*; R. SASIK; P. D. JAGER; D. A. BENNETT; R. A. RISSMAN. *Univ. of California San Diego, Univ. of California San Diego, Columbia Univ., Rush Univ. Med. Ctr., UCSD Sch. Med.*

3:00 W6 **386.07** Conditional deletion of APP, APLP1, and APLP2 in excitatory neurons of the postnatal forebrain does not cause neurodegeneration. J. KANG*; A. HO; H. WATANABE; J. SHEN. *Harvard Med. School/Bwh.*

4:00 W7 **386.08** Genome-wide association analysis of amyloid-β and tau tangle deposition identifies enrichment of neurogenesis-related pathways. E. HORGUSLUOGLU-MOLOCH*; K. NHO; S. RISACHER; A. J. SAYKIN. *Indiana University, Sch. of Med., Indiana University, Sch. of Med., Indiana Univ. Sch. of Med.*

1:00 W8 **386.09** Characterizing neuronal pathology in the 5XFAD model of Alzheimer's disease. D. TUMBLESON-BRINK*; S. PUNTAMBEKAR; S. M. BEMILLER; A. OBLAK; G. E. LANDRETH; B. T. LAMB. *Indiana University-Purdue University,Indianapolis, Indiana University-Purdue Univ., IU Sch. of Med. Stark Neurosciences Res., Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., Stark Neurosciences Res. Inst.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 W9 **386.10** Gene expression and methylation analysis of ABCA7 in patients with Alzheimer's disease. K. YAMAZAKI*. *Ehime Univ. Hosp.*

3:00 W10 **386.11** Charting epigenetic reprogramming of gene regulatory elements in AD mice. A. J. PHIPPS*; M. D. ROBINSON; J. C. VICKERS; T. R. MERCER; A. WOODHOUSE; P. C. TABERLAY. *Univ. of Tasmania, Univ. of Zurich, Univ. of Tasmania, Garvan Inst. of Med. Res., Univ. of Tasmania.*

4:00 W11 **386.12** Towards multivariate genetic models predicting phenotypes of Alzheimer's disease risk. B. C. RIEDEL*; N. JAHANSHAD; D. A. BENNETT; P. M. THOMPSON. *USC, IGC-INI @ USC, Rush Univ., Univ. of Southern California (USC).*

1:00 W12 **386.13** Molecular profiling of brain and retina to understand earliest stages of Alzheimer's disease. S. R. CHINTALAPUDI*; A. UYAR; H. WILLIAMS; X. WANG; G. CARTER; G. R. HOWELL. *The Jackson Lab., The Jackson Lab., Eisai Andover Innovative Medicines (AiM) Inst.*

2:00 W13 **386.14** ● TET3-mediated DNA demethylation regulates AD neurodegeneration. J. LI*. *Kunming Inst. of Zoology, Chinese Acad. Scie.*

3:00 W14 **386.15** Apoe locus dna methylation in Alzheimers disease. Y. SHAO; G. D'ALEO; M. KHRESTIAN; J. ZAHRATKA; S. RAO; J. PILLAI; J. LEVERENZ; L. BEKRIS*. *Cleveland Clin., Cleveland Clin., Cleveland Clin. Genomic Med. Inst.*

4:00 W15 **386.16** PRKDC and Alzheimer's disease: A candidate gene study. J. L. WEBB*. *Iowa State Univ.*

1:00 W16 **386.17** PM20D1 methylation quantitative trait locus is associated with Alzheimer's disease. J. SANCHEZ-MUT*; H. HEYN; P. GARCIA-ESPARCIA; E. VIDAL; S. SAYOLS; L. GLAUSER; A. MONTEAGUDO-SÁNCHEZ; J. PEREZ-TUR; I. FERRER; D. MONK; M. ESTELLER; J. GRÄFF. *EPFL, CNAG, Univ. of Barcelona, CRG, Inst. of Mol. Biol., IDIBELL, Inst. de Biomedicina de València-CSIC.*

2:00 W17 **386.18** Retinal dysfunction and behavior in an Alzheimer mouse model may be modified by diet. K. SAMBAMURTI*; P. VASUDEVARAJU; E. AMELLA; M. A. PAPPOLLA; C. SABIN; N. H. GREIG; D. K. LAHIRI. *MUSC, Padmaraju Vasudevaraju Ph. D., Elaine Amella, Univ. of Texas, Christina Sabin, Intramural Res. Program, Natl. Inst. On Aging, NIH, Indiana Univ. Sch. of Med.*

3:00 W18 **386.19** Specific MicroRNAs regulating expression of proteins involved in Alzheimer's disease. D. K. LAHIRI*; N. CHOPRA; B. L. BAYON; N. H. GREIG; K. SAMBAMURTI. *Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., Intramural Res. Program, Natl. Inst. On Aging, NIH, MUSC.*

4:00 W19 **386.20** The role of Sp1-modulating compounds in Alzheimer's disease. B. L. BAYON*; B. MALONEY; X. XU; R. R. RATAN; D. K. LAHIRI. *Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., Burke-Cornell Med. Resch Inst.*

1:00 W20 **386.21** GRIN2B promoter polymorphism and processing speed in older adults. R. H. LIPSKY*; M. LIN; G. JICHA; X. DING; S. L. MCILWRATH; D. FARDO; L. BROSTER; F. SCHMITT; R. KRYSCIO; Y. JIANG. *Inova Hlth. Syst., George Mason Univ., Univ. of Kentucky Chandler Med. Ctr., Western Kentucky Univ.*

POSTER

387. Amyloid-Beta Biochemistry and Toxicity

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 W21 **387.01** Molecular links of DNA replication to apoptosis in ß-amyloid-treated neurons. F. CARACI; R. SANTANGELO; A. MUNAFÒ; F. NICOLETTI; A. G. COPANI*. *Univ. of Catania, Dept. Drug Sci., Univ. Sapienza.*

2:00 W22 **387.02** ● AC253 improved acute cognitive deficits caused of β-amyloid and human amylin delivered by an intracisternal injection in conscious mice. R. KIMURA*; M. ZAYASU; M. SAIKI; A. INOUE. *Tokyo Univ. of Science, Yamaguchi, Tokyo Univ. of Science, Yamaguchi, Kyoto Univ.*

3:00 W23 **387.03** Live cell integrated surface plasmon resonance sensing system for monitoring and electrical modulation of neuron signaling. M. MOZNEB*; A. NILCHIAN; C. LI. *Florida Intl. Univ.*

4:00 W24 **387.04** The influence of β1-42-amyloid and cyclosporine A on the calcium channels of hippocampal neurons. I. KRAVENSKA*; V. YAVORSKY; I. MELNICK; O. LUKYANETZ. *Bogomoletz Inst. of Physiol. of NASU.*

1:00 W25 **387.05** Investigating Aβ toxicity using differentiated neuronal human stem cell cultures. M. S. TAN*; R. CAPPAI; M. DOTTORI; G. D. CICCOTOSTO. *The Univ. of Melbourne, The Univ. of Melbourne.*

2:00 W26 **387.06** Transcriptome profile of nicotinic receptor-linked beta amyloid neurotoxicity. K. ARORA*; M. BELCAID; R. A. NICHOLS. *John A Burns Shool of Medicine, Univ. of Hawaii, John A. Burns Sch. of Medicine, Univ. of Hawai'i.*

3:00 W27 **387.07** Mediators released by astrocytes in response to AβOs increase neuronal oxidative tone and decrease nuclear distribution of pSerStat3. Y. A. MUÑOZ*; A. PAULA-LIMA; M. T. NUÑEZ. *Univ. of Chile, Univ. of Chile.*

4:00 W28 **387.08** Alzheimer's disease: Aβ toxic conformer has dynamic localization in the human brain before Aβ plaques form. Y. KAGEYAMA; O. PLETNIKOVA; G. L. RUDOW; K. IRIE; S. M. RESNICK; D. R. FOWLER; L. J. MARTIN; J. C. TRONCOSO*. *Johns Hopkins Univ. Sch. of Med., Johns Hopkins University, Sch. of Med., Kyoto Univ., Natl. Inst. On Aging, Office of the Chief Med. Examiner.*

1:00 W29 **387.09** Subtle genomic DNA damage leads to increase in production of Amyloid-β(1-42) without inducing reactive oxygen species. H. DAS*; S. C. BISWAS. *CSIR-Indian Inst. of Chem. Biol.*

2:00 W30 **387.10** Biochemical analysis of oxygenated Aβ by photooxygenation system. Y. HORI*; S. OZAWA; A. TANIGUCHI; Y. SHIMIZU; R. KINO; T. SAITO; T. C. SAIDO; Y. SOHMA; M. KANAI; T. TOMITA. *Grad. Sch. Pharm. Sci., The Univ.Of Tokyo, Grad. Sch. Pharm. Sci., The Univ.Of Tokyo, Grad. Sch. Pharm. Sci., The Univ. of Tokyo, RIKEN Brain Sci. Inst.*

3:00 W31 **387.11** *In vivo* Aβ clearance from interstitial fluid and efflux through the choroid plexus are negatively influenced by peptide oligomerization. A. A. ROSTAGNO*; E. CABRERA; P. GIANNONI; F. MCINTEE; T. A. NEUBERT; J. GHISO. *New York Univ. Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 W32 **387.12** Amyloid β-induced mitochondrial dysfunction is mediated by changes on PGC-1α and Mfn1/Drp1 on cellular models of Alzheimer disease. J. FUENTEALBA*; J. PANES-FERNANDEZ; T. CELIS-MUÑOZ; T. SILVA-GRECCHI; D. MENNICKENT; P. A. GODOY. *Univ. de Concepcion, Univ. of Concepcion, Univ. de Concepcion.*

1:00 W33 **387.13** Single D-peptide treatment causes local long-term changes in Aβ deposition in Tg AD model mice. T. VAN GROEN*; I. KADISH; N. JIANG; D. WILLBOLD. *Univ. Alabama-Birmingham, Forschungszentrum Jülich Gmbh.*

2:00 W34 **387.14** Developmental Exposure to particulate air pollutants impairs hippocampal dependent memory, reduces hippocampal neurogenesis, and causes depressive behaviors. N. C. WOODWARD*; R. G. JOHNSON, III; F. SHIRMOHAMMADI; C. SIOUTAS; S. E. KANOSKI; C. E. FINCH; T. E. MORGAN. *USC, USC, USC, USC.*

3:00 W35 **387.15** Estradiol protective roles against air pollution mediated amyloidogenesis in neuroblastoma cells. N. SAFI*; M. CACCIOTTOLO; F. SHIRMOHAMMADI; C. SIOUTAS; T. MORGAN; C. FINCH. *USC, USC.*

4:00 W36 **387.16** Long term exposure to urban nano particulates has negative effects on cognitive functions and affects Alzheimer's disease pathological hallmarks. C. D'AGOSTINO*; M. CACCIOTTOLO; F. SHIRMOHAMMADI; C. SIOUTAS; T. E. MORGAN; C. E. FINCH. *USC Leonard Davis Sch. of Gerontology, USC Viterbi Sch. of Engin.*

1:00 X1 **387.17** ▲ Developmental Exposure to particulate air pollutants causes neuroinflammation. R. G. JOHNSON*, III; N. C. WOODWARD; F. SHIRMOHAMMADI; C. SIOUTAS; S. E. KANOSKI; T. E. MORGAN; C. E. FINCH. *USC, USC, USC, USC.*

2:00 X2 **387.18** Urban traffic-derived nanoparticulate matter promotes pro-amyloidogenic APP processing through increase of oxidative stress and lipid raft disruption. M. CACCIOTTOLO*; A. SAFFARI; C. SIOUTAS; T. E. MORGAN; C. E. FINCH. *USC Leonard Davis Sch. of Gerontology, USC Viterbi Sch. of Engin.*

3:00 X3 **387.19** Comparison of Aβ levels in brains and saliva of Alzheimer's disease mouse models. A. M. FLODEN*; G. D. MANOCHA; K. L. PUIG; C. K. COMBS. *Univ. of North Dakota.*

4:00 X4 **387.20** Morphological characterization of glia reveals circuit specific propagation of amyloid beta pathology in Alzheimer's disease. F. ABDURROB*; R. CANTER; N. DEDIC; K. CHUNG; L. TSAI. *MIT.*

1:00 DP05/X5 **387.21** ● (Dynamic Poster) Identification of measurable phenotypes relevant to Alzheimer's disease using human iPSC-derived neurons. K. MANGAN; K. KIM; L. HARMS; C. KANNEMEIER; B. M. BADER; K. JÜGELT; O. SCHRÖDER; B. FREITAS*; C. B. CARLSON; E. JONES. *Cell. Dynamics Intl., NeuroProof GmbH, Cell. Dynamics Intl.*

2:00 X6 **387.22** Traffic-related air pollution (TRAP) mediates amyloidogenesis through TNF signaling. A. HAGHANI*; M. CACCIOTTOLO; N. SAFI; K. R. DOTY; F. SHIRMOHAMMADI; B. XIN; R. ROHS; T. C. TOWN; C. SIOUTAS; T. E. MORGAN; C. E. FINCH. *USC, USC, USC, USC, USC.*

POSTER

388. Cell Biology of Huntington's Disease I

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 X7 **388.01** Early sphingolipid signatures of mutant huntingtin expression in neuronal cell. A. M. TRZECIECKA*; M. PIQUERAS; S. K. BHATTACHARYA. *Univ. of Miami.*

2:00 X8 **388.02** ● Developing and testing of small molecules that specifically degrade HDAC4 protein. H. A. WILKINSON; G. MCALLISTER; O. LAZARI; N. MACABUAG; L. URBONAS; M. EZNARRIAGA; R. JARVIS; P. BRECCIA; R. VAN DE BOSPOORT; D. MACDONALD*; E. DOHERTY; T. VOGT; I. MUNOZ-SANJUAN; C. DOMINGUEZ. *CHDI Management, Inc., Charles River, Charles River, Charles River, CHDI Management, Inc.*

3:00 X9 **388.03** Functional connectivity and dynamics in Huntington's disease striatal cultures revealed through large-scale calcium imaging. S. FERNÁNDEZ-GARCÍA; M. MASANA*; J. G. ORLANDI; G. GARCÍA-DÍAZ BARRIGA; J. SORIANO; J. ALBERCH. *Univ. of Barcelona, Inst. d'Investigacions Biomèdiques August Pi i Sunyer, Ctr. de Investigación Biomédica en Red sobre Enfermedades Neurodegenerativas, Univ. of Barcelona, Univ. of Barcelona, Univ. of Calgary, Inst. of Complex Systems (UBICS).*

4:00 X10 **388.04** Inhibiting sphingosine kinase 2 mitigates mutant huntingtin-induced neurodegeneration. N. UZOR*; J. MORUNO MANCHON; M. P. BLASCO; S. MANNURU; N. PUTLURI; E. E. FURR-STIMMING; A. S. TSVETKOV. *McGovern Med. Sch., Baylor Col. of Med.*

1:00 X11 **388.05** Up-regulation of EAAT2/GLT1 normalizes multiple components of striatal glutamate transmission in the Q175 mouse model of Huntington's disease. C. RANGEL BARAJAS*; I. CORONEL-MORALES; G. V. REBEC. *Indiana Univ.*

2:00 X12 **388.06** ● Transcriptomic analysis of the YAC128 HD mouse model shows disease mechanisms are ameliorated by pridopidine. R. KUSKO; M. GEVA; J. DREYMANN; M. POULADI; J. ROSS*; Y. CHA; R. ESCALANTE; B. ZESKIND; D. LAIFENFELD; A. ORBACH; R. LAUFER; I. GROSSMAN; M. R. HAYDEN. *Immuneering Corp., Teva Pharmaceut. Industries Ltd, Natl. Univ. of Singapore.*

3:00 X13 **388.07** Zinc finger protein reduces mHtt expression and attenuates qEEG oscillatory dysfunction in HD mice. E. J. DONZIS*; K. SAFARYAN; N. BERBERIAN; G. GANESH; S. CHOPRA; G. KONDAVEETI; K. REINA; A. M. ESTRADA-SANCHEZ; A. M. HUNTER; C. CEPEDA; M. R. MEHTA; A. F. LEUCHTER; M. S. LEVINE. *Univ. of California Los Angeles, Univ. of California Los Angeles, Univ. of California Los Angeles.*

4:00 X14 **388.08** Striatal GABAergic interneurons show distinct electrophysiological changes during disease progression in the Q175 mouse model of Huntington's disease. S. M. HOLLEY*; L. GALVAN; T. KAMDJOU; C. CEPEDA; M. S. LEVINE. *UCLA.*

1:00 X15 **388.09** Cdk5 contributes to Huntington's disease learning and memory deficits via modulation of brain region-specific substrates. E. ALVAREZ-PERIEL; M. PUIGDELLIVOL; V. I. BRITO; F. PLATTNER; J. A. BIBB; J. ALBERCH; S. GINES-PADROS*. *Med. School, Univ. of Barcelona, IDIBAPS, CIBERNED, UT Southwestern Med. Ctr., Univ. of Alabama Birmingham.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 X16 **388.10** ▲ Characterization of the onset and severity of synaptic plasticity deficits in the Q175FDN knock-in mouse model of Huntington's disease. J. G. QUIRION*; M. P. PARSONS. *Mem. Univ. of Newfoundland.*

3:00 X17 **388.11** ● TSPO-PET imaging using ^{18}F-PBR06 is a potential biomarker for monitoring therapeutic Efficacy in Huntington's disease: preclinical evidence with the small molecule p75^{NTR} ligand LM11A-31. D. A. SIMMONS*; M. L. JAMES; N. P. BELICHENKO; S. SEMAAN; C. CONDON; J. C. KUAN; A. SHUHENDLER; Z. MIAO; F. T. CHIN; F. M. LONGO. *Stanford Univ., Stanford Univ.*

4:00 X18 **388.12** Neuroprotection by NF-κB subunit RelA/P65 in cell culture models of Huntington's disease and spinocerebellar ataxia type-1. Y. ZHANG*; J. FRANKLIN; S. D'MELLO. *Southern Methodist Univ.*

1:00 X19 **388.13** Reduced expression of Foxp1 as a contributing factor in Huntington's disease. A. LOUIS SAM TITUS*; S. R. D'MELLO. *UNIV OF TEXAS AT DALLAS, Southern Methodist Univ.*

2:00 X20 **388.14** Striatal and cortical changes in huntington disease. W. SWEIDAN*; N. SERAJI BOZORGZAD; F. BAO; K. ARRAGUNTLA; S. LITCHMAN; S. RAZMJOU. *Wayne State Univ., Univ. Hlth. Ctr.*

3:00 X21 **388.15** ● Irritability in Huntington's disease: A phase II exploratory clinical trial with a novel vasopressin 1a antagonist, SRX246. S. M. HERSCH*; S. LU; K. E. ANDERSON; M. J. BROWNSTEIN; N. G. SIMON. *Massachusetts Gen. Hosp. Dept. of Neurol., Azevan Pharmaeuticals, Inc., Lehigh Univ., Georgetown Univ. Med. Ctr.*

4:00 X22 **388.16** Identifying functional regulatory units in Huntington's disease Mouse Models using a population based evolutionary algorithm. S. ALLAM*; T. H. RUMBELL; T. TRONG; A. PONZI; J. R. KOZLOSKI. *IBM Res.*

1:00 X23 **388.17** ● Results of a phenotypic HTS to identify small molecule modulators of mutant HTT levels in hES cells as HD therapies. O. LAZARI; A. MUKONOWESHURO; B. NANCOLAS; C. TURNBULL; I. GOWERS; M. IOVINO; C. PAULE; R. JARVIS; P. BRECCIA; T. LADDUWAHETTY; G. MCALLISTER; E. DOHERTY; J. A. BARD*; D. MACDONALD; A. HOWARD; C. DOMINGUEZ; I. MUNOZ-SANJUAN. *Charles River, CHDI Management, Inc.*

2:00 X24 **388.18** Altered exocytosis of synaptic vesicles and Ca^{2+} influx in cortical neurons in a Huntington's disease mouse model studied with real-time imaging of single presynaptic terminals. C. YU*; S. CHEN; L. RONG; M. ZHANG; X. QIN; H. PARK. *Hong Kong Univ. of Sci. and Technol., Hong Kong Univ. of Sci. and Technol.*

3:00 X25 **388.19** Cellular modeling of spiny projection neurons in a Huntington's disease mouse model. H. SONG*; J. GOODLIFFE; J. I. LUEBKE; C. M. WEAVER. *Franklin & Marshall Col., Boston Univ. Sch. of Med., Boston Univ. Sch. of Med.*

4:00 X26 **388.20** Intranasal administration of mesenchymal stem cells leads to improved survival and ameliorates behavioral phenotypes in the R6/2 mice of Huntington disease. H. NGUYEN*; L. YU-TAEGER; K. ARNOLD; L. DANIELYAN; A. STOLZING; E. SINGER; P. BAMBYNEK-DZIUK; J. STRICKER-SHAVER; A. NOVATI; O. RIESS. *Univ. of Tuebingen, Fraunhofer Inst., Univ. Hosp. of Tübingen, Univ. of Tuebingen.*

1:00 X27 **388.21** A novel antibody to monitor oligomeric mutant Huntingtin as a biomarker for Huntington's disease. C. CHANG*; M. LIN; W. SHEN; J. SIEW; B. SOONG; C. CHEN; P. TU; Y. CHERN. *Academia Sinica, Taipei Veterans Gen. Hosp., Chang Gung Mem. Hosp.*

2:00 X28 **388.22** Motor and visuospatial alterations correlate with white matter degeneration in Huntington´s disease. V. GÁLVEZ*, SR; A. CAMPOS-ROMO; G. RAMÍREZ GARCÍA; J. FERNANDEZ-RUIZ. *Univ. Veracruzana, UNAM, Univ. Nacional Autónoma de México, Univ. Nacional Autonoma Mexico.*

3:00 X29 **388.23** Implicit visuomotor learning impairment in Huntington's disease correlates with fronto-parietal and striatal atrophy. I. VACA-PALOMARES*; D. C. BRIEN; B. C. COE; J. FERNANDEZ-RUIZ; D. P. MUNOZ. *Univ. Nacional Autónoma De México, Queen's Univ., Univ. Nacional Autonoma Mexico, Queens Univ.*

4:00 X30 **388.24** Cortical hyperactivity of neuronal microcircuits in a presymptomatic mouse model of Huntington's disease is re-balanced by metformin treatment. I. ARNOUX*; H. WATARI; M. WILLAM; P. NARAYAN DEY; S. SCHWEIGER; A. METHNER; A. STROH. *Inst. of Microscopic Anat. and Neurobio., Inst. of Human Genet., Dept. of Neurol. Johannes Gutenberg-University.*

1:00 X31 **388.25** Increased translation contributes to neuronal dysfunction in Huntington's disease. J. CREUS-MUNCUNILL; M. GARCIA-FORN; R. BADILLOS; M. MASANA; J. ALBERCH; E. PEREZ-NAVARRO*. *Dept. Biomed. Sciences, Univ. of Barcelona, Inst. d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS), Ctr. de Investigación Biomédica en Red sobre Enfermedades Neurodegenerativas (CIBERNED).*

2:00 X32 **388.26** Dissecting the regulatory mechanism of ubiquitin E3 ligase activity and understanding the importance of such regulation in polyglutamine pathogenesis. E. CHAN*; Z. CHEN; L. LI. *The Chinese Univ. of Hong Kong.*

3:00 X33 **388.27** Latent toxoplasma gondii infection promotes neurodegeneration and increases soluble mutant huntingtin levels in the YAC128 mouse model of Huntington's disease. D. DONLEY*; T. JENKINS; M. REALING; V. CHOPRA; S. HERSH; J. GIGLEY; J. H. FOX. *Univ. of Wyoming, Univ. of Wyoming, Mass Gen., Univ. of Wyoming.*

POSTER

389. Movement Disorders II

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 Y1 **389.01** Withdrawn

2:00 Y2 **389.02** Targeting the acetyltransferase activity of Tip60 abrogates aspects of spinal and bulbar muscular atrophy pathology. H. L. MONTIE*; D. ESTRADA; C. MEZES; A. LUKASIK; E. HEINE; D. EXLER; Y. LIU; G. ZHENG; F. DEKKER; D. E. MERRY. *Philadelphia Col. of Osteo. Med., Thomas Jefferson Univ., The Univ. of Georgia, Univ. of Groningen.*

3:00 Y3 **389.03** Reduced cytoplasmic MBNL1 is an early event in a brain-specific mouse model of myotonic dystrophy. P. WANG*; Y. LIN; L. WANG; T. KUO; S. CHENG; G. WANG. *Inst. of Biomed. Sci., Program in Mol. Medicine, Natl. Yang-Ming Univ. and Academia Sinica, Neurosci. Program of Academia Sinica.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 Y4 **389.04** Non-invasive and allele-specific silencing of mutant ataxin-3 alleviates neuropathology and motor deficits of Machado-Joseph disease. R. NOBRE; J. SARAIVA; C. FUSCO; S. PAIXÃO; M. SANTANA; M. ESTEVES; L. PEREIRA DE ALMEIDA*. *CNC - Ctr. For Neurosci. | Univ. of Coimbra, Inst. for Inter-disciplinary Research, Univ. of Coimbra, Portugal, Neurol. Department, Gene Therapy Center, Univ. of Massachusetts Med. School, MA, USA, Fac. of Pharmacy, Univ. of Coimbra, Portugal.*

1:00 Y5 **389.05** Involvement of the frontotemporal dementia gene C9ORF72 in proteasome- and autophagy-mediated protein degradation pathways. S. S. LESKELÄ*; M. A. TAKALO; J. LIST; M. CARTRÓ FONT; H. SOININEN; A. M. REMES; M. HILTUNEN; A. HAAPASALO. *Univ. of Eastern Finland, Univ. of Eastern Finland, Univ. of Eastern Finland, Kuopio Univ. Hosp.*

2:00 Y6 **389.06** The ALS/FTD associated protein C9ORF72 forms a complex with SMCR8 to regulate ULK1 and play a dual role in autophagy. C. LIANG*; M. YANG; K. SWAMINATHAN; F. LAI; R. SHIEKHATTAR; J. CHEN. *Univ. of Georgia, USC, Natl. Univ. of Singapore, Univ. of Miami Miller Sch. of Med.*

3:00 Y7 **389.07** Induction of autophagy enhances degradation of causative proteins in cellular models of neurodegenerative diseases. H. ADACHI*; Z. HUANG; K. OKADA; K. OHNARI; T. HASHIMOTO; T. TOYOTA; Y. IWANAKA. *Univ. of Occup. and Envrn. Hlth.*

4:00 Y8 **389.08** PolyQ protein FAM171B expression and localization in mouse brain. Q. H. TRAN; A. K. SUDASINGHE; B. JONES; D. SHARLIN; G. M. GOELLNER*. *Minnesota State Univ., Minnesota State Univ., Minnesota State Univ., Minnesota State Univ- Mankato.*

1:00 Y9 **389.09** Ataxin-2 in stress granules regulate nucleocytoplasmic transport in als. K. ZHANG*; J. G. DAIGLE; K. M. CUNNINGHAM; A. N. COYNE; J. C. GRIMA; T. E. LLOYD; J. D. ROTHSTEIN. *Johns Hopkins University, Sch. of Med., Johns Hopkins University, Sch. of Med., Johns Hopkins University, Sch. of Med., Johns Hopkins University, Sch. of Med., Johns Hopkins University, Sch. of Med., Johns Hopkins University, Sch. of Med.*

2:00 Y10 **389.10** Peripheral nervous system pathology in a mouse model of adrenomyeloneuropathy. F. LAHEJI*; Y. GONG; A. BERENSON; R. KOK; F. EICHLER. *Massachusetts Gen. Hosp.*

3:00 Y11 **389.11** Down regulating mGluR5 in the $SOD1^{G93A}$ mouse model of ALS reduces the reactive phenotype of ex-vivo cultured spinal cord astrocytes. C. USAI*; F. PROVENZANO; E. GALLIA; M. MILANESE; T. BONIFACINO; G. BONANNO. *Natl. Rese Council, 2Department of Pharmacy, Unit of Pharmacol. and Toxicology, Univ. of Genoa, 16132 Genoa, Italy, Ctr. of Excellence for Biomed. Research, Univ. of Genoa, 16148 Genoa, Italy.*

4:00 Y12 **389.12** Non-conventional DBS stimulation for tremor and non-tremor symptoms of ET. S. LEE*; W. F. ASAAD; S. R. JONES. *Brown Univ., Brown Univ., Brown Univ.*

1:00 Y13 **389.13** Implementation of a multilayer perceptron neural network for classifying deep brain stimulation in 'On' and 'Off' modes through a smartphone representing a wearable and wireless sensor application. R. C. LEMOYNE*; T. J. MASTROIANNI. *Independent, Cognition Engin.*

2:00 Y14 **389.14** Characterizing the deep brain stimulation micro-lesion effect using peripheral sensors. S. CERNERA*; E. OPRI; A. GUNDUZ. *Univ. of Florida, Univ. of Florida.*

1:00 DP06/Y15 **389.15** ● (Dynamic Poster) Calcium imaging of striatal activity evoked by subthalamic nucleus deep brain stimulation. J. TREVATHAN*; E. N. NICOLAI; A. J. ASP; D. CHENG; M. J. SCHACHTER; J. J. NASSI; S. L. OTTE; J. G. PARKER; J. LUJAN; K. A. LUDWIG. *Mayo Clin., Mayo Clin., Mayo Grad. Sch., Inscopix, Inc., Inscopix, Stanford Univ., Mayo Clin.*

4:00 Y16 **389.16** ● Precise MRI-based stereotaxic surgery in large animal models. A. N. GLUD; J. BECH; L. TVILLING; H. ZAER; D. ORLOWSKI; L. M. FITTING; D. ZIEDLER; M. GENESER; R. SANGILL; A. K. O. ALSTRUP; C. R. BJARKAM; J. SORENSEN*. *Aarhus Univ. Hospital, CENSE Group, Aarhus, Denmark, Aarhus Univ. Hosp., Aarhus Univ. Hosp., Inst. of Clin. Med., Aarhus Univ. Hospital, Head-Neuro Ctr.*

1:00 Y17 **389.17** Towards an adaptive cortico-thalamic closed-loop deep brain stimulation for the treatment of essential tremor. E. OPRI*; S. L. CERNERA; M. OKUN; K. FOOTE; A. GUNDUZ. *Univ. of Florida, Univ. of Florida.*

2:00 Y18 **389.18** Closed-loop deep brain stimulation paradigm for Tourette syndrome. J. CAGLE*; M. S. OKUN; K. D. FOOTE; A. GUNDUZ. *Univ. of Florida.*

3:00 Z1 **389.19** Brain abnormalities in catatonia across psychiatric, neurological, and general medical conditions: A systematic review and meta-analysis of neuroimaging findings. X. CHANG; G. COLLIN*. *Univ. Med. Ctr. Utrecht, BIDMC, Harvard Med. School, Dept. of Psychiatry.*

POSTER

390. Glia-Neuronal Communication in Health and Disease

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 Z2 **390.01** Role of glial and neuronal TrkB signaling in protection of retinal ganglion cells following optic nerve injury. Y. AZUCHI*; A. KIMURA; C. HARADA; K. NAMEKATA; T. HARADA. *Tokyo Metropolitan Inst. of Med. Sci., Grad. Sch. of Science, Toho Univ.*

2:00 Z3 **390.02** N9 murine microglial cell activation is attenuated by rosmarinic acid through down regulation of inflammatory cytokines and cleaved caspase-3. P. PEREIRA*; V. R. COELHO; C. M. VIAU; R. B. STAUB; M. S. DE SOUZA; P. F. PFLÜGER; J. SAFFI. *Federal Univ. of Rio Grande Do Sul, Federal Univ. of Hlth. Sci. of Porto Alegre.*

3:00 Z4 **390.03** FKBP51 mediates neurotoxicity, astrogliosis, and demyelination via cell type-dependent signaling pathway in excitotoxicity-induced neurodegeneration. S. LIN*; H. CHUANG; Y. KUO; P. HSU; I. LEE; A. LIN; C. JENG; Y. LEE. *Natl. Yang-Ming Univ., Taipei Veteran Gen. Hosp., Natl. Yang-Ming Univ., Taipei Veteran Gen. Hosp., Natl. Yang-Ming Univ., Natl. Yang-Ming Univ.*

4:00 Z5 **390.04** ● Intracellular signaling in astrocytes in response to elevated hydrostatic pressure. S. KAJA*; V. R. RAO; Y. NAUMCHUK; A. J. PAYNE. *Loyola Univ. Chicago, Edward Hines Jr. VA Hosp., Loyola Univ. Chicago, K&P Scientific LLC.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 Z6 **390.05** Connexin 43 as a mediator of androgen and estrogen-induced protection against oxidative stress in astrocytes. N. K. KUBELKA*; N. RYBALCHENKO; M. SINGH. *Univ. of North Texas Hlth. Sci. Ctr.*

2:00 Z7 **390.06** ▲ 3-hydroxykynurenine and 3-hydroxyanthranilic acid enhance the toxicity induced by copper in rat astrocytes culture. D. RAMÍREZ ORTEGA*; A. SALAZAR RAMIRO; D. GONZALEZ ESQUIVEL; C. RIOS; B. PINEDA; V. PEREZ DE LA CRUZ. *Inst. Nacional De Neurología y Neurocirugía Manuel Velasco, INSTITUTO NACIONAL DE NEUROLOGIA, INSTITUTO NACIONAL DE NEUROLOGIA.*

3:00 Z8 **390.07** Co-culturing with Schwann cells confers protection on dorsal root ganglion neurons against cytotoxicity induced by silver nanoparticles. J. C. LAI*; W. GAO; S. W. LEUNG. *Idaho State Univ. Col. of Pharm., Idaho State Univ. Col. of Sci. & Engin.*

4:00 Z9 **390.08** Repeated daily doses of intranasal insulin aspart in young and aged F344. K. L. ANDERSON*; H. N. FRAZIER; A. O. GHOWERI; K. E. HARGIS; J. C. GANT; L. D. BREWER; N. M. PORTER; E. M. BLALOCK; O. THIBAULT. *Univ. of Kentucky.*

1:00 Z10 **390.09** *In vivo* neuronal and astrocytic high-resolution calcium in aging and a model of AD. J. C. GANT*; P. SOMPOL; P. W. LANDFIELD; C. M. NORRIS; O. THIBAULT. *Univ. of Kentucky, Univ. of Kentucky, Univ. of Kentucky, Univ. Kentucky, Univ. Kentucky Med. Ctr.*

2:00 Z11 **390.10** Signaling and expression of a truncated, constitutively active human insulin receptor in hippocampal neurons. H. N. FRAZIER*; K. L. ANDERSON; S. MAIMAITI; A. O. GOWHERI; S. D. KRANER; G. J. POPA; M. D. MENDENHALL; C. M. NORRIS; O. THIBAULT. *Univ. of Kentucky, Univ. of Kentucky, Univ. of Kentucky.*

3:00 Z12 **390.11** Macroglial Uncoupling Protein 2 deletion increases retinal ganglion cell survival in glaucoma. D. HASS*; C. J. BARNSTABLE. *The Penn State Col. of Med.*

4:00 Z13 **390.12** Neuronal plasmalemmal damage elicits rapid immune cell activation following diffuse traumatic brain injury in swine. K. WOFFORD*; K. D. BROWNE; D. P. BROWN; M. R. GROVOLA; J. E. DUDA; K. L. SPILLER; D. CULLEN. *Drexel Univ., Univ. of Pennsylvania, Corporal Michael J. Crescenz Veterans Affairs Med. Ctr., Univ. of Pennsylvania, Ctr. for Brain Injury and Repair, Dept of Neurosurg.*

1:00 Z14 **390.13** Comparison of food intake in newly diagnosed multiple sclerosis patients and healthy individuals-a case-control study. Y. GHAZAVI; Z. BAHADORAN; M. NIKFARJAM; N. BELADI MOGHADDAM; P. MIRMIRAN; M. RAZA*. *Shahid Beheshti Univ. of Med. Sci., Shahid Beheshti Univ. of Med. Sci., Shahid Beheshti Univ. of Med. Sci., Baqiyatallah Univ. of Med. Sci.*

2:00 Z15 **390.14** ▲ Early lead (Pb^{2+}) exposure induces anatomic, ultrastructural and behavioral changes in zebrafish. L. HUNT; F. NIEVES; S. NARVAEZ; A. MONTEMARANO; S. GUARIGLIA*. *CUNY Col. of Staten Island/Saint Joseph by the Sea High Sch., Col. of Staten Island.*

3:00 Z16 **390.15** Novel protein targets of dimethyl fumarate in neural cells. G. G. PIROLI*; A. M. MANUEL; T. PATEL; M. D. WALLA; J. WANG; L. SHI; S. A. LANCI; A. GALLOWAY; P. I. ORTINSKI; D. S. SMITH; N. FRIZZELL. *Univ. South Carolina Sch. Med., Univ. of South Carolina, Med. Col. of Georgia at Augusta Univ., Univ. of South Carolina.*

4:00 Z17 **390.16** Neuroprotective effect of thymoquinone on cuprizone-induced multiple sclerosis in mice. W. M. RENNO*; H. L. SADEK. *Kuwait Univ., Kuwait Univ.*

1:00 Z18 **390.17** ● ▲ Neuroprotective effect of monomethyl fumarate on inflammation-driven synaptopathy in a MS preclinical model. D. FRESEGNA*; F. DE VITO; A. MUSELLA; A. GENTILE; S. BULLITTA; F. RIZZO; A. PAOLILLO; D. CENTONZE; G. MANDOLESI. *Univ. of Rome Tor Vergata, IRCCS Inst. Neurologico Mediterraneo (INM) Neuromed, IRCCS Fondazione Santa Lucia, Biogen.*

2:00 Z19 **390.18** Copper-iron connection in cuprizone-induced oligodendrocyte loss. P. JHELUM*; E. SANTOS-NOGUEIRA; S. DAVID. *The Res. Inst. of the McGill Univ.*

3:00 Z20 **390.19** The retinoic acid synthesizing enzyme, retinaldehyde dehydrogenase 2 (RALDH2), regulates mouse CNS remyelination. S. E. NANESCU*; N. WATHIEU; L. ROSKO; D. CHA; J. K. HUANG. *Georgetown Univ.*

4:00 Z21 **390.20** Resident microglia form rod-shaped structures in cortical regions of neuronal damage and inflammation after diffuse traumatic brain injury. K. G. WITCHER*; B. N. BENNER; D. B. MCKIM; J. LIFSHITZ; D. S. EIFERMAN; J. P. GODBOUT. *Ohio State Univ., The Ohio State Univ., Phoenix Children's Hosp., The Ohio State Univ., Ohio State Univ. Dept. of Neurosci.*

1:00 Z22 **390.21** Add insult to injury: microglia activation in neuropsychiatric diseases? C. K. DONAT*; M. SHUKUROGLOU; D. R. OWEN; L. H. PINBORG; M. SASTRE; J. D. MIKKELSEN. *Imperial Col. London, Copenhagen Univ. Hosp. - Rigshospitalet, Copenhagen Univ. Hosp. - Rigshospitalet.*

2:00 Z23 **390.22** Neuroglia glutamate signaling in the adult brain is dependent on mGluR3. N. A. SMITH*; L. K. BEKAR; J. LIU; M. NEDERGAARD; V. GALLO. *Children's Natl. Hlth. Syst., Univ. of Saskatchewan Saskatoon SK, Univ. of Rochester Sch. of Med. and Dent.*

POSTER

391. Molecular Mechanisms of Ischemia

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 Z24 **391.01** ▲ Synergistic role of endogenous and exogenous 17β-estradiol in protection of ischemic neurons. R. WANG*. *Norteh CHINA UNIVERSITY OF SCIENCE AND TEHCNOLOGY.*

2:00 Z25 **391.02** Myeloid cell produced VEGF-A contributes to acute ischemic stroke damage. A. RAYASAM*; A. LINDSTEDT; J. KIJAK; T. KIM; M. HSU; M. HERBATH; J. HARDING; A. NAGY; R. VEMUGANTI; M. SANDOR; Z. FABRY. *Univ. of Wisconsin - Madison, Lunenfeld-Tanenbaum Res. Institute, Mount Sinai Hosp.*

3:00 Z26 **391.03** ASIC1a mediates autophagy activation and neuronal death induced by ischemic brain injury mice model. X. SUN*. *The First Affiliated Hosp. of Soochow Universit.*

4:00 Z27 **391.04** Global ischemia activates miR-34b/c mediated by p53 in hippocampal neurons destined to die. J. HWANG*; F. PONTARELLI; B. COURT VAZQUEZ; S. ZUKIN. *Albert Einstein Col. Med.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 Z28 **391.05** Granulocyte-colony stimulating factor induced neuroprotection in rodent models of focal and global cerebral ischemia. J. M. MENZIE-SUDERAM*; J. MODIE; H. CHOU; P. TRUJILLO; K. MEDLEY; R. TAO; H. PRENTICE; J. WU. *Florida Atlantic Univ.*

2:00 Z29 **391.06** Molecular analysis of mutant high-temperature requirement serine protease a1 identified in patients with familial cerebral small vessel disease. M. UEMURA*; H. NOZAKI; T. KATO; A. KOYAMA; O. ONODERA. *Brain Res. Inst. (BRI), Niigata Univ., Niigata Univ., Niigata Univerity, Brain Res. Inst. (BRI), Niigata Univerity.*

3:00 Z30 **391.07** Potential role of endoplasmic reticulum stress in recurrent hypoglycemia-induced increase in ischemic brain damage. A. K. REHNI*; V. SHUKLA; K. R. DAVE. *Univ. of Miami Sch. of Med., Univ. of Miami Sch. of Med.*

4:00 Z31 **391.08** Polymerase delta-interacting protein 2 regulates astrocyte activation in ischemic stroke. M. S. HERNANDES*; B. LASSÈGUE; L. L. HILENSKI; J. ADAMS; L. CHENG; M. YEPES; K. GRIENDLING. *Emory Univ., Emory Univ., Emory Univ.*

1:00 Z32 **391.09** ▲ Ginkgo biloba down-regulates pro-apoptotic gene expression in an *in vitro* stroke model. K. M. MCINTYRE; F. L. PRENDES; K. KARNAS; A. J. ETTINGER*. *Cedar Crest Col., Cedar Crest Col.*

2:00 AA1 **391.10** ▲ Effect of resveratrol on expression of glucose transporters in astrocytes and neurons subjected to excitotoxicity. G. F. GUTIÉRREZ-AGUILAR*; P. AGUILERA HERNANDEZ. *Inst. Nacional De Neurología Y Neurocirugía, Inst. Nacional De Neurología Y Neurocirugía.*

3:00 AA2 **391.11** Transient focal ischemia significantly alters the temporal expression profiles of cerebral circular RNAome. S. L. MEHTA*; G. PANDI; R. VEMUGANTI. *Univ. of Wisconsin.*

4:00 AA3 **391.12** Putative stroke/vascular risk gene expression in blood of ischemic stroke patients is sexually dimorphic and cause-specific. C. J. DYKSTRA-AIELLO*; F. R. SHARP; G. C. JICKLING; H. HULL; F. HAMADE; N. SHROFF; X. ZHAN; D. LIU; B. P. ANDER; B. S. STAMOVA. *Univ. of California, Davis.*

1:00 AA4 **391.13** Alteration of human neuronal kappa opioid receptor expression under hypoxic mimic condition. J. BABCOCK; A. HERRERA; G. CORICOR; C. KARCH; A. LIU; A. RIVERA-GINES; J. L. KO*. *Seton Hall Univ.*

2:00 AA5 **391.14** Multiscale computer modeling of penumbral zones in brain ischemia. A. SEIDENSTEIN*; A. NEWTON; R. A. MACDOUGAL; W. W. LYTTON. *New York University- Tandon Sch. of Engin., Yale Univ., Yale Univ., SUNY Downstate Med. Ctr.*

3:00 AA6 **391.15** Identification the key sites of S2-S3 loop involved in TRPM2 gating mechanism. Y. LUO*; W. YANG. *Inst. of Neurosci.*

4:00 AA7 **391.16** Netrin-5 is upregulated in the peri-infarct region after middle cerebral artery occlusion. S. YAMAGISHI*; M. TAKARADA; M. SAWADA; K. SAWAMOTO; O. HORI; K. SATO. *Hamamatsu Univ. Sch. of Med., Kanazawa Univ., Nagoya City Univ. Grad. Sch. of Med. Sci.*

1:00 AA8 **391.17** Exploring the genome's dark matter for novel therapeutic targets against ischemic stroke. S. BHATTARAI*; F. PONTARELLI; A. DHARAP. *JFK Med. Ctr.*

2:00 AA9 **391.18** The selective antagonism of adenosine A_{2b} receptors prevents synaptic and neuronal damage induced by oxygen and glucose deprivation in CA1 rat hippocampus. F. UGOLINI; M. GIOVANNINI*; D. LANA; I. FUSCO; E. COPPI; I. DETTORI; L. GAVIANO; F. PEDATA; G. PEPEU; A. PUGLIESE. *Univ.*

3:00 AA10 **391.19** Cofilin-actin rod formation in brain ischemia. S. WON*; A. M. MINNELLA; C. EUN; E. ROME; P. S. HERSON; F. DABERTRAND; J. R. BAMBURG; R. A. SWANSON. *UCSF and SFVAMC, UC Denver, Univ. of Vermont, Colorado State Univ.*

4:00 AA11 **391.20** NAD^+ precursor protects against ischemic brain injury by promoting mitochondrial fusion. N. KLIMOVA; A. LONG; T. KRISTIAN*. *Univ. of Maryland, Baltimore, Univ. of Maryland, Univ. of Maryland Sch. of Med.*

1:00 AA12 **391.21** Matrilin-2: A pro-growth extracellular matrix protein in the post-stroke brain. S. P. BRIDGES*; M. MACHNICKI; S. T. CARMICHAEL. *Univ. of California Los Angeles, Univ. of California Los Angeles.*

2:00 AA13 **391.22** Vitamin C and neuronal oxidative stress alter mitochondrial and cellular size, triggering neuronal death. L. E. FERRADA*; K. A. SALAZAR; F. J. NUALART. *Univ. de Concepción, Univ. De Concepción, Univ. de Concepción.*

3:00 AA14 **391.23** Epigenetic regulation of ion channels in stroke, the acts of PcG and TrxG proteins. A. ZHOU*; L. HERNANDEZ; P. SHARMA; T. YANG; R. P. SIMON. *Morehouse Sch. of Med., Morehouse Med. Sch.*

4:00 AA15 **391.24** Suppressive effect of hypothalamic orexin-A-mediated vagus nerve activation on the cerebral ischemia-induced elevation of hepatic inflammatory cytokines. S. HARADA*; S. TOKUYAMA. *Kobe Gakuin Univ.*

1:00 AA16 **391.25** Survival of pyramidal neurons within the ischemic core of 12-hour post-MCAo mice. R. H. MEHDER*; D. PETRIN; P. J. GAGOLEWICZ; B. M. BENNETT; A. Y. JIN; R. D. ANDREW. *Queen`S Univ.*

2:00 AA17 **391.26** Autophagy in diabetic retinal ischemia/reperfusion injury. A. C. LO*; L. H. C. TANG; A. K. W. LAI; F. K. C. FUNG. *Dept. of Ophthalmology, The Univ. of Hong Kong.*

3:00 AA18 **391.27** Targeting the vulnerable phase of SD with ketamine does not prevent plasticity mechanisms. K. M. REINHART*; R. J. OLIVER; G. PERALES; N. I. PERRONE-BIZZOZERO; C. W. SHUTTLEWORTH. *Univ. of New Mexico HSC.*

4:00 AA19 **391.28** Pathologic roles of proteolytic enzymes associated with receptor processing. M. YAMADA*; H. HAYASHI; N. MATSUSHIMA; M. OHATA; B. YUAN; N. TAKAGI. *Tokyo Univ. of Pharm. and Life Sci.*

1:00 AA20 **391.29** *In vivo* studies of neuronal activity in the primary motor cortex after transient ischemic attack. H. ZHOU*; H. A. RIINA; J. ARD; A. ROSENBERG; G. YANG. *New York Univ. Sch. of Medicine, NYU Langon, New York Univ. Sch. of Medicine, NYU Langon.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

392. Animal Models of Brain Injury: Molecular Mechanisms - Inflammation

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 AA21 **392.01** Targeting the liver acute phase response following traumatic brain injury reduces brain inflammation. E. WICKER; L. BENTON; S. ALAIYED; W. MUALEM; M. P. BURNS; S. VILLAPOL*. *Georgetown Univ., Georgetown Univ., Georgetown Univ., Georgetown Univ. Med. Ctr.*

2:00 AA22 **392.02** Effects of Apyrase in a rat model of cerebral contusion injury. Y. FURUKAWA*; M. KOBAYASHI; T. KUMAGAWA; K. SHIJO; N. MORO; M. FUKUSHIMA; T. MAEDA; A. YOSHINO. *Nihon Univ. Sch. of Med.*

3:00 AA23 **392.03** Early reduction of large layer V corticospinal motor neurons precedes the inflammatory response and upregulation of phosphorylated-tau following repetitive mild TBI. M. ALKASLASI*; N. CHO; N. DHILLON; P. HARO-LOPEZ; O. SHELEST; G. BARMPARAS; E. LEY; G. M. THOMSEN. *Cedars-Sinai Med. Ctr.*

4:00 AA24 **392.04** Investigating the inflammatory response to midline and lateral fluid percussion injury. O. KOKIKO-COCHRAN*; K. WITCHER; D. EIFERMAN; J. GODBOUT. *Ohio State Univ., Ohio State Univ.*

1:00 AA25 **392.05** Chronic inflammation and neurodegeneration after traumatic brain injury in swine. M. R. GROVOLA*; D. P. BROWN; K. D. BROWNE; C. E. KEATING; K. L. WOFFORD; J. A. WOLF; D. CULLEN; J. E. DUDA. *Univ. of Pennsylvania, Corporal Michael J. Crescenz VA Med. Ctr., Drexel Univ.*

2:00 AA26 **392.06** Neurofilament light concentrations in serum following experimental rotational traumatic brain injury in rats. M. G. RISLING*; M. ANGÉRIA; H. ZETTERBERG; K. BLENNOW; J. DAVIDSSON. *Karolinska Inst., Karolinska Institutet, Sahlgrenska Univ. Hosp., Chalmers Univ. of Technol.*

3:00 AA27 **392.07** Divergent glial response following CCI versus blast injury in the gyrencephalic ferret brain. S. C. SCHWERIN*; M. CHATTERJEE; E. B. HUTCHINSON; K. RADOMSKI; A. IMAM-FULANI; J. T. MCCABE; C. PIERPAOLI; S. L. JULIANO. *Uniformed Services Univ., NIH, Henry M. Jackson Fndn., Dept. of Anatomy, Physiol. & Genetics, Uniformed Services Univ., NIH.*

4:00 AA28 **392.08** Comprehensive dose-response study of progesterone in a preclinical model of penetrating ballistic-like brain injury. C. M. GROEBER TRAVIS*; S. L. OKADA-RISING; R. C. PEDERSEN; J. A. SUN; K. E. DEDOMINICIS; D. A. SHEAR. *Walter Reed Army Inst. of Res.*

1:00 AA29 **392.09** Transcriptional alterations following traumatic brain injury in mOHSC model. D. ZHOU*; H. YAO; I. HARTLEY; J. WANG; W. WU; O. POULSEN; J. XUE; G. G. HADDAD. *UCSD, Univ. of California San Diego, The Rady Children's Hosp.*

2:00 AA30 **392.10** Temporal changes in mast cell release following a mild traumatic brain injury in rats. H. O. AWWAD*; M. R. LERNER; M. BAIER. *Univ. of Oklahoma Hlth. Sci. Ctr., Univ. of Oklahoma Hlth. Sci. Ctr., Univ. of Oklahoma Hlth. Sci. Ctr.*

3:00 AA31 **392.11** Synaptic formation of alpha synuclein aggregates acutely following experimental traumatic brain injury. C. DIXON*; Y. LI; J. HENCHIR; X. MA; S. W. CARLSON. *Univ. of Pittsburgh.*

4:00 AA32 **392.12** Neuroinflammation and Neuronal damage in neurocysticercosis using animal model. M. R. VERASTEGUI*; R. P. CARMEN; R. H. GILMAN; D. G. DÁVILA; G. CASTILLO; J. D. MORALES; N. CHILE; E. G. BERNAL; B. J. CONDORI; A. D. DELGADO; L. E. BAQUEDANO; C. CYSTICERCOSIS-WORKING-GROUP. *Univ. Peruana Cayetano Heredia, Johns Hopkins Univ., Univ. Peruana Cayetano Heredia.*

1:00 AA33 **392.13** Sex modulates the impact of inflammation on brain development after cranial irradiation. E. DE GUZMAN*; M. AHMED; S. PERRIER; B. NIEMAN. *Hosp. For Sick Children, Univ. of Toronto, Ontario Inst. for Cancer Res.*

2:00 AA34 **392.14** Optic tract degeneration and neuroinflammation in a closed head adolescent mouse model of traumatic brain injury. N. K. EVANSON*; F. GUILHAUME-CORREA. *Cincinnati Children's Hosp. Med. Ctr.*

3:00 AA35 **392.15** ● The effect of repetitive mild traumatic brain injury on tau pathology. G. EDWARDS*, III; N. MENDEZ DINAMARCA; C. SOTO; I. MORENO-GONZALEZ. *Univ. of Texas Hlth. Sci. Center-Houston.*

4:00 AA36 **392.16** Pial arteriolar hyper-responsiveness after blast was related with changes in endothelin-1 and endothelin receptors expression. S. H. MULLAH*; R. ABUTARBOUSH; Y. CHEN; M. LASHOFF-SULLIVAN; F. ARNAUD; U. KAWOOS; R. MCCARRON; S. T. AHLERS. *Naval Med. Res. Ctr., Uniformed Services Univ. of Hlth. Sci.*

1:00 BB1 **392.17** Nogo receptor-1 regulates balance, cognition and emotion after mild traumatic brain injury in mice. J. LAI*, ESQ; K. CHEN; J. C. WU; C. CHI-ZONG HUANG; Y. CHEN; L. OLSON; Y. CHIANG. *Taipei Med. Univ., Taipei Med. Univ., Taipei Med. Univ., Karolinska Inst.*

2:00 BB2 **392.18** Blast-induced traumatic brain injury displays a unique pattern of spatial neuropathology. N. CHANDRA*; R. R. KAKULAVARAPU, 07102-1982; D. Y. YOUNGER, 07102-1982; A. A. ARAVIND, 07102-1982; B. P. PFISTER, 07102-1982; M. KURIAKOSE; M. SKOTAK. *New Jersey Inst. of Technol., New Jersey Inst. of Technol.*

3:00 BB3 **392.19** A novel monoacylglycerol lipase inhibitor MJN110 reduces neuroinflammation in the mild repetitive closed head injury mouse model. P. SELVARAJ*; J. WEN; M. TANAKA; Y. ZHANG. *Henry M. Jackson Foundation/Uniformed Services Uni, Uniformed Services Univ. of the Hlth. Sci.*

4:00 BB4 **392.20** Acute expression changes potentially affecting chronic responses in a mouse mild repetitive TBI model. W. A. RATLIFF*; D. C. DRISCOLL; S. NEYRA; D. QUPTY; C. G. PICK; B. A. CITRON. *Bay Pines VA Healthcare Syst., Univ. of South Florida Morsani Col. of Med., Tel Aviv Univ. Sackler Sch. of Med.*

1:00 BB5 **392.21** Phenserine mitigates neurodegeneration and neuroinflammation in a mouse mild traumatic brain injury model. D. LECCA; M. BADER; D. TWEEDIE; R. BECKER; C. PICK; N. H. GREIG*. *Intramural Res. Program, Natl. Inst. On Aging, NIH, Tel Aviv Univ., Independent researcher.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 BB6 **392.22** Hyperbaric oxygen therapy as a treatment for traumatic brain injury. C. G. PICK*; S. TOUSSIA- COHEN; R. BARATZ- GOLDSTEIN; A. ELPAZ; V. RUBOVITCH. *Tel Aviv Univ., Tel Aviv Univ.*

3:00 BB7 **392.23** Incretin mimetics as a new drug strategy to treat mild traumatic brain injury. M. BADER*; Y. LI; I. TAMARGO; D. TWEEDIE; V. RUBOVITCH; R. D. DIMARCHI; K. TALBOT; N. H. GREIG; C. G. PICK. *Tel-Aviv Univ., Translational Gerontology Branch, Intramural Res. Program, Natl. Inst. on Aging, Natl. Inst. of Hlth., Dept. of Chemistry, Indiana Univ., UCLA.*

4:00 BB8 **392.24** The GLP-1R agonist, exendin-4, ameliorates open-field blast brain injury-induced learning and memory deficits, neuronal degeneration and altered synaptophysin staining in mouse. L. RACHMANY RABER*; D. TWEEDIE; V. RUBOVITCH; B. J. HOFFER; N. H. GREIG; C. G. PICK. *Dep.Of Anat. and Anthropology, Sackler Sch. of Medicine, Tel-Aviv Univ., Intramural Res. Program, Natl. Inst. on Aging, NIH, Case Western Reserve Univ. Sch. of Med.*

POSTER

393. Animal Models of Brain Injury: Molecular Mechanisms, Biomarkers, and Pharmacology

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 BB9 **393.01** Loss of blood-brain barrier integrity in the corticostriatal pathway following experimental traumatic brain injury and subsequent susceptibility to the rewarding effects of a sub-threshold dose of cocaine. L. CANNELLA*; M. MAYNARD; S. F. MERKEL; E. M. LUTTON; R. RAZMPOUR; R. G. AZER; A. M. ANDREWS; S. M. RAWLS; S. H. RAMIREZ. *Temple Univ. Lewis Katz Sch. of Med., Temple Univ. L, Temple Univ. Lewis Katz Sch. of Med.*

2:00 BB10 **393.02** ▲ Differential changes in tight junction protein expression at areas of blood-brain barrier hyperpermeability following experimental traumatic brain injury. M. MAYNARD*; A. M. ANDREWS; E. M. LUTTON; R. RAZMPOUR; M. SEASOCK; W. R. KUNG; S. H. RAMIREZ. *The Lewis Katz Sch. of Med. at Temple Univer, The Lewis Katz Sch. of Med. at Temple Univ., The Lewis Katz Sch. of Med. at Temple Univ.*

3:00 BB11 **393.03** Intraventricular *in utero*-electroporation BRAFV600E-induced tumors in mice resemble ganglioglioma key features. S. CASES-CUNILLERA*; B. K. ROBENS; S. SCHOCH; A. J. BECKER. *Universitäts Klinikum Bonn, Univ. Bonn Med. Ctr., Bonn Univ. Med. Sch., Neuropathology; Univ. Bonn Med. Ctr.*

4:00 BB12 **393.04** Long-term effects of blast exposure: A functional study in rats using an advanced blast simulator. P. ARUN*; D. M. WILDER; M. A. BENTON; C. M. CHRISTOFOROU; W. DRIWECH; R. T. URIOSTE; O. D. EKEN; V. SAJJA; S. A. VAN ALBERT; Y. WANG; I. D. GIST; J. B. LONG. *Walter Reed Army Inst. of Res.*

1:00 BB13 **393.05** Omega3-polyunsaturated fatty acids attenuate streptozotocin-induced neurogenesis via BDNF signaling in fat1 transgenic mice. G. DO HYEONG*; T. HWANG; S. SHIN; J. SHIN; J. HONG; K. LIM; J. KIM; D. KIM; J. RO. *Chungnam Natl. Univ., LES Corp. Inc.*

2:00 BB14 **393.06** Administrations of mesenchymal stem/stromal cells (MSCs) produced beneficial effects in models of traumatic brain injury via prevention of blood brain barrier leakage. J. WATANABE*; H. OHTAKI; K. YAGURA; K. HONDA; S. ARATA. *Showa Univ.*

3:00 BB15 **393.07** Focal brain lesions induced by ultraviolet irradiation. M. NAKATA*; K. NAGASAKA; I. TAKASHIMA; S. YAMAMOTO. *AIST, JSPS Res. fellow, Univ. of Tsukuba.*

4:00 BB16 **393.08** ● ▲ Assessing dendritic identity and protein trafficking in regenerated dendrites in adult *Drosophila.* S. IZABEL*; Y. JAN; L. JAN; L. DEVAULT. *Anat. and Neurobio., Univ. of California San Francisco, Univ. of California San Francisco, Univ. of California San Francisco.*

1:00 BB17 **393.09** Acamprosate reduces traumatic brain injury-induced neuronal death in rats. B. CHOI*; S. LEE; S. MIN; T. CHUNG; H. CHOI; S. SUH. *Hallym University, Col. of Med., CHA Bundang Med. Center, CHA University, Sch. of Med., Hallym University, Collge of Med.*

2:00 BB18 **393.10** Protective effects of dichloroacetic acid on traumatic brain injury induced neuronal death. S. LEE*; B. CHOI; S. SUH. *Col. of Med.*

3:00 BB19 **393.11** Effects of combined treatment of dichloroacetic acid (DCA) with pyruvate on global cerebral ischemia-induced hippocampal neuronal death. D. HONG*; A. KHO; S. SUH; M. CHOI; O. RYU; M. SOHN. *Hallym Univ., Hallym Univ., Inha Univ.*

4:00 BB20 **393.12** Effects of sodium dichloroacetate (DCA) on hypoglycemia-induced hippocampal neuronal death. A. KHO*; B. CHOI; S. SUH; H. CHOI; M. CHOI; O. RYU; T. CHUNG. *Hallym Univ., Hallym Univ., Hallym Univ., CHA Univ. Sch. of Med.*

1:00 BB21 **393.13** The effects of alcohol and traumatic brain injury on neural stem cell responses. S. T. TON*; S. TSAI; H. M. FLINK; J. Y. WU; J. J. HSU; I. C. VAAGENES; G. L. KARTJE. *Loyola, Edward Hines Junior VA Hosp.*

2:00 BB22 **393.14** Evaluating the protective effect of etazolate on anxiety- and depression- like behavior and cognitive impairment induced by post traumatic stress disorder. K. H. ALZOUBI*; Z. AL SUBEH; O. F. KHABOUR. *Jordan Univ. of Sci. & Technol., Jordan Univ. of Sci. and Technol.*

3:00 BB23 **393.15** Positive allosteric modulation of cholinergic receptors improves spatial learning and memory following brain trauma in mice. D. P. HOLSCHNEIDER*; Y. GUO; O. U. SCREMIN; Z. WANG. *USC, Greater Los Angeles VA Healthcare Syst.*

4:00 BB24 **393.16** Moderate traumatic brain injury induces an increase in blood-brain-barrier permeability and decreases tight junction protein expression. S. F. ALI*; H. ROSAS-HERNANDEZ; E. CUEVAS; C. ESCUDERO-LOURDES; N. GOMEZ-CRISOSTOMO; S. M. LANTZ; N. STURDIVANT; P. RAVISHANKAR; K. BALACHANDRAN; W. SLIKKER, Jr; M. G. PAULE. *Neurochemistry Lab, Div. of Neurotoxicology, Natl. Ctr. Toxicological Res/Fda, Natl. Ctr. For Toxicological Res., Facultad de Ciencias Químicas, UASLP, UNIVERSIDAD JUAREZ AUTONOMA DE TABASCO (DIVISION A, NCTR/FDA, Univ. of Arkansas, Natl. Ctr. for Toxicological Res., FDA's Natl. Ctr. For Toxicological Res.*

1:00 BB25 **393.17** Traumatic brain injury accelerates amyloid-beta deposition and impairs learning and memory in the triple-transgenic mouse model of Alzheimer's disease. Y. KIRINO*; H. SHISHIDO; N. KAWAI; Y. TOYOTA; T. TAMIYA; M. UENO; T. KUBOTA; Y. KISHIMOTO. *Tokushima Bunri Univ., Tokushima Bunri Univ., Layton Biosci. Inc, Kagawa Univ., Kagawa Gen. Rehabil. Hosp., Kagawa Univ., Tokushima Bunri Univ., Tokushima Bunri Univ.*

2:00 BB26 **393.18** Molecular basis for amyloid precursor protein mediated neuroprotection in brain injury. C. L. INAMPUDI*; L. Q. LAM; B. ROBERTS; S. PLUMMER; F. CORRIGAN; G. D. CICCOTOSTO; P. J. CRACK; C. VAN DEN HEUVEL; R. CAPPAI. *The Univ. of Melbourne, Univ. of Melbourne, The Florey Inst. of Neurosci. and Mental Hlth., The Univ. of Adelaide.*

3:00 BB27 **393.19** Circulating miR-124 as a predictive biomarker for characterizing post-TBI cortical lesion endophenotypes. S. DAS GUPTA*; N. VUOKILA; N. PUHAKKA; A. PITKÄNEN. *Univ. of Eastern Finland/AIVI.*

4:00 CC1 **393.20** Decreased hippocampal N-Acetylaspartate in rodent models of preterm brain injury is due to mitochondrial dysfunction. B. M. TALBOT*; S. LIN; N. NIFORATOS-ANDESCAVAGE, 20010; P. WANG; S. SCAFIDI; J. SCAFIDI. *Children's Natl. Med. Ctr., Howard Univ. Col. of Med., Children's Natl. Med. Ctr., Johns Hopkins Univ. Sch. of Med., Children's Natl. Med. Ctr.*

1:00 CC2 **393.21** Improved neurobehavioral outcomes in a rabbit model of germinal matrix-intraventricular hemorrhage following intravenously engrafted human cord blood derived unrestricted somatic stem cells. G. VINUKONDA*; Y. LIAO; F. HU; P. GIRI; L. IVANOVA; Z. T. MUHAMMAD; M. CAIRO; E. F. LA GAMMA. *New York Med. Col., New York Med. Col. & BCHP, New York Med. Col., New York Med. Col., Maria Fareri Children's Hospital-New York Med. Col., Maria Fareri Children's Hosp.*

2:00 CC3 **393.22** Attenuation of axonal degeneration relative to myelin pathology after mild traumatic brain injury in mice lacking Sarm1. C. M. MARION*; K. L. RADOMSKI; R. C. ARMSTRONG. *Neurosci. Dept., Uniformed Services Univ., Uniformed Services Univ. of the Hlth. Sci., Uniformed Services Univ. of the Hlth. Sci.*

3:00 CC4 **393.23** Platelet Activating Factor receptor inhibition improves neurological outcome following pediatric traumatic brain injury. J. L. ROSSI*; T. TODD; N. G. BAZAN. *Louisiana State Univ. Neurosci. Ctr. of Excellence.*

4:00 CC5 **393.24** CHIMERA repetitive mild traumatic brain injury induces long-term pathological and behavioral changes in APP/PS1 mice. W. CHENG*; K. M. MARTENS; S. STUKAS; E. B. BUTTON; A. WILKINSON; A. BASHIR; C. J. BARRON; P. A. CRIPTON; C. L. WELLINGTON. *Univ. of British Columbia, Univ. of British Columbia.*

1:00 CC6 **393.25** A novel mouse model of repeat mild TBI that leads to long-lasting motor deficits and CTE-like brain pathology. N. CHO*; N. DHILLON; M. ALKASLASI; P. HARO-LOPEZ; O. SHELEST; G. BARMPARAS; E. LEY; G. M. THOMSEN. *Cedars-Sinai Med. Ctr.*

2:00 CC7 **393.26** P2X4 and P2X7 receptor blocker in a rat model of cerebral contusion injury. M. KOBAYASHI*; Y. FURUKAWA; T. KUMAGAWA; K. SHIJO; N. MORO; M. FUKUSHIMA; T. MAEDA; A. YOSHINO. *Nihon Univ. Sch. of Med.*

3:00 CC8 **393.27** Function study of knockout brain-specific mitochondrial apoptosis-inducing factor gene (AIF2) in normal and pathological state. J. I. RODRIGUEZ*; Y. ZHANG; T. LI; Y. SUN; C. XIE; K. BLOMGREN; C. ZHU. *Inst. of Neurosci. and Physiology, Sahlgren, Karolinska Inst.*

4:00 CC9 **393.28** Heterozygous cysteine-string protein alpha knock-out mice exhibit reduced SNARE protein abundance following traumatic brain injury. S. W. CARLSON*; C. DIXON. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

1:00 CC10 **393.29** The effect of the angiotensin receptor blocker candesartan after repeated unilateral closed head injury in mice. M. RUSNAK; A. J. SYMES*. *USUHS-Henry M. Jackson Fndn., USUHS.*

POSTER

394. Traumatic Brain Injury: Human Studies II

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 CC11 **394.01** Soccer heading-related memory deficit in players with the apolipoprotein ε4 allele. L. E. HUNTER*; M. L. LIPTON. *Albert Einstein Col. of Med., Albert Einstein Col. Med.*

2:00 CC12 **394.02** Gradient echo plural contrast imaging detects mtbi related brain tissue damage in areas without evident anatomical changes on clinical mri. S. V. ASTAFIEV; J. WEN; D. L. BRODY; A. H. CROSS; A. P. ANOKHIN; K. L. ZINN; M. CORBETTA; D. A. YABLONSKIY*. *Washington Univ. in St. Louis, Washington Univ. in St. Louis, Washington Univ. in St. Louis, Mallinckrodt Inst. Radiol.*

3:00 CC13 **394.03** ● Multimodal tasks can cause more difficulty compared to simple tasks in concussed athletes indicating a dysfunction of the sensorimotor integration mechanisms. A. B. BIALUNSKA; A. P. SALVATORE*. *Univ. of Texas At El Paso, U. of Texas At El Paso.*

4:00 CC14 **394.04** Neurocognitive, neuroimaging and biomolecular findings in concussed adolescents: An investigation of working memory, math fluency, functional near Infrared spectroscopy (fNIRS), and micro-RNA (miRNA). N. SIDEMAN; H. AYAZ; C. J. HAMMOND; A. SARGENT; D. M. APPELT; S. L. ALLEN; B. J. BALIN*. *Philadelphia Col. of Osteo. Med., Philadelphia Col. of Osteo. Med., Drexel Univ., Philadelphia Col. of Osteo. Med., Philadelphia Col. of Osteo. Med.*

1:00 CC15 **394.05** Exploring the links between traumatic brain injuries and crime: A 24-year longitudinal study of Canadian males. G. GUBERMAN*; M. ROBITAILLE; A. PTITO; S. HODGINS. *McGill Univ., Inst. Universitaire en Santé Mentale de Montréal, Univ. of Montreal, McGill Univ.*

2:00 CC16 **394.06** Translational studies of tissue and serum biomarkers for distinguishing between focal and diffuse traumatic brain injury subtypes. H. A. WEISZ*; D. BOONE; L. CHERIAN; C. ROBERTSON; H. S. LEVIN; H. SPRATT; D. DEWITT; D. S. PROUGH; H. L. HELLMICH. *Univ. of Texas Med. Br., Baylor Col. of Med., Baylor Col. Med., Univ. of Texas Med. Br., The Univ. of Texas Med. Br.*

Mon. PM

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 CC17 **394.07** Reaction time deficits in asymptomatic adolescents during the subacute period following mild traumatic brain injury. K. SPIEGLER*; J. D. HANDY; M. M. CRIPPEN; S. KOMARAVOLU; K. C. H. PANG; C. A. MAZZOLA; R. J. SERVATIUS. *Rutgers Grad. Sch. of Biomed. Sci., Syracuse VA Med. Ctr., Rutgers New Jersey Med. Sch., Rutgers New Jersey Med. Sch., Goryeb Children's Hosp. of Morristown Med. Ctr., SUNY Upstate Med. Univ.*

1:00 DP07/CC18 **394.08** (Dynamic Poster) Sex divergence of white matter microstructural change associated with soccer heading. T. G. RUBIN*; E. CATENACCIO; R. FLEYSHER; L. E. HUNTER; N. LUBIN; M. E. WAGSHUL; W. F. STEWART; M. KIM; R. B. LIPTON; M. L. LIPTON. *Albert Einstein Col. of Med., Johns Hopkins Univ., Sutter Hlth.*

1:00 CC19 **394.09** Decreased head movement variability after unilateral vestibular correlates with dizziness: A locomotion study on vestibular schwannoma patients. O. ZOBEIRI*; S. KING; R. F. LEWIS; K. E. CULLEN. *McGill Univ., Massachusetts Eye and Ear Infirmary, Harvard Med. Sch., Johns Hopkins Univ.*

2:00 CC20 **394.10** ▲ Near-infrared spectroscopy measures of prefrontal cortex oxygenation following mild traumatic brain injury. T. SUSA*; K. J. KANGAS; M. MOORE; J. M. CARLSON. *Northern Michigan Univ., Northern Michigan Univ. Psychology, Northern Michigan Univ. Hlth. and Human Performance, Northern Michigan Univ.*

3:00 CC21 **394.11** An assessment of frontal lobe activity during an attentional bias task following concussion in collegiate athletes: A near-infrared spectroscopy study. K. J. KANGAS*; J. ADAY; M. T. MOORE; J. M. CARLSON. *Northern Michigan Univ., Northern Michigan Univ., Northern Michigan Univ.*

4:00 CC22 **394.12** Lingering dynamic balance decrements in mild traumatic brain injured vs controls in collegiate athletes. M. T. MOORE*; J. M. CARLSON; K. J. KANGAS; J. P. YOUNG; J. J. HAMACHEK. *Northern Michigan Univ., Northern Michigan Univ.*

1:00 CC23 **394.13** The long-term outcomes of concussion: Alterations in emotional status and executive function. V. SICARD*; J. LORTIE; R. D. MOORE; D. ELLEMBERG. *Neurodev Lab. - Univ. of Montreal, Univ. of South Carolina.*

2:00 CC24 **394.14** Altered dynamics of the thalamo-cortical system following mild traumatic brain injury: A combined experimental and theoretical study. R. ZUCCA*; X. ARAKAKI; S. C. LOW; R. T. GOLDWEBER; M. G. HARRINGTON; P. F. M. J. VERSCHURE. *SPECS Univ. Pompeu Fabra, HMRI, Huntington Mem. Hosp., ICREA.*

3:00 CC25 **394.15** Traumatic photalgia changes in the human brainstem: Tensor-based morphometry. L. T. LIKOVA*; C. W. TYLER. *Smith-Kettlewell Eye Res. Inst.*

4:00 CC26 **394.16** Neuroimaging of diffuse axonal and vascular injury in chronic traumatic brain injury. M. HABER*; F. AMYOT; K. FLESHER; K. KENNEY; C. MOORE; E. SILVERMAN; Y. CHOU; D. PHAM; E. M. WASSERMANN; R. R. DIAZ-ARRASTIA. *Univ. of Pennsylvania, Uniformed Services Univ. of the Hlth. Sci., The Henry M. Jackson Fndn. for the Advancement of Military Med., Uniformed Services Univ. of the Hlth. Sci., NIH.*

1:00 CC27 **394.17** Derivation of a clinical decision support tool for traumatic brain injury. J. E. OLSON*; M. H. YACYSHYN; M. L. WHITMILL; M. C. MCCARTHY. *Wright State Univ. Boonshoft Sch. Med., Wright State Univ. Boonshoft Sch. Med.*

2:00 CC28 **394.18** ● BLOOD biomarkers of excitotoxicity in children with traumatic brain injury. V. G. PINELIS*; E. SOROKINA; E. ARSENIEVA; A. SURIN; J. SEMENOVA; O. KARASEVA; V. REUTOV; L. ROSHAL. *Scientific Ctr. For Children s Health, Russian M, Natl. Scientific Ctr. for Children's Hlth., Inst. of Emergency Children' s Surgery and Traumatology, Moscow., Inst. of Emergency Children' s Surgery and Traumatology, Inst. of Higher nervous activity and Neurophysiol.*

3:00 CC29 **394.19** ● Command following assessment and communication with vibro-tactile p300 and motor imagery brain-computer interface tools in complete locked-in and locked-in patients. C. GUGER*; R. SPATARO; B. ALLISON; A. HEILINGER; R. ORTNER; W. CHO; V. LABELLA. *Guger Technologies OG, Univ. of Palermo, g.tec medical engineering GmbH.*

4:00 CC30 **394.20** Clinical severity in the acute phase and brainstem volume reduction in the chronic phase in diffuse axonal injury. G. FUJIMOTO*; S. UBUKATA; N. OISHI; T. ASO; G. SUGIHARA; T. MURAI; K. UEDA. *Kyoto Univ. Grad. Sch. of Med., Kyoto Univ. Grad. Sch. of Med., Human Brain Res. Center, Kyoto Univ.*

1:00 CC31 **394.21** Alterations in perivascular Aquaporin-4 distribution in chronic traumatic encephalopathy. B. R. HUBER*; V. VENTRANO; B. KNAPP; J. D. CHERRY; V. ALVAREZ; T. STEIN; A. C. MCKEE. *VA Boston Healthcare, Boston Univ. Med. Sch., Boston Unviersity, Boston Univ.*

2:00 CC32 **394.22** Concussion and a single season of contact sport participation affect performance on a test of high memory interference. M. D. MCCRADDEN*; S. BECKER; P. I. ROSEBUSH; M. F. MAZUREK. *McMaster Univ., McMaster Univ., McMaster Univ., McMaster Univ. Med. Ctr.*

3:00 CC33 **394.23** Predicting military-related mild traumatic brain injury disease - a multimodal neuroimaging study with machine learning. P. YEH; C. G. KOAY; J. GRANER; S. RAJAMONI NADAR*; W. LIU; T. OAKES; G. RIEDY; G. BONAVIA; J. OLLINGER. *Walter Reed Natl. Military Med. Ctr.*

POSTER

395. Traumatic Brain Injury: Therapeutic Interventions II

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 DD1 **395.01** Minocycline plus N-acetylcysteine targets synaptic plasticity and restores cognition when first dosed three days after closed head injury. K. WHITNEY*; E. NIKULINA; L. BUITRAGO-SOTO; P. J. BERGOLD. *State Univ. of New York Downstate Med. Ctr.*

2:00 DD2 **395.02** Therapeutic benefit of galantamine in hyperoxic brain injury in neonatal mice. N. ZAGHLOUL*; N. COHEN; K. AYYASOLA; V. PAVLOV; M. N. AHMED. *Cohen's Children Med. Ctr., Feinstein Inst. for Med. research, Feinstein Inst. for Med. research.*

3:00 DD3 **395.03** Altered cognition, anxiety, and neuroinflammation in mouse model of comorbid traumatic brain injury and post traumatic stress disorder. K. ST. LAURENT-ARIOT*; A. FESHARAKI; J. MIYAUCHI; S. E. TSIRKA; P. J. BERGOLD. *SUNY Downstate COM, Yale Univ. Sch. of Med., Stony Brook Univ., Stony Brook Univ. Med. Ctr., SUNY-Downstate Med. Cen.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 DD4 **395.04** Post-treatment with melatonin prevents cerebral myelin and memory deficits in male rats exposed to repeated hypoxia during the equivalent of extreme prematurity. D. E. OORSCHOT*; S. NARAYANAN; L. GODDARD. *Univ. Otago Sch. Biomed Sci.*

1:00 DD5 **395.05** Docosahexaenoic acid enhances the therapeutic potential of neural stem cell transplantation post traumatic brain injury. F. H. KOBEISSY*; N. RAMADAN; H. GHAZALE; H. DARWISH; W. ABOU KHEIR; J. SOUEID. *Univ. of Florida, American Univ. of Beirut, American Univ. of Beirut, American Univ. of Beirut.*

2:00 DD6 **395.06** Functional brain network reveals enhanced rehabilitative potential by combining pharmacology and exercise after traumatic brain injury. G. KRISHNA*; Z. YING; A. PAYDAR; N. G. HARRIS; F. GOMEZ-PINILLA. *Dept. of Integrative Biol. & Physiology, UCLA, UCLA Brain Injury Res. Ctr.*

3:00 DD7 **395.07** ▲ Role of chloride homeostasis in post-traumatic depression. E. GOUBERT*; I. KHALILOV; M. ALTVATER; M. SCHAEFER; C. RIVERA; C. PELLEGRINO. *INMED INSERM, Aix Marseille Univ., Dept. of Anesthesiol. and Res. Ctr. Translational Neurosciences, Helsinki University, Neurosci. Ctr.*

4:00 DD8 **395.08** ▲ IL-1RI blockade results in decreased cytokine expression and improved learning following TBI. B. TODD*; J. MAHONEY; P. FERGUSON; A. G. BASSUK; E. A. NEWELL. *Univ. of Iowa.*

1:00 DD9 **395.09** Antibody fragment phage display as a biomarker discovery tool for traumatic brain injury. B. I. MARTINEZ*; G. MOUSA; S. STABENFELDT. *Arizona State Univ.*

2:00 DD10 **395.10** Improving outcomes: An emerging role for zinc chelation and pH in traumatic brain injury. Z. WANG*; R. TIAN. *Ohio Univ. Dept. of Biomed. Sci., Beijing Tiantan Hospital, Capital Med. University, Beijing Neurosurgical Inst.*

3:00 DD11 **395.11** ● NYX-2925 regulates tau dynamics in rat cortical tissues. L. P. CACHEAUX*; K. LEADERBRAND; M. SCHMIDT; E. COLECHIO; J. S. BURGDORF; R. A. KROES; J. R. MOSKAL. *Aptinyx Inc., Northwestern Univ.*

4:00 DD12 **395.12** Modulation of single-neuron and network activity in motor cortex by clinically realistic transcranial direct current stimulation in non-human primates. A. R. BOGAARD*; H. M. BOYD; A. MORSE; S. ZANOS; E. E. FETZ. *Univ. of Washington, Univ. of Washington, Feinstein Inst. for Med. Res.*

1:00 DD13 **395.13** Pre-treatment with the macrolide antibiotic azithromycin increases tissue sparing after cortical contusion brain injury in rats. K. B. HUBER*; D. HOPKINS; J. R. PAULY. *Univ. of Kentucky.*

2:00 DD14 **395.14** L-DOPA induces reversibility of dopamine presynaptic deficit in minimally conscious state patients following traumatic brain injury. E. A. FRIDMAN*; J. R. OSBORNE; N. D. SCHIFF. *Weill Cornell Med., Mem. Sloan Kettering Cancer Ctr.*

3:00 DD15 **395.15** ▲ The enhancement of neuroscience educational tools for subjects with traumatic brain injury. J. ORTIZ; F. BERLIN; G. LEWIS*. *George Mason Univ., George Mason Univ.*

4:00 DD16 **395.16** Evidence of mitochondrial energy dysfunction following penetrating ballistic-like brain injury. J. D. PANDYA*; Y. DENG-BRYANT; X. YANG; L. Y. LEUNG; D. A. SHEAR. *Walter Reed Army Inst. of Res. (WRAIR).*

1:00 DD17 **395.17** Magnetic resonance spectroscopy detects early, regional glutathione decrease and restoration by N-acetylcysteine following traumatic brain injury in rats. R. M. GUERRIERO*; M. HAMEED; N. W. HODGSON; B. ROWLAND; P. L. PEARL; B. E. KOSOFSKY; T. K. HENSCH; A. LIN; A. ROTENBERG. *Washington Univ. Sch. of Med., Boston Children's Hosp., Brigham And Women's Hosp., Weill Cornell Med. Col., Boston Children's Hosp. & Harvard Univ.*

2:00 DD18 **395.18** Small molecule inhibition of p38α-mediated neuroinflammatory response to traumatic brain injury. J. M. MORGANTI*; D. M. WATTERSON; L. J. VAN ELDIK. *Univ. of Kentucky, Northwestern Univ.*

3:00 DD19 **395.19** Neuroprotective strategies following severe controlled cortical impact traumatic brain injury: Lipid peroxidation-derived neurotoxic aldehyde scavenging and inhibition of mitochondrial permeability transition. J. R. KULBE*; I. N. SINGH; J. A. WANG; E. D. HALL. *Univ. of Kentucky.*

4:00 DD20 **395.20** Therapeutic hypothermia promotes cerebral blood flow recovery and brain homeostasis after resuscitation from cardiac arrest in a rat model. Q. WANG*; P. MIAO; H. MODI; S. GARIKAPATI; R. KOEHLER; N. THAKOR. *Johns Hopkins Univ.*

1:00 DD21 **395.21** Peripheral neurotrophic factor signaling with chronic mild traumatic brain injury. M. W. MCNERNEY*; V. DARCY; L. WU; D. WALTZMAN; G. SWAMINATH; M. YUTSIS; O. HARRIS; J. ASHFORD; J. YESAVAGE; A. SALEHI; M. ADAMSON. *VA.*

2:00 DD22 **395.22** Patient-derived glioblastoma cells are susceptible to intratumoral modulation therapy both in 2D and neurosphere culture. A. DEWEYERT*; A. DI SEBASTIANO; H. XU; C. DE OLIVEIRA; E. WONG; S. SCHMID; M. HEBB. *Univ. of Western Ontario, Univ. of Western Ontario, Univ. of Western Ontario.*

3:00 DD23 **395.23** Long-term viability of optogenetically transfected neurons and implantable electrodes in the motor cortex of mice. C. GORINI*; B. KOO; C. ALTIMUS; E. F. CIVILLICO. *Food and Drug Administration/CDRH/OSEL/DBP, NIH.*

POSTER

396. CNS and PNS Injury and Therapeutics

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 DD24 **396.01** Safety of intrathecally administered baclofen in rats. T. TAKENAMI*; Y. NARA; R. ISONAKA; K. SUGIMURA; Y. SUZUKI; H. OKAMOTO. *Kitasato Univ., Kitasato Univ. Sch. of Med., Kitasato Univ. Sch. of Med.*

2:00 DD25 **396.02** Anti-apoptotic effects of a fluorinated cannabidiol derivate: neuronal preservation and gliosis attenuation following neonatal sciatic nerve axotomy. S. A. OLIVEIRA; M. PEREZ; G. CHIAROTTO; R. MECHOULAM; F. S. GUIMARAES; A. L. OLIVEIRA*. *Univ. of Campinas, Unicamp, Inst. for Drug Research, Med. Faculty, Hebrew Univ., Sch. Med. Ribeirao Preto-Usp, Univ. of Campinas - Lab. of Nerve Regeneration.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 DD26 **396.03** ● Inhibition of HDAC6 reverses cisplatin-induced neurotoxicity. J. MA*; K. KRUKOWSKI; O. GOLONZHKA; G. LAUMET; T. GUTTI; J. VAN DUZER; R. MAZITSCHEK; M. JARPE; C. J. HEIJNEN; A. KAVELAARS. *MD Anderson Cancer Ctr., Acetylon Pharmaceuticals Inc, Massachusetts Gen. Hosp.*

4:00 DD27 **396.04** Neuroprotective effects of novel oxyindole compounds against oxytosis, feroptosis and ER stress. Y. HIRATA*; C. YAMADA; Y. ITO; S. YAMAMOTO; H. NAGASE; K. OH-HASHI; K. KIUCHI; H. SUZUKI; M. SAWADA; K. FURUTA. *Gifu Univ., Nagoya Univ.*

1:00 DD28 **396.05** Pioglitazone attenuates lipopolysaccharide- induced neuroinflammation and depressive-like behaviour via suppressing the NFκB/Nrf-2 and MAPK signalling pathways. S. AHMED*; M. KWATRA; A. AHMED; V. NAIDU; M. LAHKAR; B. BEZBARUAH. *NIPER, Rajarajeshwari Med. Col., Gauhati Med. Col.*

2:00 DD29 **396.06** Withdrawn

3:00 DD30 **396.07** Insulin containing PLGA nanoparticles may restore myelin to axon area and proprioceptor function in diabetic rat. V. K. HAFTEL*; C. BOWE; A. NWANCHA; A. OLADIMEJI; R. MCREYNOLDS; T. GYLES. *Morehouse Col.*

4:00 DD31 **396.08** Exposure to low doses of helium particles disrupts neuronal function and cognitive performance. B. M. RABIN*; S. M. POULOSE; M. G. MILLER; D. F. BIELINSKI; K. L. CARRIHILL-KNOLL; E. M. HAWKINS; R. C. HENG; A. LARSEN; C. SPADAFORA; N. N. ZOLNEROWICH; R. PATEL; B. SHUKITT-HALE. *Univ. Maryland Baltimore County, HNRCA At Tufts Univ.*

1:00 DD32 **396.09** Long-term effects of NADPH oxidase inhibitor treatment on seizure-induced hippocampal neurogenesis. S. LEE*; B. CHOI; S. SUH; M. LEE; H. SONG; H. CHOI; M. SOHN. *Hallym Univ., Hallym Univ., Inha Univ.*

2:00 DD33 **396.10** Effects of donepezil, an acetylcholinesterase inhibitor, in hippocampal neurogenesis after pilocarpine-induced seizure. J. JEONG*; B. CHOI; S. SUH; H. CHOI; H. SONG. *Hallym Univ., Hallym Univ.*

3:00 DD34 **396.11** Acute and sustained excitoxicity differentially influence riluzole's neuroprotective effect. S. WAGNER*; E. ANDRIAMBELOSON; C. NEVEU. *NEUROFIT.*

4:00 DD35 **396.12** Neuroprotective effects of lipid emulsion in the acute phase of kainic acid-induced injury in the rat hippocampus. M. TANIOKA*; S. UM; K. KIM; B. LEE. *Yonsei University, Grad. Sch. Dept. of Med. Sci., Brain Korea 21 PLUS Project for Med. Sci.*

1:00 DD36 **396.13** Pharmacological agents for enhancing cognitive functions. G. B. PATRUDU*. *Andhra Med. Col. & King George Hosp.*

2:00 EE1 **396.14** ● A clinically relevant, low-dose activated protein C (APC) protects the brain against ischemic stroke in mice. K. YAMATO*; Y. NAKAJO; H. YAMAMOTO-IMOTO; K. KOKAME; T. MIYATA; H. KATAOKA; J. C. TAKAHASHI; H. YANAMOTO. *Natl. Cerebral and Cardiovasc. Ctr., Rakuwa–kai Otowa Hosp., Natl. Cerebral and Cardiovasc. Ctr., Natl. Cerebral and Cardiovasc. Ctr., Osaka Univ. Grad. Sch. of Med.*

3:00 EE2 **396.15** ▲ Hypoxia induces bidirectional plasticity in retinocollicular synapses. H. DUMANSKA*; N. VESELOVSKY. *Bogomoletz Inst. of Physiology, Natl. Acade, Bogomoletz Inst. of Physiology, Natl. Acad. of Sci. of Ukraine.*

4:00 EE3 **396.16** Striatal neuronal death is attenuated in a swine model of pediatric hypoxic-asphyxic cardiac arrest with delayed hypothermia but off-target neurodegeneration is possible. C. O'BRIEN*; E. KULIKOWICZ; M. REYES; P. SANTOS; S. KANNAN; R. C. KOEHER; L. J. MARTIN; J. K. LEE. *Johns Hopkins Univ., Johns Hopkins Univ.*

1:00 EE4 **396.17** Insufficient proteasome function: A possible cause of white matter injury during hypothermia for neonatal hypoxic-ischemic encephalopathy. P. SANTOS*. *Johns Hopkins Univ.*

2:00 EE5 **396.18** Added value of interleukin-1 blockade to hypothermia in neonatal encephalopathy due to inflammatory-sensitized hypoxia-ischemia: A preclinical study. M. CHEVIN*; G. SEBIRE. *McGill Univ., MUHC.*

3:00 EE6 **396.19** Effects of dexmedetomidine on brain ischemia. S. MAEDA*; R. ONISHI; Y. HONDA-WAKASUGI; A. YABUKI-KAWASE; H. HIGUCHI; T. MIYAWAKI. *Dept. of Dent. Anesthesiol. Okayama Univ.Hosp., Okayama Univ. Grad. Sch. of Medicine, Dent. and Pharmaceut. Sci., Okayama Univ. Grad. Sch. of Medicine, Dent. and Pharmaceut. Sci.*

4:00 EE7 **396.20** ▲ The effects of Ginkgo biloba standardized extract in the serotonergic, glutamatergic and gabaergic receptors modulation in the dorsal hippocampal formation (dHF) of rats submitted to acquisition of conditioned suppression. M. TILGER*; C. R. ZAMBERLAM; S. M. CERUTTI. *Univ. Federal De São Paulo.*

1:00 EE8 **396.21** EBP50 as a molecular link between ErbB2 signaling and peripheral neuropathy. G. SONG*; D. P. GUPTA; M. H. RAHMAN; H. PARK; K. CHUNG; B. CHOI; K. SUK. *Kyungpook Natl. Univ., Col. of Med, Dong-A Univ., Kongju Natl. Univ., Samsung Med. Center, Sungkyunkwan Univ. Sch. of Medicine.*

2:00 EE9 **396.22** Obesity-induced neuroinflammation is decreased by omega-3 supplementation. R. P. GUEDES*; A. ANDRADE; B. PRAETZEL; M. PORAWSKI; L. S. DE FRAGA; M. GIOVENARDI. *Fed. Univ. of Hlth. Sci. of Porto Alegre, Federal Univ. of Rio Grande Do Sul - UFRGS.*

3:00 EE10 **396.23** Calcium release-activated calcium (CRAC) channel inhibiton protects against experimental stroke. A. MIZUMA*; R. KACIMI; K. STAUDERMAN; M. J. DUNN; S. HEBBAR; M. A. YENARI. *Univ. of California, San Francisco and Vetera, Univ. of California, San Francisco & San Francisco Veterans Affairs Med. Ctr., CalciMedica.*

4:00 EE11 **396.24** Delineating mechanisms underlying panic pathophysiology. A. WINTER*; R. AHLBRAND; L. VOLLMER; N. QUAN; E. G. KRAUSE; R. SAH. *Univ. of Cincinnati, Ohio State Univ., Univ. of Florida.*

1:00 EE12 **396.25** GABAergic depolarization in C-fiber axons is modulated directly and indirectly by allopregnanolone via PKC_e. V. BONALUME; L. CAFFINO; R. W. CARR; L. F. CASTELNOVO; D. COLLEONI; S. MELFI; F. FUMAGALLI; M. SCHMELZ*; V. MAGNAGHI. *Milan Univ., Heidelberg Univ.*

2:00 EE13 **396.26** Roles of autophagy in palmitate-induced ER stress and apoptosis in hypothalamic neuronal cells. Y. LIM*; E. KIM. *DGIST.*

3:00 EE14 **396.27** Peroxiredoxin 5 decreases beta-amyloid-mediated cyclin-dependent kinase 5 activation through regulation of Ca^{2+}-mediated calpain activation. J. SEONG*; H. J. LEE*; D. LEE. *BK21 Plus KNU Creative Bioresearch Group, Biomed. Res. Inst.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 EE15 **396.28** Influence of pulmonary inflammation on behavior in wistar rats exposed to cigarette smoke. M. T. CHÍRICO*; S. I. S. R. NORONHA; G. S. V. CAMPOS; P. M. A. LIMA; M. R. GUEDES; A. B. F. SOUZA; F. C. S. SILVA; A. B. FIGUEIREDO; L. C. C. AFONSO; S. D. CANGUSSÚ; D. A. CHIANCA-JR; F. S. BEZERRA; R. C. A. MENEZES. *Univ. Federal De Ouro Preto.*

POSTER

397. Nociceptors

Theme D: Sensory Systems

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 EE16 **397.01** HTR2B in sensory neurons mediates pruritus to SSRI antidepressants. S. LEE*; P. CHO; J. JANG; D. P. ROBERSON; R. TONELLO; S. HWANG; S. HWANG; R. H. LAMOTTE; C. PARK; S. JUNG; T. BERTA. *Univ. of Cincinnati, Physiol. Lab., 2Department of Biomed. Science, Grad. Sch. of Biomed. Sci. Hanyang Univ., Children's Hospital, Boston, 4Department of Biomed. Sciences, Korea Univ. Col. of Med., Hanyang Univ., Yale Univ. Sch. Med., Gachon University, Col. of Med., Hanyang Univ. Med. Sch.*

2:00 EE17 **397.02** Fc-epsilon receptor I in primary nociceptors as a Fc-epsilon receptor I in primary nociceptors as a sensor of IgE-immune complex may contribute to allergic ocular pruritus. F. LIU*; T. WANG; B. YUAN; C. MA. *Inst. of Basic Med. Sciences, Chinese Acade, Sch. of Basic Medicine, Peking Union Med. Col.*

3:00 EE18 **397.03** Specialized mechanosensory nociceptors mediating rapid responses to hair-pull. N. GHITANI*; A. BARIK; M. SZCZOT; J. H. THOMPSON; C. LI; C. E. LE PICHON; M. J. KRASHES; A. T. CHESLER. *Natl. Inst. of Hlth. (NIH), Natl. Inst. of Hlth. (NIH), Natl. Inst. of Hlth. (NIH).*

4:00 EE19 **397.04** The MrgprD agonist β-alanine and bovine adrenal medullary protein 8-22, an MrgprX1 agonist, preferentially activate subtypes of polymodal nociceptive C-fibers in pigtail monkeys. A. H. KLEIN; M. WOOTEN; T. V. HARTKE; G. WU; M. RINGKAMP*. *Univ. of Minnesota Duluth, Johns Hopkins Univ., Johns Hopkins Univ. Dept. of Neurol. and Neurosurg.*

1:00 EE20 **397.05** Rethinking neuronal excitability in pain: Nav1.7 contributes to action potential threshold, but not subthreshold depolarizations, in patient iPS cell-derived nociceptors. J. E. MEENTS*; E. BRESSAN; S. SONTAG; A. FOERSTER; P. HAUTVAST; M. HAMPL; H. SCHÜLER; R. GOETZKE; T. K. C. LE; I. P. KLEGGETVEIT; K. LE CANN; Z. KOHL; M. SCHMELZ; W. WAGNER; E. JORUM; B. NAMER; B. WINNER; M. ZENKE; A. LAMPERT. *Uniklinik RWTH Aachen, Uniklinik RWTH Aachen, RWTH Aachen Univ., Friedrich-Alexander-University Erlangen-Nürnberg, Uniklinik RWTH Aachen, Oslo Univ. Hospital-Rikshospitalet, Univ. Hosp. Erlangen, Heidelberg Univ., Univ. of Oslo, FAU Erlangen-Nuernberg.*

2:00 EE21 **397.06** The role of Nav1.9 in somatosensory perception. J. SALVATIERRA*; X. DONG; F. BOSMANS. *Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med.*

3:00 EE22 **397.07** Proton-sensing GPCRs, G2A and OGR1, participate in establishing hyperalgesic priming. C. LEE; W. SUN*. *Natl. Central Univ.*

4:00 EE23 **397.08** Pyrethroids inhibit K_{2P} channels and activate sensory neurons: Basis of insecticide-induced paresthesias. X. GASULL*; A. CASTELLANOS; A. ANDRES; L. BERNAL; G. CALLEJO; N. COMES; D. SOTO; A. GUAL; J. P. GIBLIN; C. ROZA. *Univ. De Barcelona, IDIBAPS, Univ. de Alcala.*

1:00 EE24 **397.09** ● A microneurography inter-species study comparing the relative distribution of C-nociceptor types and parameters of activity-dependent slowing (ADS) of conduction velocity reflecting different axonal membrane properties in mice, rat, non-human primate and healthy subjects. E. GARCIA-PEREZ*; P. S. PALL; R. SOLA; M. SUMALLA; A. HOUGHTON; J. SERRA. *Neurosci. Technologies, Merck Res. Labs.*

2:00 EE25 **397.10** ▲ Effect of eugenol on slow ventral root potentials in neonatal rats. S. YAGURA*; H. ONIMARU; M. IZUMIZAKI. *Showa Univ. Sch. of Med.*

3:00 EE26 **397.11** Sympathetic modulation of TNFalpha-induced nociception in the presence of oral squamous cell carcinoma. N. SCHEFF*; A. K. SHARMA; E. DOWSE; B. L. SCHMIDT. *New York Univ., New York Univ., New York Univ.*

4:00 EE27 **397.12** Translational profiling reveals widespread changes in translation resulting from chemotherapy induced painful neuropathy. A. WANGZHOU*; S. MEGAT; T. LOU; P. BARRAGAN-IGLESIAS; J. K. MOY; M. N. ASIEDU; P. R. RAY; M. D. BURTON; G. DUSSOR; Z. CAMPBELL; T. J. PRICE. *Univ. of Texas At Dallas, Univ. of Texas at Dallas, Univ. of Texas at Dallas, Univ. of Texas at Dallas, Univ. of Texas at Dallas.*

1:00 EE28 **397.13** PD-L1 inhibits acute and chronic pain by suppressing nociceptive neuron activity via PD-1. Y. KIM*; G. CHEN; H. LUO; D. LIU; Z. ZHANG; M. LAY; W. CHANG; R. JI. *Duke Univ. Med. Ctr., Gachon Univ., Nantong Univ.*

2:00 EE29 **397.14** ▲ Visualization of P2Y1 reporters in peripheral tissues and sensory neurons and changes in response to injury. C. ESANCY; S. SANNAJUST; T. E. KING; D. C. MOLLIVER*. *Univ. of New England.*

3:00 FF1 **397.15** Serotonin receptor subtypes responsible for calcium influx in primary cultures from rat dorsal root and trigeminal ganglia. D. T. DOMOCOS*; T. SELESCU; E. CARSTENS; M. IODI CARSTENS; A. BABES. *Fac. of Biology, Univ. of Bucharest, Univ. of California, Davis.*

4:00 FF2 **397.16** ● Sex differences in axonal membrane properties of peripheral C-nociceptors in humans and rats detected by microneurography. R. SOLA*; M. SUMALLA; J. SERRA. *Neurosci. Technologies SLP.*

1:00 FF3 **397.17** ● Assessment of Nav1.7-dependent electrical excitability of DRG neurons using a high-capacity calcium influx assay. L. DENG; K. STARK; S. LARDELL; P. KARILA; D. H. HACKOS*. *Genentech Inc, Cellectricon AB.*

2:00 FF4 **397.18** ▲ Role of nociceptors in driving B cell antibody class switching in allergic inflammation. S. MATHUR*; S. FOSTER; C. SEEHUS; S. TALBOT; C. J. WOOLF. *Harvard Univ., Children's Hosp. Boston.*

3:00 FF5 **397.19** Characterization of the loss of primary cilia in nociceptive dorsal root ganglion neurons and its affect on acute pain processing. K. L. LINDROS*; E. J. BILSKY; K. L. TUCKER. *Univ. of New England, Pacific Northwest Univ. of Hlth. Sci., Univ. of New England.*

4:00 FF6 **397.20** The evolutionary history of human dorsal root ganglia - enriched genes: Regulatory and coding sequence evolution as windows into functional turnover. P. R. RAY*; T. J. PRICE. *The Univ. of Texas at Dallas, UTD.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 FF7 **397.21** ▲ Genome-wide nonparametric tests of exon expression identify differentially expressed transcripts in human dorsal root ganglia and tibial nerves with sexual dimorphism. J. KHAN*; C. RAO; T. J. PRICE; P. R. RAY. *Univ. of Texas At Dallas, Univ. of Texas at Dallas, UTD.*

2:00 FF8 **397.22** Distinct classes of primary nociceptors show electrophysiological specializations for driving ongoing and evoked pain. M. A. ODEM*; R. M. CASSIDY; A. BAVENCOFFE; E. LOPEZ; J. TIAN; Z. WU; C. W. DESSAUER; E. T. WALTERS. *McGovern Med. Sch. At UTHealth.*

3:00 FF9 **397.23** Inhibition of Poly(A)-binding proteins reveals a key role in behavioral responses to inflammatory pain. Z. CAMPBELL*; P. BARRAGAN-IGLESIAS; T. LOU; B. J. BLACK; V. BHAT; J. PANCRAZIO; T. J. PRICE. *UT Dallas, UT-Dallas, The Univ. of Texas At Dallas, UT-Dallas, UT-Dallas.*

4:00 FF10 **397.24** Cyclin dependent kinase 5 modulates the P2X2a receptor channel gating through phosphorylation of threonine 372. E. UTRERAS PURATICH*; R. SANDOVAL; P. CASTRO; P. LAZCANO; M. HEVIA; M. ROKIC; B. HALL; A. TERSE; S. S. STOJILKOVIC; C. GONZALEZ-BILLAULT; A. B. KULKARNI; C. CODDOU. *Univ. de Chile, Catholic Univ. of the North, NICHD, NIH, NIDCR, NIH, Ctr. for Geroscience, Brain Hlth. and Metabolism (GERO).*

1:00 FF11 **397.25** Intrinsic homeostatic plasticity in mouse and human peripheral nociceptors. L. MCILVRIED*; M. PULLEN-COLON; R. W. GEREAU, IV. *Washington Univ. At St. Louis, Washington Univ. In St Louis, Washington Univ. Sch. Med.*

2:00 FF12 **397.26** ● Development, validation and functional characterisation of primary cultures of sensory neurons derived from adult human dorsal root ganglia. G. B. MILES; A. K. CHOUHAN; A. DEVLIN; D. ACTON; M. VALDOR; S. ESSER-ROSENOW; S. FRINGS; T. CHRISTOPH; A. M. RUSH; J. ROBERTS; T. REEKIE; M. CROUCH; D. I. HUGHES*; M. O. RIEHLE; A. HART. *Univ. St Andrews, Grünenthal GmbH, Metrion Biosci. Ltd., Univ. of Glasgow.*

3:00 FF13 **397.27** Nociceptor sensitivity in *Drosophila larvae* is controlled by RNA-binding proteins that regulate translation. K. HOFFMAN; R. STEWART; A. DYSON; A. C. BELLEMER*. *Appalachian State Univ.*

4:00 FF14 **397.28** A core signaling mechanism at the origin of animal nociception. E. E. ZAHARIEVA; O. M. ARENAS SABOGAL; C. VÁSQUEZ-DOORMAN; A. PARA; C. P. PETERSEN; M. GALLIO*. *Dept of Neurobio., Northwestern Univ., Northwestern Univ.*

POSTER

398. Pain Imaging

Theme D: Sensory Systems

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 FF15 **398.01** The relationship between noxious stimuli, behavioral responses and pain perception in chronic pain patients. H. B. HEITMANN*; E. S. MAY; L. TIEMANN; P. SCHMIDT; S. TA DINH; M. M. NICKEL; T. R. TÖLLE; M. PLONER. *Technische Univ. München, Technische Univ. München.*

2:00 FF16 **398.02** Prefrontal gamma oscillations encode spontaneous fluctuations of chronic back pain intensity. E. S. MAY*; M. M. NICKEL; S. TA DINH; L. TIEMANN; H. HEITMANN; I. VOTH; T. R. TÖLLE; J. GROSS; M. PLONER. *Technische Univ. München, Technische Univ. München, Univ. of Glasgow.*

3:00 FF17 **398.03** Brain networks of chronic pain assessed by resting-state EEG. S. TA DINH*; L. TIEMANN; M. M. NICKEL; E. S. MAY; H. HEITMANN; D. UTPADEL-FISCHLER; G. EDENHARTER; T. R. TÖLLE; J. GROSS; M. PLONER. *Technische Univ. München, Technische Univ. München, Univ. of Glasgow.*

4:00 FF18 **398.04** Pain modulation; when expectations become the perception to maintain the status quo. M. LIM; A. MCINTYRE; C. O'GRADY; M. LYNCH; S. MATWIN; S. BEYEA; J. A. HASHMI*. *Dalhousie Univ., Dalhousie Univ., Dalhousie Univ., Dalhousie Univ., Dalhousie Univ., Dalhousie Univ.*

1:00 FF19 **398.05** Brain networks of tonic experimental pain assessed by EEG. M. M. NICKEL*; S. TA DINH; E. S. MAY; L. TIEMANN; M. POSTORINO; M. PLONER. *Technische Univ. München.*

2:00 FF20 **398.06** Neurophysiological mediators of the perceptual, autonomic and behavioral components of pain. L. TIEMANN; V. D. HOHN; E. S. MAY; M. M. NICKEL; S. TA DINH; M. PLONER*. *TU Muenchen.*

3:00 FF21 **398.07** Functional connectivity between the somatosensory representation of the back and Salience Network areas encode clinical pain in chronic low back pain patients. J. KIM; I. MAWLA; J. KONG; J. LEE; J. GERBER; C. JUNG; A. ORTIZ; S. CHAN; M. L. LOGGIA*; A. D. WASAN; R. EDWARDS; R. L. GOLLUB; B. ROSEN; V. NAPADOW. *Korea Advanced Inst. of Sci. and Technol., Massachusetts Gen. Hosp. / Harvard Med. Sch., Ctr. for Pain Research, Univ. of Pittsburgh, Brigham and Women's Hosp.*

4:00 FF22 **398.08** Brush allodynia and mechanical hyperalgesia: Predictors and associations. Y. LIU; J. D. GREENSPAN*; Y. LIU; M. L. KEASER; A. SCHMID; T. J. MEEKER; S. G. DORSEY; D. A. SEMINOWICZ. *Univ. Maryland Dent. Sch., Peking Univ., Swiss Federal Inst. of Technol. (EPFL), Univ. Maryland Sch. of Nursing.*

1:00 GG1 **398.09** Functional diffusion tensor imaging (fDTI) of the human spinal cord during painful thermal stimulation. S. C. MUELLER*; J. C. LIN; J. W. YOUNGER. *Univ. of Alabama At Birmingham.*

2:00 GG2 **398.10** ▲ How'd you do? The impact of openness during competition on perceived pain in women. A. B. SIMMONS*; C. DE GUZMAN; J. J. SOLIS; J. R. VILLATORO; J. BOYETTE-DAVIS. *St. Edward's Univ.*

3:00 GG3 **398.11** Physical pain enhances reward-related brain activation in medial prefrontal cortex. C. WANG*; J. GAO; X. DONG. *East China Normal Univ.*

4:00 GG4 **398.12** Hippocampal subfield volumes remain time invariant in chronic pain and transition to chronic pain. T. B. ABDULLAH*; A. T. BARIA; L. HUANG; A. V. APKARIAN. *Northwestern Univ. Feinberg Sch. of Medicin.*

1:00 GG5 **398.13** Integration of bilateral nociceptive signals: When more is less. S. NORTHON*; N. RUSTAMOV; S. BOIS; S. SCHREIBER; M. PICHE. *Univ. Du Quebec A Trois-Rivieres.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 GG6 **398.14** Pain sensation and thermal pain-evoked fMRI activity changes in chronic low back pain patients. Q. YANG*; L. YANG; Y. XU; L. CHEN. *Shanghai Inst. for Biol. Sciences, CAS, Xuhui Central Hosp., Vanderbilt Univ., Vanderbilt Univ.*

3:00 GG7 **398.15** An fMRI analysis of peripheral neuropathy pain before and after treatment with transcutaneous electrical nerve stimulation. T. BODILY*; J. PEACOCK; D. BUSATH; B. KIRWAN. *Brigham Young Univ., Brigham Young Univ., Brigham Young Univ.*

4:00 GG8 **398.16** Decreased resting state network of fibromyalgia in theta band using graph filtration based on persistent homology. J. KIM*; M. CHOE; M. LIM; C. CHUNG. *Seoul Nat Univ.*

1:00 GG9 **398.17** Predicting clinical pain states using cerebral blood flow in chronic low back pain: A machine learning approach. V. NAPADOW*; I. MAWLA; J. LEE; M. LOGGIA; A. ORTIZ; J. KIM; H. KIM; C. JUNG; S. CHAN; N. MALEKI; J. GERBER; R. EDWARDS; A. WASAN; C. BERNA; J. KONG; T. KAPTCHUK; R. GOLLUB; B. ROSEN. *Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., Korea Inst. of Oriental Med., Brigham and Women's Hosp., Univ. of Pittsburgh Med. Ctr., Univ. Hosp. of Lausanne, Beth Israel Deaconess Med. Ctr.*

2:00 GG10 **398.18** Neurometabolite changes in patients with complex regional pain syndrome: A magnetic resonance spectroscopy study. Y. JUNG*; H. KIM; S. JEON; J. KWON; Y. KIM; D. KANG. *Seoul Natl. Univ. Hosp., Seoul Natl. Univ. Hosp.*

3:00 GG11 **398.19** Brain mechanisms moderating the relationship between depression and pain. A. ADLER-NEAL*; N. EMERSON; S. FARRIS; Y. JUNG; J. G. MCHAFFIE; R. C. COGHILL; F. ZEIDAN. *Wake Forest Sch. of Med., Johns Hopkins Med., Wake Forest Sch. of Med., Cincinnati Children's Hosp.*

4:00 GG12 **398.20** Effects of opioid-induced analgesia on electroencephalographic markers of pain perception . J. I. EGANA*; R. MONTEFUSCO-SIEGMUND; A. BLANCH; D. ROJAS-LIBANO; G. RIVERA. *Hosp. Clinico Univ. De Chile, Biomed. Neurosci. Inst., Univ. Alberto Hurtado, Univ. De Chile.*

1:00 GG13 **398.21** Velocity of brain-state trajectory encodes salience and attention rather than pain. R. JABAKHANJI*; A. T. BARIA; M. A. FARMER; A. V. APKARIAN. *Northwestern Univ. Feinberg Sch. of Med., Northwestern Univ. Feinberg Sch. of Med., Northwestern Univ. Feinberg Sch. of Med.*

2:00 GG14 **398.22** Closed-loop pain relief control using fMRI multi-voxel decoder and reinforcement learning. S. ZHANG*; H. MANO; W. YOSHIDA; M. KAWATO; T. YANAGISAWA; K. SHIBATA; B. SEYMOUR. *Univ. of Cambridge, NICT, ATR, Osaka Univ., Nagoya Univ.*

3:00 GG15 **398.23** Pathological functional connectivity and pain catastrophizing converge on the salience and cingulo-opercular networks. S. KRIMMEL*; M. KEASER; J. HAYTHORNTHWAITE; D. A. SEMINOWICZ. *Univ. of Maryland Baltimore, Univ. of Maryland Baltimore, Johns Hopkins Univ., Univ. of Maryland, Baltimore.*

4:00 GG16 **398.24** Brain responses evoked by acupuncture and imagery. J. CAO*; J. PARK; K. JORGENSON; C. LANG; J. LIU; R. GOLLUB; S. ORR; J. KONG. *MASSACHUSETTS GENERAL HOSPITAL, Beijing Univ. of Chinese Med.*

1:00 GG17 **398.25** Altered resting state oscillatory MEG power in multiple sclerosis patients with chronic pain. J. A. KIM*; R. BOSMA; K. S. HEMINGTON; A. ROGACHOV; J. C. CHENG; N. R. OSBORNE; J. OH; K. D. DAVIS. *Krembil Res. Inst., Univ. of Toronto, St. Michael's Hosp.*

2:00 GG18 **398.26** Quantification of tonic thermal pain using EEG data and random forest models. V. VIJAYAKUMAR*; M. CASE; S. SHIRINPOUR; B. HE. *Univ. of Minnesota, Univ. of Minnesota.*

3:00 GG19 **398.27** Functional and structural plasticity in meditators with chronic pain. L. TULIPANI*; M. SHPANER; J. BISHOP; N. LA ROSA; S. YOUNG; M. NAYLOR. *Univ. of Vermont, Univ. of Vermont.*

4:00 GG20 **398.28** Patient-clinician concordance in social mirroring brain circuitry during pain treatment: A hyperscanning fMRI study. D. ELLINGSEN*; C. JUNG; K. ISENBURG; J. GERBER; I. MAWLA; R. SCLOCCO; R. R. EDWARDS; J. KELLEY; I. KIRSCH; T. J. KAPTCHUK; V. NAPADOW. *Massachusetts Gen. Hospital, Harvard Med. Sc, Brigham and Women's Hosp., Endicott Col., Harvard Med. Sch.*

POSTER

399. Auditory Processing: Circuits, Synapses, and Neurotransmitters II

Theme D: Sensory Systems

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 GG21 **399.01** Expanding the Waxholm Space rat brain reference atlas using a data enriched magnetic resonance imaging template: New delineations of the auditory system, thalamus, and more. J. IMAD; T. B. LEERGAARD*; A. E. WENNBERG; K. K. OSEN; F. CLASCÁ; G. CSUCS; C. COELLO; J. G. BJAALIE. *Univ. of Oslo, Autonomous Univ. of Madrid, Univ. Oslo.*

2:00 GG22 **399.02** Cell type-specific and age-related changes in auditory cortical processing. D. LYNGHOLM; S. SAKATA*. *SIPBS, Univ. of Strathclyde.*

3:00 GG23 **399.03** Diffusion tractography of the subcortical auditory system in a postmortem human brain. K. R. SITEK*; E. CALABRESE; G. A. JOHNSON; S. S. GHOSH. *MIT, Duke Univ., Duke Univ.*

4:00 GG24 **399.04** Noise induced hearing loss differentially reduces the dimerized pool of dopamine receptors and their interaction with N-ethylmaleimide-sensitive fusion (NSF-1) protein across auditory related brain regions. A. K. APAWU; A. DIXON; B. ADAMS; M. HALI; B. FYK-KOLODZIEJ; A. HOLT*. *Wayne State Univ. Sch. of Med., Wayne State Univ. Sch. of Med.*

1:00 GG25 **399.05** Genetic access to active neurons in the mouse auditory cortex. G. TASAKA*; C. GUENTHNER; A. SHALEV; O. GILDAY; M. GROYSMAN; L. LUO; A. MIZRAHI. *The Hebrew Univ. of Jerusalem, Howard Hughes Med. Inst. - Stanford Univ., Hebrew Univ. of Jerusalem.*

2:00 GG26 **399.06** Mechanisms of changes in synaptic depression in response to different levels of activity at endbulbs of Held. X. ZHUANG*; W. SUN; M. A. XU-FRIEDMAN. *SUNY UNIVERSITY AT BUFFALO, SUNY Univ. at Buffalo.*

Mon. PM

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 DP08/GG27 **399.07** (Dynamic Poster) Integrating *in vivo* imaging and neuronal barcoding to link neural coding and network structure in mouse cortex. A. VAUGHAN*; C. J. STONEKING; A. M. ZADOR. *Cold Spring Harbor Lab.*

4:00 GG28 **399.08** Reliable and persistent population encoding of sounds across layers in the auditory cortex of awake mice. D. E. WINKOWSKI*; Z. BOWEN; T. L. RIBEIRO; D. PLENZ; P. KANOLD. *Univ. of Maryland, Univ. of Maryland, NIH, Natl. Inst. of Mental Health, NIH.*

1:00 GG29 **399.09** Feedforward and feedback mechanisms governing auditory sensory gating in awake mice. A. KHANI*; F. LANZ; K. SCHALLER; C. M. MICHEL; C. QUAIRIAUX. *Univ. of Geneva, Univ. of Geneva.*

2:00 GG30 **399.10** Effect of ACh and general DREADD inhibition in tegmental areas on sensorimotor gating. N. FULCHER*; E. C. AZZOPARDI; C. DE OLIVEIRA; S. SCHMID. *The Univ. of Western Ontario, Univ. of Western Ontario.*

3:00 GG31 **399.11** Behavioral state modifies excitation and inhibition in auditory cortical neurons. N. EDWARDS*; J. S. ISAACSON. *Uinversity of California, San Diego, UCSD.*

4:00 GG32 **399.12** Characterizing the organization and function of auditory cortex projection neurons. P. LIN*; J. S. ISAACSON. *UCSD.*

1:00 GG33 **399.13** Sublaminar subdivision of mouse auditory cortex layer 2/3 based on functional connections. X. MENG*; J. P. Y. KAO; P. O. KANOLD. *Univ. of Maryland, Univ. of Maryland Sch. of Med.*

2:00 HH1 **399.14** Optogenetic manipulation of inhibitory populations in auditory cortex during stimulus-specific adaptation. T. S. YARDEN*; A. MIZRAHI; I. NELKEN. *Hebrew Univ.*

3:00 HH2 **399.15** GABAB receptors in cortical input layers mediate spike-timing dependent LTD of inhibition and regulate critical period plasticity. E. D. VICKERS*; C. CLARK; A. FRATZL; R. SCHNEGGENBURGER. *EPFL, EPFL.*

4:00 HH3 **399.16** Cortical circuits of GABAergic callosal projections. C. ROCK*; H. ZURITA; S. LEBBY; C. J. WILSON; A. J. APICELLA. *Univ. of Texas at San Antonio.*

POSTER

400. Auditory System Plasticity

Theme D: Sensory Systems

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 HH4 **400.01** Restoring neuronal plasticity in the auditory cortex in adult mice by reducing thalamic adenosine signaling. J. A. BLUNDON*; N. ROY; B. TEUBNER; J. YU; S. HAN; S. ZAKHARENKO. *St Jude Children's Res. Hosp.*

2:00 HH5 **400.02** Restoring auditory cortical map plasticity in adult mice by disrupting thalamic adenosine signaling. N. ROY*; J. A. BLUNDON; B. TEUBNER; J. YU; T. EOM; S. HAN; S. ZAKHARENKO. *St. Jude Children's Res. Hosp.*

3:00 HH6 **400.03** Synaptic and spiking responses to infant vocalizations in mouse paraventricular hypothalamus *in vivo.* S. VALTCHEVA*; R. C. FROEMKE. *NYU Sch. of Med.*

4:00 HH7 **400.04** Perceptual categorization of pup vocalizations in the auditory cortex of maternal mice. J. SCHIAVO*; R. C. FROEMKE. *New York Univ., NYU Med.*

1:00 HH8 **400.05** Cortical mechanisms of perceptual learning in juveniles. M. L. CARAS*; D. H. SANES. *New York Univ.*

2:00 HH9 **400.06** Network-level modifications induced by sound-reward or -punishment associations in mice auditory cortex. J. LEGER*; X. LIU; A. LOURDIANE; C. VENTALON; L. BOURDIEU; Y. BOUBENEC; S. A. SHAMMA. *CNRS-Ecole Normale Superieure, Ecole Normale Superieure, Univ. of Maryland, Ecole Normale Supérieure.*

3:00 HH10 **400.07** Categorical memory representation in ferret auditory and frontal cortices. P. YIN*; J. B. FRITZ; S. A. SHAMMA. *Inst. For Syst. Research, Univ. Maryland, Electrical and Computer Engin. Department, Univ. of Maryland, Sensory Perception Laboratory, Ecole Normale Superieure.*

4:00 HH11 **400.08** Representations of tones in core fields of auditory cortex depend on their associated, upcoming behavioral outputs during the performance of auditory tasks. Y. HUANG*; M. BROSCH. *Leibniz Inst. For Neurobio.*

1:00 HH12 **400.09** Maladaptive central auditory gain enhancement and disrupted loudness perception following acoustic trauma. B. D. AUERBACH*; K. RADZIWON; G. CHEN; M. GHOBADI; E. T. ESFAHANI; R. SALVI. *Univ. at Buffalo, Univ. at Buffalo.*

2:00 HH13 **400.10** ER-mitochondria crosstalk is regulated by NCS and is impaired in Wolfram syndrome. B. DELPRAT*; C. DELETTRE. *Inserm U1051.*

3:00 HH14 **400.11** Dyslexia: Evidence for a multifactorial basis. M. G. FEITOSA*; M. R. D. PRESTES, 70910-900; M. M. F. SANTANA, 70910-900; N. G. S. N. RIBEIRO. *Univ. De Brasília, Governo do Distrito Federal, Ctr. Universitário do Distrito Federal, Brasilia Children's Hosp.*

4:00 HH15 **400.12** Gata3 haploinsufficiency causes sensitivity to noise damage. J. DUNCAN*. *Western Michigan Univ.*

1:00 HH16 **400.13** Cortical auditory response adaptation and cross-frequency coupling in normal and impaired listeners. U. MALINOWSKA*; P. J. FRANASZCZUK; N. E. CRONE; D. F. BOATMAN. *Johns Hopkins Sch. of Med., US Army Res. Lab., Johns Hopkins Hosp., Johns Hopkins Sch. of Med.*

2:00 HH17 **400.14** ● Effects of short term synaptic plasticity on stimulus specific adaptation in auditory cortex: A modeling study. D. BEEMAN*; P. KUDELA; D. BOATMAN-REICH; W. S. ANDERSON. *Univ. of Colorado Boulder, Johns Hopkins Univ., Johns Hopkins Sch. of Med.*

3:00 HH18 **400.15** Mechanistic identification of stimulus relay from the medial auditory thalamus necessary for delay and trace eyelid conditioning. L. C. HOFFMANN*; S. J. ZARA; M. D. MAUK. *Univ. of Texas At Austin.*

4:00 HH19 **400.16** Hearing sensitivity and participation restriction in adults with longstanding unilateral chronic otitis media. R. S. TSCHIEDEL*; S. C. L. BRAGA; L. S. SÁ; M. V. S. MEDEIROS; R. C. GRANJEIRO; M. A. G. FEITOSA. *Univ. of Brasilia, Distrito Federal Dept. of Hlth.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

401. Retina: Motion

Theme D: Sensory Systems

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 HH20 **401.01** Selective synaptic contacts promote retinotopic detection of visual looming in the *Drosophila* central brain. M. B. REISER*; M. MORIMOTO; A. NERN; G. M. RUBIN; E. ROGERS; A. WONG; P. GHORBANI; N. A. SMITH; M. DREHER; R. PAREKH; D. BOCK. *HHMI / Janelia.*

2:00 HH21 **401.02** ● A visual projection neuron class links the detection of translational motion to the control of forward walking. M. ISAACSON*; J. ELIASON; A. NERN; M. B. REISER. *HHMI.*

3:00 HH22 **401.03** Simple integration of inputs computes directional selectivity in *Drosophila.* E. GRUNTMAN*; S. ROMANI; M. B. REISER. *Janelia Res. Campus, HHMI Janelia Res. Campus, HHMI Janelia Res. Campus.*

4:00 HH23 **401.04** Circuitry of the lobula giant movement detector 2 neuron. E. COCKS*; C. RIND. *Newcastle Univ.*

1:00 HH24 **401.05** Electron microscopy-based reconstruction of the motion information processing circuits in the fruit fly brain. K. SHINOMIYA*; G. HUANG; T. ZHAO; S. XU; S. PLAZA; L. SCHEFFER; I. A. MEINERTZHAGEN. *HHMI Janelia Res. Campus, HHMI Janelia Res. Campus, Dalhousie Univ.*

2:00 HH25 **401.06** Comprehensive connectome of the fly's visual and olfactory circuits using FIBSEM. S. TAKEMURA*; S. PLAZA; L. SCHEFFER; I. A. MEINERTZHAGEN. *Janelia Res. Campus/HHMI, HHMI, Howard Hughes Med. Inst. Janelia Farm Res. Campus, Dalhousie Univ.*

3:00 HH26 **401.07** The effect of locomotion-induced octopamine release on motion detection circuits in *Drosophila.* J. KOHN*; R. BEHNIA. *Columbia Univ.*

4:00 HH27 **401.08** Flight control and color vision in *Drosophila.* K. D. LONGDEN*; M. B. REISER. *HHMI Janelia Res. Campus.*

1:00 HH28 **401.09** Characterization of feed forward inhibition in a looming detection circuit. H. WANG*; R. B. DEWELL; F. GABBIANI. *Baylor Col. of Med., Rice Univ.*

2:00 HH29 **401.10** Electroretinographic study of vision in the stink bug Halymorpha halys compound eyes. J. STRICKLAND; A. B. LALL; V. D. SHIELDS*. *Towson Univ., Howard Univ.*

POSTER

402. Visual Cortex: Functional Architecture and Circuits

Theme D: Sensory Systems

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 HH30 **402.01** Linear relation between orientation structure and spatial resolution in visual cortex. E. KOCH*; J. JIN; J. M. ALONSO; Q. ZAIDI. *SUNY Optometry, SUNY Optometry.*

2:00 HH31 **402.02** Emergent functional connectomes are systematically activated within overlapping micro-organization of spatial frequency and orientation maps in the visual cortex. S. MOLOTCHNIKOFF*; V. BHARMAURIA; N. CHANAURIA; L. BACHATENE. *Univ. de Montreal, York Univ., Univ. de Montréal, Univ. de Sherbrooke.*

3:00 HH32 **402.03** Functional specialization of ON and OFF pathways for slow-global and fast-local change in the visual world. R. MAZADE*; J. JIN; C. PONS; J. ALONSO. *State Univ. of New York Col. of Optometry.*

4:00 HH33 **402.04** Optical blur affects differently on and off visual pathways. C. PONS*; R. MAZADE; J. JIN; J. ALONSO. *State Univ. of New York.*

1:00 HH34 **402.05** ▲ 100 thalamic afferents per cortical point are sufficient to accurately map on and off retinotopy in cat visual cortex. E. ZABEH*; J. JIN; R. LASHGARI; J. ALONSO. *IPM, SUNY Col. of Optometry.*

2:00 HH35 **402.06** Untangling cortical maps in mouse primary visual cortex. D. L. RINGACH*; L. JIMENEZ; E. TRING; J. T. TRACHTENBERG. *UCLA, UCLA, UCLA, UCLA.*

3:00 HH36 **402.07** 2-P imaging of visual cortex layer 6 corticothalamic feedback in the behaving mouse. S. AUGUSTINAITE*; B. KUHN. *Okinawa Inst. of Sci. and Technol. Grad. Univ.*

4:00 II1 **402.08** Distinct patterns of stimulus selectivity, spontaneous activity, and connectivity of L6 callosal projection and thalamic projection neurons in primary visual cortex of the awake mouse. Y. LIANG*; W. SUN; R. LU; N. JI. *Janelia Res. Campus, HHMI.*

1:00 II2 **402.09** Integrated circuit analysis of layer 2/3 pyramidal cells in mouse visual cortex. S. WEILER*; T. ROSE; M. HÜBENER; T. BONHOEFFER; V. SCHEUSS. *Max Planck Inst. Neurobio.*

2:00 II3 **402.10** Neocortical layer 5 is composed of cell type specific microcolumnar circuits. S. SAKAI*; H. MARUOKA; N. NAKAGAWA; S. TSURUNO; T. YONEDA; T. HOSOYA. *Tokyo Metropolitan Inst. of Med. Sci., RIKEN BSI.*

3:00 II4 **402.11** Involvement of gap junctions in the function of microcolumns in neocortex. N. NAKAGAWA*; T. YONEDA; H. MARUOKA; S. SAKAI; T. HOSOYA. *RIKEN Brain Sci. Inst.*

4:00 II5 **402.12** LGN input to fast-spike interneurons in layers 4 and 6 of awake rabbit visual cortex. Y. I. BERESHPOLOVA*; X. HEI; C. R. STOELZEL; J. ALONSO; H. A. SWADLOW. *Univ. of Connecticut, Univ. of Connecticut, SUNY Optometry.*

1:00 II6 **402.13** A circuit for spatial integration and its modulation by running in four classes of V1 neurons. M. DIPOPPA*; M. CARANDINI; K. D. HARRIS. *Univ. Col. London.*

2:00 II7 **402.14** Functional organization of presynaptic networks in primary visual cortex. L. F. ROSSI*; K. D. HARRIS; M. CARANDINI. *Univ. Col. London.*

3:00 II8 **402.15** ● Single-cell-initiated monosynaptic tracing reveals diverse network properties in visual cortex. S. TRENHOLM*; A. WERTZ; A. BHARIOKE; K. YONEHARA; Z. RAICS; D. HILLIER; J. JÜTTNER; M. LEINWEBER; A. OLIVEIRA; G. SZALAY; G. KELLER; B. RÓZSA; B. ROSKA. *McGill Univ., Friedrich Miescher Inst., Danish Res. Inst. of Translational Res., Hungarian Acad. of Sci., Univ. of Basel.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 II9 **402.16** Functional organization of intrinsic and feedback presynaptic inputs in the primary visual cortex. Y. WEN*; Q. ZHANG; H. LI; A. GUO; M. POO. *Inst. of Neuroscience, SIBS, CAS.*

1:00 II10 **402.17** Local interneurons form an organizing nidus for feature-selective subnetworks in mouse visual cortex. G. S. PALAGINA*; S. M. SMIRNAKIS. *Boston VA Res. Inst., Brigham and Women's Hospital, Harvard Med. Sch.*

2:00 II11 **402.18** Thalamic influence on the statistical wiring of visual cortical receptive fields and maps. A. J. VALIÑO; J. R. BROTONS-MAS; F. T. SOMMER; J. A. HIRSCH; S. SALA; L. M. MARTINEZ*. *Inst. De Neurociencias De Alicante. CSIC-UMH, Helen Wills Neurosci. Inst., USC.*

3:00 II12 **402.19** Signatures of colorvision in the functional architecture of the primary visual cortex. M. SCHOTTDORF*; J. LIEDTKE; F. WOLF. *MPI DS.*

4:00 II13 **402.20** Mapping visual cortical processing networks with infrared neural stimulation. M. M. CHERNOV*; R. M. FRIEDMAN; A. W. ROE. *Oregon Hlth. and Sci. Univ., Oregon Hlth. & Sci. Univ. - ONPRC, Zhejiang Univ., Oregon Hlth. and Sci. University- ONPRC.*

1:00 II14 **402.21** Organization of orientation and spatial frequency preferences in V1: Two-photon imaging of awake monkey. Y. SHAO*; S. GUAN; N. JU; L. TAO; C. YU; S. TANG. *Peking Univ., Peking Univ., Peking Univ., Peking Univ., Peking Univ.*

POSTER

403. Visual Cortical Streams: Primate and Human

Theme D: Sensory Systems

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 II15 **403.01** A new visuotopic cluster in macaque posterior parietal cortex revealed by wide-field retinotopy. S. RIMA*; B. R. COTTEREAU; Y. HÉJJA-BRICHARD; Y. TROTTER; J. DURAND. *Cerco.*

2:00 II16 **403.02** Functional parcellation of lateral prefrontal cortex in macaques. R. RAJIMEHR*; H. XU; D. Y. TSAO; R. DESIMONE. *MIT, Caltech.*

3:00 II17 **403.03** Elucidating multi-scale cortical dynamics via simulation: A multi-area spiking model of macaque visual cortex. S. J. VAN ALBADA*; M. SCHMIDT; R. BAKKER; K. SHEN; G. Y. BEZGIN; C. C. HILGETAG; M. DIESMANN. *Res. Ctr. Juelich, RIKEN Brain Sci. Inst., Radboud Univ., Rotman Res. Inst., McConnell Brain Imaging Ctr., Univ. Med. Ctr. Hamburg-Eppendorf, Boston Univ., RWTH Aachen Univ.*

4:00 II18 **403.04** Dorsal visual cortex in macaques resembles that of New World monkeys: A reassessment of its topography based on sub-millimeter retinotopic fMRI mapping. Q. ZHU*; W. VANDUFFEL. *KU Leuven, Harvard Med. Sch., Massachusetts Gen. Hosp.*

1:00 II19 **403.05** Transient oscillatory feedback from ipsilateral IPS in response to a visual target. K. YUASA*; H. TAKEMURA; I. MOTOYOSHI; K. AMANO. *NICT, Osaka Univ., JSPS, The Univ. of Tokyo.*

2:00 II20 **403.06** Dynamic lateral interactions in monkey area V4. R. XIA*; S. GUAN; D. L. SHEINBERG. *Brown Univ., Brown Univ., Brown Univ.*

3:00 II21 **403.07** Bidirectional visual processing: Distinct dynamics and interactions between V4 and inferior temporal cortex in challenging scenarios. S. GUAN*; R. XIA; D. SHEINBERG. *Brown Univ., Brown Univ.*

4:00 II22 **403.08** Distinct intrinsic connectivity patterns for dorsal and ventral regions of lateral intraparietal area (LIP) of macaque monkeys. M. RUESSELER*; B. AHMED; J. BENNETT; J. E. T. SMITH; A. J. PARKER; K. KRUG. *Univ. of Oxford, Univ. of Sussex.*

1:00 II23 **403.09** Foveal, elliptical and horizontal - Population receptive fields in the visual word form area are tuned optimally for word reading. E. H. SILSON*; R. C. REYNOLDS; D. JANINI; C. I. BAKER; D. J. KRAVITZ. *Natl. Inst. of Mental Hlth., Natl. Inst. of Mental Hlth., NIH, The George Washington Univ.*

2:00 II24 **403.10** Multi-electrode recordings in human lateral occipital cortex. E. PREMEREUR*; T. DECRAMER; W. VAN PAESSCHEN; P. JANSSEN; J. VAN LOON; T. THEYS. *KU Leuven, KU Leuven, UZ Leuven, Lab. Exp. Neurochirurgie En Neuroanatomie.*

3:00 II25 **403.11** Cortical thinning of functional regions in the ventral temporal cortex is associated with increased myelination. V. S. NATU*; J. GOMEZ; M. BARNETT; B. JESKA; Z. ZHEN; S. COX; K. GRILL-SPECTOR. *Dept. of Psychology, Stanford University, Neurosciences Program, Stanford Univ. Sch. of Medicine, Stanford, Stanford Univ., Stanford Neurosciences Institute, Stanford Univ.*

4:00 II26 **403.12** Functional magnetic resonance imaging (fMRI) - Guided single unit recordings reveal weak higher-order disparity selectivity in macaque area TEO. A. ALIZADEH*; R. VOGELS; P. JANSSEN. *Katholieke Univ. Leuven.*

1:00 II27 **403.13** Categorization in monkey inferior temporal cortex determined by image features, not acquired knowledge. X. YUE*; M. YETTER; L. G. UNGERLEIDER. *NIH, NIH, Natl. Inst. of Mental Hlth.*

2:00 JJ1 **403.14** Principles of object representation in two object networks in IT cortexprinciples of object representation in two object networks in IT cortex. P. BAO*; L. SHE; M. MCGILL; D. Y. TSAO. *Caltech, Caltech, Caltech.*

3:00 JJ2 **403.15** The role of disparity columns in segmentation. J. K. HESSE*; D. Y. TSAO. *Caltech, Caltech.*

4:00 JJ3 **403.16** Coding of 3d-surfaces by neurons in the primate caudal intraparietal sulcus (CIPS). L. CHANG*; D. Y. TSAO. *CALIFORNIA INSTITUTE OF TECHNOLOGY, Caltech.*

1:00 JJ4 **403.17** Receptive fields of adjacent neurons in primate prefrontal and parietal cortices. P. VISWANATHAN*; A. NIEDER. *Inst. of Neurobiology, Univ. of Tuebingen, IMPRS for Cognitive and Systems Neurosci.*

2:00 JJ5 **403.18** Voxel-to-voxel encoding models of connectivity between visual areas. M. MELL*; T. P. NASELARIS. *Med. Univ. of South Carolina.*

3:00 JJ6 **403.19** The effect of ocular dominance and binocularity on population receptive fields' properties. P. B. DE BEST*; N. RAZ; N. LEVIN. *Hadassah Hebrew Univ. Med. Ctr.*

4:00 JJ7 **403.20** Visual field map clusters in higher-order visual processing: Organization of visual field maps within the human lateral occipital cortex. A. A. BREWER*; B. BARTON. *UC Irvine, Univ. of California Irvine.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 JJ8 **403.21** Visual field map clusters in high-order visual processing: Organization of V3A/V3B and a new cloverleaf cluster in the posterior superior temporal sulcus. B. BARTON*; A. A. BREWER. *Univ. of California Irvine.*

2:00 JJ9 **403.22** The fMRI contrast response function to natural images is enhanced according to local subjective importance. W. ZUIDERBAAN*; S. O. DUMOULIN. *Utrecht Univ., Spinoza Ctr. For Neuroimaging.*

3:00 JJ10 **403.23** High-resolution 7T fMRI reveals auditory and imagery information in non-stimulated visual cortex. M. BENNETT*; L. S. PETRO; A. A. MORGAN; F. DE MARTINO; L. MUCKLI. *Univ. of Glasgow, Fac. of Psychology, Maastricht Univ., Univ. of Glasgow.*

4:00 JJ11 **403.24** Development differentially sculpts receptive fields across human visual cortex. J. GOMEZ*; V. S. NATU; B. L. JESKA; M. A. BARNETT; K. GRILL-SPECTOR. *Stanford Univ., Stanford Univ., Univ. of Pennsylvania, Stanford Univiersity.*

1:00 JJ12 **403.25** Retinotopic organization in the default mode network. T. KNAPEN*; D. VAN ES; M. BARENDREGT. *VU Amsterdam, Vrije Univ. Amsterdam.*

2:00 JJ13 **403.26** Separate resting state networks for grasping and visually guided reaching in macaques. R. S. GREULICH*; R. ADAM; S. EVERLING; H. SCHERBERGER. *German Primate Ctr., Univ. of Western Ontario, Univ. of Western Ontario, Univ. of Western Ontario, Univ. of Göttingen.*

3:00 JJ14 **403.27** A preference for mathematical processing outweighs selectivity for Arabic numbers in the inferior temporal gyrus. M. GROTHEER*; B. L. JESKA; K. GRILL-SPECTOR. *Stanford Univ., Stanford Univ., Stanford Univ. Sch. of Med.*

4:00 JJ15 **403.28** A neural basis for biased competition in the developing visual system: An fMRI study in school-aged children. N. KIM*; M. A. PINSK; S. KASTNER. *Princeton Univ.*

POSTER

404. Vestibular System: Central Processing

Theme D: Sensory Systems

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 JJ16 **404.01** Optical infrared vestibular stimulation evokes physiological eye movement and cardiovascular responses. W. JIANG*; D. RICE; G. P. MARTINELLI; G. R. HOLSTEIN; S. RAJGURU. *Univ. of Miami, Univ. of miami, Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Univ. of Miami.*

2:00 JJ17 **404.02** Localization of central vestibular neurons activated by pulsed infrared stimulation of individual vestibular end organs. G. R. HOLSTEIN*; D. RICE; W. JIANG; S. RAJGURU; G. P. MARTINELLI. *Icahn Sch. of Med. at Mount Sinai, Univ. of Miami, Univ. of Miami, Icahn Sch. of Med. at Mount Sinai.*

3:00 JJ18 **404.03** Probing the role of the efferent vestibular system using direct monosynaptic viral tracing. M. A. MATHEWS; A. J. CAMP*; A. J. MURRAY. *Univ. of Sydney, Univ. of Sydney, Univ. Col. London.*

4:00 JJ19 **404.04** Decoding body-centered representations of translational motion in 3D from neural activity in the rostral fastigial nucleus. C. MARTIN*; J. X. BROOKS; A. M. GREEN. *Univ. De Montreal.*

1:00 JJ20 **404.05** Noise correlations between neurons in early vestibular pathways are negligible during both active and passive self-motion. A. DALE*; J. CARRIOT; M. J. CHACRON; K. E. CULLEN. *McGill Univ., McGill Univ., Johns Hopkins Univ.*

2:00 JJ21 **404.06** Cerebellar re-encoding of self-generated head movements. G. P. DUGUÉ*; M. TIHY; B. GOURÉVITCH; C. LENA. *IBENS, Inst. De Neurosci. Paris-Saclay (neuropsi), Inst. de Biologie de l'Ecole Normale Superieure.*

3:00 JJ22 **404.07** Temporal whitening of naturalistic self-motion stimuli by early vestibular pathways. D. E. MITCHELL*; A. KWAN; J. CARRIOT; M. J. CHACRON; K. E. CULLEN. *McGill Univ., McGill Univ., McGill Univ.*

4:00 JJ23 **404.08** Neonatal excitation-inhibition imbalance introduces long-lasting changes to neuronal recruitment in vestibular circuits for spatial navigation. O. W. CHUA*; Q. F. JIANG; K. L. K. WU; Y. S. CHAN. *The Univ. of Hong Kong.*

1:00 JJ24 **404.09** Vestibular compensation: possible role of extracellular matrix. K. MATESZ*. *Univ. of Debrecen, Fac. of Dent., Univ. of Debrecen.*

2:00 JJ25 **404.10** Malformation of the vestibular inner ear leads to abnormal vestibular nuclei development. S. J. LILIAN; H. E. SEAL; A. POPRATILOFF; J. C. HIRSCH; K. D. PEUSNER*. *George Washington Univ. Sch. of Med. and Hlth. Sci., George Washington Univ. Sch. of Med. and Hlth. Sci.*

3:00 JJ26 **404.11** Primary projections of the VIIIth nerve in two species of snakes, the western diamondback rattlesnake (Crotalus atrox) and amazon tree boa (Corallus hortulanus). R. M. LONG*; M. S. BOTHE; C. GUTIERREZ-IBANEZ; T. KOHL; H. LUKSCH; H. STRAKA; D. R. WYLIE. *Univ. of Alberta, Tech. Univ. of Munich, LMU Munich - Biocenter Martinsried.*

4:00 JJ27 **404.12** Vestibular nucleus and reticular formation neurons with converging limb and labyrinthine inputs differentially discriminate vestibular signals. D. M. MILLER*; C. D. BALABAN; A. A. MCCALL. *Univ. of Pittsburgh.*

1:00 JJ28 **404.13** Peripheral and central processing during vestibular unisensory integration in humans. P. A. FORBES*; G. P. SIEGMUND; A. KWAN; D. E. MITCHELL; A. C. SCHOUTEN; K. E. CULLEN; J. BLOUIN. *Erasmus Med. Ctr., Univ. of British Columbia, Delft Univ. of Technol., MEA Forensic Engineers & Scientists, McGill Univ., McGill Univ., Delft Univ. Tech.*

2:00 JJ29 **404.14** Updated screening for vestibular and balance disorders. H. S. COHEN*; A. P. MULAVARA; B. T. PETERS; C. MILLER; J. STITZ; H. SANGI-HAGHPEYKAR; S. P. WILLIAMS; J. J. BLOOMBERG. *Baylor Col. Med., KBRwyle, Univ. of Applied Sciences/ Upper Austria, Baylor Col. of Med., Baylor Col. of Med., NASA/ Johnson Space Ctr.*

3:00 JJ30 **404.15** Reduction of motion sickness through targeting histamine N dash methyltransferase in the dorsal vagal complex. H. L. XU*; L. CHANG; Z. JIANG. *Nantong Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 KK1 **404.16** Vestibular dysfunction impairs visuospatial working memory independently of other co-morbid depression, anxiety, fatigue and sleep disturbance. S. SURENTHIRAN*; L. J. SMITH; D. T. WILKINSON; R. BICKNELL; M. BODANI. *Medway Maritime Hosp., Univ. of Kent.*

1:00 KK2 **404.17** Resolving the paradox of active versus passive self-motion sensation: A unified internal model theory. J. LAURENS*; D. E. ANGELAKI. *Baylor Col. of Med., Baylor Col. of Med.*

2:00 KK3 **404.18** Correlation of postural instability during virtual reality immersion to virtual sickness symptoms. E. SON*; K. ROH; J. KIM; J. KIM; S. HONG; S. KIM. *Yonsei Univ. Col. of Med.*

3:00 KK4 **404.19** The neural encoding of active self-motion by the primate cerebellum-evidence for an internal model that accounts for gravity. I. MACKROUS*; J. CARRIOT; K. E. CULLEN. *McGill, McGill Univ., McGill Univ.*

4:00 KK5 **404.20** ▲ Inter-hemispheric control of vestibular thresholds. N. BEDNARCZUK*; M. CASANOVAS-ORTEGA; A. FLURI; A. M. BRONSTEIN; Q. ARSHAD. *Imperial Col. London.*

POSTER

405. The Control of Reaching Movements II

Theme E: Motor Systems

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 KK6 **405.01** High-level motor planning assessment during performance of complex actions in humans and humanoid robots: A computational approach. T. C. HAUGE*; G. KATZ; D. HUANG; G. DAVIS; J. A. REGGIA; R. J. GENTILI. *Univ. of Maryland, Col. Park, Univ. of Maryland, Univ. of Maryland.*

2:00 KK7 **405.02** Postural control that precedes to the forelimb reaching in the cat. K. TAKAKUSAKI*; M. TAKAHASHI; S. MIYAGISHI; T. DREW. *Asahikawa Med. Univ., Montreal Univ.*

3:00 KK8 **405.03** Effect of practice on the control of reach extent. J. C. STEWART*; A. HETHERINGTON; D. BRUEMMER; T. ICHIYANAGI; J. ROCKTASHEL; M. O'DONNELL; C. SIMMONS; T. M. HERTER. *Univ. of South Carolina.*

4:00 KK9 **405.04** Visual feedback may establish an implied context for reaching behavior. S. G. PENNY*; N. VAIDYANATHAN; M. BERNIKER. *Univ. of Illinois At Chicago.*

1:00 KK10 **405.05** Local generalization curves after force field adaptation. A. REZAZADEH*; M. BERNIKER. *Univ. of Illinois At Chicago, Univ. of Illinois At Chicago.*

2:00 KK11 **405.06** Are straight reaches the result of visual feedback? N. VAIDYANATHAN*; S. PENNY; M. BERNIKER. *Univ. of Illinois At Chicago, Univ. of Illinois at Chicago.*

3:00 KK12 **405.07** Modeling a shuffleboard machine that regulates motor noise like a human. J. P. CUSUMANO*; C. J. SMITH; J. B. DINGWELL. *Penn State Univ., Penn State Univ., Univ. of Texas At Austin.*

4:00 KK13 **405.08** Task dependent modulation of implicit visuomotor adaptation. D. E. PARVIN*; J. R. MOREHEAD; A. R. STOVER; R. B. IVRY. *UC Berkeley, Harvard Univ.*

1:00 KK14 **405.09** Gaze patterns provide a read out of strategy use in visuomotor adaptation. A. J. DE BROUWER*; M. ALBAGHDADI; J. R. FLANAGAN; J. P. GALLIVAN. *Queen's Univ.*

2:00 KK15 **405.10** PMd reach-related activity expresses a response component related to the strength of evidence used to choose a target before, during and after the movement. C. MONTANEDE*; J. F. KALASKA. *Univ. of Montreal, Univ. De Montréal.*

3:00 KK16 **405.11** Reinforcement learning leads to increase in exploration variability. S. UEHARA*; F. MAWASE; A. S. THERRIEN; K. M. CHERRY-ALLEN; A. J. BASTIAN; P. CELNIK. *Johns Hopkins Univ., Japan Society for the Promotion of Sci., Johns Hopkins Univ., Kennedy Krieger Inst., Johns Hopkins Univ.*

4:00 KK17 **405.12** Are physically interacting partners mutually optimal? N. BECKERS*; A. KEEMINK; E. VAN ASSELDONK; H. VAN DER KOOIJ. *Univ. of Twente.*

1:00 KK18 **405.13** Preparatory activity in motor cortex and supplementary motor area does not reflect the instantaneous probability of choosing to move. A. J. ZIMNIK*; A. H. LARA; M. M. CHURCHLAND. *Columbia Univ.*

2:00 KK19 **405.14** Relative sensitivity of subjects' performance to total, net and relative evidence in three color-quantity estimation tasks. S. DUROCHER*; J. MILOSZ; O. IERFINO; J. KALASKA. *Univ. De Montreal.*

3:00 KK20 **405.15** Mechanisms underlying motor planning under uncertainty. L. ALHUSSEIN*; R. B. SINGH; M. SMITH. *Harvard Univ.*

4:00 KK21 **405.16** ● Arm reaching movements are affected by the uncertainty in the targeet location during standing in stroke individuals. R. B. GARBUS*; S. R. ALOUCHE; A. G. NARDINI; S. M. FREITAS. *Univ. Cidade De São Paulo, Univ. Cidade de Sao Paulo, Univ. Cidade de São Paulo, Univ. Cidade De Sao Paulo.*

1:00 KK22 **405.17** Deciding while acting - an investigation of decision-making during ongoing action control. J. MICHALSKI; P. E. CISEK*. *Univ. of Montreal.*

2:00 KK23 **405.18** Molecular changes in the sensorimotor cortex during learning and recall: Tracking and manipulating PKMzeta. J. T. FRANCIS*; P. GAO. *Univ. of Houston, SUNY Downstate Med. Ctr.*

POSTER

406. Cortical Planning and Execution: Neural Correlates of Behavior

Theme E: Motor Systems

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 KK24 **406.01** Post-stroke interhemispheric cortical connectivity during active motor states of the paretic and nonparetic limb. J. A. PALMER*; L. A. WHEATON; P. GURUPRASAD; M. R. BORICH. *Emory Univ., Georgia Inst. of Technol.*

2:00 KK25 **406.02** Context-dependent brain dynamics during grasping and dexterous manipulation. P. MCGURRIN*; J. FINE; K. SCREWS; M. SANTELLO. *Arizona State Univ., Arizona State Univ., Arizona State Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 KK26 **406.03** Two representations of the diaphragm in the primary motor cortex. L. B. HELOU*; R. P. DUM; P. L. STRICK. *Systems Neurosci. Institute, Univ. of Pitt, Univ. Pittsburgh, Systems Neurosci. Institute, Univ. of Pittsburgh.*

4:00 KK27 **406.04** Deconstruction of corticospinal circuits for goal-directed motor skills. X. WANG*. *Boston Children's Hosp.*

1:00 KK28 **406.05** Cortical and reticular contributions to response preparation and initiation. A. N. CARLSEN*; D. MASLOVAT; N. M. DRUMMOND; A. LEGUERRIER; J. HAJJ; V. SMITH. *Univ. of Ottawa, Univ. of British Columbia.*

2:00 KK29 **406.06** Variability in corticospinal excitability during digit force planning for grasping in humans. N. RAO*; P. J. PARIKH. *Univ. of Houston, Arizona State Univ.*

3:00 KK30 **406.07** The relationship between cortical and muscle activity during a motor-cognitive interaction task. J. R. LUKOS*; M. ALAM; J. C. BRADFORD; D. P. FERRIS. *Space and Naval Warfare Systems Center, Pacific, Space and Naval Warfare Syst. Ctr. Pacific, Army Res. Lab., Univ. of Michigan.*

4:00 KK31 **406.08** The role of different motor cortex subregions in goal directed action in mice. K. MORANDELL*; D. HUBER. *Univ. of Geneva, Univ. of Geneva.*

1:00 KK32 **406.09** Modulation of different interneurone networks during proactive and reactive inhibition. V. RAWJI*; R. TIBOLD; T. FOLTYNIE; M. JAHANSHAHI; J. C. ROTHWELL. *Univ. Col. London, Univ. Col. London Inst. of Neurol., Univ. Col. London, Inst. Neurol.*

2:00 KK33 **406.10** Imitation depends on an intact representation of abstract trajectory shape in dorsal premotor cortex. A. L. WONG*; S. A. JAX; L. L. SMITH; L. J. BUXBAUM; J. W. KRAKAUER. *Johns Hopkins Univ. Sch. of Med., Moss Rehabil. Res. Inst.*

3:00 KK34 **406.11** Transfer learning in convolutional neural networks as a tool to analyze animal behavior imaging data. A. ARAC*; S. CARMICHAEL; P. GOLSHANI. *UCLA, UCLA Sch. Med., UCLA Dept. of Neurol.*

4:00 KK35 **406.12** Consistency between task-related neural sub-spaces within and between subjects: Potential for universal neural decoders? C. E. VARGAS-IRWIN*; J. HYNES; J. B. ZIMMERMANN; J. P. DONOGHUE. *Brown Univ., Brown Univ., Wyss Ctr. For Bio and Neuro Engin.*

1:00 KK36 **406.13** Motor learning for corticospinal and corticobulbar pathways. S. PARK*; A. CASAMENTO-MORAN; M. L. SINGER; A. E. ERNSTER; B. YACOUBI; I. A. HUMBERT; E. A. CHRISTOU. *Univ. of Florida, Univ. of Florida.*

2:00 LL1 **406.14** Effects of pseudoexperience on the understanding of hemiplegic movements: An fMRI study by physical therapists as subjects. R. WATANABE*; N. KATSUYAMA; N. USUI; M. TAIRA. *Tokyo Med. and Dent. Univ.*

POSTER

407. Cortical Planning and Execution: Animal Neurophysiology

Theme E: Motor Systems

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 DP09/LL2 **407.01** ▲ (Dynamic Poster) An open database of cat neuronal activity. I. A. NALL; I. BRAVERMAN; J. T. GOODROAD; F. FLORES; F. JOHNSON; A. RIVARD; I. N. BELOOZEROVA*. *Arizona State Univ., Barrow Neurolog. Inst.*

2:00 LL3 **407.02** A 'landscape view' of motor planning. P. DEL GIUDICE*; G. BAGLIETTO; S. FERRAINA. *Italian Natl. Inst. of Hlth., IFLYSIB, Inst. de Fisica de Liquidos y Sistemas Biologicos (UNLP-CONICET), Sapienza Univ. Rome.*

3:00 LL4 **407.03** Inhibition of protein synthesis in M1 of monkeys disrupts performance of sequential movements guided by memory. M. OHBAYASHI*; P. L. STRICK. *Univ. of Pittsburgh, Sch. of Medicine, Syst. Neurosci. Inst., CNBC, Dept. of Neurobio., Brain Inst.*

4:00 LL5 **407.04** Intrinsic connections of motor cortex columns revealed with intracortical microstimulation and optical imaging in squirrel monkeys. N. S. CARD; A. SLOAN; O. A. GHARBAWIE*. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

1:00 LL6 **407.05** Area-specific involvement of frontal areas and the basal ganglia in goal-directed behavior in monkeys. Y. NAKAYAMA*; T. YAMAGATA; N. ARIMURA; E. HOSHI. *Tokyo Metropolitan Inst. of Med. Sci., Tokyo Metropolitan Inst. of Med. Sci., Tamagawa Univ. Brain Sci. Inst.*

2:00 LL7 **407.06** Premotor network exploration and reinforcement during practice of a stereotyped, learned motor action. W. A. LIBERTI*, III; J. SHEN; D. P. LEMAN; N. PERKINS; T. J. GARDNER. *Boston Univ., Boston Univ.*

3:00 LL8 **407.07** Selective suppression of local circuits during movement preparation in the mouse motor cortex. T. R. SATO*; M. HASEGAWA; K. MAJIMA; T. ITOKAZU; Y. KAMITANI; T. SATO. *Ctr. For Integrative Neurosci., Univ. of Tuebingen, Kyoto Univ., Osaka Univ., Kyoto Univ., Technische Univ. München.*

4:00 LL9 **407.08** Thalamo-cortico-thalamic circuits in a premotor-like frontal cortical area in the mouse. K. GUO*; N. YAMAWAKI; G. M. SHEPHERD. *Northwestern Univ.*

1:00 LL10 **407.09** ● Topography in the mouse motor cortex is a mosaic. N. JAIN*; S. R. JOHN; P. HALDER. *Natl. Brain Res. Ctr.*

2:00 LL11 **407.10** Corticocortical signaling drives activity in a downstream area efficiently, reliably, reversibly, and scalably. X. LI*; N. YAMAWAKI; K. P. KORDING; G. M. G. SHEPHERD. *Northwestern Univ., Northwestern Univ.*

3:00 LL12 **407.11** Parvalbumin expressing GABA-ergic neurons in primary motor cortex signal reaching. D. HOFFMANN*; L. ESTEBANEZ; B. C. VOIGT; J. F. POULET. *Max-Delbrück Ctr. For Mol. Med. (MDC), Cluster of Excellence NeuroCure/ Charité-Universitätsmedizin, Ctr. Natl. de la Recherche Scientifique.*

4:00 LL13 **407.12** Transcranial laser scanning photostimulation and video motion tracking for optogenetic cortical motor mapping of mouse corticospinal neurons. L. LAMBOT*; J. M. BARRETT; X. LI; G. M. SHEPHERD. *Northwestern Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 LL14 **407.13** Oscillatory activity of supplementary motor areas reflects temporal integration of periodic events. J. D. CADENA-VALENCIA*; V. DE LAFUENTE. *Inst. De Neurobiología.*

2:00 LL15 **407.14** Motor cortical encoding of arm impedance during the coordinated control of both force and movement. S. D. KENNEDY*; A. B. SCHWARTZ. *Univ. of Pittsburgh, Univ. of Pittsburgh Dept. of Neurobio.*

3:00 LL16 **407.15** Comparing M1 neural reorganization during contralateral and ipsilateral visuomotor rotation learning. L. BAHUREKSA*; W. JOINER; S. CHASE. *Carnegie Mellon Univ., Carnegie Mellon Univ., George Mason Univ.*

4:00 LL17 **407.16** Demarcation of subjective value from arousal during action observation in F5 neurons. S. SPADACENTA*; J. K. POMPER; F. BUNJES; M. A. GIESE; P. THIER. *Hertie Inst. For Clin. Brain Res., Hertie Inst. For Clin. Brain Res. / CIN.*

1:00 LL18 **407.17** Head-restraint does not change the cortical dependence of a sensorimotor task in mice. T. BOLLU; N. PRASAD; J. H. GOLDBERG*. *Cornell Univ., Cornell Univ.*

2:00 LL19 **407.18** Representation of egocentric space in the frontal orienting field. H. LI*; H. H. YIN. *Duke Univ., Duke Univ.*

3:00 LL20 **407.19** Encoding properties of neurons in the orofacial sensorimotor cortex during bite force generation at varying gapes. F. I. ARCE-MCSHANE*; K. TAKAHASHI; B. J. SESSLE; N. HATSOPOULOS; C. ROSS. *Univ. of Chicago, Univ. Toronto.*

4:00 LL21 **407.20** Presynaptic inhibition of muscle afferent input to spinal cord in awake, behaving monkeys. S. TOMATSU*; G. KIM; S. KUBOTA; K. SEKI. *Natl. Inst. of Neuroscience, NCNP, JSPS, JST, PREST.*

1:00 LL22 **407.21** Decoding neuronal firing patterns in the anterior lateral motor cortex into sensory cue information. J. SOHN*; S. CHAE; S. KIM. *Daegu-Gyeongbuk Med. Innovation Fndn., Ulsan Natl. Inst. of Sci. and Technol., Ulsan Natl. Inst. of Sci. and Technol.*

2:00 LL23 **407.22** Clustering of dendritic activity during decision making. A. M. KERLIN; B. MOHAR*; D. A. FLICKINGER; B. J. MACLENNAN; C. DAVIS; N. JI; N. SPRUSTON; K. SVOBODA. *HHMI Janelia Res. Campus.*

3:00 LL24 **407.23** Predictive coding of temporal events through regulation of cortical dynamics. S. W. EGGER*; C. CHANG; M. JAZAYERI. *MIT, MIT.*

4:00 LL25 **407.24** Long-range inputs and H-current regulate different modes of operation in a multiscale model of mouse M1 microcircuits. S. DURA-BERNAL*; S. A. NEYMOTIN; B. A. SUTER; G. M. SHEPHERD; W. W. LYTTON. *State Univ. of New York Downstate Med. Ctr., Brown Univ., Northwestern Univ., Northwestern Univ., SUNY Downstate.*

1:00 LL26 **407.25** Primary motor cortex neurons which produce post-spike suppression provide an active descending command to turn off muscle activity. D. M. GRIFFIN*; D. S. HOFFMAN; P. L. STRICK. *Univ. of Pittsburgh.*

2:00 LL27 **407.26** Discrete attractor dynamics underlies selective ramping activity in frontal cortex. H. INAGAKI*; L. FONTOLAN; S. ROMANI; K. SVOBODA. *JFRC.*

3:00 LL28 **407.27** Models for short-term memory in a motor preparation task. L. FONTOLAN*; H. K. INAGAKI; K. SVOBODA; S. ROMANI. *Howard Hughes Med. Inst.*

POSTER

408. From Brain to Mouth: Oral Motor Speech Control

Theme E: Motor Systems

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 LL29 **408.01** Modulation of event-related potentials associated with orofacial skin stretch during speech production. T. ITO*; H. OHASHI; E. MONTAS; V. L. GRACCO. *Gipsa Lab, CNRS, Haskins Labs., Haskins Labs. Inc, McGill Univ.*

2:00 LL30 **408.02** Lingual nerve transection induces neutrophil response in the anterior tongue of rats. J. D. OMELIAN*; S. I. SOLLARS. *Univ. of Nebraska at Omaha Dept. of Psychology, Univ. of Nebraska At Omaha.*

3:00 LL31 **408.03** Motor control of the tongue during speech: Predictions of an optimization policy under sensorimotor noise. P. BARADUC*; P. PERRIER. *Gipsa-Lab, CNRS / U. Grenoble-Alpes UMR 5216.*

4:00 LL32 **408.04** Entrainment of chewing rhythm by gait rhythm during treadmill walking in humans. H. MAEZAWA; S. KOGANEMARU; M. MATSUHASHI; M. FUNAHASHI; T. MIMA*. *Hokkaido Univ., Hokkaido Univ., Kyoto Univ. Grad. Sch. of Med., Hokkaido Univ, Grad Sch. Dent. Med., Ritsumeikan Univ.*

1:00 LL33 **408.05** Somatosensory-based compensation to mechanical perturbations of the larynx during speech. D. J. SMITH*; A. F. SALAZAR-GOMEZ; C. E. STEPP; F. H. GUENTHER. *Boston Univ., Boston Univ.*

2:00 MM1 **408.06** Speech movement parameters reflected in sensorimotor cortex activity. E. SALARI*; Z. V. FREUDENBURG; M. J. VANSTEENSEL; N. F. RAMSEY. *Univ. Med. Ctr. Utrecht.*

3:00 MM2 **408.07** Sensorimotor adaptation of speech with delays in the formant-shifted auditory feedback signal. T. MITSUYA; D. SHILLER; L. MAX*. *Univ. Washington, Univ. of Montreal.*

4:00 MM3 **408.08** Responses to brief mid-utterance formant perturbations in the auditory feedback of ongoing speech. I. RAHARJO*; H. KOTHARE; J. F. HOUDE; S. NAGARAJAN. *UC San Francisco, UC Berkeley.*

1:00 MM4 **408.09** Speech auditory-motor learning: Are adaptation and de-adaptation similarly affected by practice schedule? K. S. KIM*; T. MITSUYA; L. MAX. *Univ. of Washington, Haskins Labs.*

2:00 MM5 **408.10** High gamma neural responses dissociate between the acoustic and linguistic analysis of temporal speech structure. G. B. COGAN*; J. M. PEARSON; M. M. HAGLUND; S. R. SINHA; T. OVERATH. *Duke Univ., Duke Univ., Duke Univ.*

3:00 MM6 **408.11** Reciprocal connections between oral motor and agranular insular cortices mediate the control of consummatory behaviors. L. M. AMARANTE*; M. S. CAETANO; M. LAUBACH. *American Univ., Univ. Federal Do ABC.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 MM7 **408.12** How primary is primary motor cortex for the control of vocalization? C. M. CERKEVICH*; P. L. STRICK. *Univ. Pittsburgh Sch. Med., Univ. Pittsburgh Sch. Med., Univ. Pittsburgh Sch. Med., Univ. Pittsburgh Sch. Med.*

1:00 MM8 **408.13** Neural encoding of attended speech in primary and non-primary human cortices. J. A. O'SULLIVAN*; J. L. HERRERO; E. H. SMITH; G. M. MCKHANN; S. A. SHETH; A. D. MEHTA; N. MESGARANI. *Columbia Univ., Mortimer B. Zuckerman Mind Brain Behavior Inst., The Feinstein Inst. For Med. Res., Hofstra Northwell Sch. of Med., Columbia Univ., The Feinstein Inst. for Med. Res.*

2:00 MM9 **408.14** Decoding human speech articulation by multi-scale signals recorded from human sensory-motor cortex. K. IBAYASHI*; N. KUNII; T. MATSUO; Y. ISHISHIA; S. SHIMADA; K. KAWAI; N. SAITO. *Univ. of Tokyo, Grad. Sch. of Med., Tokyo Metropolitan Neurolog. Hosp., Jichi Med. Univ.*

3:00 MM10 **408.15** Oscillatory modulation during swallowing revealed by human electrocorticograms. H. HASHIMOTO*; M. HIRATA; S. KAMEDA; T. YANAGISAWA; S. OSHINO; H. KISHIMA; T. YOSHIMINE. *Osaka Univ., Osaka University, Global Ctr. for Med. Engin. and Informatic.*

4:00 MM11 **408.16** Positive and negative BOLD contributions to speech production: An ICA approach. V. L. GRACCO*; H. OHASHI; N. BOURGUIGNON. *Haskins Labs., McGill Univ., Ghent Univ.*

1:00 MM12 **408.17** Articulatory gesture encoding in human sensorimotor cortex during continuous speech production. J. CHARTIER*; G. K. ANUMANCHIPALLI; E. F. CHANG. *Univ. of California, San Francisco, Univ. of California, San Francisco.*

2:00 MM13 **408.18** Cortical representation of articulatory gestures. E. M. MUGLER*; K. LIVESCU; M. C. TATE; J. W. TEMPLER; M. GOLDRICK; M. W. SLUTZKY. *Northwestern Univ., Toyota Technological Inst. at Chicago, Northwestern Univ., Northwestern Univ.*

3:00 MM14 **408.19** Adaptive representation of noise and speech in human auditory cortex. B. KHALIGHINEJAD*; J. L. HERRERO; A. D. MEHTA; N. MESGARANI. *Dept. Electrical Engineering, Columbia Univ., Mortimer B. Zuckerman Mind Brain Behavior Institute, Columbia Univ., Hofstra Northwell Sch. of Med., The Feinstein Inst. for Med. Res.*

4:00 MM15 **408.20** ● Real-time functional mapping assists electrical cortical stimulation to identify the eloquent cortex. J. R. SWIFT*; R. PRUECKL; C. KAPELLER; C. GUGER. *Wadsworth Ctr., g.tec neurotechnologies USA inc, Guger Technologies OG.*

1:00 MM16 **408.21** Reconstructing Mel-scaled spectrograms of speech from electrocorticography. C. HERFF*; G. D. JOHNSON; J. J. SHIH; D. J. KRUSIENSKI; T. SCHULTZ. *Univ. of Bremen, Old Dominion Univ., UC San Diego, Old Dominion Univ., Univ. of Bremen.*

2:00 MM17 **408.22** The neural correlates of lip movements during continuous speech for the development of speech neuroprosthetics. S. LESAJA; C. HERFF; G. JOHNSON; J. SHIH; T. SCHULTZ; D. J. KRUSIENSKI*. *Old Dominion Univ., Univ. of Bremen, UC San Diego, Old Dominion Univ.*

3:00 MM18 **408.23** Decoding individual phonemes from ECoG neural responses using convolutional neural networks. J. BEREZUTSKAYA*; Z. V. FREUDENBURG; N. F. RAMSEY. *Brain Ctr. Rudolf Magnus, Univ. of Utrecht.*

4:00 MM19 **408.24** ● Topography of human motor speech area using externally recorded 12-20Hz beta peaks during articulatory movements and phoneme expression. P. R. KENNEDY*; T. LIMTOM; C. GAMBRELL; A. KIRILLOV. *Neural Signals Inc, Neural Signals Inc., Neuroexplorer Inc.*

POSTER

409. Posture and Gait: Kinematics, Muscle Activity, Exercise, and Fatigue

Theme E: Motor Systems

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 MM20 **409.01** Improvement of cycling power output following transcranial direct current stimulation depends on the exercise duration. S. SASADA*; T. ENDOH; T. ISHII; K. KAWASHIMA; S. SATO; A. HAYASHI; T. KOMIYAMA. *Dept. of Food and Nutr. Science, Sagami W, Fac. of Develop. and Education, Uekusa Gakuen Univ., Fac. of Education, Grad. Sch. of Education, Chiba Univ., United of Grad. Sch. Education, Tokyo Gakugei Univ., Dept. of Hlth. and Sports Sciences, Fac. of Education, Chiba Univ.*

2:00 MM21 **409.02** Novel measure of dynamic balance during walking. J. YOO; T. YAMAGUCHI; M. SHINYA; M. MILOSEVIC; K. MASANI*. *Univ. of Toronto, Tohoku Univ., Hiroshima Univ., Univ. of Tokyo, Toronto Rehab Inst.*

3:00 MM22 **409.03** ● Implicit manipulation of gait parameters by a visuomotor adaptation paradigm. K. YAMAMOTO*; T. IKEGAMI; M. HIRASHIMA. *Natl. Inst. of Fitness and Sports In Kanoya, Natl. Inst. of Information and Communications Technol.*

4:00 NN1 **409.04** ● Biomechanical effects of differential limb-loading demands in the fore-aft direction on relative interlimb propulsion symmetry during walking. A. NAIDU*; C. P. HURT; D. A. BROWN. *Univ. of Alabama At Birmingham, Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham.*

1:00 NN2 **409.05** Balance and muscle activation patterns during sit-to-stand across four initial foot positions. W. JEON*; D. GUPTA; J. FENNELL; J. L. JENSEN; L. GRIFFIN. *The Univ. of Texas At Austin, Univ. of Melbourne.*

2:00 NN3 **409.06** ● Movement dynamics associated with response strategies in running. J. L. MCDONNELL*; J. C. MIZELLE; T. R. DERRICK; S. MEARDON. *East Carolina Univ., East Carolina Univ., Iowa State Univ., East Carolina Univ.*

3:00 NN4 **409.07** Contribution of lower limb joint movement to symmetrization of step length in split-belt locomotion. K. HIRATA*; T. KOKUBUN; H. YOKOYAMA; T. MIYAZAWA; K. KUBOTA; M. SONOO; H. HANAWA; N. KANEMURA. *Grad. Sch. of Saitama Prefectural Univ., Saitama Prefectural Univ., The Univ. of Tokyo, Ageo Futatsumiya Clin.*

4:00 NN5 **409.08** Retention of locomotor learning: Effects of practice duration and washout periods. J. E. GALGIANI*; S. M. MORTON. *Univ. of Delaware.*

1:00 NN6 **409.09** Is it "pain, no gain" rather than "no pain, no gain" for motor learning? P. W. HODGES*; S. E. SALOMONI; L. J. BOUYER. *Univ. Queensland, The Univ. of Queensland, Univ. Laval Fac Med.*

Mon. PM

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 NN7 **409.10** Proximal-to-distal segmental sequence of toppling observed during human quiet standing. S. SASAGAWA*; A. IMURA. *Dept. of Human Sciences, Kanagawa Univ., Tokyo Metropolitan Univ.*

3:00 NN8 **409.11** Effects of motor fatigue on walking stability during concurrent cognitive challenges. P. KAO*; M. A. PIERRO; K. BOORAS. *Univ. of Massachusetts Lowell.*

4:00 NN9 **409.12** Locomotor learning “in the wild”: Motorized shoes can induce split-belt-like adaptation over ground. Y. AUCIE*; X. ZHANG; R. SARGENT; G. TORRES OVIEDO. *Univ. of Pittsburgh, The Robotics Institute, Carnegie Mellon Univ.*

1:00 NN10 **409.13** Can split-belt treadmill walking be explained with a reflex-based model? S. SONG*; Y. AUCIE; G. TORRES-OVIEDO. *Carnegie Mellon Univ., Univ. of Pittsburgh, Univ. of Pittsburgh.*

2:00 NN11 **409.14** Interference in locomotor adaptation. A. SALATIELLO*; G. TORRES-OVIEDO. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

3:00 NN12 **409.15** Treadmill versus overground body weight support training in stroke patients: Effects on coordination variability during walking. M. L. CELESTINO*; A. M. F. BARELA; G. L. GAMA; J. A. BARELA; R. E. A. VAN EMMERIK. *Univ. Cruzeiro Do Sul, Univ. of Massachusetts, Univ. Estadual Paulista.*

4:00 NN13 **409.16** Learning and generalization of locomotor skills acquired during a virtual obstacle negotiation task. A. KIM*; J. M. FINLEY. *USC.*

1:00 NN14 **409.17** Regulation of whole-body angular momentum during adaptive locomotor learning. S. PARK*; J. M. FINLEY. *USC, USC.*

2:00 NN15 **409.18** The influence of objects in the peri-personal space on standing sway. M. A. BRYANTON; K. K. FENRICH*; J. E. MISIASZEK. *Univ. of Alberta, Univ. of Alberta.*

3:00 NN16 **409.19** Improvement of dynamic balance control by an exercise program. D. SHIBATA*. *Univ. of New Mexico.*

4:00 NN17 **409.20** Quantifying the non-linear properties of center of pressure patterns during different running styles. C. D. BOWERSOCK*; S. MORRISON; D. RUSSELL. *Old Dominion Univ.*

1:00 NN18 **409.21** Saccadic eye movements influence postural sway after fatiguing and stretching. J. M. HONDZINSKI*; M. A. YEOMANS; A. G. NELSON; M. J. MACLELLAN. *Sch. of Kinesiology; Louisiana State Univ.*

2:00 NN19 **409.22** Analysis of kinematic synergy in arm swing during gai. T. FUJINO*; N. KANEMURA; T. KOKUBUN; K. KUBOTA; K. HIRATA; H. HANAWA; A. KOBAYASHI; K. TAKAYANAGI. *Saitama Prefectural Univ.*

3:00 NN20 **409.23** Automatic unsupervised analysis of motor function by deep learning. B. OMMER*; B. BRATTOLI; U. BÜCHLER; A. WAHL; M. E. SCHWAB. *Heidelberg Univ., Brain Res. Institute, Univ. and ETH Zurich, Univ. Zurich.*

POSTER

410. Posture and Gait: Animal Models

Theme E: Motor Systems

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 NN21 **410.01** Contributions of pelvic roll to weight-supported locomotion in the neonatally spinalized rat. J. VANLOOZEN*; S. F. GISZTER. *Drexel Univ. Col. of Med.*

2:00 NN22 **410.02** Adaptations of neural control to mediolateral perturbations of the patella. F. BARROSO*; C. ALESSANDRO; T. SANDERCOCK; M. TRESCH. *Northwestern Univ.*

3:00 NN23 **410.03** Adaptation to quadriceps paralysis as a window into neural control of internal joint variables. C. ALESSANDRO*; B. RELLINGER; F. BARROSO; T. G. SANDERCOCK; M. C. TRESCH. *Northwestern Univ., Northwestern Univ.*

4:00 NN24 **410.04** Correlations between quadriceps muscles during locomotion in the rat. M. C. TRESCH*; C. ALESSANDRO; F. BARROSO. *Northwestern Univ., Shirley Ryan AbilityLabs, Northwestern Univ.*

1:00 NN25 **410.05** ▲ In pursuit of a generalized model of legged locomotion. G. ANTONIAK*; V. BHANDAWAT; T. BISWAS. *Duke Univ., Loyola Univ.*

2:00 NN26 **410.06** The role of ankle extensors when adjusting to treadmill speed in chronic spinal cats. J. HARNIE*; C. CÔTÉ-SARRAZIN; M. HURTEAU; Y. THIBAUDIER; C. DAMBREVILLE; E. DESROCHERS; A. DOELMAN; T. ROSS; A. TELONIO; A. FRIGON. *Univ. De Sherbrooke.*

3:00 NN27 **410.07** The modulation of forelimb and hindlimb muscle activity with increasing treadmill speed before and after an incomplete spinal cord injury in adult cats. A. W. DOELMAN*; T. ROSS; M. HURTEAU; E. DESROCHERS; Y. THIBAUDIER; C. DAMBREVILLE; A. TELONIO; A. FRIGON. *Univ. De Sherbrooke.*

4:00 NN28 **410.08** The spinal control of hindlimb muscle synergies during locomotion. E. DESROCHERS; M. HURTEAU; J. HARNIE; A. DOELMAN; A. TELONIO; A. FRIGON*. *Univ. de Sherbrooke.*

1:00 NN29 **410.09** Selective genetic ablation of adrenergic cells leads to dramatic and progressive motor control and metabolic deficits in adult mice. S. MANJA; A. OWJI; L. LINDO; J. ALTIER; K. ROBY; R. RASOOL; S. NANDINI; J. AYALA; S. KING; S. N. EBERT*. *Univ. of Central Florida, Univ. of Central Florida, Sanford Burnham Prebys Med. Discovery Inst., Univ. of Central Florida.*

2:00 NN30 **410.10** Injured corticospinal tracts prevented learning of split wheel walking in mice. J. SONSINI*; A. CHUGHTAI; Z. AHMED. *Grad. Ctr. City Univ. of New York, CUNY Col. of Staten Island.*

1:00 DP10/NN31 **410.11** (Dynamic Poster) Uncovering the structure of the mouse gait controller with mechanical and neural perturbations. A. VAHEDIPOUR*; P. SHAMBLE; O. MAGHSOUDI; M. SHORT; B. ROBERTSON; A. SPENCE. *Temple Univ., Harvard Univ.*

4:00 NN32 **410.12** Simulated cockroach walks in different directions at cockroach-like speeds and stepping frequencies. N. S. SZCZECINSKI*; S. E. RUBEO; R. E. RITZMANN; R. D. QUINN. *Case Western Reserve Univ., Case Western Reserve Univ., Case Western Reserve Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract’s submitting author

1:00 NN33 **410.13** Hypoxia Ischemia mice show behavior deficiency on DigiGait and Intelicage behavior test. C. XIE*. *Univ. of Goteborg.*

POSTER

411. CPGs: Circuit Mechanisms

Theme E: Motor Systems

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 OO1 **411.01** Specificity of excitatory spinal neurons involved in generation of rhythmic activity for locomotion. A. E. TALPALAR*; V. RIBEIRO CALDEIRA; T. I. TALPALAR; S. M. DYMECKI; O. KIEHN. *Dept. Neuroscience, Karolinska Institutet, Harvard Med. Sch.*

2:00 OO2 **411.02** Computational modeling of interactions between cervical and lumbar CPG circuits in the rodent spinal cord *in vitro.* N. A. SHEVTSOVA*; S. M. DANNER; I. A. RYBAK. *Drexel Univ. Col. of Med.*

3:00 OO3 **411.03** Computational modeling study of the role of long propriospinal neurons in speed-dependent gait expression. S. M. DANNER; N. A. SHEVTSOVA; I. A. RYBAK*. *Drexel Univ. Col. of Med.*

4:00 OO4 **411.04** Genetic dissection of the spinal locomotor circuit in DSCAM mutant mice. L. THIRY*; F. BRETZNER. *CRCHUQ, CRCHUQ - Univ. Laval.*

1:00 OO5 **411.05** V2a interneuron sub-circuits controlling the speed of locomotion. I. PALLUCCHI; J. SONG; K. AMPATZIS; J. AUSBORN; A. EL MANIRA*. *Karolinska Inst., Drexel Univ. Col. of Med.*

2:00 OO6 **411.06** Connectivity analysis of multielectrode neural recordings using a stochastic framework. M. ABOLFATH-BEYGI*; T. D. SANGER; S. F. GISZTER. *USC, Drexel Univ. Col. of Med.*

3:00 OO7 **411.07** Interconnectivity within a spinal locomotor rhythm generating interneurons in mouse. N. HA*; L. YAO; K. DOUGHERTY. *Drexel Univ. Col. of Med., Drexel Univ. Col. of Med.*

4:00 OO8 **411.08** Distinct neural mechanisms underlie half center oscillators for homologous swimming behaviors of two sea slug species. A. SAKURAI*; P. S. KATZ. *Georgia State Univ., Univ. of Massachusetts.*

1:00 OO9 **411.09** Multi-compartmental cardiac ganglion large cell model to study single cell and network outputs. S. S. NAIR*; D. C. WOOD; J. WANG; D. KICK; D. SCHULZ. *Univ. of Missouri Columbia, Univ. of Missouri, Univ. of Missouri.*

2:00 OO10 **411.10** Balancing inhibitory and excitatory coupling in a multifunctional central pattern generator with slow and fast rhythms. J. R. P. GREEN; R. KHWAJA; A. N. KLISHKO; B. I. PRILUTSKY; G. S. CYMBALYUK*. *Georgia State Univ., Georgia State Univ., Georgia Inst. of Technol., Georgia Inst. Technol.*

POSTER

412. Motor Unit Recordings

Theme E: Motor Systems

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 OO11 **412.01** Factors influencing beta-band motor unit coherence with changining force level. L. M. MCMANUS*; M. LOWERY. *Univ. Col. Dublin.*

2:00 OO12 **412.02** Common drive of motor units during dynamic activities of the upper-limb. J. C. KLINE*; P. CONTESSA; S. H. ROY; G. DE LUCA. *Delsys, Inc.*

3:00 OO13 **412.03** ● Influence of synergist muscle activation on motor unit firing behavior during fatigue. J. LETIZI; J. C. KLINE; P. CONTESSA*. *Delsys Inc.*

4:00 OO14 **412.04** Motometrics: A guided analysis toolbox for annotating and analyzing motor evoked potentials. S. RATNADURAI GIRIDHARAN*; D. GUPTA; J. N. HILL; A. PAL; A. M. MISHRA; J. B. CARMEL. *Burke Med. Res. Inst., Weill Cornell Med., Blythedale Children's Hosp.*

1:00 OO15 **412.05** ● Motor unit rate coding and recruitment of elbow flexion agonists does not always reflect muscle length-tension curve relationships. Z. ADAMS*; R. E. AKINS, Jr; T. S. BUCHANAN. *Univ. of Delaware, Nemours - Alfred I. Dupont Hosp For Children, Univ. of Delaware.*

2:00 OO16 **412.06** Is increased activation of PFC with cognitive demands associated with the motor unit variability? B. NOH*; K. C. PHILLIPS; H. MAAT; T. YOON. *Michgan Tech., Michigan Technological Univ., Michigan Tech. Univ.*

3:00 OO17 **412.07** Optimal force production by an idealized motor pool necessitates a flexible interplay between size and speed principles. N. J. MARSHALL*; L. ABBOTT; M. M. CHURCHLAND. *Columbia Univ.*

4:00 OO18 **412.08** ● Evidence of increased synchrony within and between muscles during isometric leg extension in Parkinson's disease. M. W. FLOOD*; B. R. JENSEN; A. MALLING; M. M. LOWERY. *Univ. Col. Dublin, Insight Ctr. for Data Analytics, UCD, Univ. of Southern Denmark, Univ. of Copenhagen, Univ. Col. Dublin.*

1:00 OO19 **412.09** The role of common synaptic input to populations of motor neurons in the generation of force. F. NEGRO*; K. G. KEENAN; C. ORIZIO. *Dept. of Clin. and Exptl. Sci., Univ. of Wisconsin-Milwaukee.*

2:00 OO20 **412.10** Can one EMG-based neural-machine interface fit all. L. PAN*; D. CROUCH; H. HUANG. *NC State Univ. and UNC-Chapel Hill.*

3:00 OO21 **412.11** Influence of muscle architecture on the sEMG signal of the first dorsal interosseous muscle: A subject-specific model based on diffusion tensor imaging. D. PEREIRA BOTELHO*; N. COLGAN; A. FAGAN; K. CURRAN; M. LOWERY. *Univ. Col. Dublin, Natl. Univ. of Ireland, Trinity Col. Dublin.*

4:00 OO22 **412.12** High-density electromyogram decomposition using different blind source separation algorithms. C. DAI*; X. HU. *Univ. of North Carolina At Chapel Hill.*

1:00 OO23 **412.13** Development of a simple device for assessment of spasticity. K. TAKEDA*; H. MAEDA; S. SONODA. *Fujita Hlth. Univ., Fujita Hlth. Univ.*

Mon. PM

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 OO24 **412.14** Sources of muscle weakness in stroke survivors based on a motor unit simulation. X. HU*; H. SHIN; W. Z. RYMER; N. L. SURESH. *UNC Chapel Hill, Rehabil. Inst. of Chicago, Rehabil. of Chicago.*

3:00 OO25 **412.15** Muscle synergies underlying sit-to-stand tasks in acute stroke patients. H. HANAWA*; K. KUBOTA; T. KOKUBUN; K. HIRATA; T. MIYAZAWA; M. SONOO; T. FUJINO; N. KANEMURA. *Grad. Sch. of Saitama Prefectural Univ., Saitama Prefectural Univ., Ageo Futatsumiya Clin.*

4:00 OO26 **412.16** Relationship between muscle synergy in knee osteoarthritis patients and the functional evaluation of knee joints. K. KUBOTA*; H. HANAWA; T. KOKUBUN; M. SONOO; K. HIRATA; T. FUJINO; G. OONO; N. KANEMURA. *Grad. Sch. of Saitama Prefectural Univ., Saitama Prefectural Univ.*

1:00 OO27 **412.17** Anterior interosseous nerve syndrome variant confirmed by MRI and electromyography. I. JUNG*; S. JEE; I. KIM. *Chungnam Natl. Univ. Hosp., Seoul Natl. Univ. Col. of Med.*

2:00 OO28 **412.18** Modulation of jaw reflex responses during peripherally and centrally evoked swallowing. T. SUZUKI*; M. YOSHIHARA; K. TSUJI; J. MAGARA; T. TSUJIMURA; M. INOUE. *Niigata Univ. Grad. Sch. of Med. and.*

3:00 OO29 **412.19** The influence of the difference in the volume of keying on trunk movement during piano performance. A. KOBAYASHI*; T. KOKUBUN; D. NOHARA; H. SHONO; M. MATSUNO; H. HANAWA; N. KANEMURA. *Saitama Prefectural Univ., Saitama Prefectural Univ., Saitama Prefectural Univ., Grad. Sch. of Saitama Prefectural Univ.*

4:00 OO30 **412.20** Knee flexors and extensors are defined by the task and not anatomy. P. SRIYA*; T. RICHARDS; S. ASTILL; S. CHAKRABARTY. *Fac. of Biol. Sci.*

1:00 OO31 **412.21** Concurrent recordings of motor unit and spinal interneuron discharge patterns during reflex activation. C. K. THOMPSON*; F. MARCHIONNE; A. J. KRUPKA; F. NEGRO; D. FARINA; M. A. LEMAY. *Temple Univ., Temple Univ., Univ. degli Studi di Brescia, Univ. Col.*

2:00 OO32 **412.22** Sex differences in neuromuscular control of quadriceps muscles during various levels of knee extension force. Y. PENG*; D. GUPTA; J. JENSEN; L. GRIFFIN. *The Univ. of Texas At Austin.*

POSTER

413. Stress, Inflammation, and Behavior

Theme F: Integrative Physiology and Behavior

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 OO33 **413.01** ▲ Stress-induced pro- and anti-inflammatory cytokine expression in casual drug and alcohol users. M. ARCHEY*; K. N. SHEFFIELD; C. NEUTZLER; H. R. RHODES; J. A. BOYETTE-DAVIS. *St. Edward's Univ., St. Edward's Univ.*

2:00 OO34 **413.02** ● COMTval158met polymorphism effects on inflammation and enduring stress response: A novel mechanism of PTSD risk. J. DESLAURIERS*; X. ZHOU; V. B. RISBROUGH. *Univ. of California San Diego, Ctr. of Excellence for Stress and Mental Health, VA.*

3:00 OO35 **413.03** Adaptive immunity in depressive mood states. S. L. KIGAR*; M. UDAWATTA; M. L. LEHMANN; S. J. LISTWAK; A. G. ELKAHLOUN; D. MARIC; M. HERKENHAM. *Natl. Inst. of Mental Hlth., Natl. Human Genome Res. Inst., Natl. Inst. of Neurolog. Disorders and Stroke.*

4:00 OO36 **413.04** Inflammatory pathways in the medial prefrontal cortex modulate the anxiogenic effect induced by an acute stress. S. F. LISBOA*; C. VILA-VERDE; D. L. ULIANA; L. A. BRAGA; L. B. M. RESSTEL; F. S. GUIMARAES. *Univ. of Sao Paulo - FMRP/USP, Univ. of Sao Paulo - FMRP/USP, Univ. of Sao Paulo - FMRP/USP, Univ. of Sao Paulo - FMRP/USP.*

1:00 PP1 **413.05** Neonatal administration of prolactin decreases glial population and attenuates stress-induced cytokine expression in the hippocampus of male rat pups. L. TORNER*; G. ZINZUN-IXTA; A. OCHOA-ZARZOSA. *Inst. Mexicano Del Seguro Social, Univ. Michoacana de San Nicolás de Hidalgo.*

2:00 PP2 **413.06** Effects of chronic low-grade inflammation on basolateral amygdala function in rats. S. MUNSHI*; J. A. ROSENKRANZ. *Rosalind Franklin Univ. of Med. & Sci.*

3:00 PP3 **413.07** Stress impairs memory and activates caspase-1 via a mechanism involving adrenergic signaling and adenosine. A. E. TOWERS*; M. L. OELSCHLAGER; M. R. LORENZ; G. G. FREUND. *Univ. of Illinois At Urbana-Champaign, Univ. of Illinois At Urbana-Champaign, Univ. of Illinois At Urbana-Champaign, Univ. of Illinois At Urbana-Champaign.*

4:00 PP4 **413.08** Estradiol mediates chronic stress effects on microglial morphology in medial prefrontal cortex in female rats. J. L. BOLLINGER*; C. L. WELLMAN. *Psychological and Brain Sci., Indiana Univ.*

1:00 PP5 **413.09** Exposure to an acute stressor disinhibits microglia via down-regulation of CD200R: A mechanism of neuroinflammatory and microglial priming. M. G. FRANK*; L. K. FONKEN; J. ANNIS; L. R. WATKINS; S. F. MAIER. *Univ. of Colorado.*

2:00 PP6 **413.10** ● Neuromolecular mediators of resilience to chronic stress in the bed nucleus of the stria terminalis of the mouse. A. GURURAJAN*; J. M. LYTE; A. VENTURA DA SILVA; G. M. MOLONEY; T. M. BECKER; R. O. CONNOR; M. BOEHME; M. V. WOUW; B. MERCX*; T. G. DINAN; J. F. CRYAN. *Univ. Col. Cork, Univ. Col. Cork.*

3:00 PP7 **413.11** ● Acute-stress induced gastrointestinal serotonergic responses are region-dependent and host strain specific. J. M. LYTE*; M. S. GOODSON; N. KELLEY-LOUGHNANE; T. G. DINAN; J. F. CRYAN; G. CLARKE. *Univ. Col. Cork, Air Force Res. Lab. Wright-Patterson Air Force Base, Univ. Col. Cork.*

4:00 PP8 **413.12** The effects of stress-inflammation interaction on behavior and gene expression in mice models of mood and anxiety disorders. S. FLAISHER-GRINBERG*; L. OLEK; J. KUEHN. *St. Francis Univ., St. Francis Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 PP9 **413.13** Peripheral blood gene expression signature accompanying acute stress exposure among adolescents with and without early childhood adversity. T. GOLTSER*; C. KALLA, 7174166; A. SHALEV; F. BEN-HARASH; R. GIESSER; A. BEN YEHUDA; O. OZ; D. PEVZNER; I. VASHDI; R. HABER; C. SALONER; A. MIRAN; L. CANETTI; E. GALILI-WEISSTUB; O. BONNE; R. SEGMAN. *Kiryat Hadassah, Mol. Psychiatry Lab. - Dept. of Psychiatry, Hadassah - Hebrew Univ. Med. center, Jerusalem, Israel., The Herman-Danna Div. of Pediatric Psychiatry, Dept. of Psychiatry, Hadassah - Hebrew Univ. Med. Center;, Dept. of Mental Hlth. Israel Def. Forces.*

2:00 PP10 **413.14** Mononuclear cell gene expression changes in postpartum depression. R. SEGMAN*; T. GOLTSER DUBNER; T. SHIMONOVITZ; S. KLAR; L. CANETTI; E. GALILI-WEISSTUB; I. SHACHAR; D. PEVZNER; O. OZ; I. VASHDI; N. FRIEDMAN; D. HOCHNER-CELNIKIER. *Hadassah Univ. Hosp., Mol. Psychiatry Lab. Dept. of Psychiatry, Hadassah - Hebrew Univ. Med. center, The Herman-Danna Div. of Pediatric Psychiatry, Dept. of Psychiatry, Hadassah - Hebrew Univ. Med. Center;, Dept. of Obstetrics and Gynecology - Hadassah Mt. Scopus - Hebrew Univ. Med. center, Sch. of Computer Sci. and Engineering, Hebrew Univ.*

3:00 PP11 **413.15** Effects of repeated stress on the ying-yang of catecholamines and glucocorticoids in the regulation of brain cytokines. D. F. BARNARD*; K. GABELLA; A. KULP; A. PARKER; J. D. JOHNSON. *Kent State Univ., Kent State Univ., Kent State Univ.*

4:00 PP12 **413.16** Sex-differences in prenatal stress model of microglial activation in stress-regulating structures. S. N. CASSELLA*; E. J. JONES; D. WILSON; A. GRANT; E. RHINEHART. *Susquehanna Univ.*

1:00 PP13 **413.17** Microglia during early life contribute to myelination, HPA axis development, and the behavioral effects of neonatal stress. L. H. NELSON*; S. WARDEN; K. M. LENZ. *Ohio State Univ., The Ohio State Univ., Ohio State Univ. Dept. of Psychology.*

2:00 PP14 **413.18** β-adrenergic signaling suppression protects against chemically induced carcinogenesis in rats. V. B. VALENTE*; F. VERZA; H. CECÍLIO; F. LOPES; M. SUNDEFELD; K. TJIOE; É. BIASOLI; G. MIYAHARA; A. SOUBHIA; C. FURUSE; M. DE ANDRADE; S. DE OLIVEIRA; D. BERNABÉ. *São Paulo State Univ. - UNESP, Mayo Clin. Col. of Med., São Paulo State Univ. - UNESP, São Paulo State Univ. - UNESP.*

3:00 PP15 **413.19** ● Preimmunization with heat-killed Mycobacterium vaccae enhances fear extinction in the rat fear-potentiated startle paradigm. J. E. HASSELL*, JR; J. H. FOX; P. H. SIEBLER; M. R. ARNOLD; A. K. LAMB; D. G. SMITH; H. E. W. DAY; T. SMITH; E. M. SIMMERMAN; A. A. OUTZEN; K. S. HOLMES; C. J. BRAZELL; C. A. LOWRY. *Univ. of Colorado, Univ. of Colorado, Univ. of Colorado.*

4:00 PP16 **413.20** Influence of depressive-like behavior on tumor onset and progression in a chemically induced cancer model. D. G. BERNABE*; L. KOBAYASHI; F. VERZA; V. VALENTE; J. FIGUEIRA; B. SARAFIM-SILVA; M. CRIVELINI; M. SUNDEFELD; É. BIASOLI; G. MIYAHARA; S. OLIVEIRA. *São Paulo State Univ.*

1:00 PP17 **413.21** Microglial responses in the dentate gyrus after 72 hours sleep deprivation in mice. C. TSAO*; L. TUAN; L. LEE. *Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ.*

POSTER

414. Thermoregulation and Other

Theme F: Integrative Physiology and Behavior

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 PP18 **414.01** Yawning as a thermoregulatory response to manipulations of brain temperature. M. L. SHOUP-KNOX*; Z. FALK; M. D. KEITER. *James Madison Univ. Dept. of Psychology.*

2:00 PP19 **414.02** Increased core temperature following ablation of neurokinin 3 receptor-expressing neurons in the mouse median preoptic nucleus and adjacent preoptic area (MnPO/POA). S. J. KRAJEWSKI-HALL, 85724; E. M. BLACKMORE; J. R. MCMINN; N. T. MCMULLEN; N. E. RANCE*. *Univ. of Arizona Col. of Med., Univ. of Arizona Col. of Med., Evelyn F. McKnight Brain Inst.*

3:00 PP20 **414.03** The TRPV1 channel modulates body temperature and cardiovascular responses during physical exercise in rats. A. C. KUNSTETTER; A. A. ROMANOVSKY*; W. C. DAMASCENO; D. D. SOARES; W. PIRES; S. P. WANNER. *Federal Univ. of Minas Gerais, St Joseph's Hosp. and Med. Ctr.*

4:00 PP21 **414.04** A novel neuronal circuit for thermoregulatory inversion. D. TUPONE*; G. CANO; S. F. MORRISON. *Oregon Hlth. and Sci. Univ., UNIBO, Univ. of Pittsburgh Dept. of Neurosci., Oregon Hlth. and Sci. Univ. Dept. of Neurolog. Surgery.*

1:00 PP22 **414.05** Protection of adiposity during dieting: A role for (lack of)leptin in the dorsomedial hypothalamus. R. A. ADAN*; R. PANDIT; A. OMRANI; S. E. LA FLEUR. *UMCU, Academic Med. Center, Univ. of Amsterdam.*

2:00 PP23 **414.06** Bombesin-like receptor 3 neurons regulate body temperature, heart rate and food intake. R. A. PINOL*; S. H. ZAHLER; C. LI; B. TAN; A. SAHA; C. XIAO; O. GAVRILOVA; A. V. KRAVITZ; M. J. KRASHES; M. REITMAN. *NIH, Natl. Inst. of Diabetes and Digestive, UCSF, NIH, Natl. Inst. of Diabetes and Digestive and Kidney Dis., NIDDK, Natl. Inst. of Hlth., NIH, NIDDK, NIH.*

3:00 PP24 **414.07** Erythropoietin in the brain reduces high fat-diet-induced microglial activation and regulates glucose metabolism. S. DEY*; J. CABAN; Z. CUI; M. GASSMANN; C. T. NOGUCHI. *NIDDK, NIDDK, Univ. of Zurich, Natl. Inst. of Diabetes and Digestive and Kidney Dis.*

POSTER

415. Early Life and Intergenerational Effects on Feeding

Theme F: Integrative Physiology and Behavior

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 PP25 **415.01** Perinatal high fat diet leads to DNMT activity deficits in the offspring prefrontal cortex. K. R. LLOYD*; S. E. MCKEE; N. M. GRISSOM; B. L. SMITH; T. M. REYES. *Univ. of Cincinnati, Univ. of Pennsylvania, Univ. of Minnesota, Univ. of Cincinnati.*

2:00 PP26 **415.02** Embryonic exposure to ethanol in zebrafish: Effects on development and migration of hypothalamic orexin neurons. A. EVANS*; E. RAMIREZ; V. HALKINA; V. KEWALDAR; G. CHANG; O. KARATAYEV; S. F. LEIBOWITZ. *Rockefeller Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 PP27 **415.03** ▲ Effects of maternal over-nutrition on offspring´s cognitive processes and behavioral patterns. Y. BARB*; E. NAVARRETE; R. MONTÚFAR-CHAVEZNAVA; A. SALAZAR; P. OSTROSKY-SHEJET; I. CALDELAS. *Inst. De Investigaciones Biomédicas, UNAM, Univ. Nacional Autónoma de México.*

4:00 PP28 **415.04** Female adolescent opioid exposure confers vulnerability to metabolic dyshomeostasis in F1 offspring in a diet-specific context. A. TOORIE*; F. M. VASSOLER; A. KUBEREK; C. WYSE; E. M. BYRNES. *Tufts Univ., Tufts Univ. Cummings Sch. of Vet. Med., Tufts Univ. Cummings school of Vet. Med., Tufts Univ. Cummings school of Vet. Med.*

1:00 PP29 **415.05** ▲ Neonatal nutritional programming and hypothalamic glial cell morphology: the role of leptin in the modulation of TCPTP and conexins. L. K. DEBARBA*; P. B. MARANGON; F. M. V. VECHIATO; H. V. P. SILVA; J. C. VENÂNCIO; B. C. BORGES; G. ALMEIDA-PEREIRA; M. C. JAMUR; J. ANTUNES-RODRIGUES; L. L. K. ELIAS. *Ribeirão Preto Med. Sch. / USP, Ribeirão Preto Med. Sch. / USP, Ribeirão Preto Med. Sch. / USP.*

2:00 QQ1 **415.06** Effects of perinatal programming by caloric restriction on the cocaine and amphetamine regulated transcript (CART) neurons in the lateral hypothalamic area of weaned rats. C. D. MACHADO*; M. G. MARTINS; I. Z. GUIATI; J. C. BITTENCOURT; J. A. C. HORTA, Jr. *Inst. of Biosci. of Botucatu, Inst. of Biomed. Sci.*

3:00 QQ2 **415.07** Effect of prenatal stress on adrenal and thyroid axes of adult male rats subjected to light-phase feeding during prepuberty. C. GARCIA-LUNA*; P. SOBERANES-CHAVEZ; P. DE GORTARI. *Inst. Nacional De Psiquiatria.*

4:00 QQ3 **415.08** Energy balance in overfeed rats. A. DA SILVA; G. F. BRAZ; S. A. SILVA; C. M. FREITAS; C. LAGRANHA*. *UFPE, CAV-UFPE.*

POSTER

416. Neuropeptide Regulators

Theme F: Integrative Physiology and Behavior

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 QQ4 **416.01** Estradiol protects proopiomelanocortin neurons against insulin resistance. J. QIU*; M. A. BOSCH; U. NAVARRO; C. C. NESTOR; O. K. RØNNEKLEIV; M. J. KELLY. *Oregon Hlth. and Sci. Univ., Oregon Natl. Primate Res. Ctr.*

2:00 QQ5 **416.02** Genetic dissection of leptin regulated neural circuits controlling energy balance and glucose homeostasis. C. L. BARTOLOME*; J. XU; C. S. LOW; X. YI; C. CHIEN; P. WANG; D. KONG. *Tufts Univ., Tufts Univ. Sch. of Med.*

3:00 QQ6 **416.03** Behavioral, anatomical and molecular investigation of PACAP and leptin interactions in the rat ventromedial hypothalamus. M. M. HURLEY*; E. M. HESS; B. MAUNZE; C. LAMBERTON; M. FRENKEL; G. CALLAN; N. S. PATEL; D. A. BAKER; S. CHOI. *Marquette Univ.*

4:00 QQ7 **416.04** Cellular actions of adropin on paraventricular nucleus neurons. S. P. LOEWEN*; A. V. FERGUSON. *Queen's Univ.*

1:00 QQ8 **416.05** In search of the cocaine- and amphetamine-regulated transcript (CART) receptor: Identification of CART binding sites in the rodent brain. L. A. TAN*; M. H. PERRIN; J. M. VAUGHAN; C. M. ARIAS; K. A. LEWIS; J. E. RIVIER; P. E. SAWCHENKO. *Salk Inst. For Biol. Studies.*

2:00 QQ9 **416.06** Intracellular signaling involved in neurokinin NK1 receptor-mediated emesis in the least shrew. W. ZHONG; S. CHEBOLU; N. A. DARMANI*. *Coll Osteo. Med. Pacific, Western Univ. Hlth. Sci., Coll Osteo. Med. Pacific, Western Univ. Hlth. Sci.*

3:00 QQ10 **416.07** Elucidating the central anorexigenic mechanism of corticotropin releasing factor in chickens (Gallus gallus domesticus). J. WANG*; E. R. GILBERT; M. A. CLINE. *Virginia Tech.*

4:00 QQ11 **416.08** Central neuropeptide FF injection is associated with anorexigenic effects in Japanese quail. A. L. LOGAN*; E. R. GILBERT; M. A. CLINE. *Virginia Polytechnic Inst. and State Universit.*

1:00 QQ12 **416.09** Neuropeptigeric control of feeding in Trichoplax, an animal lacking synapses. C. L. SMITH; T. S. REESE*; A. SENATORE. *NIH, NIH, Univ. of Toronto.*

2:00 QQ13 **416.10** ▲ Alpha-melanocyte stimulating hormone-induced anorexia in Japanese quail(Corturnix japonica) likely involves the ventromedial hypothalamus and paraventricular nucleus of the hypothalamus. M. O'DONNELL*; E. GILBERT; M. A. CLINE. *Virginia Tech., Virginia Tech.*

3:00 QQ14 **416.11** The role of ventral tegmental area melanocortin 3 receptor-expressing neurons in the regulation of feeding and body weight. A. I. DUNIGAN*; A. G. ROSEBERRY. *Georgia State Univ.*

4:00 QQ15 **416.12** Peripheral neuropeptide Y differentially influences adipogenesis and lipolysis in chicks from lines selected for low or high body weight. Y. XIAO*; L. LIU; G. WANG; S. L. SHIPP; P. B. SIEGEL; M. A. CLINE; E. R. GILBERT. *Virginia Polytechnic Inst. and State Univ.*

1:00 QQ16 **416.13** Morphological and neurochemical characterization of the melanin-concentrating hormone [MCH] peptidergic system in the CNS of the mouse. G. B. DINIZ*; P. M. CHERUBINI; J. C. G. DUARTE; J. G. P. FERREIRA; D. S. BATAGELLO; L. V. SITA; J. C. BITTENCOURT. *Inst. of Biomed. Sci., Univ. of São Paulo, Inst. of Biomed. Sci., Univ. of São Paulo, Ctr. for Neurosci. and Behavior, Inst. of Psychology, Univ. of São Paulo.*

2:00 QQ17 **416.14** Leptin promotes growth and bone formation via the PI3Kα signalling pathway. D. GARCIA GALIANO*; S. J. ALLEN; K. M. KOZLOFF; C. F. ELIAS. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

3:00 QQ18 **416.15** Prostaglandin E_2 activates melanin-concentrating hormone neurons in diet-induced obesity. L. FANG; V. LINEHAN; M. HIRASAWA*. *Mem. Univ.*

4:00 QQ19 **416.16** Neural adaptation in the LH area in mice exposed to chronic high-fat diet. F. HANG; Z. LIU; Y. TAN; X. GAO*. *First Affiliated Hosp. of Guangxi Med. Univ., Yale university Sch. of Med., The Second Affiliated Hosp. of Chongqing Med. Univ., Yale Univ. Sch. Med.*

1:00 QQ20 **416.17** ▲ Anorexigenic effects of substance P in Coturnix japonica. C. BUENAVENTURA*; M. A. CLINE; E. R. GILBERT. *Virginia Tech., Virginia Tech., Virginia Polytechnic Inst. and State Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

417. Fear and Aversive Learning and Memory: Modulation

Theme G: Motivation and Emotion

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 QQ21 **417.01** Gamma oscillations in the basolateral amygdala and prefrontal cortex support the emotional modulation of memory consolidation. V. KANTA*; D. PARÉ; D. B. HEADLEY. *Rutgers, the State Univ. of New Jersey.*

2:00 QQ22 **417.02** Stress-induced changes in effective connectivity during the emotional response to threat. A. M. GOODMAN*; M. D. WHEELOCK; N. G. HARNETT; D. R. HURST; T. R. OREM; G. DESHPANDE; S. MRUG; D. C. KNIGHT. *Univ. of Alabama at Birmingham, Washington Univ., Auburn Univ. MRI Res. Ctr.*

3:00 RR1 **417.03** How do rest periods following the end of chronic stress impact fear conditioning? J. M. JUDD*; V. SHAH; A. FLEGENHEIMER; B. LE; F. SANABRIA; C. D. CONRAD. *Arizona State Univ.*

4:00 RR2 **417.04** Midbrain dopamine neurons regulate model-based, not model-free, aversive learning. C. Y. PENG*; P. JEAN-RICHARD DIT BRESSEL; G. P. MCNALLY. *Univ. of New South Wales - Kensington Campus.*

1:00 RR3 **417.05** Safety-signal learning in Hermissenda produced by conditioned inhibition training. J. FARLEY*. *Indiana Univ. Bloomington.*

2:00 RR4 **417.06** Neurotoxic damage to orbitofrontal subregions 12 or 13 impairs startle response to fearful and safe stimuli in macaques. L. E. MURPHY*; C. WYNN; V. WERTMAN; A. M. KAZAMA; J. BACHEVALIER. *Emory Univ.*

3:00 RR5 **417.07** Early life stress differentially impacts adult fear discrimination and increases alcohol drinking in male and female rats. R. A. ZACHARIAS*; C. ANDREANSKY; M. H. RAY; M. A. MCDANNALD. *Boston Col.*

4:00 RR6 **417.08** An investigation into the long term and cross- contextual effects of fear counter- conditioning via DecNef. J. E. STEWART*; M. KAWATO; A. KOIZUMI; H. LAU. *ATR, ATR, NICT, Univ. of California.*

1:00 RR7 **417.09** Modelling the impact of matrix metalloproteinase inhibition on human threat learning. F. MELINSCAK*; A. TZOVARA; D. R. BACH. *Psychiatric Hospital, Univ. of Zurich, Wellcome Trust Ctr. for Neuroimaging.*

2:00 RR8 **417.10** Gamma oscillations in BLA - a computational perspective. F. FENG*; D. B. HEADLEY; Z. CHEN; B. LATIMER; A. AMIR; D. PARE; S. S. NAIR. *Univ. of Missouri-Columbia, Rutgers Univ.*

3:00 RR9 **417.11** Role of PSD95 and nNOS binding in the regulation of conditioned fear. L. LI*; E. T. DUSTRUDE; M. M. HAULCOMB; A. R. ABREU; S. D. FITZ; S. K. FLORIO; A. I. MOLOSH; Y. Y. LAI; A. SHEKHAR. *Program In Med-Neuro, Indiana Univ. Sch. of Med., Paul and Carole Stark Neurosciences Res. Institute, Indiana Univ. Sch. of Med., Dept. of Psychiatry, Indiana Univ. Sch. of Med., Anagin, Inc., Indiana Ctr. for Biomed. Innovation, Dept. of Psychological and Brain Sciences, Indiana Univ. Bloomington.*

4:00 RR10 **417.12** Lateral orbitofrontal cortex regulation of aversive prediction errors. M. H. RAY*; E. HANLON; M. A. MCDANNALD. *Boston Col.*

1:00 RR11 **417.13** Attenuated threat reversal learning in combat veterans. P. HOMAN*; E. FELTHAM; J. HU; J. H. KRYSTAL; I. LEVY; I. HARPAZ-ROTEM; D. SCHILLER. *Icahn Sch. of Med. At Mount Sinai, Yale Univ. Sch. of Med., Yale Sch. of Med., Icahn Sch. of Med. at Mount Sinai.*

2:00 RR12 **417.14** Mapping the cholinergic engram in fear & anxiety. P. M. RAJEBHOSALE*; D. TALMAGE; L. W. ROLE. *State Univ. of New York At Stony Brook, Stony Brook Univ., Stony Brook Univ., Stony Brook Univ.*

3:00 RR13 **417.15** ▲ Cued fear memory discrimination and generalization over time. J. BEZEK*; G. POLLACK; L. WEINGAST; H. BERGSTROM. *Vassar Col.*

4:00 RR14 **417.16** Mediated generalization in active avoidance. V. CAMPESE*; T. J. MARTIN; C. H. ROBERTS; C. DRAUS; J. E. LEDOUX. *New York Univ., Nathan Kline Inst. for Psychiatric Res.*

1:00 RR15 **417.17** Retention intervals enhance associative competition produced by a preexposed conditioned stimulus. T. SCHACHTMAN*; D. KLAKOTSKAIA; R. A. RICHARDSON; A. TAMASI; C. BAKER. *Univ. of Missouri, Univ. of Missouri.*

2:00 RR16 **417.18** Affective flexibility without perceptual awareness. D. SCHILLER*; P. HOMAN; H. LAU; C. M. RAIO; D. R. BACH; D. CARMEL. *Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. at Mount Sinai, New York Univ., Univ. of Zurich, Univ. of Edinburgh.*

POSTER

418. Reward: Dopamine and Learning

Theme G: Motivation and Emotion

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 RR17 **418.01** Dopamine D2 receptor upregulation in cholinergic interneurons (CINs) of the nucleus accumbens: Effects on CIN function and Pavlovian incentive motivation. E. F. GALLO*; E. TEBOUL; M. BAILEY; P. BALSAM; J. A. JAVITCH; C. KELLENDONK. *Columbia University/NYSPI, Columbia University/NYSPI, Columbia Univ., Columbia University/Barnard Col.*

2:00 RR18 **418.02** Effects of environmental enrichment on sucrose cue reactivity and ventral striatal and cortical DARPP32 and DARPP32Thr34 in rats. J. W. GRIMM*; E. GLUECK; D. GINDER; J. HYDE; K. NORTH; H. REISTERER; J. SULC; K. JIGANTI. *Western Washington Univ.*

3:00 RR19 **418.03** ▲ Discovery of dopaminergic circuitry controlling *Drosophila* sleep and other behaviors. S. LUU*; M. C. W. HO; T. XIE; M. WU. *Johns Hopkins Univ.*

4:00 RR20 **418.04** Influence of repeated intracranial self-stimulation on brain-wide functional networks. T. C. WEIDNER*; D. VINCENZ; M. J. BROCKA; A. OELSCHLEGEL; J. GOLDSCHMIDT; F. W. OHL; M. T. LIPPERT. *Leibniz Inst. for Neurobio., Ctr. for Behavioral Brain Sci. (CBBS), Inst. of Biol.*

1:00 RR21 **418.05** The role of glutamate receptor-dependent signaling in the dopamine system in reinforcement learning. P. E. CIESLAK*; J. RODRIGUEZ PARKITNA. *Inst. of Pharmacol. PAS.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 RR22 **418.06** Nucleus accumbens expression of pkiα may modulate the motivation to be physically active. K. GRIGBSY*. *Univ. of Missouri, Col. of Vet. Medi.*

3:00 RR23 **418.07** A novel task to study loss of control over food intake in rodents. J. P. VERHAREN*; M. C. M. LUIJENDIJK; L. J. M. J. VANDERSCHUREN; R. A. H. ADAN. *Utrecht Univ. Med. Ctr., Utrecht University, Fac. of Vet. Med.*

4:00 RR24 **418.08** Is it possible that non-attractive male mouse could get female mind? Y. N. OHNISHI*; Y. KAWAHARA; Y. H. OHNISHI; A. NISHI. *Kurume Univ. Sch. of Med.*

1:00 RR25 **418.09** Lengthening the intertrial interval increases sign tracking and dopamine release to conditioned and unconditioned stimuli. M. R. ROESCH*; B. LEE; R. N. GENTRY; G. B. BISSONETTE; R. J. HERMAN; J. J. MALLON; D. BRYDEN; D. J. CALU; G. SCHOENBAUM; E. COUTUREAU; A. R. MARCHAND; M. KHAMASSI. *Univ. of Maryland at Col. Park, Univ. of Maryland, Univ. of Maryland, Col. Park, Univ. of Maryland at Col. Park Dept. of Psychology, Univ. of Maryland Col. Park, Univ. of Maryland, Natl. Inst. on Drug Abuse Intramural Res. Program, CNRS, Univ. de Bordeaux, CNRS - Univ. Pierre Et Marie Curie.*

2:00 RR26 **418.10** Differential effects of dopamine receptor activation at the nucleus accumbens and the medial preoptic area on male rat sexual behavior expression of sexually exhausted male rats. L. GUADARRAMA-BAZANTE; G. RODRIGUEZ-MANZO*. *Cinvestav-Sede Sur, IPN.*

3:00 RR27 **418.11** Coincident and causal contributions of striatal dopamine to cognitive flexibility. A. KOCHARIAN*; A. K. RADKE; D. M. LOVINGER; Y. MATEO; A. HOLMES, PhD. *Natl. Inst. on Alcohol Abuse and Alcoholism, Miami Univ.*

4:00 RR28 **418.12** Projection-specific roles of dopamine neurons in decision making. M. CARANDINI*; S. SCHRÖDER; M. WELLS; C. REDDY; K. D. HARRIS; A. LAK. *Univ. Col. London.*

1:00 RR29 **418.13** The priming effect of rewarding brain stimulation persists with pimozide. C. EVANGELISTA*; N. MEHREZ; W. G. BRAKE; P. SHIZGAL. *Concordia Univ.*

2:00 RR30 **418.14** Distinguishing movement from prediction signals in midbrain dopamine neurons during Pavlovian acquisition. L. T. CODDINGTON*; J. T. DUDMAN. *HHMI Janelia Res. Campus, HHMI.*

3:00 RR31 **418.15** Blockade of dopaminergic transients prevents learning driven by changes in reward features. C. CHANG*; M. GARDNER; M. GONZALEZ DI TILLIO; G. SCHOENBAUM. *NIDA.*

4:00 RR32 **418.16** Can high fructose corn syrup alter behavioral and neural responses to oxycodone? M. MINHAS*; E. STROM; C. L. LIMEBEER; F. LERI. *Univ. of Guelph.*

1:00 RR33 **418.17** The activation of GABA-A alpha1 receptors in the ventral tegmental area potentiates the stimulation of dopamine neurons in the antero-ventral region of the ventral tegmental area induced by lateral septum stimulation. I. M. VEGA-QUIROGA; H. E. YARUR; K. GYSLING*. *Pontificia Univ. Catolica De Chile.*

2:00 RR34 **418.18** Spatio-temporally heterogeneous activity of VTA projections to dorsal striatum. A. HAMID*; M. J. FRANK; C. I. MOORE. *Brown Univ., Brown Univ.*

3:00 RR35 **418.19** Midbrain neuronal activity during cue-guided spatial learning. Y. KREMER*; J. FLAKOWSKI; C. ROHNER; C. LÜSCHER. *Dept. Basic Neurosciences - Univ. of Geneva, Geneva Univ. Hosp.*

4:00 RR36 **418.20** The role of the reward system in attenuating tumor progression in mice. M. SCHILLER*; T. L. BEN-SHAANAN; H. AZULAY-DEBBY; B. KORIN; N. BOSHNAK; J. SHAKYA; M. A. RAHAT; F. HAKIM; A. ROLLS. *Technion, Rambam Hlth. Care Campus.*

1:00 SS1 **418.21** ▲ *In vivo* electrochemical and optogenetic assessment of the nucleus accumbens in the acquisition, valuation and extinction of avoidance behavior. K. J. PULTORAK*; S. A. SCHELP; G. P. KRZYSTYNIAK; D. R. RAKOWSKI; B. BUSCH; E. OLESON. *Univ. of Colorado Denver.*

2:00 SS2 **418.22** Food seeking engages distinct calcium responses in direct and indirect pathway striatal neurons. T. LONDON*; A. KRAVITZ. *Natl. Inst. of Health/ NIDDK.*

3:00 SS3 **418.23** Dynamic changes in striatal dopamine predict reward learning: Evidence from simultaneous PET/MR. F. J. CALABRO*; D. F. MONTEZ; V. P. MURTY; B. LARSEN; J. C. PRICE; B. LUNA. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh, Massachusetts Gen. Hosp., Lab. Of Neurocognitive Develop.*

4:00 SS4 **418.24** Exploring the mechanism by which optogenetic stimulation of ventral tegmental area dopamine neurons prevents extinction of cued approach behavior. C. M. REYES*; S. M. NICOLA. *Albert Einstein Col. of Med., Albert Einstein Coll Med.*

1:00 SS5 **418.25** Activation of ventral tegmental CB1 receptors is essential for avoidance learning. J. M. WENZEL*; H. M. DANTRASSY; E. B. OLESON; J. F. CHEER. *Univ. of Maryland Sch. of Med., Univ. of Maryland Sch. of Med., Univ. of Colorado Denver, Univ. of Maryland Sch. of Med.*

2:00 SS6 **418.26** Dopamine activation tracks uncertainty during operant responding. P. MASCIA*; J. BROWN; K. NESBITT; R. KENNEDY; P. VEZINA. *Univesity of Chicago, Univ. of Michigan.*

3:00 SS7 **418.27** Differential modulation of striatal dopamine release by nicotinic receptors in adolescent and adult rats. M. J. FERRIS*; A. NORTH-FENNELL; L. L. SEXTON. *Wake Forest Sch. of Med.*

4:00 SS8 **418.28** Direct vs. indirect pathway optogenetic stimulation during conditional olfactory learning in mice. K. TAM*; I. OZDEN; E. LEE; J. PERGE; Z. YU; A. NURMIKKO; W. ASAAD. *Brown Univ., Brown Univ., Brown Univ.*

1:00 SS9 **418.29** ▲ The effects of d-amphetamine on progressive ratio responding for intracranial self-stimulation and food reinforcment. M. BAGNALL; G. BOATMAN; W. D. KLIPEC*. *Drake Univ.*

POSTER

419. Eating Disorders

Theme G: Motivation and Emotion

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 SS10 **419.01** Time of sucrose access affects differentially binge eating behavior and Per1 in the nucleus Accumbens. R. I. OSNAYA*; M. PALMA GOMEZ; C. ESCOBAR. *UNAM, UNAM.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 SS11 **419.02** Behavioral and metabolic characterization of eating disorder associated HDAC4-A778-T mutant mice. K. C. DAVIS*; M. Z. KHAN; M. L. LUTTER; H. CUI. *Univ. of Iowa Dept. of Psychiatry, Univ. of Iowa, Univ. of Iowa Roy J and Lucille A Carver Col. of Med.*

3:00 SS12 **419.03** Evaluating sucrose and saccharin value in diet-induced obese rats. S. R. BATTEN*; J. BECKMANN. *Univ. of Kentucky.*

4:00 SS13 **419.04** Identification of transcriptional activity driven by estrogen-related receptor alpha as a novel pathway associated with eating disorder. H. CUI*; K. SAITO; K. C. DAVIS; E. RODRIGUEZ CRUZ; B. TOTH; M. LUTTER. *Univ. of Iowa Roy J and Lucille A Carver Col. of Med., Univ. of Iowa Roy J and Lucille A Carver Col. of Med.*

1:00 SS14 **419.05** Accumbens processing of a food associated cue in a rat model of binge eating. J. STAMOS*; A. PAWLAK; M. SICHERER; R. PAN; C. STAMOS; J. KULIK; N. BEACHER; N. BELLO; M. WEST. *Rutgers Robert Wood Johnson Med. Sch.*

2:00 SS15 **419.06** Sleep deprivation induces signs of compulsive eating behavior to high fat diet associated with changes in reward brain structures. E. N. ESPITIA*; C. ESCOBAR. *UNAM.*

3:00 SS16 **419.07** Taste reward prediction error signaling in adolescent anorexia nervosa. M. DEGUZMAN*; M. SHOTT; G. K. FRANK. *Univ. of Colorado Anschutz Med. Campus.*

4:00 SS17 **419.08** Accumbens mechanisms for cued sucrose seeking. A. BOBADILLA*; C. GARCIA-KELLER; J. A. HEINSBROEK; M. SCOFIELD; V. CHAREUNSOUK; C. MONFORTON; P. W. KALIVAS. *Med. Univ. of South Carolina.*

1:00 SS18 **419.09** Ghrelin inhibition of the M-current in KNDy neurons and the impact of 17b-estradiol. K. M. CONDE*; T. A. ROEPKE. *Rutgers Univ., Rutgers Univ., Rutgers, The State Univ. of New Jersey.*

2:00 SS19 **419.10** Medial prefrontal cortex VIP neuron activation suppresses binge-like feeding and interest in novel stimuli in the absence of an effect on food intake. B. A. NEWMYER*; M. M. SCOTT. *Univ. of Virginia.*

3:00 SS20 **419.11** Contributions of lateral hypothalamic galanin signaling to feeding and affective behavior. E. QUALLS-CREEKMORE*; M. FRANCOIS; A. BRUCE-KELLER; C. D. MORRISON; H. MUNZBERG. *Pennington Biomed. Res. Ctr., Pennington Biomed Res. Ctr.*

4:00 SS21 **419.12** ▲ Adolescents show conditioned food aversion: A strategy to study disordered eating? C. M. KUHN*; E. BURNETTE; G. OCAMPO; R. WANDER; Q. WALKER; N. ZUCKER. *Duke Univ. Hosp.*

1:00 SS22 **419.13** Sex-specific alterations in dopamine transporter function from food restriction and/or exercise are amplified during adolescence. T. L. GILMAN*; W. A. OWENS; L. METZEL; C. M. GEORGE; L. C. DAWS. *UT Hlth. Sci. Ctr. at San Antonio.*

POSTER

420. Circuit and Molecular Mechanisms of Memory in Addiction

Theme G: Motivation and Emotion

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 SS23 **420.01** Mechanisms specific to methamphetamine-associated memory disruption by nonmuscle myosin II inhibition. M. HAFENBREIDEL*; S. B. BRIGGS; S. KHAN; M. D. CAMERON; G. RUMBAUGH; C. A. MILLER. *The Scripps Res. Inst., The Scripps Res. Inst., The Scripps Res. Inst.*

2:00 SS24 **420.02** Determining the selectivity of actin depolymerization for disrupting METH-associated memories. S. B. BRIGGS*; E. YOUNG; M. HAFENBREIDEL; G. RUMBAUGH; C. A. MILLER. *The Scripps Res. Institute-Fl Campus.*

3:00 SS25 **420.03** BDNF mediates pervasive habit learning following withdrawal. E. HARVEY*; N. ANGELILLIS; C. AHN; P. J. KENNEDY. *Univ. of California Los Angeles, Univ. of California Los Angeles, Univ. of California Los Angeles.*

4:00 SS26 **420.04** Differential regulation of EGR transcription factors in hippocampus following extended access to cocaine self-administration and withdrawal. A. GOLD*; P. J. KENNEDY. *UCLA, Univ. of California Los Angeles.*

1:00 SS27 **420.05** Fos-expressing neuronal ensembles within the infralimbic cortex mediate extinction of cocaine seeking. B. L. WARREN*; V. SELVAM; M. VENNIRO; M. MENDOZA; F. R. SOTO DEL VALLE; D. CAPRIOLI; Y. SHAHAM; B. T. HOPE. *Natl. Inst. on Drug Abuse Intramural Res. Program.*

2:00 SS28 **420.06** ▲ Whole brain Fos mapping during relapse to food seeking. L. E. KOMER*; R. MADANGOPAL; C. HEINS; S. A. GOLDEN; V. KASHTELYAN; C. MEJIAS-APONTE; Y. SHAHAM; B. T. HOPE. *NIDA, Natl. Inst. On Drug Abuse IRP, NIH, Natl. Inst. on Drug Abuse, Natl. Inst. On Drug Abuse, Natl. Inst. on Drug Abuse Intramural Res. Program, IRP/NIDA/NIH, NIH/NIDA.*

3:00 SS29 **420.07** Examination of the role of prelimbic cortex neuronal ensembles in encoding reinstatement of palatable food seeking in rats using *in vivo* calcium imaging. R. MADANGOPAL*; C. HEINS; D. CAPRIOLI; B. LIANG; G. BARBERA; L. KOMER; J. BOSSERT; B. T. HOPE; Y. SHAHAM; D. LIN. *Natl. Inst. On Drug Abuse IRP.*

4:00 SS30 **420.08** Distinct Fos-expressing neuronal ensembles in the prelimbic cortex mediate cue-induced reinstatement of cocaine and heroin seeking. F. RUBIO*; R. QUINTANA-FELICIANO; B. L. WARREN; X. LI; K. F. R. WITONSKY; Y. SHAHAM; B. T. HOPE. *Behavioral Neurosci. Res. Branch, NIDA IRP, NIH.*

1:00 SS31 **420.09** sing neuronal ensembles and non-ensembles in rat prelimbic cortex following operant learning. L. R. WHITAKER*; B. L. WARREN; M. VENNIRO; T. C. HARTE; K. B. MCPHERSON; J. M. BOSSERT; Y. SHAHAM; A. BONCI; B. T. HOPE. *Natl. Inst. on Drug Abuse Intramural Res. Program, Natl. Inst. On Drug Abuse, Natl. Inst. on Drug Abuse, NIH, NIDA, IRP, IRP/NIDA/NIH, Natl. Inst. On Drug Abuse, NIH/NIDA.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 SS32 **420.10** ▲ Cue-induced reinstatement of cocaine or heroin seeking activates Fos-expressing neuronal ensembles composed of glutamatergic and GABAergic cell types in rat prelimbic cortex. R. QUINTANA FELICIANO*; F. RUBIO; X. LI; K. F. R. WITONSKY; Y. SHAHAM; B. T. HOPE. *Natl. Inst. On Drug Abuse, NIH.*

3:00 SS33 **420.11** The role of oxytocin and dopamine interaction in amygdaloid reinforcing mechanisms and anxiety. K. LASZLO*; K. FITTLER; T. OLLMANN; A. KOVACS; O. ZAGORACZ; L. PECZELY; E. KERTES; Z. KARADI; L. LENARD. *Pécs University, Med. Sch., Ctr. of Neuroscience, Univ. of Pecs, Inst. of Physiology, Univ. of Pécs, Med. Sch., Mol. Endrocrinol. and Neurophysiol. Res. Group.*

4:00 SS34 **420.12** NCS-Rapgef2, the protein product of the neuronal Rapgef2 gene, is a specific activator of D1 dopamine receptor-dependent ERK phosphorylation in mouse brain. S. Z. JIANG*; W. XU; S. SWEAT; M. EIDEN; C. GERFEN; A. EMERY; L. EIDEN. *NIMH/NIH.*

1:00 SS35 **420.13** Regional expression of Egr2 in substructures of the reward circuit regulates distinct aspects of cocaine-induced behaviors. D. MUKHEREE*; B. GONZALES; E. ITSKOVITS; L. IZAKSON; A. ZASLAVER; A. CITRI. *Hebrew Univ.*

2:00 SS36 **420.14** Retrieval of cocaine and caffeine-associated memory selectively alters early gene expression in the prefrontal cortex and nucleus accumbens of mice. J. P. PRIETO; J. MUÑIZ; B. GONZALEZ; J. L. CADET; M. SCORZA; F. J. URBANO; V. BISAGNO*. *Inst. de Investigaciones Biologicas C. Estable, ININFA-CONICET, NIH, IFIBYNE-CONICET.*

3:00 SS37 **420.15** Acute nicotine disrupts consolidation of contextual fear extinction and alters long-term memory-associated hippocampal kinases. S. GADIWALLA*; T. J. GOULD; M. G. KUTLU; J. TUMOLO; B. GARRETT. *Penn State Univ., Temple Univ.*

4:00 SS38 **420.16** Activity changes surrounding cerebellar perineuronal nets in cocaine induced preference memories. J. GUARQUE-CHABRERA*; I. GIL-MIRAVET; M. MIQUEL. *Univ. Jaume I, Univ. Jaume I, Jaume I Univ.*

POSTER

421. Opioids and Behavior

Theme G: Motivation and Emotion

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 SS39 **421.01** Modeling drug seeking using zebrafish. G. BOSSE*; R. T. PETERSON. *Univ. of Utah, Col. of Pharm.*

2:00 SS40 **421.02** Higher anhedonia during withdrawal from initial opiate exposure predicts lower levels of subsequent morphine self-administration in rats. Y. SWAIN*; P. MUELKEN; A. SKANSBERG; M. KRUEGER; D. MOTZ; Z. HAAVE; M. G. LESAGE; J. C. GEWIRTZ; A. C. HARRIS. *Univ. of Minnesota Twin Cities, Minneapolis Med. Res. Fndn., Univ. of Minnesota, Twin Cities, Univ. of Minnesota, Twin Cities.*

3:00 SS41 **421.03** The role of the paraventricular nucleus of the thalamus in the augmentation of heroin seeking induced by chronic food restriction. A. CHISHOLM*; D. RIZZO; N. GONZALEZ; C. MCANULTY; E. FORTIN; A. BUMBU; U. SHALEV. *Concordia Univ.*

4:00 SS42 **421.04** The effect of NMDA antagonists on the reinforcing properties of oxycodone and nalbuphine in rhesus macaques. K. L. NICHOLSON*; K. L. SHELTON; M. L. BANKS. *Virginia Commonwealth Univ.*

1:00 SS43 **421.05** Effects of heroin intake on prosocial behavior in rats. S. E. TOMEK; G. M. STEGMANN; M. OLIVE*. *Arizona St Univ.*

2:00 SS44 **421.06** Endomorphin analog ZH853 shows reduced locomotor activation and physical dependence relative to morphine. A. T. AMGOTT-KWAN*; T. J. HUNTER; A. K. FEEHAN; J. E. ZADINA. *Tulane Univ., Tulane Univ. Sch. of Med., SE Louisiana Veterans HCS, Tulane Univ. Sch. of Med.*

3:00 SS45 **421.07** VK4-116, a highly selective and metabolically stable dopamine D3R antagonist, selectively inhibits oxycodone reward without compromising oxycodone's antinociceptive effects in rats. Z. YOU*; G. BI; V. KUMAR; E. L. GARDNER; Z. XI; N. H. AMY. *NIDA-IRP/NIH/DHHS, NIDA-IRP/NIH/DHHS.*

4:00 SS46 **421.08** Preconception opiate exposure enhances the rewarding effects of cocaine in offspring. F. M. VASSOLER*; A. M. TOORIE; E. M. BYRNES. *Tufts Univ. Cummings Sch. of Vet. Med.*

1:00 SS47 **421.09** Craving and addiction severity in rat models of heroin and cocaine sequential polydrug abuse. E. CRUMMY*. *Univ. of Washington.*

2:00 SS48 **421.10** Striatal medium spiny neurons regulate reinstatement of heroin-seeking. T. J. O'NEAL*; S. M. FERGUSON. *Univ. of Washington.*

3:00 SS49 **421.11** The contribution of 6-acetylmorphine to the rewarding effects of heroin. A. S. KVELLO*; F. BOIX; J. M. ANDERSEN; J. MORLAND; I. BOGEN. *Oslo Univ. Hosp., Norwegian Inst. Publ. Hlth.*

4:00 SS50 **421.12** ● An investigation of the reinforcing effects of diazepam and midazolam in rats trained to self-administer heroin. S. L. SMITH*; S. HOLLAND; R. A. GRAY; D. J. HEAL. *Renasci Ltd, GW Pharmaceuticals.*

1:00 SS51 **421.13** The selective M_5 negative allosteric modulator ML375 attenuates remifentanil self-administration without blocking morphine-induced analgesia in rats. B. GUNTER*; R. W. GOULD; M. P. MILLER; M. BUBSER; C. W. LINDSLEY; C. K. JONES. *Vanderbilt Univ., Vanderbilt Ctr. for Neurosci. Drug Discovery, Vanderbilt Univ.*

2:00 SS52 **421.14** Effect of blockade of mu, delta, and kappa opioid receptors on context-induced reinstatement of oxycodone seeking. J. K. HOOTS*; I. FREDRIKSSON; C. CIFANI; S. ADHIKARY; Y. SHAHAM; J. M. BOSSERT. *NIDA/NIH, U Camerino.*

3:00 SS53 **421.15** ▲ Cannabidiol blocks morphine place preference in mice. J. R. MARKOS; H. M. HARRIS; W. GUL; M. A. ELSOHLY; K. J. SUFKA*. *Univ. of Mississippi, Univ. of Mississippi.*

4:00 SS54 **421.16** Time-of-day effects on heroin intake. A. A. COFFEY*; J. FANG; P. S. GRIGSON. *Penn State Col. of Med.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

422. Opioid Cellular Physiology

Theme G: Motivation and Emotion

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 SS55 **422.01** ▲ *In vivo* electrochemical assessment of dopamine release during conditioned withdrawal in heroin dependent rats. S. SCHELP*; K. PULTORAK; E. OLESON. *Univ. of Colorado, Denver.*

2:00 SS56 **422.02** Sex differences in gene expression in the amygdala in morphine dependence and withdrawal. S. J. O'SULLIVAN*; J. PARK; J. GORKY; C. C. THEISEN; B. A. REYES; E. J. VAN BOCKSTAELE; J. S. SCHWABER. *Thomas Jefferson Univ., Univ. of Delaware, Drexel Univ. Col. of Med., Drexel Univ. Col. of Med.*

3:00 SS57 **422.03** ΔFosB expression in human postmortem brain tissue from opioid overdoses. L. JABBOUR*; F. CARTEE; M. CAISSE; K. HAYNES. *Franklin Pierce Univ.*

4:00 SS58 **422.04** A subtype-selective neuropeptide FF receptor antagonist attenuates morphine withdrawal syndrome. D. H. MALIN*; J. ELAYOUBI; M. M. HENCEROTH; J. R. CAMPBELL; C. MADISON; C. P. WARD. *Univ. of Houston Clear Lake.*

1:00 SS59 **422.05** ● Exploring mechanisms for the effect of social environment on morphine response. S. BATES*; M. A. EMERY; C. T. HORRAX; P. J. WELLMAN; S. EITAN. *Texas A&M Univ., Texas A&M Univ., Texas A&M, Texas A&M Univ., Texas A&M Univ.*

2:00 SS60 **422.06** Changes in ventral tegmental area serum- and glucocorticoid-inducible kinase 1 (SGK1) catalytic activity and phosphorylation alter drug-related behaviors. M. A. DOYLE*; V. BALI; S. KASKA; S. E. COOPER; M. S. MAZEI-ROBISON. *Michigan State Univ., Michigan State Univ., Michigan State Univ.*

3:00 SS61 **422.07** ▲ Determination of circuit-specific morphological adaptations in ventral tegmental area dopamine neurons by chronic morphine. K. WHEELER; S. E. COOPER; M. S. MAZEI-ROBISON*. *Michigan State Univ., Michigan State Univ., Michigan State Univ.*

4:00 SS62 **422.08** Determination of the upstream kinases responsible for increased phosphorylation of serum and glucocorticoid-inducible kinase by drugs of abuse. V. BALI*; M. A. DOYLE; S. E. COOPER; S. KASKA; M. S. MAZEI-ROBISON. *Michigan State Univ., Michigan State Univ., Michigan State Univ.*

1:00 SS63 **422.09** Determination of the morphine-induced transcriptome in ventral tegmental area dopamine neurons. S. E. COOPER*; K. WHEELER; M. MAZEI-ROBISON. *Michigan State Univ., Michigan State Univ., Michigan State Univ.*

2:00 SS64 **422.10** Functional μ-opioid- galanin Gal_1 receptor heteromers in the ventral tegmental area as targets for opioid use disorders. N. CAI*; E. MORENO; C. R. QUIROZ; W. P. REA; A. SEYEDIAN; C. LLUÍS; E. CANELA; V. CASADÓ; S. FERRE. *NIDA/NIH, Univ. de Barcelona.*

3:00 SS65 **422.11** Drebrin regulates opiate-induced behavioral and structural plasticity in the NAc. J. A. MARTIN*; C. T. WERNER; Z. WANG; J. N. SIEMIAN; P. ZHONG; D. HAGARTY; R. VISWANATHAN; R. L. NEVE; J. LI; R. CHANDRA; M. LOBO; A. M. GANCARZ; Z. YAN; D. M. DIETZ. *State Univ. of New York At Buffalo, State Univ. of New York At Buffalo, California State University, Bakersfield, MIT, Univ. of Maryland Sch. of Med.*

1:00 DP12/SS66 **422.12** (Dynamic Poster) Chronic oxycodone exposire alters brain function and structure multimodal MRI study. S. IRIAH*; J. QIAO; L. TIMMS; P. P. KULKARNI; C. F. FERRIS. *Northeastern Univ., Northeastern Univ. Dept. of Psychology, Northeastern University, Ctr. for Translational NeuroImaging.*

1:00 TT1 **422.13** Getting out of the net: Chronic escalating doses of morphine induces morphological changes in perineuronal nets and axonal guidance in substantia nigra in adolescent female rats. R. GAGLIA*; P. GONZALES; G. S. LARMOUR; M. T. BARDO; D. B. VAZQUEZ-SANROMAN. *Oklahoma State Univ. Ctr. For Hlth. Scienc, Tulsa Community Col., Univ. Kentucky.*

2:00 TT2 **422.14** Perineuronal nets and neuronal cilia abnormalities in insular cortex of adolescent female rats treated with chronic escalating doses of morphine. D. B. VAZQUEZ SANROMAN*; R. GAGLIA; P. GONZALES; G. S. LARMOUR; M. T. BARDO; N. F. WILSON. *Oklahoma State Univ., Oklahoma State Univ. Ctr. For Hlth. Scienc, Tulsa Community Colleague, Univ. Kentucky.*

3:00 TT3 **422.15** Contribution of oxygen and hyperbaric pressure to hyperbaric oxygen (HBO_2) suppression of naloxone-precipitated withdrawal in morphine-dependent mice. R. M. QUOCK*; P. N. MAHARAJ; S. N. DEWALD; E. K. HEATH; A. L. BREWER; D. Y. SHIRACHI. *Washington State Univ., Univ. of the Pacific.*

4:00 TT4 **422.16** Thalidomide-induced suppression for naloxone-precipitated withdrawal signs in morphine-dependent mice. A. BREWER*; P. K. MAHARAJ; S. N. DEWALD; E. K. HEATH; R. M. QUOCK. *Washington State Univ.*

1:00 TT5 **422.17** Bidirectional effects of opioid self-administration on medial prefrontal cortex $GABA_BR$-GIRK signaling. E. M. ANDERSON*; L. FRIEDRICH; D. GOMEZ; M. C. HEARING. *Marquette Univ.*

2:00 TT6 **422.18** Cell-type and pathway-specific plasticity in the NAc following opioid self-administration. A. MADAYAG; L. FRIEDRICH; M. C. HEARING*. *UNC Chapel Hill, Marquette Univ., Marquette Univ.*

3:00 TT7 **422.19** Opioid-induced adaptations in the neuropeptide Y system in the rat locus coeruleus. C. C. THEISEN*; B. A. S. REYES; E. J. VAN BOCKSTAELE. *Drexel Univ. Col. of Med., Drexel Univ. Col. of Med.*

4:00 TT8 **422.20** Modeling functional genetic variation at the mu opioid receptor using human stem cells. A. HALIKERE*; J. C. MOORE; M. SWERDEL; J. A. TISCHFIELD; R. P. HART; Z. PANG. *CHINJ, RWJMS, Rutgers Univ., RUCDR/Infinite Biologics, The Human Genet. Inst. of New Jersey, The Human Genet. Inst. of New Jersey, Rutgers Univ.*

1:00 TT9 **422.21** Examinations of morphine-induced withdrawal and its related comorbidity. C. OU*; C. WU; A. HUANG. *Dept. of Psychology, Fo Guang Univ., Keelung Hospital, Ministry of Hlth. and Welfare, Fo Guang Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 TT10 **422.22** Reconsidering the definition of the tVTA (tail of the ventral tegmental area) or RMTg (rostromedial tegmental nucleus). F. FAIVRE*; C. FILLINGER; D. DANIEL; J. KAUFLING; E. DESCHATRETTES; D. PLASSARD; P. ROMIEU; J. SWILLER; P. LUTZ; C. SANDU; C. THIBAULT-CARPENTIER; D. MASSOTTE; P. VEINANTE; M. BARROT. *CNRS UPR 3212, Univ. of Oxford, LNCA UMR7364, IGBMC UMR7104.*

3:00 TT11 **422.23** The tail of the ventral tegmental area: aversive drugs, painful stimuli, stressful stimuli, opioid withdrawal and conditioned taste aversion. M. BARROT*; F. FAIVRE; I. YALCIN; M. MULLER; D. MASSOTTE; M. MAJCHRZAK; M. SANCHEZ-CATALAN. *INCI - CNRS UPR3212, LNCA UMR7364, Dept. de Farmacia y Tecnología Farmacéutica y Parasitología, Universitad de Valencia.*

POSTER

423. Information Processing, Decision Making, and Reinforcement

Theme H: Cognition

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 TT12 **423.01** Serotoninergic projections to the OFC and BLA modulate reversal learning. D. TAPP*; M. MCMURRAY. *Miami Univ.*

2:00 TT13 **423.02** Action-specific reinforcement and update by direct- and indirect- pathway striatal projection neurons. S. NONOMURA*; K. NISHIZAWA; K. KOBAYASHI; Y. SAKAI; Y. KAWAGUCHI; A. NAMBU; K. YAMANAKA; K. ENOMOTO; Y. ISOMURA; M. KIMURA. *Tamagawa Univ., Dept Mol Genet, Fukushima Med. Univ., Fukushima Med. Univ., Natl. Inst. Physiol Sci., Juntendo University, Hlth. and Sports Sci.*

3:00 TT14 **423.03** Neuronal activity in the primate amygdala during economic decisions. A. JEZZINI*; C. PADOA-SCHIOPPA. *Washington Univ. In St Louis, Washington Univ. in St Louis.*

4:00 TT15 **423.04** The effect of serotonin 5-HT_4 receptor antagonist on discounting of reward value in decision making. F. AKIZAWA; T. MIZUHIKI; R. KUBOKI; M. SHIDARA*. *Univ. of Tsukuba, Univ. Tsukuba.*

1:00 TT16 **423.05** Encoding expected reward value for formulating goal-directed decision in the rostro-medial caudate and the ventral pallidum. A. FUJIMOTO*; Y. HORI; Y. NAGAI; K. W. MCCAIRN; T. HIRABAYASHI; E. KIKUCHI; M. TAKADA; T. SUHARA; T. MINAMIMOTO. *Natl. Inst. of Radiological Sciences, QST, Kyoto Univ.*

2:00 TT17 **423.06** Probing the motivational control of decision making in mice using an in-house automatized, high throuhput behavioral task. C. SCHREIWEIS*; M. GACOIN; G. PENDERIA; J. DAUNIZEAU; E. BURGUIÈRE. *Brain and Spine Inst. (ICM).*

3:00 TT18 **423.07** Different time courses of explore-exploit decisions in primate amygdala, striatum, and orbitofrontal cortex. V. D. COSTA*; B. B. AVERBECK. *NIMH/NIH.*

4:00 TT19 **423.08** Ventral tegmental area hypoactivity may contribute to altered age-related risk-based decision making. V. L. TRYON*; S. J. Y. MIZUMORI. *Univ. of Washington.*

1:00 TT20 **423.09** Social influences on control signals in human and monkey anterior cingulate cortex (ACC) in a simulated stock market. A. W. HUTTUNEN*; M. L. PLATT. *Univ. of Pennsylvania, Univ. of Pennsylvania.*

2:00 TT21 **423.10** Environmental valence modulates dorsal raphe serotonin and GABA neural dynamics. C. SEO*; M. JIN; A. K. RECKNAGEL; E. WANG; C. M. BOADA; N. A. KRUPA; Y. HO; D. A. BULKIN; M. R. WARDEN. *Cornell Univ., Cornell Univ.*

3:00 TT22 **423.11** Multisensory decision making in rats and underlying neuronal mechanisms. N. NIKBAKHT*; M. ADIBI; D. ZOCCOLAN; M. E. DIAMOND. *SISSA.*

4:00 TT23 **423.12** Subcallosal anterior cingulate cortex, ventral striatum, and amygdala encode distinct aspects of reward. M. E. YOUNG*; K. D. ESANNASON; S. TAMANG; C. P. MOSHER; P. H. RUDEBECK. *Icahn Sch. of Med. at Mount Sinai.*

1:00 TT24 **423.13** Optogenetic dissection of temporal dynamics of amygdala-striatal interplay during risk/reward decision-making. D. A. BERCOVICI*; D. E. MOORMAN; M. TSE; S. B. FLORESCO. *Univ. of British Colombia, Univ. of Massachusetts Amherst, Univ. British Columbia.*

2:00 TT25 **423.14** Dorsal and ventral regions of the medial prefrontal cortex play dissociable roles in regulating risk/reward decision making during a “Blackjack” task guided by external cues. M. VAN HOLSTEIN*; S. B. FLORESCO. *Univ. of British Columbia, Univ. British Columbia.*

3:00 TT26 **423.15** Modulation of probabilistic discounting and reversal learning by dopamine within the medial orbitofrontal cortex. N. L. JENNI*; Y. T. LI; S. B. FLORESCO. *Univ. of British Columbia, Univ. of British Columbia, Univ. British Columbia.*

4:00 TT27 **423.16** Local androgen synthesis in the male rat brain and its modulation of behavioral flexibility. R. J. TOMM*; H. R. SCHWEITZER; D. J. TOBIANSKY; G. K. KACHKOVSKI; C. MA; H. H. ADOMAT; E. S. GUNS; S. B. FLORESCO; K. K. SOMA. *Univ. of British Columbia, The Univ. of British Columbia, Univ. of British Columbia, The Prostate Ctr. at Vancouver Gen. Hosp., Univ. British Columbia, Univ. British Columbia.*

1:00 TT28 **423.17** Active versus passive avoidance is differentially regulated by nucleus accumbens core and shell. P. T. PIANTADOSI*; D. C. M. YEATES; S. B. FLORESCO. *Univ. of British Columbia, Univ. of British Columbia, Univ. British Columbia.*

2:00 TT29 **423.18** Functional encoding of inhibitory control in rats in the variable delay-to-signal task. M. ESTEVES*; A. M. CUNHA; J. S. REIS; A. ALMEIDA; N. SOUSA; H. LEITE-ALMEIDA. *Sch. of Medicine, Univ. of Minho.*

3:00 TT30 **423.19** Opposite role of left and right nucleus accumbens in impulsive and habit to goal-directed decision-making. A. FERREIRA CUNHA*; M. GUIMARÃES; M. ESTEVES; F. TEIXEIRA; A. SALGADO; A. RODRIGUES; N. SOUSA; A. ALMEIDA; H. LEITE-ALMEIDA. *Life and Hlth. Sci. Res. Inst. (ICVS).*

4:00 TT31 **423.20** Visual two-arm bandit reinforcement learning in rodents. G. M. ZABALA-ALEMAN*; J. DU HOFFMANN; Y. CHUDASAMA; B. B. AVERBECK. *Natl. Inst. of Mental Hlth., Unit on Learning and Decision Making, Univ. Central del Caribe, Section on Behavioral Neurosci., Rodent Behavioral Core.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract’s submitting author

1:00 TT32 **423.21** Behavior-dependent limbic-cortical interactions in a Cyfip1 knockout rat model of psychiatric risk. J. HECKENAST*; S. TRENT; J. HALL; L. WILKINSON; M. W. JONES. *Cardiff Univ., Univ. of Bristol, Cardiff Univ.*

2:00 TT33 **423.22** Ventral hippocampus olm cells control type 2 theta oscillations and response to predator odor. S. MIKULOVIC*; E. RESTREPO; S. SIWANI; A. B. TORT; K. KULLANDER; R. N. LEAO. *Uppsala University, Neurosci. Dept., Uppsala Univ., Brain Institute, UFRN, UFRN.*

3:00 TT34 **423.23** The macaque medial prefrontal cortex neurons respond rapidly and strongly to images of snakes and emotional faces of conspecifics. H. NISHIMARU*; H. TRONG DINH; J. MATSUMOTO; Y. TAKAMURA; Q. VAN LE; E. HORI; T. ONO; H. NISHIJO. *Grad. Sch. Med. Pharm. Sci., Univ. Toyama.*

4:00 TT35 **423.24** Tactile stimulation of the face and body elicit neural activity in the monkey amygdala. J. MORROW*; C. P. MOSHER; K. M. GOTHARD. *Univ. of Arizona, Cedars Sinai Med. Ctr., Univ. Arizona, Col. Med.*

1:00 TT36 **423.25** Neurons in the primate amygdala respond to tactile, auditory, and visual stimuli. P. E. ZIMMERMAN*; J. MARROW; C. P. MOSHER; K. M. GOTHARD. *Univ. of Arizona, Cedars-Sinai Med. Ctr., Univ. Arizona, Col. Med.*

2:00 TT37 **423.26** Oxytocin (intranasal or bilateral microinjections) enhances the selectivity of amygdala neural responses in a social discrimination task. P. PUTNAM*; P. E. ZIMMERMAN; L. J. YOUNG; K. M. GOTHARD. *Univ. Of Arizona, Univ. Of Arizona, Emory Univ.*

POSTER

424. Memory Consolidation and Reconsolidation: From Epigenetics to Gestation

Theme H: Cognition

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 TT38 **424.01** Stable changes in H2A.Z binding and acetylation during memory formation and maintenance. K. NARKAJ*; A. AZAM; A. ANGCO; K. SERVADO; I. B. ZOVKIC. *Univ. of Toronto Mississauga, Univ. of Toronto Mississauga, Univ. of Toronto Mississauga.*

2:00 TT39 **424.02** 3D chromatin organizer, CCCTC-binding factor (CTCF), regulates remote memory and cortical synaptic plasticity. S. KIM*; N. YU; J. KIM; K. SHIM; D. CHOI; S. LEE; J. CHOI; J. LEE; B. KAANG. *Seoul Natl. Univ., Scripps, Seoul Natl. Univ., Seoul Natl. Univ., Kyung Hee Univ., Seoul Natl. Univ.*

3:00 TT40 **424.03** Role of nuclear receptor Nr4A in hippocampus dependent memory formation: A single-cell RNA seq approach. S. CHATTERJEE*; E. BAHL; M. E. GAINE; J. J. MICHAELSON; T. ABEL. *The Univ. of Iowa, The Univ. of Iowa.*

4:00 TT41 **424.04** Hippocampal 5-HT2A receptors regulate Rac1 activity for forgetting of contextual fear memory. L. JIANG*; Y. YIN; R. MAO; L. XU. *Dali university, The third People's hospital of Yunnan province, Kunming Inst. of Zoology, the Chinese Acad. of Sci., Kunming Inst. of Zoology, the Chinese Acad. of Sci.*

1:00 TT42 **424.05** Association between completeness of context memory formation and the number of cells incorporated into hippocampal neuronal ensembles after learning. J. A. LEAKE*; R. ZINN; L. H. CORBIT; B. VISSEL. *The Univ. of Sydney, The Univ. of Technol. Sydney, The Univ. of Sydney.*

2:00 TT43 **424.06** ● Up-regulation of dorsal hippocampal kappa-opioid receptors modulate fear memory intensity during consolidation in rats. T. C. DE LIMA*; F. VANZ, 88040-970; M. A. BICCA; M. GIACHERO; L. J. BERTOGLIO. *Univ. Federal de Santa Catarina, Federal Univ. of Santa Catarina, Northwestern Univ.*

3:00 TT44 **424.07** ● Selective PKR inhibition restores short-term memory deficits in apoE4-carrying mouse. D. IBGHI; V. TAUPIN*; P. BERNARDELLI; N. MOINDROT; P. GONIOT; E. GENET; C. VINCENT; V. ROUDIERES; V. FLEURY; A. KRICK; M. LOPEZ-GRANCHA. *Neurodegeneration Research, Neurosci. Therapeut. Area, Sanofi, Inc., Sanofi R&D.*

4:00 TT45 **424.08** Cognitive responses to recurrent administration of intraperitoneal lipopolysaccharide. B. J. KUPFERSCHMID*; P. J. ROWSEY. *Univ. of Michigan-Flint, The Univ. of North Carolina at Greensboro.*

1:00 TT46 **424.09** Acute exposure to acetaminophen impairs object recognition memory in mice. T. M. MILEWSKI*; S. PATEL; C. A. STAPF; S. N. WIERBOWSKI; P. T. ORR. *Univ. of Scranton, Univ. of Scranton.*

2:00 TT47 **424.10** Microanatomy of fear memory consolidation and extinction within sub-regions of the prefrontal cortex and amygdala revealed by Arc and pERK/MAPK activity. A. JACQUES*; N. CHAAYA; A. BATTLE; L. R. JOHNSON. *Queensland Univ. of Technol., Inst. of Hlth. and Biomed. Innovation, Queensland Univ. of Technol., Translational Res. Institute, Queensland Univ. of Technol., Queensland Univ. of Technol., Ctr. for the Study of Traumatic Stress, Dept. of Psychiatry, USU Sch. of Med.*

3:00 TT48 **424.11** ● Hookworm infection attenuates hippocampus-dependent learning by inhibiting memory consolidation. Z. KOLO*; T. M. BROMBACHER; K. S. DE GOUVEIA; L. CRUYWAGEN; F. BOOLEY; M. DARBY; F. BROMBACHER. *Univ. of Cape Town, Univ. of Cape Town.*

4:00 TT49 **424.12** High demand of hippocampal glucose and lactate during memory formation in early development. E. CRUZ*; A. TRAVAGLIA; C. M. ALBERINI. *New York Univ. Ctr. for Neural Sci., New York Univ., New York Univ.*

1:00 TT50 **424.13** Alcohol exposure during gestational development alters spatial extinction behavior in adult male and female rats. C. M. MAGCALAS*; J. WAGNER; D. D. SAVAGE; D. A. HAMILTON. *Univ. of New Mexico, Univ. of New Mexico.*

2:00 TT51 **424.14** How much gestational noise stress impairs reproduction activates HPA axis and damages behavior in mice. Z. JAFARI*; J. MEHLA; B. E. KOLB; M. H. MOHAJERANI. *Univ. of Lethbridge, CCBN.*

3:00 TT52 **424.15** ▲ Acute restraint stress impairs object recognition memory in female mice. C. A. STAPF; K. N. WALTER; K. E. TALERICO; P. T. ORR*. *Univ. of Scranton, Univ. of Scranton.*

4:00 TT53 **424.16** ● Phases of the estrous cycle modulate renewal of appetitive and fear behavior. E. HILZ*; M. MONFILS; H. LEE. *Univ. of Texas At Austin.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

425. Learning and Memory: Hippocampal-Parahippocampal-Limbic Interactions

Theme H: Cognition

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 TT54 **425.01** Anterior thalamus regulates interactions between hippocampus and retrosplenial cortex. N. A. KAMBI*; J. M. PHILLIPS; Y. B. SAALMANN. *Univ. of Wisconsin-Madison.*

2:00 TT55 **425.02** Neuronal activity in the retrosplenial cortex of rats performing a visuospatial attention task. E. HWANG*; F. YANG; T. K. JACOBSON; R. D. BURWELL. *Brown Univ., Univ. of Michigan, Brown Univ.*

3:00 TT56 **425.03** Object-location conjunctive coding in the parahippocampal network. V. J. ESTELA*; A. FAROVIK; R. D. BURWELL. *Brown Univ., Brown Univ.*

4:00 TT57 **425.04** ▲ Bio-plausible models of ACC function in a novel probabilistic reversal learning task. R. M. FRANCIS*; R. A. WIRT; J. M. HYMAN. *UNLV, Univ. of Nevada Las Vegas, Univ. of Nevada Las Vegas.*

1:00 TT58 **425.05** Expectation and outcome representations combine to create a novel signal in ACC neurons underlying the FN. J. M. HYMAN*; C. B. HOLROYD; J. K. SEAMANS. *Univ. of Nevada Las Vegas, Univ. of Victoria, UBC.*

2:00 TT59 **425.06** It's about time: Electrophysiological evidence for temporally mediated consolidation of spatial memories. R. A. WIRT*; L. A. CREW; K. R. ZHA; N. L. KAPLAN; R. M. FRANCIS; J. M. HYMAN. *Univ. of Nevada Las Vegas, Univ. of Nevada Las Vegas.*

3:00 TT60 **425.07** Familiarity-induced activity patterns in the LEC and PER in the absence of a functional hippocampus. L. MAHNKE*; E. ATUCHA; T. KITSUKAWA; M. SAUVAGE. *Leibniz Inst. For Neurobio., Mercator Res. Group, Osaka Univ., Otto von Guericke Univ., Otto von Guericke Univ.*

4:00 DP11/TT61 **425.08** (Dynamic Poster) Identifying olfactory neural circuits in adult *Drosophila* using high-speed whole brain functional imaging (SCAPE). N. MISHRA*; W. LI; E. S. SCHAFFER; V. VOLETI; E. M. HILLMAN; R. AXEL. *Columbia Univ., Columbia Univ.*

1:00 TT62 **425.09** Cholecystokinin from entorhinal cortex switches long-term potentiation in hippocampus. J. SU*; W. YE; J. HE. *City Univ. of Hong Kong, Guangzhou Inst. of Biomedicine and Hlth.*

2:00 TT63 **425.10** Impaired performance in an object place paired associate task by a rat model of moderate prenatal alcohol exposure. L. M. SANCHEZ*; J. K. GOSS; J. WAGNER; S. DAVIES; D. A. HAMILTON; D. D. SAVAGE II; B. J. CLARK. *Univ. of New Mexico, Univ. of New Mexico Sch. of Med.*

3:00 TT64 **425.11** Reduced spatial coding of hippocampal place cells following moderate prenatal alcohol exposure. R. E. HARVEY*; J. K. GOSS; T. RIGG; L. E. BERKOWITZ; L. M. SANCHEZ; J. L. WAGNER; D. D. SAVAGE; D. A. HAMILTON; B. J. CLARK. *Univ. of New Mexico.*

4:00 TT65 **425.12** Sex specific spatial navigation and spatial memory impairment in the TgF344-ad rat model of Alzheimer's disease. L. E. BERKOWITZ*; S. M. THOMPSON; E. N. DRAKE; J. T. MADDEN; E. A. SNEDDON; R. E. HARVEY; B. J. CLARK. *Univ. of New Mexico.*

1:00 TT66 **425.13** Brainwide coherent theta oscillations during visual and olfactory guided spatial learning and memory. A. SHERIFF*; L. M. KAY. *The Univ. of Chicago, The Univ. of Chicago.*

2:00 UU1 **425.14** Spatiotemporal patterns of cortical voltage activity during sharp-wave ripples: Implications for memory consolidation theory. J. KARIMI*; M. NAZARI; B. L. MCNAUGHTON; M. H. MOHAJERANI. *Canadian Ctr. For Behavioral Neuroscience/Univer, CCBN/University of Lethbridge.*

3:00 UU2 **425.15** Differential genes expression following EGb treatment and conditioned suppression in the amygdaloid complex and dorsal hippocampal formation. S. M. CERUTTI*; C. R. ZAMBERLAM; J. M. CERUTTI. *Univ. Federal De Sao Paulo, Federal Univ. of Sao Paulo, Federal Univ. of Sao Paulo.*

4:00 UU3 **425.16** Physiological characteristics and functional role of ventral hippocampus projecting cells. M. R. LOPEZ*; H. ZURITA; B. HARLAND; K. LEONG; A. J. APICELLA; I. A. MUZZIO. *Univ. of Texas At San Antonio, Univ. of Arizona.*

1:00 UU4 **425.17** Chronically reactivating positive and negative memories to modulate hedonic and social behaviors. E. DOUCETTE*; E. MERFELD; Y. ZAKI; S. L. GRELLA; N. J. MURAWSKI; M. SHPOKAYTE; S. RAMIREZ. *Harvard Univ.*

2:00 UU5 **425.18** ▲ Inhibiting ensembles in the hippocampus and amygdala to suppress reinstatement-induced fear. Y. ZAKI*; E. DOUCETTE; S. L. GRELLA; N. J. MURAWSKI; E. MERFELD; M. SHPOKAYTE; S. RAMIREZ. *Harvard Univ.*

3:00 UU6 **425.19** ● Artificially enhancing or suppressing hippocampus-mediated fear memories. N. J. MURAWSKI*; B. CHEN; S. L. GRELLA; M. SHPOKAYTE; E. MERFELD; Y. ZAKI; E. DOUCETTE; S. RAMIREZ. *Harvard Univ., Columbia Univ. Med. Ctr.*

4:00 UU7 **425.20** Activating ventral hippocampus to amygdala terminals processing fear and reward. M. SHPOKAYTE*; S. L. GRELLA; Y. ZAKI; N. J. MURAWSKI; E. DOUCETTE; E. MERFELD; S. RAMIREZ. *Harvard Univ.*

1:00 UU8 **425.21** Reactivating hippocampus-mediated memories to disrupt the reconsolidation of fear. S. L. GRELLA*; Y. ZAKI; N. J. MURAWSKI; E. DOUCETTE; E. MERFELD; M. SHPOKAYTE; S. RAMIREZ. *Harvard Univ., Harvard Univ.*

2:00 UU9 **425.22** Neuronal activity in the amygdala and hippocampus during and after optogenetic stimulation of the basolateral amygdala in awake rats. N. S. AHLGRIM*; C. R. GALLOWAY; Y. CHUNG; K. PARK; J. R. MANNS. *Emory Univ., Emory Univ., Emory Univ.*

3:00 UU10 **425.23** Conjunctive coding in the primate entorhinal cortex. M. L. MEISTER*; E. A. BUFFALO. *Univ. of Washington, Univ. of Washington.*

4:00 UU11 **425.24** ● Mnemonic discrimination task in rhesus macaques. C. I. O'LEARY*; M. L. JUTRAS; A. NG; S. A. SCHLEUFER; A. J. O. DEDE; Z. REAGH; M. A. YASSA; E. P. LEBOIS; E. A. BUFFALO. *Univ. of Washington, Univ. of Washington, Univ. of California Irvine, Univ. of California, Irvine, Pfizer, Inc.*

1:00 UU12 **425.25** Eye movements temporally organize spatial representations in the primate hippocampus. S. D. KOENIG*; E. A. BUFFALO. *Univ. of Washington, Univ. of Washington, Univ. of Washington.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 UU13 **425.26** Context-specific representations in monkey hippocampal neurons. Y. BROWNING*; J. W. RUECKEMANN; K. L. MORRISROE; S. A. SCHLEUFER; M. J. JUTRAS; A. L. FAIRHALL; E. A. BUFFALO. *Univ. of Washington, Univ. of Washington, Univ. of Washington, Univ. of Washington.*

POSTER

426. Learning and Memory: Hippocampal CA2 and Social Learning

Theme H: Cognition

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 UU14 **426.01** Modified firing in hippocampal area CA2 in a mouse model of schizophrenia during social tasks. M. L. DONEGAN*; F. STEFANINI; Y. ZAFRINA; S. FUSI; J. A. GORDON; S. A. SIEGELBAUM. *Columbia Univ., Barnard Col., Natl. Inst. of Mental Hlth.*

2:00 UU15 **426.02** Organization of CA2 projections to ventral CA1 neurons. E. W. BUSS*; F. LEROY; S. A. SIEGELBAUM. *Columbia Univ.*

3:00 UU16 **426.03** CA2 circuits controlling social behaviors. F. LEROY*; J. PARK; T. MEIRA; E. W. BUSS; S. A. SIEGELBAUM. *Columbia Univ., Sch. of Medicine, Univ. of Minho.*

4:00 UU17 **426.04** The hippocampal CA2 region plays a dynamic role in social memory. T. MEIRA*; F. LEROY; S. SIEGELBAUM. *Columbia Univ., Life and Hlth. Sci. Res. Inst. (ICVS), Sch. of Medicine, Univ. of Minho, Columbia Univ.*

1:00 UU18 **426.05** Oxytocin increases excitability of excitatory and inhibitory CA2 neurons through modulation of M-current. N. N. TIRKO*; K. W. EYRING; I. CARCEA; M. MITRE; M. V. CHAO; R. C. FROEMKE; R. W. TSIEN. *Actuated Med. Inc, New York Univ. Sch. of Med., NYU Med. Ctr., New York Univ. Sch. of Med., New York Univ. Langone Med. Ctr., NYU Med., New York Univ.*

2:00 UU19 **426.06** The contribution of hippocampal oxytocin receptors to social memory processing. T. RAAM*. *Massachusetts Gen. Hosp.*

3:00 UU20 **426.07** Role of CA2 neuronal activity level in conditioned fear learning. G. M. ALEXANDER*; N. V. RIDDICK; D. J. LUSTBERG; S. S. MOY; S. M. DUDEK. *Natl. Inst. of Envrn. Hlth. Sci., Univ. of North Carolina at Chapel Hill Sch. of Med., Natl. Inst. of Env. Hlth. Sci., NIH, Univ. of North Carolina at Chapel Hill Sch. of Med., Natl. Inst. of Env. Hlth. Sci., NIH.*

4:00 UU21 **426.08** Social and non-social encoding by Vasopressin 1b receptor expressing Pyramidal neurons in CA2 hippocampal subfield of mice. A. CYMERBLIT-SABBA*; M. STACKMANN; S. K. WILLIAMS AVRAM; M. C. GRANOVETTER; A. SMITH; J. SONG; J. FASTMAN; H. LEE; W. S. YOUNG. *NIMH, Kyungpook Natl. Univ.*

1:00 UU22 **426.09** The role of vasopressin 1b receptor-expressing pyramidal neurons of the hippocampus CA2 region in an object novelty task. M. STACKMANN*; A. CYMERBLIT-SABBA; M. C. GRANOVETTER; S. WILLIAMS; W. S. YOUNG. *Natl. Inst. of Mental Hlth.*

2:00 UU23 **426.10** How dynamic inhibitory control of CA2 pyramidal cell output influences CA1 activity. R. A. PISKOROWSKI*; K. NASRALLAH; L. THERREAU; V. ROBERT; V. CHEVALEYRE. *Inserm U894, Univ. Paris Descartes, Albert Einstein Col. of Med.*

3:00 UU24 **426.11** Differential contributions of dorsal and ventral CA3 to social memory. M. CHIANG*; A. J. Y. HUANG; R. BOEHRINGER; D. POLYGALOV; T. OHSHIMA; T. J. MCHUGH. *RIKEN BSI, Waseda Univ.*

4:00 UU25 **426.12** The impact of transient silencing of the retrosplenial cortex on hippocampal physiology. H. GUAN*; A. J. Y. HUANG; D. POLYGALOV; T. INOUE; T. J. MCHUGH. *RIKEN, Riken BSI, Waseda Univ.*

1:00 UU26 **426.13** Characterization of a novel hippocampal-septal circuit. H. HE*; K. OKANOYA; T. J. MCHUGH. *RIKEN, BSI, The Univ. of Tokyo.*

POSTER

427. Hippocampal and Cortical Circuits Mediating Learning and Memory

Theme H: Cognition

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 UU27 **427.01** Head direction cells in mice are referenced to gravity. H. CHAM*; J. LAURENS; D. E. ANGELAKI; J. DICKMAN. *Baylor Col. of Med., Baylor Col. of Med., Baylor Col. of Med.*

2:00 UU28 **427.02** Neural encoding of azimuth by head direction cells during rotation in three dimensions; and interaction with gravity responses. J. LAURENS; H. CHAM; J. DICKMAN*; D. E. ANGELAKI. *Baylor Col. of Med., Baylor Col. of Med., Baylor Col. of Med.*

3:00 UU29 **427.03** Comparison of medial entorhinal and nucleus reuniens projections in ca1. D. MAISSON*; A. L. GRIFFIN. *Univ. of Delaware.*

4:00 UU30 **427.04** Distinct spatial working memory correlates of prefrontal and hippocampal projections to the nucleus reuniens. Z. M. GEMZIK*; J. J. STOUT; M. T. GAYLORD; D. MAISSON; A. L. GRIFFIN. *Univ. of Delaware.*

1:00 UU31 **427.05** Oscillatory synchrony within the hippocampal-thalamo-prefrontal circuit during spatial working memory. A. C. GARCIA*; A. L. GRIFFIN. *Univ. of Delaware.*

2:00 UU32 **427.06** Posterior parietal and retrosplenial cortices map the position of a pursuit target. D. A. NITZ*; A. S. ALEXANDER; J. TUNG. *Univ. of California San Diego, Boston Univ., Univ. of California San Diego.*

3:00 UU33 **427.07** Representation of navigational distance in the retrosplenial cortex. A. S. ALEXANDER*; D. A. NITZ. *Boston Univ., Univ. of California San Diego.*

4:00 UU34 **427.08** Creating spaces: Posterior parietal cortex and hippocampal mapping of environmental subspaces. L. E. SHELLEY*; D. A. NITZ. *UCSD.*

1:00 UU35 **427.09** Enriched environment alters the epigenetic profile in the hippocampus and mitigates memory deficits induced by early postnatal lead exposure in a sex-dependent manner. V. SINGH*; G. VARMA; J. SCHNEIDER. *Thomas Jefferson Univ.*

2:00 UU36 **427.10** Grid cell representation across a multi-level maze. P. A. LACHANCE*; S. S. WINTER; M. L. MEHLMAN; J. S. TAUBE. *Dartmouth Col., The Jackson Lab.*

3:00 UU37 **427.11** Are head direction cell responses commutative on a 3D surface? J. R. DUMONT*; P. A. LACHANCE; J. L. MARCROFT; N. R. BOVIO; S. S. WINTER; J. S. TAUBE. *Psychological & Brain Sci., Dartmouth Col., The Jackson Lab.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 UU38 **427.12** The dorsal striatum and medial precentral cortex are functionally and anatomically integrated into the head direction cell circuitry. M. L. MEHLMAN*; S. S. WINTER; S. VALERIO; J. S. TAUBE. *Dartmouth Col., The Jackson Lab., Natl. Inst. of Hlth. and Med. Res.*

POSTER

428. Learning and Memory: Molecules and Mechanisms I

Theme H: Cognition

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 UU39 **428.01** Modulation of GluN2B subunit-containing NMDA receptors expression and spatial long-term memory in medial septal immunolesioned rats. G. BESELIA*; M. DASHNIANI; M. BURJANADZE; R. SOLOMONIA; L. KRUASHVILI; N. CHKHIKVISHVILI. *I. Beritashvili Ctr. of Exptl. Biomedicine.*

2:00 UU40 **428.02** Calbindin in distinct populations of hippocampal neurons modulates stress susceptibility and resilience. J. LI*; X. XIE; J. YU; Y. SU; M. V. SCHMIDT; X. WANG; T. SI. *Inst. of Mental Health, Peking Univ., Inst. of Neuroscience, Zhejiang Univ., Max Planck Inst. of Psychiatry.*

3:00 UU41 **428.03** Targeting DNA methylation to enhance learning and memory. K. E. ZENGELER; C. P. GETTENS; A. R. GOGLIETTINO; T. S. R. HOTZ; B. G. MALACHOWSKY; A. J. KENNEDY*. *Bates Col.*

4:00 UU42 **428.04** LSD1 phosphorylation by PKCα is required for presynaptic plasticity and hippocampal learning and memory. C. LIM*; H. NAM; J. LEE; D. KIM; J. CHOI; S. J. KANG; S. KIM; H. KIM; C. KWAK; K. SHIM; S. KIM; H. KO; R. LEE; E. JANG; J. YOO; J. SHIM; M. ISLAM; Y. LEE; J. LEE; S. BAEK; B. KAANG. *Lab. of Neurobiology, Seoul Natl. Univ., Lab. of Mol. and Cell. Genetics, Seoul Natl. Univ., Seoul Natl. Univ. Col. of Med., Kyung Hee Univ.*

1:00 UU43 **428.05** The role of the ventral hippocampus in contextual fear conditioning. J. A. GRAHAM*; B. J. WILTGEN. *UC Davis, UC Davis.*

2:00 UU44 **428.06** Context fear learning triggers metaplasticity in the hippocampus. J. N. KRUEGER*; A. P. CRESTANI; B. J. WILTGEN. *Univ. of California Davis, Federal Univ. of Rio Grande do Sul, Univ. of California, Davis.*

3:00 UU45 **428.07** Molecular mechanisms of working memory and possible involvement of TRPC channels. A. REBOREDA*; M. J. VALERO-ARACAMA; F. M. THEISSEN; A. ARBOIT; A. CORBU; M. YOSHIDA. *Leibniz Inst. For Neurobio., German Ctr. for Neurodegenerative Dis. (DZNE), Ruhr Univ. Bochum, Inst. for physiology and pathophysiology.*

4:00 UU46 **428.08** Investigating the role of TRPC channels in hippocampal persistent firing. A. ARBOIT*; F. THEISSEN; J. SCHWEIHOFF; L. BIRNBAUMER; M. YOSHIDA. *German Ctr. For Neurodegenerative Diseases-DZNE, Ruhr-Universität Bochum, Natl. Inst. of Envrn. Hlth. Sci., Inst. of Biomed. Res. (BIOMED UCA-CONICET), Leibniz Inst. For Neurobio.*

1:00 UU47 **428.09** TRPC5 channels in the hippocampus support trace fear conditioning. F. M. THEISSEN*; A. ARBOIT; L. BIRNBAUMER; M. SAUVAGE; M. YOSHIDA. *DZNE, DZNE, Natl. Inst. of Envrn. Hlth. Sci., Inst. of Biomed. Res. (BIOMED UCA-CONICET), Leibniz Inst. for Neurosci.*

2:00 UU48 **428.10** Deficiency of TRPC1 exacerbated the apoptosis and cognitive impairment induced by Aβ. M. LI*; J. WANG. *Huazhong Univ. of Sci. and Technol., Huazhong Univ. of Sci. and Technol.*

3:00 UU49 **428.11** Methamphetamine activating hippocampal HCN channels involves in drug-associated context learning. R. SONG*; S. ZHANG; D. CAO; L. YANG; Z. WANG; N. WU; J. LI; J. ZHENG. *Beijing Insistitute of Pharmacol. and Toxicology, Dept. of Anesthesia, Chinese PLA general hospital.*

4:00 UU50 **428.12** Role of CREST in synaptic plasticity and memory formation. T. J. HEMSTEDT*; E. A. KRAMÁR; Y. ALAGHBAND; D. P. MATHEOS; J. J. BANIHANI; M. A. WOOD. *Univ. of California Irvine.*

1:00 UU51 **428.13** HDAC3-inhibition facilitates long-term memory consolidation of sound-specific information. A. SHANG*; S. BYLIPUDI; K. M. BIESZCZAD. *Rutgers Univ.*

2:00 UU52 **428.14** Histone acetylation controls transcription of the atypical protein kinases in primary neuronal cultures. A. BORODINOVA*; M. VOLOBUEVA; A. BOLSHAKOV; P. BALABAN. *Inst. of Higher Nervous Activity.*

3:00 UU53 **428.15** Changes in nuclear geometry are associated with long-term memory formation. I. CERA*; A. ABENTUNG; C. REDDY; P. FEURLE; G. APOSTOLOVA; G. DECHANT. *GE Neurowissenschaften.*

4:00 UU54 **428.16** Multiple acute concurrent stresses and memory: Females are not protected. A. K. SHORT*; Y. CHEN; J. MOLET; J. C. LAUTERBORN; C. M. GALL; T. Z. BARAM. *Univ. of California Irvine, Univ. of California Irvine, CEA MINATEC CAMPUS, Univ. of California Irvine, Univ. of California.*

1:00 UU55 **428.17** IQGAP1-ERK signaling regulates histone posttranslational modifications in fear memory. C. GAO*; X. LIU; B. YAO; L. JIN; N. SUN; J. HAO. *Xuzhou Med. Univ.*

2:00 UU56 **428.18** Nuclear receptor corepressors regulate cognitive function by modulating GABA signaling. W. ZHOU*; Y. HE; S. HONG; G. DING; H. K. YALAMANCHILI; Y. WAN; B. PAUL; C. WANG; Y. GONG; Q. WU; Q. TONG; Z. LIU; Y. XU; Z. SUN. *Baylor Col. of Med., Baylor Col. of Med., The Intl. Peace Maternity & Child Hlth. Hosp. of China welfare institute, Jan and Dan Duncan Neurolog. Res. Institute, Texas Children's Hosp., Baylor Col. of Medicine,Jan and Dan Duncan Neurolog. Res. Institute, Texas Children's Hosp., Baylor Col. of Med., Univ. of Texas Hlth. Sci. Ctr. at Houston, Baylor Col. of Med., Baylor Col. of Med.*

3:00 UU57 **428.19** Tat-PTEN1 enhances hippocampal LTP and learning & memory through selective inhibition of calpain-2-mediated PTEN cleavage. Y. LIU*; Y. WANG; J. SUN; Y. LUO; X. BI; M. BAUDRY. *Western Univ. of Hlth. Sci., Western Univ. Hlth. Sci.*

4:00 UU58 **428.20** Baseline mTOR pathway phosphorylation is different within laser capture microdissected subregions of the medial temporal lobe in non-human primates. B. A. CORGIAT*; C. MUELLER; J. N. TURCHI; J. L. OLDS; R. C. SAUNDERS; L. A. LIOTTA; M. MISHKIN. *Natl. Inst. of Mental Hlth., George Mason Univ., George Mason Univ.*

1:00 UU59 **428.21** mTORC1-mediated late LTP in somatostatin interneurons regulates hippocampal network plasticity and memory precision. J. ARTINIAN*; A. JORDAN; A. KHLAIFIA; A. LA FONTAINE; I. LAPLANTE; J. LACAILLE. *Dept of Neuroscience, Univ. of Montreal, GRSNC.*

2:00 UU60 **428.22** ● The temporal dynamics of Arc expression regulate cognitive flexibility. A. M. MABB*; M. J. WALL; D. R. COLLINS; S. L. CHERY; Z. D. ALLEN; E. D. PASTUZYN; V. D. NIKOLOVA; S. S. MOY; B. D. PHILPOT; J. D. SHEPHERD; M. D. EHLERS; S. A. CORREA. *Georgia State Univ., Univ. of Warwick, Univ. of Utah, Univ. of North Carolina, Univ. of North Carolina at Chapel Hill Sch. of Med., Univ. North Carolina, Biogen, Univ. of Bradford.*

3:00 UU61 **428.23** ● Enhancement of synaptic plasticity by NYX-2925: The role of receptor trafficking and intracellular signaling. R. A. KROES*; M. E. SCHMIDT; S. U. SAHU; J. S. BURGDORF; M. A. KHAN; J. R. MOSKAL. *Aptinyx, Inc., Northwestern Univ.*

4:00 UU62 **428.24** Impaired cerebellar plasticity and eye-blink conditioning in calpain-1 knock-out mice. M. R. FOY*; S. HEYSIEATTALAB; K. LEE; Y. LIU; X. BI; M. BAUDRY. *Loyola Marymount Univ., Western Univ. of Hlth. Sci.*

1:00 UU63 **428.25** GABAergic modulation of cells within the neurogenic niche of the postnatal spinal cord. N. SHAFIN*; J. DEUCHARS; S. A. DEUCHARS. *Univ. of Leeds, Universiti Sains Malaysia.*

POSTER

429. Learning and Memory: Pharmacology

Theme H: Cognition

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 UU64 **429.01** Blockade of the sigma-1 receptor prevent brain plasticity induced in mice by habituation to a complex environment, the Hamlet test. L. CROUZIER*; T. MAURICE. *INSERM UMR-S1198.*

2:00 UU65 **429.02** ● NYX-783: A novel small molecule NMDA receptor modulator with therapeutic potential for the treatment of post-traumatic stress disorder. E. M. COLECHIO*; T. BHATTACHARYA; J. S. BURGDORF; J. DUNNING; A. L. GROSS; J. M. PRIEBE; M. A. KHAN; P. K. STANTON; X. ZHANG; C. CEARLEY; J. R. MOSKAL. *Northwestern Univ., Aptinyx, Inc., Northwestern Univ., Aptinyx Inc, Aptinyx, Inc., New York Med. Col., Northwestern Univ.*

3:00 UU66 **429.03** Amygdala c-Fos expression in rats with tolerance to anxiolytic effect of midazolam. D. J. GONZÁLEZ-SÁNCHEZ*, SR; G. CASTILLO-ROBERTO; J. C. P. ARRIAGA-RAMÍREZ; S. E. CRUZ-MORALES. *UNAM.*

4:00 UU67 **429.04** ● Chemotherapy-induced cognitive deficits in an APOE mouse model. A. SPEIDELL*; T. DEMBY; Y. LEE; O. RODRIGUEZ; C. ALBANESE; J. MANDELBLATT; G. REBECK. *Georgetown Univ. Med. Ctr., Georgetown Univ. Med. Ctr., Georgetown Univ. Med. Ctr., Georgetown Univ. Med. Ctr., Georgetown Univ. Med. Ctr.*

1:00 UU68 **429.05** 6-Gingerol attenuates LPS-induced memory impairment via its anti-inflammatory and antioxidant activity. F. ZHANG; J. ZHANG; X. HOU; Y. ZHOU; H. ZHANG*. *Institute of pharmacology, Taishan Med. Univ., West Virginia Univ. Hlth. Sci. Ctr.*

2:00 UU69 **429.06** Informative cues and drug reward modulate risky decision-making in a probabilistic foraging task. A. P. SMITH*; J. BECKMANN. *Univ. of Kentucky Dept. of Psychology, Univ. of Kentucky.*

3:00 UU70 **429.07** Increasing dietary choline attenuates persistent spatial memory deficits in female mice exposed to cyclophosphamide and doxorubicin. B. E. JOHNS; M. FICKEN; M. E. ENGBERG; L. WECKER*; R. M. PHILPOT. *USF Hlth. Morsani Col. of Med.*

4:00 UU71 **429.08** Towards revealing avoidance test-the role of dopamine. G. F. ANTUNES*; F. V. GOUVEIA; M. D. D. SENO; M. C. DE CARVALHO; C. C. DE OLIVEIRA; L. C. T. DOS SANTOS; F. STRAMBIO; M. C. DE CASTRO; M. J. TEIXEIRA; J. P. OTOCH; M. L. BRANDÃO; E. T. FONOFF; R. C. R. MARTINEZ. *Inst. Sirio Libanês De Ensino E Pesquisa, Univ. de São Paulo, Inst. de Psiquiatria da Univ. de São Paulo, Univ. de São Paulo.*

1:00 UU72 **429.09** Intermittent stimulation of the Nucleus Basalis of Meynert improves performance on the Continuous Performance Task in adult monkeys. R. LIU; J. CRAWFORD; P. CALLAHAN; A. V. TERRY, JR; C. CONSTANTINIDIS; D. T. BLAKE*. *Augusta Univ., Augusta Univ., Augusta Univ., Wake Forest Univ. Sch. of Med., Med. Coll Georgia/Augusta Univ.*

2:00 UU73 **429.10** Medial prefrontal cortex glutamate and canabinoide systems modulating reconsolidation and extinction of contextual fear conditioning memory. L. B. RESSTEL*; D. G. REIS; S. F. LISBOA. *Schl Med, FMRP-USP, Univ. Sao Paulo, Univ. of São Paulo - FMRP.*

3:00 UU74 **429.11** Spontaneous novel object recognition, object location recognition, and temporal order discrimination in rats neonatally treated chronically with MK-801. T. HATAKEYAMA*; H. FURUIE; K. YAMADA; Y. ICHITANI. *Univ. of Tsukuba, Ibaraki Prefectural Univ. of Hlth. Sci., Natl. Ctr. of Neurol. and Psychiatry.*

4:00 UU75 **429.12** The chemotherapeutic agent paclitaxel selectively impairs reversal learning while sparing prior learning, new learning and episodic memory. D. PANOZ-BROWN*; L. M. CAREY; A. E. SMITH; M. GENTRY; C. M. SLUKA; H. E. CORBIN; J. WU; A. G. HOHMANN; J. D. CRYSTAL. *Indiana Univ. Bloomington.*

1:00 UU76 **429.13** Atomoxetine enhances working memory and other behavioral domains in young and aged animals. A. V. TERRY*, JR; P. M. CALLAHAN; M. PLAGENHOEF; D. BLAKE. *Augusta Univ., Augusta Univ.*

2:00 UU77 **429.14** Selective D4R antagonist ligands as molecular tools to study addiction. C. A. BOATENG*; M. M. DAY; R. B. FREE; D. R. SIBLEY; K. STEWART; T. M. KECK. *High Point University, Fred Wilson Sch. of Pharm, Natl. Inst. of Neurolog. Disorders and Stroke, Rowan Univ.*

3:00 UU78 **429.15** Acetycholinesterase inhibitors prevent, but do not reverse, persistent spatial memory deficits induced in female mice by cyclophosphamide and doxorubicin exposure. M. FICKEN; B. E. JOHNS; M. E. ENGBERG; L. WECKER; R. M. PHILPOT*. *Univ. South Florida, Morsani Col. of Med.*

4:00 UU79 **429.16** Effects of heat shock protein induction on spatial learning and memory in mice. R. TANOUE*; Y. MORITA; S. YAMAMOTO; N. HASHIKAWA-HOBARA; N. HASHIKAWA. *Okayama Univ. of Sci.*

1:00 UU80 **429.17** An automated test of olfactory working memory in rats: Effects of MK-801. H. A. KELLIHER; S. A. NELSON; K. DYER; S. ACCATTATO; L. RICHARDSON; M. MATHEWS; J. GALIZIO*. *Univ. of North Carolina at Wilmington, Univ. of North Carolina at Wilmington.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 UU81 **429.18** Nicotinergic alpha7 and alpha4/beta2 sub-receptor agonists differentially enhance reversal learning speed and attentional filtering of distraction in a non-human primate model. M. AZIMI*; M. OEMISCH; T. WOMELSDORF. *York Univ., Vanderbilt Univ.*

3:00 UU82 **429.19** Behavioral flexibility is improved by chronic fluoxetine treatment through BDNF/TrkB signaling. J. UMEMORI*; G. DIDIO; F. WINKEL; H. ANTILA; M. L. POU; V. VÕIKAR; R. GURADO; E. CASTREN. *Univ. of Helsinki, Univ. of Helsinki, Univ. of Barcelona.*

4:00 UU83 **429.20** ● The phosphodiesterase 1 inhibitor Lu AF64386 increases cGMP and cAMP in the brain and exerts procognitive effects in the rat. A. MORK*; H. S. LINDGREN; V. NIELSEN; C. T. CHRISTOFFERSEN; J. KEHLER; J. NIELSEN. *H. Lundbeck A/S.*

1:00 VV1 **429.21** The relationship between blood pressure reduction and working memory performance in spontaneously hypertensive rats (SHR): Understanding the effects of hydralazine and strains differences in rats. T. SATO*. *Nagano Univ.*

POSTER

430. Neuromodulation and Working Memory

Theme H: Cognition

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 VV2 **430.01** Modulating the cortico-striatal output gate of working memory. J. MILLER*; A. KIYONAGA; R. B. IVRY; M. D'ESPOSITO. *UC Berkeley, UC Berkeley.*

2:00 VV3 **430.02** Reactivation and suppression of representations in working memory using frequency specific tms. J. RIDDLE*; D. CELLIER; S. DHANANI; M. DESPOSITO. *Univ. of California Berkeley, Univ. of California, Berkeley, Univ. of California Berkeley.*

3:00 VV4 **430.03** May mental arithmetic performance be enhanced by transcranial direct current stimulation? - Preliminary results. S. JANG*; M. KWON; K. KIM; S. C. JUN. *Gwangju Inst. of Sci. and Technol. (GIST), Korea Res. Inst. of Standards and Sci. (KRISS), Univ. of Sci. and Technol. (UST).*

4:00 VV5 **430.04** Transcranial direct current stimulation during working memory training increases transfer to problem solving and alters connectivity between the dorsal attention network and trained cortex. D. CISLER*; M. STRENZIOK; A. HARWOOD; R. PARASURAMAN; P. GREENWOOD. *George Mason Univ.*

1:00 VV6 **430.05** Prefrontal high gamma contributes differentially to the multi-frequency MEG response to rest and working memory task activation. F. W. CARVER; D. Y. RUBINSTEIN; S. I. FRADKIN; T. HOLROYD; R. COPPOLA*. *NIMH, NIMH.*

2:00 VV7 **430.06** ● Novelty modulates human striatal activation and prefrontal-striatal effective connectivity during working memory encoding. L. S. GEIGER*; A. SCHAEFER; C. MOESSNANG; Z. ZANG; M. ZANGL; H. CAO; T. VAN RAALTEN; A. MEYER-LINDENBERG; H. TOST. *Central Inst. of Mental Hlth., Rudolf Magnus Brain Ctr.*

3:00 VV8 **430.07** Verbal working memory elicits synchronization between cortex and hippocampus. J. SARNTHEIN*; E. BORAN; P. HILFIKER; L. STIEGLITZ; T. GRUNWALD; T. FEDELE. *Universitätsspital Zürich, Swiss Epilepsy Ctr.*

4:00 VV9 **430.08** Exploring the effect of age, task performance and learning style on prefrontal hemodynamics during a working memory task. A. A. ANDERSON*; K. PARSA; S. GEIGER; R. ZARAGOZA; R. KERMANIAN; E. SMITH; A. GANDJBAKHCHE. *NIH, St. Olaf Col.*

1:00 VV10 **430.09** Higher working memory capacity is associated with better suppression of internal noise. A. RAJAN*; S. MEYYAPPAN; H. WALKER; M. DING. *Univ. of Florida.*

2:00 VV11 **430.10** Examination of cerebral cortico-cortical communication for cognitive workload assessment during dual-task walking. E. P. SHAW*; J. C. RIETSCHEL; B. D. HENDERSHOT; A. L. PRUZINER; M. W. MILLER; B. D. HATFIELD; R. J. GENTILI. *Walter Reed Natl. Military Med. Ctr., Univ. of Maryland, Univ. of Maryland, Veteran's Hlth. Admin., DOD-VA Extremity Trauma and Amputation Ctr. of Excellence, Uniformed Services Univ. of the Hlth. Sci., Auburn Univ., Univ. of Maryland.*

3:00 VV12 **430.11** Methylphenidate manipulation of the neural underpinnings of anxiety and working memory interactions. B. FUCHS*; T. LAGO; N. BALDERSTON; C. GRILLON; M. ERNST. *NIH.*

4:00 VV13 **430.12** The effect of threat of shock on working memory maintenance vs. manipulation during the Sternberg paradigm. N. L. BALDERSTON*; A. HSIUNG; V. ONYEACHU; M. ERNST; C. GRILLON. *NIH.*

1:00 VV14 **430.13** The impact of age of language exposure on spatial working memory using fNIRS neuroimaging. G. KARTHEISER*; L. PETITTO. *Brain and Language Lab. For Neuroimaging, Gallaudet Univ.*

POSTER

431. Memory Encoding and Retrieval Processes

Theme H: Cognition

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 VV15 **431.01** Memory in autism: A preliminary fmri study. S. HUEMER*. *Loyola Marymount Univ.*

2:00 VV16 **431.02** Intervention of memory consolidation by post-trial learning: An fMRI study on figure-word associative memory. T. CHOU*; F. WU; K. LIANG. *Natl. Taiwan Univ., Natl. Taiwan Univ.*

3:00 VV17 **431.03** Spatiotemporal neural activity dissociates encoding and retrieval states. N. M. LONG*; M. L. DRASCHER; B. A. KUHL. *Univ. of Oregon.*

4:00 VV18 **431.04** Disentangling interactions between context switches and repetition effects. L. J. LOHNAS*; L. DAVACHI. *New York Univ.*

1:00 VV19 **431.05** Conceptual knowledge modulates visual representations through a frontoparietal network. K. BRAUNLICH*; B. C. LOVE. *Univ. Col. London, The Alan Turing Inst.*

2:00 VV20 **431.06** Estimating the functional dimensionality of neural representations. C. AHLHEIM*; B. C. LOVE. *Univ. Col. London, Univ. Col. London, The Alan Turing Inst.*

3:00 VV21 **431.07** Measures of neural similarity. S. BOBADILLA SUAREZ*; B. C. LOVE. *Univ. Col. London.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 VV22 **431.08** Detecting content-specific patterns using targeted memory reactivation. B. WANG; J. W. ANTONY; S. LURIE; K. A. PALLER; K. NORMAN*. *Princeton Univ., Northwestern Univ.*

1:00 VV23 **431.09** Effects of contextual reinstatement on retrieval of item-emotion associations. R. SAMIDE*; K. KURKELA; M. RITCHEY. *Boston Col.*

2:00 VV24 **431.10** Testing leads to consolidated-like memories. J. ARNAEZ-TELLERIA*; M. CARREIRAS; P. M. PAZ-ALONSO. *Basque Ctr. On Cognition Brain and Language, IKERBASQUE, Basque Fndn. for Sci.*

3:00 VV25 **431.11** Dynamic changes in directed connectivity during paired associates memory task. R. YAFFE; J. I. CHAPETON; S. K. INATI; K. A. ZAGHLOUL*. *Natl. Inst. of Neurolog. Disorders and Stroke, NIH, Natl. Inst. of Neurolog. Disorders and Stroke, NIH.*

4:00 VV26 **431.12** Neural signature of successful memory updating. L. M. KLUEN*; G. JOCHAM; L. SCHWABE. *Univ. of Hamburg, Ctr. For Behavioral Brain Sciences, Otto-von-Guericke-University Magdeburg.*

1:00 VV27 **431.13** Dopamine gene polymorphism, prefrontal cortex activation and neural pattern similarity during episodic memory encoding. L. ZHENG*; G. XUE. *State Key Lab. of Cognitive Neurosci. and Learning.*

2:00 VV28 **431.14** Context-dependent memory effects revealed by reinstated neural oscillations. M. J. WÄLTI*; D. G. WOOLLEY; N. WENDEROTH. *ETH Zurich.*

3:00 VV29 **431.15** Cortical oscillations during a fact-based memory integration task relate to academic success. N. L. VARGA*; J. R. MANNS. *Emory Univ.*

4:00 VV30 **431.16** Illusory shape processing during encoding of scrambled items induces subsequent false memory for intact shapes. J. M. KARANIAN*; S. D. SLOTNICK. *Boston Col., Wesleyan Univ., Boston Col.*

1:00 VV31 **431.17** Target-lure similarity predicts eye movements during encoding and retrieval in a mnemonic discrimination task. D. K. BJORNN*; C. STRAW; E. S. BRIGHTON; C. B. KIRWAN. *Brigham Young Univ., Brigham Young Univ., Brigham Young Univ.*

2:00 VV32 **431.18** ▲ Mnemonic discrimination in context-dependent memory specificity utilizing eye tracking confidence measures. T. WINN*; A. HEDGES-MUNCY; B. KIRWAN. *Brigham Young Univ., Brigham Young Univ.*

3:00 VV33 **431.19** ▲ Exploring the resting state neural activity of monolinguals, late and early bilinguals. A. L. HOWELL*; C. E. GOLD; C. B. KIRWAN. *Brigham Young Univ., Brigham Young Univ., Brigham Young Univ.*

4:00 VV34 **431.20** Mri data pre-processing steps differentially affect volumetric measures. A. HEDGES*; N. M. MUNCY; B. KIRWAN. *Brigham Young Univ.*

1:00 VV35 **431.21** The fate of memory representations in mnemonic generalization: An FMRI study. N. MUNCY*; B. KIRWAN. *Brigham Young Univ., Brigham Young Univ.*

2:00 VV36 **431.22** Physical activity is associated with differential BOLDresponses In the hippocampus during pattern separation: an fMRI study. C. B. HODGES*; N. M. MUNCY; C. B. KIRWAN. *Brigham Young Univ.*

3:00 VV37 **431.23** The neural mechanism of testing effect in episodic memory. Z. YE*; G. XUE. *State Key Lab. of Cognitive Neurosci. and Learning.*

1:00 DP13/VV38 **431.24** (Dynamic Poster) Using virtual reality environments to assess context boundary effects and temporal memory performance via spatiotemporal exploration. K. M. HORECKA*; M. R. DULAS; N. J. COHEN. *Univ. of Illinois at Urbana-Champaign Col. of Liberal Arts and Sci., Beckman Inst.*

1:00 VV39 **431.25** Separating memory and attention within the parietal memory network: An fMRI investigation comparing explicit and implicit retrieval processes using overt picture naming and recognition. A. W. GILMORE*; S. E. KALINOWSKI; S. C. MILLEVILLE; S. J. GOTTS; A. MARTIN. *Lab. of Brain and Cognition, NIMH/NIH, NIMH / LBC, Natl. Inst. of Mental Hlth.*

2:00 VV40 **431.26** The stimulus specific representation underlies similar memory discrimination. Z. GAO*; L. WANG. *Inst. of Psychology, Chinese Acad. of Sci., Univ. of Chinese Acad. of Sci.*

3:00 VV41 **431.27** ▲ The influence of prediction error on episodic memory reconsolidation. A. H. SINCLAIR*; M. D. BARENSE. *Univ. of Toronto.*

4:00 VV42 **431.28** Sleep selectively enhances associative aspects of emotional memories. R. COX*; M. VAN BRONKHORST; H. GOMILLION; A. C. SCHAPIRO; R. STICKGOLD. *Beth Israel Deaconess Med. Ctr., Harvard Med. Sch., Beth Israel Deaconess Med. Ctr., Beth Israel Deaconess Med. Ctr. / Harvard Med., Ctr. For Sleep and Cognition.*

1:00 VV43 **431.29** Strength of initial encoding in the selection of memories for sleep-dependent consolidation. D. DENIS*; R. STICKGOLD. *Ctr. for Sleep and Cognition, Ctr. For Sleep and Cognition.*

POSTER

432. Visual Working Memory

Theme H: Cognition

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 VV44 **432.01** Neural consequences of directing retrospective attention in visual working memory. P. M. BAYS*; R. TAYLOR. *Univ. of Cambridge, Univ. of Cambridge.*

2:00 VV45 **432.02** Maintenance of location information for the unattended memory item during visual working memory. Q. YU*; B. POSTLE. *Univ. of Wisconsin-Madison.*

3:00 VV46 **432.03** The neural representation of stimulus information, of the stimulus location, and of the location-dependence of stimulus information in visual working memory. Y. CAI*; D. A. SHELDON; B. R. POSTLE. *Beijing Normal Univ., Univ. Of Wisconsin–Madison.*

4:00 VV47 **432.04** Neural substrate of objects' material properties held in visual working memory. M. FUJIMICHI*; H. TSUDA; H. YAMAMOTO; J. SAIKI. *Kyoto Univ.*

1:00 VV48 **432.05** Neural oscillations underlie maintenance of simultaneously presented multi-items in visuospatial working memroy. Y. PAN*; C. QIN; Z. TAN; L. REN; W. ZHOU; L. WANG. *CAS Key Lab. of Mental Hlth., Univ. of Chinese Acad. of Sci., Beijing Key Lab. of Neuromodulation, Beijing Inst. of Functional Neurosurgery, Xuanwu Hospital, Capital Med. Univ., Epilepsy Ctr. of Yuquan Hospital, Tsinghua Univ., CAS Ctr. for Excellence in Brain Sci. and Intelligence Technol.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 VV49 **432.06** Resource allocation and confidence in visual working memory. A. H. YOO*; Z. KLYSZEJKO; W. J. MA; C. E. CURTIS. *New York Univ., New York Univ.*

3:00 VV50 **432.07** Retroactive spatial prioritization in working memory. K. MAXOOD; A. TEMUDO; K. K. SREENIVASAN*. *New York Univ. Abu Dhabi.*

4:00 VV51 **432.08** Decoding uncertainty in visual spatial short term memory from retinotopic cortex. T. C. SPRAGUE*; M. RAHMATI; A. YOO; W. MA; C. E. CURTIS. *New York Univ.*

1:00 VV52 **432.09** Oculomotor capture reveals trial-by-trial neural correlates of attentional guidance by contents of visual working memory. V. BECK*; T. VICKERY. *Univ. of Delaware.*

2:00 VV53 **432.10** Trans-saccadic integration and visual working memory. A. L. FROST*; M. NIEMEIER. *Univ. of Toronto, Univ. Toronto.*

3:00 VV54 **432.11** Frontal visual field maps mediate noise resilience of working memory. W. MACKEY*; C. E. CURTIS. *New York Univ., NYU.*

4:00 VV55 **432.12** Efficient coding in visual working memory accounts for stimulus-specific variations in recall. R. TAYLOR*; P. M. BAYS. *Univ. of Cambridge.*

POSTER

433. Working Memory

Theme H: Cognition

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 VV56 **433.01** ▲ What about grades in school?: the role of the working memory and fluid intelligence. J. SIBAJA-MOLINA*; O. A. RODRÍGUEZ-VILLAGRA. *Univ. of Costa Rica, Univ. of Costa Rica, Univ. of Costa Rica.*

2:00 VV57 **433.02** Pre-allocation of memory resources improves working memory performance in a sequential memory task. H. LEE*; Y. PARK; S. PAIK. *Korea Advanced Inst. of Sci. and Technol., Korea Advanced Inst. of Sci. and Technol.*

3:00 VV58 **433.03** Neither cholinergic nor dopaminergic enhancement improves spatial working memory precision in humans. A. N. HAREWOOD SMITH; J. ADITYA CHALLA; M. A. SILVER*. *Univ. of California, Berkeley, Univ. of California, Berkeley, Univ. of California, Berkeley, Univ. Of California, Berkeley.*

4:00 VV59 **433.04** Electroencephalographic features during the performance of a test demanding working memory in early postmenopausal women. M. SOLIS-ORTIZ*; E. G. GONZALEZ-PEREZ; M. L. GUTIERREZ-MUÑOZ. *Inst. Invest Med, Univ. Guanajuato, Univ. de Guanajuato, Univ. Autonoma de Nuevo Leon.*

1:00 VV60 **433.05** Intersubject correlation analysis of brain activity when viewing videotaped teacher's explanation. Y. HIRAKO*; T. ITO; S. SHIMADA. *Meiji Univ. Grad. Sch., Meiji Univ., Meiji Univ.*

2:00 VV61 **433.06** Decoding the limits of simultaneous storage in working memory. K. C. ADAM*; E. AWH; E. K. VOGEL. *Univ. of Chicago.*

3:00 VV62 **433.07** Alpha-band activity reveals concurrent storage of independent locations in spatial working memory. J. J. FOSTER*; D. W. SUTTERER; K. C. ADAM; E. K. VOGEL; E. AWH. *Univ. of Chicago.*

4:00 VV63 **433.08** Evidence for concurrent activation of sequentially encoded spatial locations. D. W. SUTTERER*; E. AWH. *Univ. of Chicago, Univ. of Chicago.*

1:00 VV64 **433.09** Restoration of fMRI decoding quality does not imply latent working memory states: A neural field model of retro-cue effects. S. SCHNEEGANS*; P. M. BAYS. *Univ. of Cambridge.*

2:00 VV65 **433.10** Associations between MEG-measured prefrontal activity during working memory and dopamine D_1 receptor availability measured with PET. D. Y. RUBINSTEIN*; D. P. EISENBERG; A. M. IANNI; F. W. CARVER; D. R. WEINBERGER; R. COPPOLA; K. F. BERMAN. *Natl. Inst. of Mental Hlth., Natl. Inst. of Mental Hlth., Lieber Inst. For Brain Develop.*

3:00 VV66 **433.11** A self-organizing memory network. C. FEDERER*; J. ZYLBERBERG. *Univ. of Colorado Sch. of Med., Univ. of Colorado Sch. of Med.*

1:00 DP14/VV67 **433.12** (Dynamic Poster) Network competition and reconfiguration during working memory processing. A. KIYONAGA*; D. J. LURIE; M. D'ESPOSITO. *Univ. of California Berkeley.*

1:00 VV68 **433.13** Disentangling sensory specialization from task specialization in lateral frontal cortex. A. L. NOYCE*; N. CESTERO; S. W. MICHALKA; B. G. SHINN-CUNNINGHAM; D. C. SOMERS. *Boston Univ., Boston Univ., Olin Col. of Engin.*

2:00 VV69 **433.14** Spatially specific delay period activity in the human superior colliculus. K. DESIMONE*; M. RAHMATI; G. T. SABER; K. K. SREENIVASAN; C. E. CURTIS. *New York Univ., New York Univ. Abu Dhabi, New York Univ., New York Univ., NYU.*

3:00 VV70 **433.15** ▲ Association of hippocampal D_1/D_2 receptor availability and neural activity during implicit encoding. S. E. GROGANS*; R. RASETTI; M. GREGORY; B. KOLACHANA; M. WINSTON; C. HEGARTY; A. IANNI; P. KOHN; J. H. CALLICOTT, III; D. R. WEINBERGER; K. F. BERMAN. *Natl. Inst. of Mental Hlth., NIH, Clin. and Translational Neurosci. Br., Lieber Inst. For Brain Develop., Natl. Inst. of Mental Hlth.*

4:00 VV71 **433.16** Neurodynamic mechanisms of working memory gating. B. J. FRICK*; C. W. HOY; J. LIN; R. T. KNIGHT; M. D'ESPOSITO; D. BADRE. *Brown Univ., Univ. of California at Berkeley, Univ. of California, Irvine, Univ. of California Berkeley, Univ. of California at Berkeley, Univ. of California.*

1:00 VV72 **433.17** Load-related theta decrease in DLPFC during information maintenance in working memory predicts subsequent performance. A. BRZEZICKA*; J. KAMINSKI; A. MAMELAK; U. RUTISHAUSER. *Cedars-Sinai Med. Ctr., SWPS Univ. of Social Sci. and Humanities, Caltech, Cedars-Sinai Med. Ctr.*

2:00 VV73 **433.18** The limits of unconscious working memory. M. PAYTON*; I. UL-HAQ; V. BABUSHKIN; K. K. SREENIVASAN. *New York Univ., New York Univ. Abu Dhabi, New York Univ. - Abu Dhabi, New York Univ. Abu Dhabi.*

3:00 VV74 **433.19** Ear morphometrics correlate with schizotypal inventory scores and SAT performance in sex- and side-specific manners. J. CANNON*; P. T. ORR. *Univ. of Scranton, Univ. of Scranton.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

434. Genetic and Genomic Studies of Schizophrenia

Theme H: Cognition

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 VV75 **434.01** Hippocampal subfield analysis in schizophrenia psychosis. J. M. PEREZ*; K. GLEASON; S. GHOSE; T. KIM; C. A. TAMMINGA. *UT Southwestern Med. Ctr.*

2:00 VV76 **434.02** Altered gene and protein expression of proinflammatory cytokines in the postmortem brain of schizophrenia patients. H. ZHANG*; H. RIZAVI; X. REN; G. PANDEY. *Univ. of Illinois at Chicago.*

3:00 VV77 **434.03** Effect of single nucleotide polymorphisms in fibroblast growth factor 14. J. DI RE*; P. A. WADSWORTH; F. LAEZZA. *Univ. of Texas Med. Br., Univ. of Texas Med. Br., Univ. of Texas Med. Br., Univ. of Texas Med. Br., Univ. of Texas Med. Br.*

4:00 VV78 **434.04** Resting-state connectivity in healthy adults is associated with polygenic risk for schizophrenia in dorsal frontal cortex. M. O'BRIEN*; M. D. GREGORY; M. L. ELLIOTT; J. P. MIKHAIEL; B. S. KOLACHANA; J. B. CZARAPATA; D. P. EISENBERG; K. F. BERMAN. *Natl. Inst. of Mental Hlth., NIH/NIMH, NIMH/NIH, Natl. Inst. of Mental Hlth., Natl. Inst. of Mental Hlth.*

1:00 VV79 **434.05** ● Polymorphism of the IL-6 SNP rs1800795 increases IL-6 production and is associated with symptom severity in chronically ill schizophrenia patients. D. BOERRIGTER*; T. W. WEICKERT; R. LENROOT; M. O'DONNELL; C. GALLETLY; D. LIU; C. SHANNON WEICKERT. *Neura, Sch. of Psychiatry, Univ. of New South Wales, Schizophrenia Res. Inst., Discipline of Psychiatry, Sch. of Medicine, the Univ. of Adelaide, Northern Adelaide Local Hlth. Network, Ramsay Hlth. Care (SA) Mental Hlth.*

2:00 VV80 **434.06** L1 retrotransposons in schizophrenia. B. C. REINER*; G. A. DOYLE; R. C. CRIST; A. M. PIGEON; R. N. LEVINSON; C. S. WEICKERT; G. TURECKI; T. N. FERRARO; W. H. BERRETTINI. *Univ. of Pennsylvania, Neurosci. Res. Australia, McGill, Cooper Med. Sch. of Rowan Univ.*

3:00 VV81 **434.07** Dysbindin regulates mitochondrial fission in hippocampal excitatory neurons. J. ZHAO*; Z. LI. *NIMH/NIH, NIMH.*

4:00 VV82 **434.08** Chromatin immunoprecipitation followed by deep sequencing reveals differential repressive chromatin sites in schizophrenia post mortem brain. B. M. FEINER; J. K. MELBOURNE; C. ROSEN; R. P. SHARMA*. *UIC Psychiatry, Univ. of Illinois At Chicago, Univ. of Illinois At Chicago, Univ. of Illinois at Chicago.*

1:00 VV83 **434.09** Sleep deprivation induces expression of serotonin 2A receptors in the frontal cortex of mice, in an Egr3-dependent manner. A. VANNAN*; K. T. MEYERS; A. M. MAPLE; D. I. ELIZALDE; X. ZHAO; A. OVERGAARD; G. M. KNUDSEN; A. L. GALLITANO. *Arizona State Univ., Univ. of Arizona Col. of Med., Copenhagen Univ. Hosp. Rigshospitalet, Univ. of Copenhagen.*

2:00 VV84 **434.10** ▲ Exploring polygenic risk in cognitive trajectory subgroups of schizophrenia: Unexpected differences in correlations with cognition. S. R. ZAIDMAN*; E. GIANGRANDE; D. R. WEINBERGER; K. F. BERMAN; D. DICKINSON. *NIMH, Univ. of Virginia, Lieber Inst. For Brain Develop., Natl. Inst. of Mental Hlth., Natl. Inst. of Mental Hlth.*

3:00 VV85 **434.11** Genetic analysis of regulatory elements of the NMDARs in schizophrenia. A. BALIK*; J. CERNY; T. RAUSCH; V. BENES; S. HRYCHOVA; J. HORACEK; L. VYKLICKY. *Inst. of Physiology, ASCR, Inst. of Biotechnology, CAS, EMBL, Inst. of Physiology, CAS, Natl. Inst. of Mental Hlth., Inst. of Physiology, CAS.*

4:00 VV86 **434.12** Using random forest machine learning to identify multi-genetic influences on neural activity underlying motivation. Q. CHEN*; R. W. LEFCO; R. E. STRAUB; K. K. NICODEMUS; D. R. WEINBERGER; C. F. ZINK. *Lieber Inst. For Brain Develop., Univ. of Edinburgh.*

1:00 VV87 **434.13** Maternal immune activation impacts schizophrenia-related microRNA related to neuroinflammation. S. K. AMOAH*; B. A. RODRIGUEZ; C. N. LOGOTHETIS; T. R. YELLOWHAIR; J. P. WEICK; L. L. JANTZIE; N. MELLIIOS. *Univ. of New Mexico HSC, Univ. of New Mexico HSC.*

POSTER

435. Human and Animal Studies of Circuits and Systems in Schizophrenia

Theme H: Cognition

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 VV88 **435.01** Study of the functional importance of DISC1 Serine 713/710 phosphorylation in brain development and cognitive behavior in human subjects and in novel mouse models. H. JAARO-PELED*; N. GAMO; Y. HORIUCHI; S. ISHII; K. ISHII; K. NISHIHARA; Z. HO; S. KULASON; S. MORI; D. SCHRETLEN; H. OKANO; T. RATNANATHER; M. MILLER; K. ISHIZUKA; A. SAWA. *Johns Hopkins Univ., Johns Hopkins Univ., Keio Univ., Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ.*

2:00 VV89 **435.02** Medial septum differentially regulates spontaneous dopamine neuron activity in the ventral tegmental area and substantia nigra pars compacta via distinct neurochemical pathways. D. M. BORTZ*; A. A. GRACE. *Univ. of Pittsburgh.*

3:00 VV90 **435.03** ● Molecular mapping of the human thalamus. Relationship with thalamocortical wiring and role in schizophrenia. R. CALZAVARA*; H. AKIL; J. D. BARCHAS; W. E. BUNNEY; F. S. LEE; R. M. MYERS; A. F. SCHATZBERG; S. J. WATSON. *Mol Beh Neurosci In Univ. of Michigan Med. Sch., Dept. of Psychiatry Weill Cornell Med. Col., Psychiatry and Human Behavior Univ. of California - Irvine, Hudson Alpha Inst. for Biotech., Dept. of Psychiatry and Behavioral Sciences, Stanford Univ.*

4:00 VV91 **435.04** Immune activation across the visuospatial working memory circuit in schizophrenia. A. R. LOCKER*; E. SIPPLE; P. LIDSTONE; D. VOLK. *UPMC, Univ. of Pittsburgh.*

1:00 VV92 **435.05** Relationship of auditory event related potentials with magnetic resonance spectroscopy metabolites in early stage psychosis. L. BARTOLOMEO; A. M. WRIGHT; R. MA; T. A. HUMMER; M. M. FRANCIS; A. C. VISCO; N. MEHDIYOUN; A. R. BOLBECKER; W. P. HETRICK; U. DYDAK; B. F. O'DONNELL*; A. BREIER. *Indiana Univ., Purdue Univ., Indiana Univ. Sch. of Med., Indian Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 WW1 **435.06** Facial emotion processing in schizophrenia using newly created facial stimuli by japanese actors; fMRI study. N. ORIBE*; H. KUGA; H. TAKAO; S. FUKUSHIMA; Y. HIRANO; T. ONITSUKA; T. UENO. *Kyushu Univ., Hizen Psychiatric Ctr.*

3:00 WW2 **435.07** Tolcapone modulates cortical information processing underlying cognitive control mechanisms in patients with schizophrenia and healthy controls. Y. TONG*; J. A. APUD; R. RASETTI; J. H. CALLICOTT, III; B. KOLACHANA; B. K. DAS; T. VARGAS; B. ZOLTICK; D. DICKINSON; D. R. WEINBERGER; V. S. MATTAY; K. F. BERMAN. *NIH/NIMH, NIH, Natl. Inst. of Mental Hlth., Natl. Inst. of Mental Hlth., Lieber Inst. For Brain Develop.*

4:00 WW3 **435.08** Ventral hippocampal fMRI hypoactivity and social memory impairment in a 22q11.2 deletion mouse model of schizophrenia. J. B. KAHN*; S. L. WEHRLI; S. A. ANDERSON; D. A. COULTER. *Univ. of Pennsylvania, Children's Hosp. of Philadelphia, Univ. of Pennsylvania, Children's Hosp. of Philadelphia, Children's Hosp. of Philadelphia, Children's Hosp. of Philadelphia.*

1:00 WW4 **435.09** Schizophrenia exhibits bi-directional alterations in cortico-striato-cerebellar circuits. J. JI*; C. DIEHL; C. SCHLEIFER; G. YANG; G. CREATURA; G. REPOVS; J. D. MURRAY; A. WINKLER; A. ANTICEVIC. *Yale Univ., Univ. of Ljubljana, Oxford Univ.*

2:00 WW5 **435.10** ▲ Role of antipsychotics in disruptions of face detection in schizophrenia. P. E. MARINHO*; N. L. ALMEIDA; W. E. M. COMFORT; T. M. P. FERNANDES; T. L. GOMES; N. A. SANTOS. *Univ. Federal Da Paraíba, Univ. Federal Da Paraíba, Univ. Federal Rural de Pernambuco.*

3:00 WW6 **435.11** Metacognition dysfunction and disruptions of global balance between brain networks in schizophrenia. W. JIA*; H. ZHU; Y. NI; J. SU; H. JIA; X. WAN. *State Key Lab. of Cognitive Neurosci. & Learning, Beijing Anding Hosp.*

4:00 WW7 **435.12** Global NMDAR hypofunction increases activity of top-down projections during sensory processing. A. RANSON*; E. BROOM; A. POWELL; J. HALL. *Cardiff Univ.*

1:00 WW8 **435.13** Neurobiology of reality monitoring: Implications for treatment development in schizophrenia. K. SUBRAMANIAM*; L. B. HINKLEY; D. MIZUIRI; H. KOTHARE; S. VINOGRADOV; J. F. HOUDE; S. NAGARAJAN. *UCSF, Univ. of Minnesota.*

2:00 WW9 **435.14** Dynamical clustering of mismatch negativity EEG data in large cohorts of schizophrenia patients and healthy participants reveals functionally distinct subgroups. R. KIM*; C. LAINSCSEK; M. L. THOMAS; T. COGS INVESTIGATORS; T. J. SEJNOWSKI; G. A. LIGHT. *UCSD, Salk Inst. for Biol. Studies, Inst. for Neural Computation, UCSD, UCSD.*

3:00 WW10 **435.15** Coincidental disruption of gamma rhythms in first episode schizophrenia. Y. HIRANO*; N. ORIBE; T. ONITSUKA; S. KANBA; R. MCCARLEY; K. SPENCER. *Kyushu Univ., VA Boston, Harvard Med. Sch., VA Boston, Harvard Med. Sch.*

4:00 WW11 **435.16** Effects of glutamatergic and dopaminergic drugs on auditory steady state response in common marmosets. Y. IWAMURA; K. MATSUMOTO; T. NAKAKO; H. IMAI; A. KIYOSHI; T. ENOMOTO; A. MATSUMOTO; M. IKEJIRI; T. NAKAYAMA; Y. OGI; T. ISHIYAMA*; K. IKEDA. *Sumitomo Dainippon Pharma Co., Ltd.*

1:00 WW12 **435.17** Abnormal hippocampal-mPFC synchrony in the KCNH2-3.1 transgenic mouse model. M. REN*; J. ZHU; Y. LI; S. ZHU; K. MEZEIVTCH; Z. HU; S. QIN; X. LI; Q. TIAN; D. PARADES; Q. CHEN; K. H. WANG; D. R. WEINBERGER; F. YANG. *The Lieber Inst. for Brain Develop., Chongqing Med. Univ., Natl. Inst. of Mental Hlth.*

2:00 WW13 **435.18** The orexin receptor antagonist TCS 1102 reverses aberrant dopamine system function in a rodent model of schizophrenia. S. M. PEREZ*; M. PATTON; D. J. LODGE. *UTHSCSA, UTHSCSA.*

3:00 WW14 **435.19** Intra-nucleus accumbens infusion of quinpirole recovers mesolimbic hyperdopaminergia induced by systemic administration of sulpiride. S. B. DE SOUZA*; E. MCKIMM; S. M. TRABOSH; C. D. BLAHA; C. DA CUNHA. *Mayo Clin., Univ. of Memphis, Mayo Clin., Univ. Federal do Parana.*

4:00 WW15 **435.20** Focal cortico-striatal tract deymelination in juvenile mice promotes neuro-functional changes related to social and motor-stereotypical behaviours. G. MENDEZ-VICTORIANO*; R. E. REYNA-GUTIERREZ; J. M. VEGA-RIQUER; N. MOY-LOPEZ; J. GUZMAN-MUNIZ; O. GONZALEZ-PEREZ. *Univ. of Colima, Med. Sci. PhD Program, Sch. of Medicine/University of Colima.*

1:00 WW16 **435.21** A study of auditory cortical cross-frequency coupling in schizophrenia. N. RAMAKRISHNAN*; N. R. MURPHY; C. P. WALKER; N. R. POLIZZOTTO; D. P. WOMACK; R. Y. CHO. *Univ. of Texas Hlth. Sci. Ctr.*

POSTER

436. Staining and Imaging Techniques

Theme I: Techniques

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 WW17 **436.01** Quantification of immunohistochemistry on adjacent sections comparing fluorescent and DAB markers. B. TIPTON*; J. BAUN; T. YORK; C. ZURHELLEN; R. C. SWITZER, III. *Neurosci. Associates.*

2:00 WW18 **436.02** Improved application of the electrophoretic tissue clearing technology, CLARITY, to intact solid organs. S. PARK*; H. LEE. *Korea Inst. of Toxicology, Keimyung Univ. Sch. of Med.*

3:00 WW19 **436.03** Fluorescent biomarkers as reporters of poor quality transcardial perfusion-fixation in frozen brain sections: A much needed tool for experimental neuroscience. A. DEHGHANI*; H. KARATAS KURSUN; A. CAN; M. YEMISCI OZKAN; E. EREN KOCAK; T. DALKARA. *Hacettepe Uni. Inst. Neurol. Sci. and Psych., Dept. of Histology and Embryology, Hacettepe University, Fac. of medicine, Dept. of Neurol., Hacettepe University, Fac. of Medicine, Dept. of Psychiatry.*

4:00 WW20 **436.04** Ultra-luminous labels for imaging of individual molecular targets in brain cells. V. V. DIDENKO*. *Baylor Col. of Med.*

1:00 WW21 **436.05** Split-miniSOG for imaging intracellular protein-protein interactions by correlated light and electron microscopy. D. BOASSA*; S. R. ADAMS; S. PALIDA; V. LEV-RAM; J. HU; Q. XIONG; S. PHAN; M. ELLISMAN; J. T. NGO. *Univ. of California San Diego, Univ. of California San Diego, Boston Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 WW22 **436.06** Direct observation of local protein synthesis in single cells *in vivo*. I. KAYS*; B. E. CHEN. *McGill Univ. Hlth. Ctr., McGill Univ.*

3:00 WW23 **436.07** ● Nucleomic substrates for social behavior in GnRH1 neurons in an African cichlid fish. S. ALVARADO*; R. A. FERNALD. *Stanford Univ.*

4:00 WW24 **436.08** Study on antioxidant measurement in human brain using MRS. T. MURASE*; M. UMEDA; T. HIGUCHI. *Meiji Univ. of Integrative Med.*

1:00 WW25 **436.09** Novel knockin mouse lines for Cre-depenent sparse labeling of genetically-defined, single neurons for brainwide morphological analyses. M. B. VELDMAN*; N. N. FOSTER; M. ZHU; M. BECERRA; T. L. DAIGLE; H. ZENG; H. DONG; X. W. YANG. *UCLA, Keck Sch. of Med. of USC, Allen Inst. For Brain Sci., Allen Inst. for Brain Sci.*

2:00 WW26 **436.10** Quantification of allele-specific protein expression over time in single cells *in vivo*. C. LO*; B. E. CHEN. *Ctr. for Res. In Neurosci., McGill Univ.*

3:00 WW27 **436.11** Simultaneous mapping and quantitation of neurotransmitters directly in tissue sections using mass spectrometry imaging. P. E. ANDREN*; M. SHARIATGORJI; A. NILSSON; E. FRIDJONSDOTTIR; L. KATAN; J. SAVMARKER; P. SVENNINGSSON; L. ODELL. *Uppsala Univ., Karolinska Institutet.*

4:00 WW28 **436.12** Engineered hemodynamic imaging of neuropeptides and proteases in the brain. M. DESAI*; A. D. SLUSARCZYK; M. D. BARCH; A. D. CHAPIN, 02139; A. JASANOFF. *MIT, MIT.*

1:00 WW29 **436.13** An axon-targeted GCaMP sensor for *in vivo* imaging of distal and local axons in mammalian cortex. G. J. BROUSSARD*, JR; Y. LIANG; M. FRIDMAN; E. K. UNGER; G. MENG; L. T. PETREANU; N. JI; L. TIAN. *Univ. of California At Davis, Janelia Res. Campus, HHMI, Champalimaud Neurosci. Programmme.*

POSTER

437. Optical Methods for Functional Circuit Analysis *In Vivo*

Theme I: Techniques

Mon. 1:00 PM – *Walter E. Washington Convention Center*, Halls A-C

1:00 WW30 **437.01** An AAV toolbox for enhanced transduction efficiency with regional and/or cell-type specificity in the CNS and PNS after systemic delivery. K. CHAN*; S. R. KUMAR; M. J. JANG; Y. LUO; R. C. HURT; N. C. FLYTZANIS; N. GOEDEN; B. E. DEVERMAN; V. GRADINARU. *Caltech.*

2:00 WW31 **437.02** Deep brain optical imaging reveals motivational salience encoding by dorsal raphe dopamine neurons. J. CHO*; J. E. ROBINSON; J. B. TREWEEK; D. A. WAGENAAR; V. GRADINARU. *Caltech, Caltech.*

3:00 WW32 **437.03** Machine learning to predict expression, membrane localization, and functional properties of diverse Channelrhodopsin variants. C. BEDBROOK*; K. K. YANG; A. J. RICE; X. DING; F. H. ARNOLD; V. GRADINARU. *CALTECH, CALTECH.*

4:00 WW33 **437.04** Engineering prokaryotic repressors for optical sensing of neurotransmitters. X. DING*; C. N. BEDBROOK; N. HUTCHINS; V. GRADINARU. *Caltech.*

1:00 WW34 **437.05** Elucidating the circuit architecture and function of NAc inputs to the VTA. H. YANG; J. W. DE JONG; Y. TAK; J. R. PECK; H. BATEUP; S. LAMMEL*. *UC Berkeley.*

2:00 WW35 **437.06** Causal link between neocortical single-cell ensemble activity and specific behaviors. J. H. JENNINGS*; C. K. KIM; J. MARSHEL; M. RAFFIEE; L. YE; S. QUIRIN; S. PAK; C. RAMAKRISHNAN; K. DEISSEROTH. *Stanford Univ., Stanford Univ., Howard Hughes Med. Inst.*

3:00 WW36 **437.07** Cell-type specific reward dynamics of habenular neurons. E. L. SYLWESTRAK*; S. VESUNA; A. CROW; C. RAMAKRISHNAN; K. DEISSEROTH. *Stanford Univ., Stanford Univ., Stanford Univ. Dept. of Psychology.*

4:00 WW37 **437.08** All-optical closed-loop feedback control of targeted neuronal populations in awake animals. N. YOUNG*; C. K. KIM; M. INOUE; Y. S. KIM; K. DEISSEROTH. *Stanford Univ.*

1:00 WW38 **437.09** Molecular and circuit-dynamical identification of top-down neural mechanisms for restraint of reward-seeking. C. K. KIM*; L. YE; J. H. JENNINGS; N. PICHAMOORTHY; D. D. TANG; C. RAMAKRISHNAN; A. WANG; K. DEISSEROTH. *Stanford Univ.*

2:00 WW39 **437.10** Engineering of near-infrared genetically encoded voltage indicators. M. MONAKHOV; M. MATLASHOV; D. SHCHERBAKOVA; A. BOILLAT; C. SONG; S. ANTIC; V. VERKHUSHA; T. KNOPFEL*. *UConn Hlth., Albert Einstein Col. of Med., Imperial Col. London, Imperial Col. London.*

3:00 WW40 **437.11** Neural circuit mechanisms underlying drug-induced changes in motivated behaviors. J. W. DE JONG*; S. A. AFJEI; J. R. PECK; V. HAN; C. K. KIM; K. DEISSEROTH; S. LAMMEL. *UC Berkeley, Stanford Univ., Stanford Univ. Dept. of Psychology.*

4:00 WW41 **437.12** Amygdalonigral salience signals shape action-outcome associations. E. E. STEINBERG*; F. GORE; B. D. HEIFETS; K. T. BEIER; C. FÖLDY; T. N. LERNER; M. D. TAYLOR; L. LUO; K. DEISSEROTH; R. C. MALENKA. *Stanford Univ., Univ. of Zurich, Northwestern Univ.*

1:00 WW42 **437.13** Ancestral circuits for the coordinated modulation of brain state. M. LOVETT-BARRON*; A. ANDALMAN; W. E. ALLEN; S. VESUNA; I. KAUVAR; V. M. BURNS; K. DEISSEROTH. *Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ.*

2:00 WW43 **437.14** Habenular cell ensemble activity encoding adverse experience: Temporal tiling, brainwide response orchestration and behavioral state transitions. A. S. ANDALMAN*; V. M. BURNS; M. LOVETT-BARRON; M. BROXTON; B. POOLE; S. J. YANG; L. GROSENICK; T. N. LERNER; P. MOURRAIN; M. LEVOY; K. DEISSEROTH. *Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Northwestern, Stanford Univ., Stanford Univ., Stanford Univ.*

3:00 WW44 **437.15** A novel red-shifted excitatory channelrhodopsin with multiple properties enabling markedly improved integration of Ca^{2+} imaging with optogenetic control. Y. KIM*; M. INOUE; C. RAMAKRISHNAN; H. KATO; S. YOSHIZAWA; K. DEISSEROTH. *Stanford Univ., Univ. of Tokyo.*

4:00 WW45 **437.16** Wide field-of-view three dimensional all-optical neurophysiology with millisecond-resolution *in vivo*. J. H. MARSHEL*; S. QUIRIN; E. L. SYLWESTRAK; A. CHIBUKHCHYAN; A. CROW; C. RAMAKRISHNAN; K. DEISSEROTH. *Stanford Univ.*

1:00 WW46 **437.17** ● Two-photon calcium imaging in behaving rhesus macaque and its feasibility for all-optical brain-machine interfaces. X. SUN*; E. TRAUTMANN; D. O' SHEA; J. MARSHEL; W. ALLEN; I. KAUVAR; C. RAMAKRISHNAN; S. RYU; K. DEISSEROTH; K. SHENOY. *Stanford Univ.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 WW47 **437.18** Precise spatiotemporal control of neural activity. A. R. MARDINLY*; I. OLDENBURG; N. PEGARD; S. SRIDHARAN; E. LYALL; K. CHESNOV; S. BROHAWN; L. WALLER; H. ADESNIK. *UC Berkeley, Univ. of California.*

3:00 WW48 **437.19** Automated fine-scale three-dimensional paw tracking and posture classification system in mice. M. BALBI*; A. LUO; L. BOLANOS; F. BOLANOS; J. LEDUE; T. H. MURPHY. *Univ. of British Columbia.*

4:00 WW49 **437.20** Correlating mesoscopic cortical calcium activity with single unit activity or body movements in mice. M. P. VANNI*; D. XIAO; C. MITELUT; A. W. CHAN; J. LEDUE; J. BOYD; M. BALBI; F. BOLANOS; Y. SEKINO; G. SILASI; N. V. SWINDALE; T. H. MURPHY. *Univ. of British Columbia, Univ. British Columbia.*

1:00 WW50 **437.21** Automated optogenetic and mesoscopic brain imaging system for the mouse home-cage with web-based monitoring for up to 10 mice. F. BOLANOS*; J. M. LEDUE; J. D. BOYD; T. H. MURPHY. *UBC.*

2:00 WW51 **437.22** Sub-cortical or peripheral nerve spike-triggered cortical mesoscale activity associated with specific actions in awake chronic mice. D. XIAO*; J. M. LEDUE; J. GREWAL; T. H. MURPHY. *Kinsmen Lab, Dept. of Psychiatry, Djavad Mowafaghian Ctr. for Brain Health, Univ. of British Columbia, Dept. of Psychiatry and Brain Res. Ctr.*

3:00 WW52 **437.23** Movement initiation in gcamp6 mice is preceded by stereotyped, multi-second wide-scale dorsal cortex dynamics. C. MITELUT*; A. X. LUO; G. SILASI; Y. SEKINO; J. BOYD; F. BOLANOS; N. V. SWINDALE; T. H. MURPHY. *Univ. of British Columbia, Univ. of Ottawa, Kyushu Univ.*

1:00 DP15/WW53 **437.24** (Dynamic Poster) An active nanophotonic multi-beam probe for optogenetic stimulation *in vivo.* A. KEPECS*; Q. LI; A. MOHANTY; A. M. TAYADON; M. LIPSON. *Cold Spring Harbor Lab., Columbia Univ.*

1:00 WW54 **437.25** Transgenic sparse expression of genetically. S. D. ANTIC*; C. SONG; M. COLAVITA; T. KNOPFEL. *UConn Hlth., Imperial Col. London.*

• Indicated a real or perceived conflict of interest, see page 145 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

Conflict of Interest Statements

The following presenters, signified by a dot (•) in the program, indicated a real or perceived conflict of interest. Presenters listed without a dot in the program had no financial relationships to disclose.

PRESENTATION NUMBER	STATEMENT
263	**H.J. Willison:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; PI for ICA-GBS, Alexion funded study on complement inhibition in Guillain-Barre syndrome. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Receipt of SJN-1945 from Senju Pharmceuticals for pre-clinical studies, Receipt of ANX-005 from Annexon Biosciences for pre-clinical studies. F. Consulting Fees (e.g., advisory boards); SAB Member, Annexon Biosciences.
268	**B. Wilson:** Other; MED-EL GmbH.
271.05	**C. Hor:** A. Employment/Salary (full or part-time); Duke-NUS Medical School. **E.L. Goh:** A. Employment/Salary (full or part-time); Duke-NUS Medical School.
272.02	**A.R. Kriegstein:** F. Consulting Fees (e.g., advisory boards); Neurona Therapeutics. **A. Alvarez-Buylla:** F. Consulting Fees (e.g., advisory boards); Neurona Therapeutics.
273.02	**D.K. Cullen:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Axonova Medical.
275.06	**X. Jiang:** A. Employment/Salary (full or part-time); Misfolding Diagnostics, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Misfolding Diagnostics, Inc. **J. Chapman:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Misfolding Diagnostics, Inc.
276.05	**H. Wei:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Consultant of Eagle Pharmaceuticals, Inc.
279.06	**M. Michaelides:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Metis Laboratories, Inc.
279.11	**C.J. Magnus:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Redpin Therapeutics. Other; Issued and pending patents. **P.H. Lee:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Redpin Therapeutics. Other; Issued and pending patents. **S.M. Sternson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Redpin Therapeutics. Other; Issued and pending patents.
281.08	**R. Gil-Da-Costa:** A. Employment/Salary (full or part-time); Neuroverse, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neuroverse, Inc. **M. Lopes:** A. Employment/Salary (full or part-time); Neuroverse, Inc. **M. Zinni:** A. Employment/Salary (full or part-time); Neuroverse, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neuroverse, Inc. **M. Caswell:** A. Employment/Salary (full or part-time); Neuroverse, Inc.
282.18	**J.L. Rubenstein:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Neurona Therapeutics.
283.21	**M. Chatterjee:** A. Employment/Salary (full or part-time); Yale University. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Brain and Behavior Research Foundation. **P.K. Kurup:** A. Employment/Salary (full or part-time); Yale University.
285.19	**T.A. Babola:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Otonomy. **S. Li:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Otonomy. **B. Lee:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Otonomy. **D.E. Bergles:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Otonomy.
286.22	**M.A. Geyer:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; NIDA, NIMH, U.S. Veteran's Administration VISN 22 Mental Illness Research, Education, and Clinical Center. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); San Diego Instruments. F. Consulting Fees (e.g., advisory boards); Abbott, Dart, Lundbeck, Neurocrine, Omeros, Otsuka, Sunovion.
287.01	**J.F. Cheer:** Other; DA022340; DA042595. **C.W. Lindsley:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); patent on allosteric modulators of GPCR. **P.J. Conn:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); patent on allosteric modulators GPCR.
287.02	**C. Jones:** Other; I am an inventor on patents protecting selective allosteric modulators of multiple GPCRs. **C. Lindsley:** Other; I am an inventor on patents protecting selective allosteric modulators of multiple GPCRs. **J. Conn:** Other; I am an inventor on patents protecting selective allosteric modulators of multiple GPCRs.
287.03	**D.P. Covey:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; DA041827. **J.F. Cheer:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; A022340. **P. Conn:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); patent holder.
287.04	**C.W. Lindsley:** Other; I am an inventor on patents protecting selective allosteric modulators of multiple GPCRs. **P.J. Conn:** Other; I am an inventor on patents protecting selective allosteric modulators of multiple GPCRs.
287.20	**R. Lutjens:** A. Employment/Salary (full or part-time); Addex Therapeutics.
287.23	**A. Pittaluga:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Aziende Chimiche Riunite Angelini Francesco A.C.R.A.F. S.p.A. **M. Marchi:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Aziende Chimiche Riunite Angelini Francesco A.C.R.A.F. S.p.A.

PRESENTATION NUMBER	STATEMENT
288.12	**J.L. Costantin:** A. Employment/Salary (full or part-time); Nanion Technologies. **A. Obergrussberger:** A. Employment/Salary (full or part-time); Nanion Technologies. **S. Stölzle-Feix:** A. Employment/Salary (full or part-time); Nanion Technologies. **N. Becker:** A. Employment/Salary (full or part-time); Nanion Technologies. **C. Haarmann:** A. Employment/Salary (full or part-time); Nanion Technologies. **M. Rapedius:** A. Employment/Salary (full or part-time); Nanion Technologies. **T. Goetze:** A. Employment/Salary (full or part-time); Nanion Technologies. **I. Rinke-Weiß:** A. Employment/Salary (full or part-time); Nanion Technologies. **E. Dragicevic:** A. Employment/Salary (full or part-time); Nanion Technologies. **C. Bot:** A. Employment/Salary (full or part-time); Nanion Technologies. **R. Haedo:** A. Employment/Salary (full or part-time); Nanion Technologies. **M. George:** A. Employment/Salary (full or part-time); Nanion Technologies. **A. Brüggemann:** A. Employment/Salary (full or part-time); Nanion Technologies. **N. Fertig:** A. Employment/Salary (full or part-time); Nanion Technologies.
289.19	**A.O. Williams:** A. Employment/Salary (full or part-time); Double Helix LLC, Boulder, CO 80302, USA. **A. Agrawal:** A. Employment/Salary (full or part-time); Double Helix LLC, Boulder, CO 80302, USA.
291.03	**W.S. Anderson:** F. Consulting Fees (e.g., advisory boards); Globus Medical,, Longeviti, LLC.
293.05	**A. Sargsyan:** A. Employment/Salary (full or part-time); Kaoskey Pty Ltd, Sydney. **D. Melkonian:** A. Employment/Salary (full or part-time); Kaoskey Pty Ltd, Sydney. **P.M. Casillas-Espinosa:** A. Employment/Salary (full or part-time); Deaprtment of Medicine, The Royal Melbourne Hospital, The University of Melbourne. **T.J. O'Brien:** A. Employment/Salary (full or part-time); Deaprtment of Medicine, The Royal Melbourne Hospital, The University of Melbourne.
294.08	**T.P. Sutula:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); T.S. has equity interest in Neurogenomex, Inc.
294.09	**G.C. Luerman:** A. Employment/Salary (full or part-time); Axiogenesis AG. **C. Fleming:** A. Employment/Salary (full or part-time); Axiogenesis AG. **D. Hess:** A. Employment/Salary (full or part-time); Axiogenesis AG. **T. Palm:** A. Employment/Salary (full or part-time); Axiogenesis AG. **A. Ehlich:** A. Employment/Salary (full or part-time); Axiogenesis AG. **H. Bohlen:** A. Employment/Salary (full or part-time); Axiogenesis AG. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Axiogenesis AG.
295.14	**S. Schilling:** F. Consulting Fees (e.g., advisory boards); Probiodrug AG. **H.U. Demuth:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Probiodrug AG. F. Consulting Fees (e.g., advisory boards); Probiodrug AG.
296.02	**S.W. Hell:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Abberior GmbH and Abberior Instruments GmbH.
296.07	**J.P. Svaren:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Charcot-Marie-Tooth Association.
297.05	**V.R. Lingappa:** A. Employment/Salary (full or part-time); all Time Employee of Prosetta. **D. Dey:** A. Employment/Salary (full or part-time); FTE Prosetta. **S. Selvarajah:** A. Employment/Salary (full or part-time); FTE Prosetta. **V. Asundi:** A. Employment/Salary (full or part-time); FTE Prosetta. **C. Korth:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; roject in part funded by Prosetta, but own salary independentt.
298.03	**S.A. McAllen:** A. Employment/Salary (full or part-time); University of Texas Medical Branch.
299.01	**L.E. Vincent:** A. Employment/Salary (full or part-time); NeuroInitiative. **J.W. Ryan:** A. Employment/Salary (full or part-time); NeuroInitiative. **D.A. Dodds:** A. Employment/Salary (full or part-time); NeuroInitiative. **A.D. Lee:** A. Employment/Salary (full or part-time); NeuroInitiative. **B. Behrouz:** A. Employment/Salary (full or part-time); NeuroInitiative.
299.04	**H.J. Federoff:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inventor on a patent application.
299.09	**D. Ho:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Y BIOLOGICS.
300.07	**P. Thomas:** A. Employment/Salary (full or part-time); Proteomics Center of Excellence, Northwestern University, Evanston, IL 60208, Robert H. Lurie Cancer Center, Northwestern Universit.
301.04	**B.L. Burgess:** A. Employment/Salary (full or part-time); Genentech. **D.L. Baker:** A. Employment/Salary (full or part-time); Genentech. **S.L. Dominguez:** A. Employment/Salary (full or part-time); Genentech. **A. Datwani:** A. Employment/Salary (full or part-time); Genentech. **F.L. Yeh:** A. Employment/Salary (full or part-time); Genentech.
301.11	**M.J. Alvarez:** Other; DarwinHealth, Inc. NY.
302.02	**M.. de Araujo Furtado:** A. Employment/Salary (full or part-time); BioSead, Inc.
302.03	**M.D. Furtado:** A. Employment/Salary (full or part-time); BioSEaD, LLC. **T. Haas:** A. Employment/Salary (full or part-time); Data Sciences International.
302.14	**A. Gravanis:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Bionature EA LTD.
303.05	**P. Toledo Nunes:** A. Employment/Salary (full or part-time); Full time Post-Doc.
303.06	**R.M. Kannan:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ashvattha Therapeutics, Orpheris Inc. **S. Kannan:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ashvattha Therapeutics, Orpheris Inc.
303.11	**F. Perez:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Conacyt Grant 241911. **C. González-Espinosa:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Grant Conacyt 188565.
303.17	**S. Rege:** A. Employment/Salary (full or part-time); Alkahest, Inc. **H. Hackbart:** A. Employment/Salary (full or part-time); Alkahest, Inc. **A. Teichert:** A. Employment/Salary (full or part-time); Alkahest, Inc. **J. Masumi:** A. Employment/Salary (full or part-time); Alkahest, Inc. **S.P. Braithwaite:** A. Employment/Salary (full or part-time); Alkahest, Inc. **S. Minami:** A. Employment/Salary (full or part-time); Alkahest, Inc.
304.24	**M.S. Alam:** A. Employment/Salary (full or part-time); University of Notre Dame. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); University of Notre Dame. **K. Haldar:** A. Employment/Salary (full or part-time); University of Notre Dame. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); University of Notre Dame.

PRESENTATION NUMBER	STATEMENT
306.12	**S.C. Cramer:** Other; Steven C. Cramer has served as a consultant for MicroTransponder, Dart Neuroscience, RAND Corporation, and Roche.
307.23	**T. Bronhara:** Other; University of Sao Paulo. **J.L. Liberato:** A. Employment/Salary (full or part-time); CAPES/PNPD. **W.F. Santos:** A. Employment/Salary (full or part-time); University of Sao Paulo.
307.27	**R.L. Webb:** A. Employment/Salary (full or part-time); ArunA Biomedical. **S.L. Stice:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); ArunA Biomedical.
307.29	**H.H. Engelhard:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Pulse Therapeutics, Inc. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Pulse Therapeutics, Inc. **A. Levin:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Pulse Therapeutics, Inc. **S. Pernal:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Pulse Therapeutics, Inc. **Z. Gaertner:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Pulse Therapeutics, Inc. **M. Sabo:** A. Employment/Salary (full or part-time); Pulse Therapeutics, Inc. **F. Creighton:** A. Employment/ Salary (full or part-time); Pulse Therapeutics, Inc.
309.11	**T.L. Yaksh:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Medtronic PLC. **K. Hildebrand:** A. Employment/Salary (full or part-time); Medtronic PLC. **L. Page:** A. Employment/Salary (full or part-time); Medtronic PLC.
309.28	**V. Goura:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd., Hyderabad, India. **A. Vuyyuru:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd., Hyderabad, India. **R. Kallepalli:** A. Employment/ Salary (full or part-time); Suven Life Sciences Ltd., Hyderabad, India. **P. Jayarajan:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd., Hyderabad, India. **S.M. Irappanavar:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd., Hyderabad, India. **R. Nirogi:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd., Hyderabad, India.
310.09	**H. Yoshimi:** A. Employment/Salary (full or part-time); Medical Corporation JIvaka Yoshimi Dental Office. **M. Shinomiya:** A. Employment/Salary (full or part-time); Medical Corporation JIvaka Yoshimi Dental Office. **Y. Komoriya:** A. Employment/Salary (full or part-time); Medical Corporation JIvaka Yoshimi Dental Office. **Y. Ono:** A. Employment/Salary (full or part-time); Department of Electronics and Bioinformatics, School of Science and Technology, Meiji University.
312.03	**Y. Wang:** A. Employment/Salary (full or part-time); University of Houston. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; NIH Research Grants EY-008128 (YC), EY-003611, CORE grant EY-007551. **B. Zhang:** A. Employment/Salary (full or part-time); Nova Southeastern University College of Optometry. **J.M. Wensveen:** A. Employment/Salary (full or part-time); University of Houston. **I. Ohzawa:** A. Employment/ Salary (full or part-time); Osaka University. **E.L. Smith:** A. Employment/Salary (full or part-time); University of Houston. **Y.M. Chino:** A. Employment/Salary (full or part-time); University of Houston.
312.06	**M.D. Oliver:** A. Employment/Salary (full or part-time); University of California Berkeley. **J.L. Gallant:** A. Employment/Salary (full or part-time); University of California Berkeley.
313.14	**A.J. Nagy:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amplipex Ltd. **A. Berenyi:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amplipex Ltd.
316.18	**W.S. Selbie:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); HAS Motion Inc. **S.H. Scott:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BKIN Technologies.
317.02	**M.P. Kilgard:** F. Consulting Fees (e.g., advisory boards); MicroTransponder, Inc. **R.L. Rennaker:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Vulintus, Inc.
317.03	**P. Sabes:** A. Employment/Salary (full or part-time); Neuralink Corp.
317.06	**R.L. Rennaker:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Vulintus, Inc.,. **M.P. Kilgard:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); MicroTransponder, Inc.
317.15	**N. Kanemura:** A. Employment/Salary (full or part-time); Saitama Prefectural University. B. Contracted Research/ Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; principal investigator.
318.07	**A.R. Lazarchik:** A. Employment/Salary (full or part-time); NIH.
320.18	**S.J. Tye:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Teva P/L. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Xencor P/L.
321.02	**D.V. Aillon:** A. Employment/Salary (full or part-time); Pinnacle Technology Inc. **S. Gabbert:** A. Employment/ Salary (full or part-time); Pinnacle Technology Inc. **E. Kerner:** A. Employment/Salary (full or part-time); Pinnacle Technology Inc. **S. Groth:** A. Employment/Salary (full or part-time); Pinnacle Technology Inc. **E. Naylor:** A. Employment/Salary (full or part-time); Pinnacle Technology Inc. **D. Gwartney:** A. Employment/Salary (full or part-time); Pinnacle Technology Inc. **B. Barrett:** A. Employment/ Salary (full or part-time); Pinnacle Technology Inc. **D.A. Johnson:** A. Employment/Salary (full or part-time); Pinnacle Technology Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Pinnacle Technology Inc. **D.A. Johnson:** A. Employment/Salary (full or part-time); Pinnacle Technology Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pinnacle Technology Inc.
321.11	**D.A. Morilak:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); H. Lundbeck.
322.08	**M. Walter:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI

PRESENTATION NUMBER	STATEMENT
	for a drug study, report that research relationship even if those funds come to an institution.; Biologische Heilmittel Heel GmbH.
323.14	**E. Naranjo-Rodríguez:** A. Employment/Salary (full or part-time); Employment. full, National Autonomous University of Mexico, Naranjo-Rodríguez Elia-Brosla, Employment. full, National Autonomous University of Mexico, Lira-Rocha Alfonso-Sebastián. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Contracted Research, National Autonomous University of Mexico., Montiel-Avilés Jesica Talía, Contracted Research, National Autonomous University of Mexico., Almaráz-Sánchez Aarón.
323.20	**I. Gozes:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Coronis Neurosciences.
325.04	**K.L. Zuloaga:** A. Employment/Salary (full or part-time); Albany Medicial College. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; National Institue of Aging. **C.S. Bjornsson:** A. Employment/Salary (full or part-time); Zeiss. **E. Wait:** A. Employment/Salary (full or part-time); Drexel University. **Y. Wang:** A. Employment/Salary (full or part-time); Neural Stem Cell Institute. **A.R. Cohen:** A. Employment/Salary (full or part-time); Drexel University. **S. Temple:** A. Employment/Salary (full or part-time); Regenerative Research Foundation/Neural Stem Cell Institute.
325.16	**A.K. Shinde:** A. Employment/Salary (full or part-time); Suven Life Sciences. **S. Yathavakilla:** A. Employment/Salary (full or part-time); Suven Life Sciences. **A. Vuyyuru:** A. Employment/Salary (full or part-time); Suven Life Sciences. **R. Medapati,:** A. Employment/Salary (full or part-time); Suven Life Sciences. **G. Venkata Ramalingayya:** A. Employment/Salary (full or part-time); Suven Life Sciences. **J. Tadiparthi:** A. Employment/Salary (full or part-time); Suven Life Sciences. **N. Ganuga:** A. Employment/Salary (full or part-time); Suven Life Sciences. **N. Muddanna:** A. Employment/Salary (full or part-time); Suven Life Sciences. **S. Darpelli:** A. Employment/Salary (full or part-time); Suven Life Sciences. **V. Uthukam:** A. Employment/Salary (full or part-time); Suven Life Sciences. **D. Sisodaya:** A. Employment/Salary (full or part-time); Suven Life Sciences. **N. Patibandla:** A. Employment/Salary (full or part-time); Suven Life Sciences. **M. Srirangavaram:** A. Employment/Salary (full or part-time); Suven Life Sciences. **V. Mekala:** A. Employment/Salary (full or part-time); Suven Life Sciences. **R. Subramanian:** A. Employment/Salary (full or part-time); Suven Life Sciences. **V. Goyal:** A. Employment/Salary (full or part-time); Suven Life Sciences. **K. Bojja:** A. Employment/Salary (full or part-time); Suven Life Sciences. **S. Kommineni:** A. Employment/Salary (full or part-time); Suven Life Sciences. **S. Manchineella:** A. Employment/Salary (full or part-time); Suven Life Sciences. **R. Nirogi:** A. Employment/Salary (full or part-time); Suven Life Sciences.
326.13	**C.M. Novak:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Novo Nordisk/The Obesity Society Mid-Career Research Grant.
330.04	**M.A. Riva:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Marco A. Riva has received research grants from Lundbeck, Sumitomo Dainippon Pharma and Sunovion. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); M.A. Riva has received compensation as speaker from Lundbeck, Otzuka, Sumitomo Dainippon Pharma and Sunovion. F. Consulting Fees (e.g., advisory boards); M.A. Riva has received compensation as consultant from Sumitomo Dainippon Pharma.
330.11	**D.A. Morilak:** A. Employment/Salary (full or part-time); UT Health Science Center at San Antonio, Center for Biomedical Sciences, South Texas Veterans Health Care System, San Antonio TX.
330.16	**Y. Li:** A. Employment/Salary (full or part-time); Alkermes, Inc. **D. Eyerman:** A. Employment/Salary (full or part-time); Alkermes, Inc. **C. Sanchez:** A. Employment/Salary (full or part-time); Alkermes, Inc.
330.29	**J. Ma:** A. Employment/Salary (full or part-time); Anatomy Department of Dalian Medical University.
331.27	**A.A. Grace:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Lundbeck. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Lilly, Autofony, Johnson and Johnson. F. Consulting Fees (e.g., advisory boards); Johnson and Johnson, Lundbeck, Pfizer, GSK, Merck, Takeda, Dainippon Sumitomo, Otsuka, Lilly, Roche, Asubio, Abbott.
332.19	**C.A. Jimenez-Rivera:** A. Employment/Salary (full or part-time); University of Puerto Rico. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; NIGMS (2SC1GM084854-05A1).
336.09	**D. Rotllant:** A. Employment/Salary (full or part-time); ORYZON GENOMICS S.A. **M. Lufino:** A. Employment/Salary (full or part-time); ORYZON GENOMICS S.A. **C. Mascaró:** A. Employment/Salary (full or part-time); ORYZON GENOMICS S.A. **M. Pallàs:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; CR for ORYZON GENOMICS S.A. **R. Nadal:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; CR for ORYZON GENOMICS S.A. **A. Armario:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; CR for ORYZON GENOMICS S.A. **T. Maes:** A. Employment/Salary (full or part-time); ORYZON GENOMICS S.A. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; ADDF. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ORYZON GENOMICS S.A.
340.22	**Y. Liu:** A. Employment/Salary (full or part-time); National Taiwan University.
341.05	**N. Upton:** A. Employment/Salary (full or part-time); TRANSPHARMATION LTD. **G. Wadsworth:** A. Employment/Salary (full or part-time); TRANSPHARMATION LTD. **D.R. Anderson:** A. Employment/Salary (full or part-time); CADENT THERAPEUTICS. **T. Piser:** A. Employment/Salary (full or part-time); CADENT THERAPEUTICS. **S.C. Lesier:** A. Employment/Salary (full or part-time); CADENT THERAPEUTICS.
341.12	**P. Banerjee:** A. Employment/Salary (full or part-time); Employee. **H.Y. Meltzer:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator

PRESENTATION NUMBER	STATEMENT
	or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Research Grant.
341.14	**D.F. Manvich:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; DA039991, DA038453. **D. Weinshenker:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; DA039991, DA038453.
342.09	**A. Planul:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); In process to have a patent, Confidential before SfN's 47th annual meeting, Neuroscience 2017. **D. Dalkara:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); in process to have a patent, Confidential before SfN's 47th annual meeting, Neuroscience 2017.
342.16	**M.F. Pagliusi:** A. Employment/Salary (full or part-time); CAPES. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); FAPESP. **A.D. Brandão:** A. Employment/Salary (full or part-time); CAPES. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); FAPESP. **I.J.M. Bonet:** A. Employment/Salary (full or part-time); CAPES. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); FAPESP. **C.R. Sartori:** A. Employment/Salary (full or part-time); UNICAMP. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); FAPESP. **A.S. Vieira:** A. Employment/Salary (full or part-time); UNICAMP. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); FAPESP.
342.22	**T. Villani:** A. Employment/Salary (full or part-time); Visikol Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Visikol Inc. **G. Gardner:** A. Employment/Salary (full or part-time); Visikol Inc. **M. Johnson:** A. Employment/Salary (full or part-time); Visikol Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Visikol Inc. **N. Crider:** A. Employment/Salary (full or part-time); Visikol Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Visikol Inc.
343.05	**M. Beaumont:** A. Employment/Salary (full or part-time); Axion BioSystems. **H.B. Hayes:** A. Employment/Salary (full or part-time); Axion BioSystems. **A.M. Nicolini:** A. Employment/Salary (full or part-time); Axion BioSystems. **C.A. Arrowood:** A. Employment/Salary (full or part-time); Axion BioSystems. **I.P. Clements:** A. Employment/Salary (full or part-time); Axion BioSystems. **D.C. Millard:** A. Employment/Salary (full or part-time); Axion BioSystems.
343.15	**D.J. Woodward:** A. Employment/Salary (full or part-time); Biographics Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Biographics Inc. **J. Chang:** A. Employment/Salary (full or part-time); Biographics Inc.
343.17	**M.P. Weisend:** A. Employment/Salary (full or part-time); Rio Grande Neurosciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Rio Grande Neurosciences.
343.19	**J.D. Weiland:** A. Employment/Salary (full or part-time); Platinum Group Coatings, LLC. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Platinum Group Coatings, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Platinum Group Coatings, LLC.
343.20	**M.E. Pflieger:** A. Employment/Salary (full or part-time); Cortech Solutions, Inc. **L.T. Smith:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Cortech Solutions, Inc.
343.26	**R.R. Rácz:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); CyberDeal S.r.L. **A.T. Schaefer:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Paradromics.
344.07	**Y. Soudagar:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent holder.
344.18	**N. Nadella:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inventor on patents owned by UCLB. **P. Kirkby:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inventor on patents owned by UCLB. **A. Silver:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inventor on patents owned by UCLB.
344.20	**A. Ghetti:** A. Employment/Salary (full or part-time); JZ, YM, PEM and AG are employees of AnaBios Corporation. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; NIH R01 grant NS042595 to RG and R21 AR068012 to SD. **Y. Miron:** A. Employment/Salary (full or part-time); Employee of AnaBios Corp. **J. Zhang:** A. Employment/Salary (full or part-time); Employee of AnaBios Corp. **G. Page:** A. Employment/Salary (full or part-time); Employee of AnaBios Corp. **B.A. Copits:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; NIH R01 grant NS042595. **S. Davidson:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; NIH R21 AR068012. **R.W. Gereau:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; NIH R01 grant NS042595. **P.E. Miller:** A. Employment/Salary (full or part-time); Employee of AnaBios Corp.
344.26	**P. Kirkby:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inventor on patents owned by UCLB. **S.K.M.N. Nadella:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inventor on patents owned by UCLB. **A.R. Silver:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inventor on patents owned by UCLB.
345.16	**R. Modi:** Other; GlaxoSmithKline (GSK), Defense Advanced Research Projects Agency (DARPA). **W. Voit:** Other; GlaxoSmithKline (GSK), Defense Advanced Research Projects Agency (DARPA).
346.19	**K.V. Shenoy:** F. Consulting Fees (e.g., advisory boards); Neuralink Inc., consultant, Cognescent, Scientific Advisory Board, Heal, Scientific Advisory Board.
346.21	**F. Miwakeichi:** A. Employment/Salary (full or part-time); full, Department of Statistical Modeling, The Institute of

PRESENTATION NUMBER	STATEMENT
	Statistical Mathematics, Tokyo, Japan, Department of Statistical Science, School of Multidisciplinary Sciences, The Graduate University for Advanced Studies, Tokyo, Japan.
346.26	**T. Zhang:** A. Employment/Salary (full or part-time); University of Virginia.
353	**H.Y. Zoghbi:** A. Employment/Salary (full or part-time); HHMI. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); UCB. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); intellectual property Rett diagnostic. F. Consulting Fees (e.g., advisory boards); Regeneron, Denali, Biopontis.
356.12	**S. Wegmann:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Sangamo Therapeutics. **B. Zeitler:** A. Employment/Salary (full or part-time); Sangamo Therapeutics. **S. DeVos:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Sangamo Therapeutics. **K. Marlen:** A. Employment/Salary (full or part-time); Sangamo Therapeutics. **Q. Yu:** A. Employment/Salary (full or part-time); Sangamo Therapeutics. **H. Nguyen:** A. Employment/Salary (full or part-time); Sangamo Therapeutics. **M.C. Holmes:** A. Employment/Salary (full or part-time); Sangamo Therapeutics. **B. Riley:** A. Employment/Salary (full or part-time); Sangamo Therapeutics. **S. Zhang:** A. Employment/Salary (full or part-time); Sangamo Therapeutics.
357.03	**A. Ittner:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent holder. **L.M. Ittner:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent holder.
357.04	**B. Ghetti:** A. Employment/Salary (full or part-time); Full time. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Indiana University. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); NIA. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); NA. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NA. F. Consulting Fees (e.g., advisory boards); NA. Other; NA. **A.W. Fitzpatrick:** A. Employment/Salary (full or part-time); Full time. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; NA. **B. Falcon:** A. Employment/Salary (full or part-time); Full time. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; NA. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); NA. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); NA. **S. He:** A. Employment/Salary (full or part-time); Full time. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; NA. **A.G. Murzin:** A. Employment/Salary (full or part-time); Full time.
358.03	**S.A. Lipton:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Harvard University: S.A.L. named inventor on patents for memantine (Namenda®) and NitroSynapsin for treatment of neurodegenerative diseases, royalty sharing agreement, Forest Laboratories/Actavis/Allergan: licensed memantine and NitroSynapsin patents from S.A.L and Harvard Medical School/Boston Children's Hospital, Adams Pharmaceuticals, Inc.: S.A.L. Scientific Co-Founder of Adamas Pharmaceuticals, Inc. for developing long-lasting formulations of memantine and combination with donepezil.
359.05	**B. Behrouz:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neuroinitiative. **J.W. Ryan:** A. Employment/Salary (full or part-time); Neuroinitiative. **D.A. Dodds:** A. Employment/Salary (full or part-time); Neuroinitiative. **A.D. Lee:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neuroinitiative.
359.08	**R. Hodgson:** A. Employment/Salary (full or part-time); Charles River Laboratories. **T. Parkkari:** A. Employment/Salary (full or part-time); Charles River Discovery. **A. Bradley:** A. Employment/Salary (full or part-time); Charles River Laboratories Edinburgh Ltd. **D.K. Bryce:** A. Employment/Salary (full or part-time); Merck. **P. Galatsis:** A. Employment/Salary (full or part-time); Pfizer Inc. **T. Heikkinen:** A. Employment/Salary (full or part-time); Charles River Discovery. **C. Houle:** A. Employment/Salary (full or part-time); Pfizer Inc. **L.A. Hyde:** A. Employment/Salary (full or part-time); Merck. **S. Kuruvilla:** A. Employment/Salary (full or part-time); Merck. **A.J. Nurmi:** A. Employment/Salary (full or part-time); Charles River Discovery. **A. Stepan:** A. Employment/Salary (full or part-time); Pfizer Inc. **M.J. Fell:** A. Employment/Salary (full or part-time); Merck.
363.03	**A. Schatzberg:** A. Employment/Salary (full or part-time); Stanford University. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Jansen Pharmaceuticals. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); GME, inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Merck, Corcept, Insyte Genetics, Seattle Genetics, Titan, Intersectent, Stanford University, American Psychiatric Publishing. F. Consulting Fees (e.g., advisory boards); Alkermes, Forum, Avanir, Clintera, Owl.
365.03	**S. Hochstein:** A. Employment/Salary (full or part-time); Hebrew University. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Israel Science Foundation (ISF).
365.04	**M.B. Pavlovskaya:** A. Employment/Salary (full or part-time); Loewenstein Rehabilitation Hospital, Tel Aviv University. **N. Soroker:** A. Employment/Salary (full or part-time); Loewenstein Rehabilitation Hospital. **Y. Bonneh:** A. Employment/Salary (full or part-time); Bar-Ilan University. **S. Hochstein:** A. Employment/Salary (full or part-time); Hebrew University.
367.01	**M. Hattori:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Mitsubishi Tanabe Pharma Corporation.
367.07	**M. Kato:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship

PRESENTATION NUMBER	STATEMENT
	even if those funds come to an institution.; KAKENHI 26460073, KAKENHI 17H03895, AMED ACT-M 17im0210602h002, AMED ACT-M 16im0210602h0001. **M. Hattori:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Mitsubishi Tanabe Pharma Corp.
370.07	**J.S. Sprouse:** F. Consulting Fees (e.g., advisory boards); Anavex Life Sciences. **N. Rebowe:** A. Employment/Salary (full or part-time); Anavex Life Sciences. **D. Klamer:** A. Employment/Salary (full or part-time); Anavex Life Sciences. **C. Missling:** A. Employment/Salary (full or part-time); Anavex Life Sciences.
370.11	**D.M. Katz:** Other; Founding advisor to ArRETT Neuroscience, a company focused on advancing treatments for patients with Rett syndrome.
371.19	**J.L. Roffman:** F. Consulting Fees (e.g., advisory boards); Joshua L. Roffman reports grant support and consulting income from Nestle Health Sciences/Pamlab for unrelated projects. The other authors declare no competing financial interests.
373.01	**M. He:** A. Employment/Salary (full or part-time); employed by ACD. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); stock owner at ACD. **A. Laeremans:** A. Employment/Salary (full or part-time); employed by ACD. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); stock owner at ACD. **E. Park:** A. Employment/Salary (full or part-time); employed by ACD. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); stock owner at ACD.
374.04	**J.J. Doherty:** A. Employment/Salary (full or part-time); Sage Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Sage Therapeutics. **M.C. Lewis:** A. Employment/Salary (full or part-time); Sage Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Sage Therapeutics. **M. Quirk:** A. Employment/Salary (full or part-time); Sage Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Sage Therapeutics. **S.M. Paul:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Sage Therapeutics. **C.F. Zorumski:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Sage Therapeutics. **S.J. Mennerick:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Sage Therapeutics.
374.06	**V.S. Pande:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Andreessen Horowitz. F. Consulting Fees (e.g., advisory boards); Schrodinger, LLC, Globavir, Apeel Inc, Freenome Inc, Omada Health, Patient Ping, Rigetti Computing.
374.12	**C.T. Bot:** A. Employment/Salary (full or part-time); Nanion Technologies Inc. **A.R. Obergrussberger:** A. Employment/ Salary (full or part-time); Nanion Technologies GmbH. **I. Rinke-Weiß:** A. Employment/Salary (full or part-time); Nanion Technologies GmbH. **S. Stölzle-Feix:** A. Employment/Salary (full or part-time); Nanion Technologies GmbH. **N. Becker:** A. Employment/Salary (full or part-time); Nanion Technologies GmbH. **E. Dragicevic:** A. Employment/Salary (full or part-time); Nanion Technologies GmbH. **C. Haarmann:** A. Employment/Salary (full or part-time); Nanion Technologies GmbH. **A. Brüggemann:** A. Employment/Salary (full or part-time); Nanion Technologies GmbH. **M. George:** A. Employment/Salary (full or part-time); Nanion Technologies GmbH. **N. Fertig:** A. Employment/Salary (full or part-time); Nanion Technologies GmbH.
374.19	**N. Ghoreishi-Haack:** A. Employment/Salary (full or part-time); Aptinyx Inc. **J. Priebe:** A. Employment/Salary (full or part-time); Aptinyx Inc. **J. Dunning:** A. Employment/Salary (full or part-time); Aptinyx Inc. **J. Burgdorf:** A. Employment/ Salary (full or part-time); Aptinyx Inc., NORTHWESTERN UNIVERSITY. **T. Madsen:** A. Employment/Salary (full or part-time); Aptinyx Inc. **M. Khan:** A. Employment/Salary (full or part-time); Aptinyx Inc. **C. Cearley:** A. Employment/ Salary (full or part-time); Aptinyx Inc. **J. Moskal:** A. Employment/Salary (full or part-time); Aptinyx Inc., NORTHWESTERN UNIVERSITY.
374.20	**T. Nishi:** A. Employment/Salary (full or part-time); Takeda Pharmaceutical Company Ltd. **S. Kondo:** A. Employment/ Salary (full or part-time); Takeda Pharmaceutical Company Ltd. **H. Kimura:** A. Employment/Salary (full or part-time); Takeda Pharmaceutical Company Ltd. **I. Mody:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Supported by a grant from Takeda Pharmaceutical Company Ltd.
375.03	**A. Richardson:** A. Employment/Salary (full or part-time); Auifony Therapeutics Ltd. **N. Pilati:** A. Employment/Salary (full or part-time); Autifony Therapeutics Ltd. **C.H. Large:** A. Employment/Salary (full or part-time); Autifony Therapeutics Ltd. **I.D. Forsythe:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Autifony Therapeutics Ltd.
375.14	**S.K. Sikdar:** A. Employment/Salary (full or part-time); Ministry of Human Resource Development, Govt. of India. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Department of Biotechnology, Govt. of India, Ministry of Human Resource Development, Govt. of India.
375.16	**K.P. Mangan:** A. Employment/Salary (full or part-time); Fujifilm/Cellular Dynamics International. **L.K. Kaczmarek:** F. Consulting Fees (e.g., advisory boards); Praxis Pharmacueticals.
375.28	**M.J. Abraham:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Canadian Institute of Health Research. **R. Bergeron:** B. Contracted Research/ Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Canadian Institute of Health Research.
376.11	**M. Naujock:** A. Employment/Salary (full or part-time); Boehringer Ingelheim Pharma GmbH & Co KG. **V. Kizner:** A. Employment/Salary (full or part-time); Boehringer Ingelheim Pharma GmbH & Co KG. **S. Felk:** A. Employment/Salary (full or part-time); Boehringer Ingelheim Pharma GmbH & Co KG. **A. Speidel:** A. Employment/Salary (full or part-time); Boehringer Ingelheim Pharma GmbH & Co KG. **S. Jaeger:** A. Employment/ Salary (full or part-time); Boehringer Ingelheim Pharma GmbH & Co KG. **G. Leperc:** A. Employment/Salary (full or part-time); Boehringer Ingelheim Pharma GmbH & Co KG. **K. Fundel-Clemens:** A. Employment/Salary (full or part-time); Boehringer Ingelheim Pharma GmbH & Co KG. **T. Hildebrandt:** A. Employment/Salary (full or part-time); Boehringer Ingelheim Pharma GmbH & Co KG. **C. Dorner-Ciossek:** A. Employment/Salary (full or part-time); Boehringer Ingelheim Pharma GmbH & Co KG. **B. Sommer:** A. Employment/Salary (full or part-

PRESENTATION NUMBER	STATEMENT
	time); Boehringer Ingelheim Pharma GmbH & Co KG. **F. Gillardon:** A. Employment/Salary (full or part-time); Boehringer Ingelheim Pharma GmbH & Co KG.
378.11	**B.A. Macleod:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); TherExcell Pharma. Other; Jean Templeton Hugill Anesthesiology Research Fund. **E. Puil:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); TherExcell Pharma. Other; Jean Templeton Hugill Anesthesiology Research Fund.
378.19	**N.S. Cayla:** A. Employment/Salary (full or part-time); Stanford University.
378.26	**J. Fan:** A. Employment/Salary (full or part-time); Hopstem Biotechnology Ltd. Co. **T. Zou:** A. Employment/Salary (full or part-time); Hopstem Biotechnology Ltd. Co. **Q. Liu:** A. Employment/Salary (full or part-time); Hopstem Biotechnology Ltd. Co. **Y. Mei:** A. Employment/Salary (full or part-time); Hopstem Biotechnology Ltd. Co.
381.03	**H.R. Siebner:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Biogen Idec. Denmark A/S. F. Consulting Fees (e.g., advisory boards); Lundbeck A/S.
381.10	**A. Anticevic:** F. Consulting Fees (e.g., advisory boards); BlackThorn Therapeutics. **J.D. Murray:** F. Consulting Fees (e.g., advisory boards); BlackThorn Therapeutics.
381.11	**A. Anticevic:** F. Consulting Fees (e.g., advisory boards); BlackThorn Therapeutics. **J.D. Murray:** F. Consulting Fees (e.g., advisory boards); BlackThorn Therapeutics.
381.28	**K. Mangan:** A. Employment/Salary (full or part-time); Cellular Dynamics International. **B.D. Anson:** A. Employment/Salary (full or part-time); Cellular Dynamics International. **L. Harms:** A. Employment/Salary (full or part-time); Cellular Dynamics International. **E. Enghofer:** A. Employment/Salary (full or part-time); Cellular Dynamics International. **C. Carlson:** A. Employment/Salary (full or part-time); Cellular Dynamics International. **C. Kannemeier:** A. Employment/Salary (full or part-time); Cellular Dynamics International.
382.01	**R. Matsumoto:** Other; Endowed department by UCB, GSK, NihonKoden, Otsuka. **R. Takahashi:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; DAINIPPON SUMITOMO PHARMA, Boehringer Ingelheim, NOVARTIS, Pfizer Co. Ltd., Takeda Pharmaceutical Company, Mitsubishi Tanabe Pharma, Kyowa Hakko Kirin Co., Otsuka Pharmaceutical Co., Nihon Medi-Physi. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); Glaxo Smith Kline, FP PHARMACEUTICAL CORP, NOVARTIS, Boehringer Ingelheim Co., Kyowa Hakko Kirin Co., Dainippon Sumitomo Pharma Co., Mitsubishi Tanabe Pharma Co., Glaxo Smith Kline., Otsuka Pharmaceut. F. Consulting Fees (e.g., advisory boards); KAN Research Institute INC., DAINIPPON SUMITOMO PHARMA, AbbVie Inc., Takeda Pharmaceutical Company. **A. Ikeda:** Other; Endowed department by UCB, GSK, NihonKoden, Otsuka.
382.06	**A. Pascual-Leone:** F. Consulting Fees (e.g., advisory boards); Magstim, Nexstim, Neronix,Neuroelectrics, Starlab Neuroscience, Constant Therapy, Neosync, axilum robotics. **A. Rotenberg:** F. Consulting Fees (e.g., advisory boards); Neuro'motion Inc., consults for NeuroRex Inc., and a co-inventor of a patent for real-time integration TMS and EEG. AR receives or has received research support in the form of material and/or funding.
383.01	**N. Saleh-Subaie:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; CONACYT-BMBF 2013 Grant Number 208132. **O. Arias-Carrion:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; CONACYT-BMBF 2013 Grant Number 208132.
386.03	**X. Wang:** A. Employment/Salary (full or part-time); Eisai.
386.04	**B.T. Lamb:** F. Consulting Fees (e.g., advisory boards); Eli Lilly, Amgen, Abbvie.
386.14	**J. Li:** A. Employment/Salary (full or part-time); Kunming Institute of Zoology, CAS.
387.02	**R. Kimura:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Mitsui Sumitomo Insurance Welfare Foundation Research Grant 2016.
387.21	**K. Mangan:** A. Employment/Salary (full or part-time); Cellular Dynamics International. **K. Kim:** A. Employment/Salary (full or part-time); Cellular Dynamics International. **L. Harms:** A. Employment/Salary (full or part-time); Cellular Dynamics International. **C. Kannemeier:** A. Employment/Salary (full or part-time); Cellular Dynamics International. **B.M. Bader:** A. Employment/Salary (full or part-time); NeuroProof GmbH. **K. Jügelt:** A. Employment/Salary (full or part-time); NeuroProof GmbH. **O. Schröder:** A. Employment/Salary (full or part-time); NeuroProof GmbH. **B. Freitas:** A. Employment/Salary (full or part-time); Cellular Dynamics International. **C.B. Carlson:** A. Employment/Salary (full or part-time); Cellular Dynamics International. **E. Jones:** A. Employment/Salary (full or part-time); Cellular Dynamics International.
388.02	**H.A. Wilkinson:** A. Employment/Salary (full or part-time); CHDI. **G. McAllister:** A. Employment/Salary (full or part-time); Charles River. **O. Lazari:** A. Employment/Salary (full or part-time); Charles River. **N. Macabuag:** A. Employment/Salary (full or part-time); Charles River. **L. Urbonas:** A. Employment/Salary (full or part-time); Charles River. **M. Eznarriaga:** A. Employment/Salary (full or part-time); Charles River. **R. Jarvis:** A. Employment/Salary (full or part-time); Charles River. **P. Breccia:** A. Employment/Salary (full or part-time); Charles River. **R. van de Bospoort:** A. Employment/Salary (full or part-time); Charles River. **D. Macdonald:** A. Employment/Salary (full or part-time); CHDI. **E. Doherty:** A. Employment/Salary (full or part-time); CHDI. **T. Vogt:** A. Employment/Salary (full or part-time); CHDI. **I. Munoz-Sanjuan:** A. Employment/Salary (full or part-time); CHDI. **C. Dominguez:** A. Employment/Salary (full or part-time); CHDI.
388.06	**R. Kusko:** A. Employment/Salary (full or part-time); Teva Pharmaceutical Industries Ltd. **M. Pouladi:** A. Employment/Salary (full or part-time); Teva Pharmaceutical Industries Ltd. **J. Ross:** A. Employment/Salary (full or part-time); Teva Pharmaceutical Industries Ltd. **Y. Cha:** A. Employment/Salary (full or part-time); Teva Pharmaceutical Industries Ltd. **R. Escalante:** A. Employment/Salary (full or part-time); Teva Pharmaceutical Industries Ltd. **B. Zeskind:** A. Employment/Salary (full or part-time); Teva Pharmaceutical Industries Ltd.
388.11	**F.M. Longo:** Other; Dr. Longo is listed as an inventor on patents relating to a compound in this report, which is assigned to the University of North Carolina, University of California, San Francisco and the Dept. of Vet.
388.15	**S. Lu:** A. Employment/Salary (full or part-time); Azevan Pharmaceuticals, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Azevan Pharmaceuticals, Inc. **K.E. Anderson:** F. Consulting Fees (e.g., advisory boards); Azevan Pharmaceuticals, Inc. **M.J. Brownstein:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship

PRESENTATION NUMBER	STATEMENT
	even if those funds come to an institution.; NIH grant 1 U44 NS090616. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Azevan Pharmaceuticals, Inc. **N.G. Simon:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Azevan Pharmaceuticals, Inc.
388.17	**O. Lazari:** A. Employment/Salary (full or part-time); Charles River. **A. Mukonoweshuro:** A. Employment/Salary (full or part-time); Charles River. **B. Nancolas:** A. Employment/ Salary (full or part-time); Charles River. **C. Turnbull:** A. Employment/Salary (full or part-time); Charles River. **I. Gowers:** A. Employment/Salary (full or part-time); Charles River. **M. Iovino:** A. Employment/Salary (full or part-time); Charles River. **C. Paule:** A. Employment/Salary (full or part-time); Charles River. **R. Jarvis:** A. Employment/Salary (full or part-time); Charles River. **P. Breccia:** A. Employment/ Salary (full or part-time); Charles River. **T. Ladduwahetty:** A. Employment/Salary (full or part-time); Charles River. **G. McAllister:** A. Employment/Salary (full or part-time); Charles River. **E. Doherty:** A. Employment/Salary (full or part-time); CHDI. **J.A. Bard:** A. Employment/Salary (full or part-time); CHDI. **D. Macdonald:** A. Employment/Salary (full or part-time); CHDI. **A. Howard:** A. Employment/Salary (full or part-time); CHDI. **C. Dominguez:** A. Employment/ Salary (full or part-time); CHDI. **I. Munoz-Sanjuan:** A. Employment/Salary (full or part-time); CHDI.
389.15	**D. Cheng:** A. Employment/Salary (full or part-time); Inscopix. **M.J. Schachter:** A. Employment/Salary (full or part-time); Inscopix. **J.J. Nassi:** A. Employment/Salary (full or part-time); Inscopix. **S.L. Otte:** A. Employment/Salary (full or part-time); Inscopix.
389.16	**J. Sorensen:** A. Employment/Salary (full or part-time); CENSE group, Department of Clinical Medicine, Aarhus University, Department of Neurosurgery, Aarhus University Hospital.
390.04	**S. Kaja:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); K&P Scientific LLC, Experimentica Ltd. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); K&P Scientific LLC, Experimentica Ltd. F. Consulting Fees (e.g., advisory boards); Experimentica Ltd. **A.J. Payne:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); K&P Scientific LLC.
390.17	**A. Musella:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Ministero della Salute. **A. Paolillo:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Biogen. **G. Mandolesi:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Ministero della Salute.
392.15	**C. Soto:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amprion.
393.08	**S. Izabel:** Other; Howard Hughes Medical Institute, National Institute of Health.
394.03	**A.B. Bialunska:** A. Employment/Salary (full or part-time); University of Texas at El Paso. B. Contracted Research/ Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR). **A.P. Salvatore:** A. Employment/Salary (full or part-time); University of Texas at El Paso. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR).
394.18	**V.G. Pinelis:** A. Employment/Salary (full or part-time); National Scientific Center for Children's Health, Russian Ministry of health. **E. Sorokina:** A. Employment/Salary (full or part-time); National Scientific Center for Children's Health, Russian Ministry of health. **E. Arsenieva:** A. Employment/Salary (full or part-time); National Scientific Center for Children's Health, Russian Ministry of health. **A. Surin:** A. Employment/Salary (full or part-time); National Scientific Center for Children's Health, Russian Ministry of health. **J. Semenova:** A. Employment/Salary (full or part-time); Institute of Emergency Children' s Surgery and Traumatology. **O. Karaseva:** A. Employment/Salary (full or part-time); Institute of Emergency Children' s Surgery and Traumatology. **V. Reutov:** A. Employment/Salary (full or part-time); Institute of Higher nervous activity and Neurophysiology. **L. Roshal:** A. Employment/Salary (full or part-time); Institute of Emergency Children' s Surgery and Traumatology.
394.19	**C. Guger:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Guger Technologies OG. **B. Allison:** A. Employment/Salary (full or part-time); Guger Technologies OG. **A. Heilinger:** A. Employment/ Salary (full or part-time); Guger Technologies OG. **R. Ortner:** A. Employment/Salary (full or part-time); g.tec medical engineering GmbH. **W. Cho:** A. Employment/ Salary (full or part-time); g.tec medical engineering GmbH.
395.11	**L.P. Cacheaux:** A. Employment/Salary (full or part-time); Aptinyx Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Aptinyx Inc. **K. Leaderbrand:** A. Employment/Salary (full or part-time); Aptinyx Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Aptinyx Inc. **M. Schmidt:** A. Employment/Salary (full or part-time); Aptinyx Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Aptinyx Inc. **E. Colechio:** A. Employment/Salary (full or part-time); Aptinyx Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Aptinyx Inc. **J.S. Burgdorf:** A. Employment/Salary (full or part-time); Aptinyx Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Aptinyx Inc. **R.A. Kroes:** A. Employment/Salary (full or part-time); Aptinyx Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Aptinyx Inc. **J.R. Moskal:** A. Employment/Salary (full or part-time); Aptinyx Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx Inc.
396.03	**K. Krukowski:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Patent. **O. Golonzhka:** A. Employment/Salary (full or part-time); Acetylon Pharmaceuticals. **J. van Duzer:** A. Employment/ Salary (full or part-time); Acetylon Pharmaceuticals. **R. Mazitschek:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Acetylon Pharmaceuticals. **M. Jarpe:** A. Employment/Salary (full or part-time); Acetylon Pharmaceuticals. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); patent holder. **C.J. Heijnen:** B. Contracted Research/Research

PRESENTATION NUMBER	STATEMENT
	Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Grant from Acetylon Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Patent holder. **A. Kavelaars:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Grant from Acetylon Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent holder.
396.14	**K. Yamato:** A. Employment/Salary (full or part-time); Lab. of Neurol. and Neurosurg.,.
397.09	**E. Garcia-Perez:** A. Employment/Salary (full or part-time); NEUROSCIENCE TECHNOLOGIES. **P.S. Pall:** A. Employment/Salary (full or part-time); Merck Research Laboratories. **R. Sola:** A. Employment/Salary (full or part-time); NEUROSCIENCE TECHNOLOGIES. **M. Sumalla:** A. Employment/Salary (full or part-time); NEUROSCIENCE TECHNOLOGIES. **A. Houghton:** A. Employment/Salary (full or part-time); Merck Research Laboratories. **J. Serra:** A. Employment/Salary (full or part-time); NEUROSCIENCE TECHNOLOGIES.
397.16	**R. Sola:** A. Employment/Salary (full or part-time); full-time employee at NT. **M. Sumalla:** A. Employment/Salary (full or part-time); full-time employee at NT. **J. Serra:** A. Employment/Salary (full or part-time); full-time employee at NT.
397.17	**L. Deng:** A. Employment/Salary (full or part-time); Genentech, Inc. **K. Stark:** A. Employment/Salary (full or part-time); Genentech, Inc. **S. Lardell:** A. Employment/ Salary (full or part-time); Cellectricon AB. **P. Karila:** A. Employment/Salary (full or part-time); Cellectricon AB. **D.H. Hackos:** A. Employment/Salary (full or part-time); Genentech, Inc.
397.26	**M. Valdor:** A. Employment/Salary (full or part-time); Grünenthal GmbH. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Grünenthal GmbH. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Grünenthal GmbH. **S. Esser-Rosenow:** A. Employment/Salary (full or part-time); Grünenthal GmbH. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Grünenthal GmbH. **S. Frings:** A. Employment/Salary (full or part-time); Grünenthal GmbH. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Grünenthal GmbH. **T. Christoph:** A. Employment/ Salary (full or part-time); Grünenthal GmbH. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Grünenthal GmbH. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Grünenthal GmbH. **A.M. Rush:** A. Employment/Salary (full or part-time); Metrion Biosciences Ltd. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Metrion Biosciences Ltd.
400.14	**W.S. Anderson:** F. Consulting Fees (e.g., advisory boards); Longeviti, LLC - compensated advisory board member, Globus Medical - compensated consultant.
401.02	**M. Isaacson:** A. Employment/Salary (full or part-time); HHMI - Janelia Research Campus. **J. Eliason:** A. Employment/Salary (full or part-time); HHMI - Janelia Research Campus. **A. Nern:** A. Employment/Salary (full or part-time); HHMI - Janelia Research Campus. **M.B. Reiser:** A. Employment/Salary (full or part-time); HHMI - Janelia Research Campus.
402.15	**B. Rózsa:** F. Consulting Fees (e.g., advisory boards); Femtonics (scientific advisory board). Other; Author founded a company (Femtonics) that produces a product or service related to the work being reported.
405.16	**S.M. Freitas:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); FAPESP Grant # 2012/19943-0.
407.09	**N. Jain:** A. Employment/Salary (full or part-time); National Brain Research Centre. **S.R. John:** A. Employment/Salary (full or part-time); National Brain Research Centre. **P. Halder:** A. Employment/Salary (full or part-time); National Brain Research Centre\.
408.20	**J.R. Swift:** A. Employment/Salary (full or part-time); g.tec neurotechnology USA inc. **R. Prueckl:** A. Employment/ Salary (full or part-time); guger technologies OG. **C. Kapeller:** A. Employment/Salary (full or part-time); guger technologies OG. **C. Guger:** A. Employment/Salary (full or part-time); guger technologies OG.
408.24	**P.R. Kennedy:** A. Employment/Salary (full or part-time); Part time. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neural Signals Inc. **A. Kirillov:** A. Employment/Salary (full or part-time); Full Time, Neuroexplorer Inc.
409.03	**M. Hirashima:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); 3D Incorpolated.
409.04	**D.A. Brown:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); consultant to HDT robotics, co-inventor.
409.06	**S. Meardon:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); New Balance.
412.03	**J. Letizi:** A. Employment/Salary (full or part-time); Delsys Inc. **J.C. Kline:** A. Employment/Salary (full or part-time); Delsys Inc. **P. Contessa:** A. Employment/Salary (full or part-time); Delsys Inc.
412.05	**R.E. Akins:** A. Employment/Salary (full or part-time); Nemours-A.I. DuPont Research Hospital for Children.
412.08	**M.W. Flood:** A. Employment/Salary (full or part-time); Science Foundation Ireland - Insight Centre for Data Analytics, University College Dublin. **B.R. Jensen:** A. Employment/Salary (full or part-time); Odense University Hospital, University of Southern Denmark. **A. Malling:** A. Employment/Salary (full or part-time); Odense University Hospital, University of Southern Denmark. **M.M. Lowery:** A. Employment/Salary (full or part-time); University College Dublin. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Science Foundation Ireland - Insight Centre for Data Analytics, European Research Council - Consolidator Grant.
413.02	**V.B. Risbrough:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; VA Merit Award BX002558-01.
413.10	**T.G. Dinan:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Mead Johnson, Cremo, 4D Pharma, Suntory Wellness, Nutricia. **J.F. Cryan:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Mead Johnson, Cremo, 4D Pharma, Suntory Wellness, Nutricia.

PRESENTATION NUMBER	STATEMENT
413.11	**T.G. Dinan:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Cremo, 4D Pharma, Suntory Wellness, Mead Johnson, Nutricia. **J.F. Cryan:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Cremo, 4D Pharma, Suntory Wellness, Mead Johnson, Nutricia.
413.19	**C.A. Lowry:** F. Consulting Fees (e.g., advisory boards); CAL serves on the Scientific Advisor Board of Immodulon Therapeutics, Ltd.
421.12	**S.L. Smith:** A. Employment/Salary (full or part-time); RenaSci Ltd. **S. Holland:** A. Employment/Salary (full or part-time); RenaSci Ltd. **R.A. Gray:** A. Employment/Salary (full or part-time); GW Pharmaceuticals. **D.J. Heal:** A. Employment/Salary (full or part-time); RenaSci Ltd.
422.05	**P.J. Wellman:** A. Employment/Salary (full or part-time); Texas A&M University. **S. Eitan:** A. Employment/Salary (full or part-time); Texas A&M University.
424.06	**T.C. de Lima:** A. Employment/Salary (full or part-time); Federal University of Santa Catarina - Department of Pharmacology - Florianopolis - SC ~Brazil. **L.J. Bertoglio:** A. Employment/Salary (full or part-time); Federal University of Santa Catarina - Department of Pharmacology - Florianopolis - SC ~Brazil.
424.07	**D. Ibghi:** A. Employment/Salary (full or part-time); Neurodegeneration Research, Neuroscience Therapeutic Area, Sanofi, Inc., Chilly Mazarin, France. **V. Taupin:** A. Employment/Salary (full or part-time); Neurodegeneration Research, Neuroscience Therapeutic Area, Sanofi, Inc. **P. Bernardelli:** A. Employment/Salary (full or part-time); sanofi R&D. **N. Moindrot:** A. Employment/Salary (full or part-time); Neurodegeneration Research, Neuroscience Therapeutic Area, Sanofi, Inc. **P. goniot:** A. Employment/Salary (full or part-time); Neurodegeneration Research, Neuroscience Therapeutic Area, Sanofi, Inc. **E. genet:** A. Employment/Salary (full or part-time); Neurodegeneration Research, Neuroscience Therapeutic Area, Sanofi, Inc. **C. vincent:** A. Employment/Salary (full or part-time); Neurodegeneration Research, Neuroscience Therapeutic Area, Sanofi, Inc. **V. roudieres:** A. Employment/Salary (full or part-time); Neurodegeneration Research, Neuroscience Therapeutic Area, Sanofi, Inc. **V. fleury:** A. Employment/Salary (full or part-time); Neurodegeneration Research, Neuroscience Therapeutic Area, Sanofi, Inc. **A. krick:** A. Employment/Salary (full or part-time); sanofi R&D. **M. Lopez-Grancha:** A. Employment/Salary (full or part-time); Neurodegeneration Research, Neuroscience Therapeutic Area, Sanofi, Inc.
424.11	**F. Brombacher:** Other; International Centre for Genetic Engineering and Biotechnology.
424.16	**E. Hilz:** A. Employment/Salary (full or part-time); University of Texas at Austin. **M. Monfils:** A. Employment/Salary (full or part-time); University of Texas at Austin. **H. Lee:** A. Employment/Salary (full or part-time); University of Texas at Austin.
425.19	**N.J. Murawski:** A. Employment/Salary (full or part-time); Harvard University.
425.24	**C.I. O'Leary:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Partial support provided by Pfizer, Inc. **M.L. Jutras:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Partial support provided by Pfizer, Inc. **A. Ng:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Partial support provided by Pfizer, Inc. **S.A. Schleufer:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Partial support provided by Pfizer, Inc. **A.J.O. Dede:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Partial support provided by Pfizer, Inc. **E.P. Lebois:** A. Employment/Salary (full or part-time); Employee of Pfizer, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); I own Pfizer, Inc. Stock. **E.A. Buffalo:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Partial support provided by Pfizer, Inc.
428.22	**M.D. Ehlers:** A. Employment/Salary (full or part-time); Biogen.
428.23	**R.A. Kroes:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx, Inc. **M.E. Schmidt:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx, Inc. **S.U. Sahu:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx, Inc. **J.S. Burgdorf:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx, Inc. **M.A. Khan:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx, Inc. **J.R. Moskal:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx, Inc.
429.02	**E.M. Colechio:** A. Employment/Salary (full or part-time); Aptinyx Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx Inc. **T. Bhattacharya:** A. Employment/Salary (full or part-time); Aptinyx Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx Inc. **J.S. Burgdorf:** A. Employment/Salary (full or part-time); Aptinyx Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx Inc. **J. Dunning:** A. Employment/Salary (full or part-time); Aptinyx Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx Inc. **A.L. Gross:** A. Employment/Salary (full or part-time); Aptinyx Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx Inc. **J.M. Priebe:** A. Employment/Salary (full or part-time); Aptinyx Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx Inc. **M.A. Khan:** A. Employment/Salary (full or part-time); Aptinyx Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx Inc. **P.K. Stanton:** F. Consulting Fees (e.g., advisory boards); Aptinyx Inc. **C. Cearley:** A. Employment/Salary (full or part-time); Aptinyx Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx Inc. **J.R. Moskal:** A. Employment/Salary (full or part-time);

PRESENTATION NUMBER	STATEMENT
	Aptinyx Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx Inc.
429.04	**A. Speidell:** A. Employment/Salary (full or part-time); Employment, FT. **Y. Lee:** A. Employment/Salary (full or part-time); Georgetown University. **O. Rodriguez:** A. Employment/Salary (full or part-time); Employment, FT. **C. Albanese:** A. Employment/Salary (full or part-time); Employment, FT. **J. Mandelblatt:** A. Employment/Salary (full or part-time); Employment, FT. **G. Rebeck:** A. Employment/Salary (full or part-time); Employment, FT.
429.20	**A. Mork:** A. Employment/Salary (full or part-time); H. Lundbeck A/S. **H.S. Lindgren:** A. Employment/Salary (full or part-time); H. Lundbeck A/S. **V. Nielsen:** A. Employment/Salary (full or part-time); H. Lundbeck A/S. **C.T. Christoffersen:** A. Employment/Salary (full or part-time); H. Lundbeck A/S. **J. Kehler:** A. Employment/Salary (full or part-time); H. Lundbeck A/S. **J. Nielsen:** A. Employment/Salary (full or part-time); H. Lundbeck A/S.
430.06	**A. Meyer-Lindenberg:** F. Consulting Fees (e.g., advisory boards); A.M.-L. has received consultant fees from AstraZeneca, Elsevier, F. Hoffmann-La Roche, Gerson Lehrman Group, Lundbeck, Outcome Europe Sárl, Outcome Sciences, Roche Pharma, Servier International and Th.
434.05	**C. Shannon Weickert:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Lundbeck, Astellas Pharma Inc.
435.03	**R. Calzavara:** Other; The author is member of the Pritzker Neuropsychiatric Disorders Research Consortium, which is supported by the Pritzker Neuropsychiatric Disorders Research Fund L.L.C. **H. Akil:** Other; The author is member of the Pritzker Neuropsychiatric Disorders Research Consortium, which is supported by the Pritzker Neuropsychiatric Disorders Research Fund L.L.C. **J.D. Barchas:** Other; The author is member of the Pritzker Neuropsychiatric Disorders Research Consortium, which is supported by the Pritzker Neuropsychiatric Disorders Research Fund L.L.C. **W.E. Bunney:** Other; The author is member of the Pritzker Neuropsychiatric Disorders Research Consortium, which is supported by the Pritzker Neuropsychiatric Disorders Research Fund L.L.C. **F.S. Lee:** Other; The author is member of the Pritzker Neuropsychiatric Disorders Research Consortium, which is supported by the Pritzker Neuropsychiatric Disorders Research Fund L.L.C. **R.M. Myers:** Other; The author is member of the Pritzker Neuropsychiatric Disorders Research Consortium, which is supported by the Pritzker Neuropsychiatric Disorders Research Fund L.L.C. **A.F. Schatzberg:** Other; The author is member of the Pritzker Neuropsychiatric Disorders Research Consortium, which is supported by the Pritzker Neuropsychiatric Disorders Research Fund L.L.C. **S.J. Watson:** Other; The author is member of the Pritzker Neuropsychiatric Disorders Research Consortium, which is supported by the Pritzker Neuropsychiatric Disorders Research Fund L.L.C.
436.07	**S. Alvarado:** A. Employment/Salary (full or part-time); Stanford University. F. Consulting Fees (e.g., advisory boards); Thwacke LLC. **R.A. Fernald:** A. Employment/Salary (full or part-time); Stanford University.
437.17	**K. Shenoy:** F. Consulting Fees (e.g., advisory boards); Neuralink Inc., consultant, Cognescent, Scientific Advisory Board, Heal, Scientific Advisory Board.

PRESENTATION NUMBER	STATEMENT

NEUROSCIENCE 2017 — EXHIBITS AND POSTER SESSIONS

Walter E. Washington Convention Center: Halls A–C

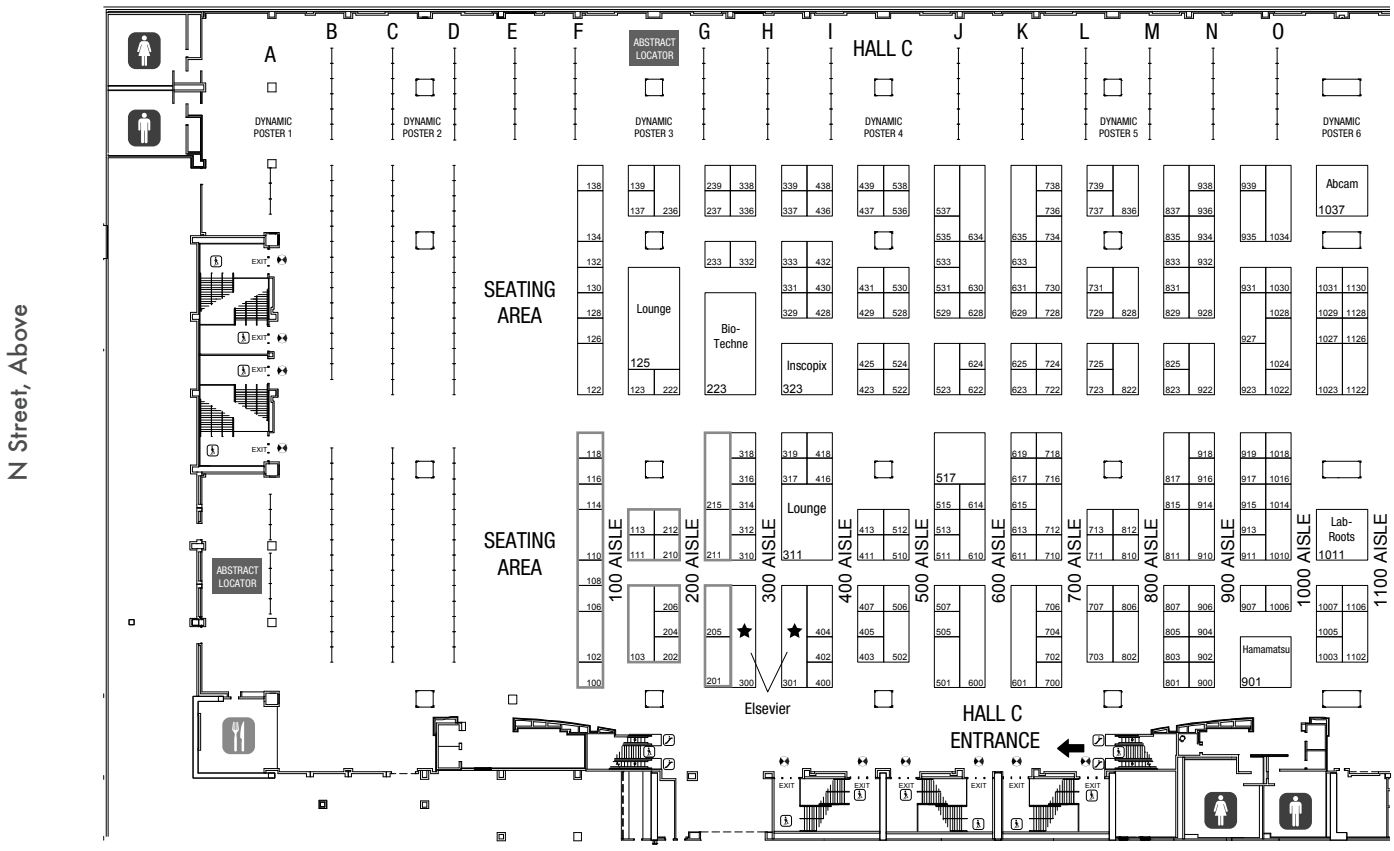
Meeting Dates: Nov. 11–15
Exhibit Dates: Nov. 12–15

Entrances will open at noon on Saturday and at 7 a.m. Sunday through Wednesday for poster presenter setup only. Poster sessions are open for all attendees at 1 p.m. on Saturday and 8 a.m. Sunday through Wednesday.

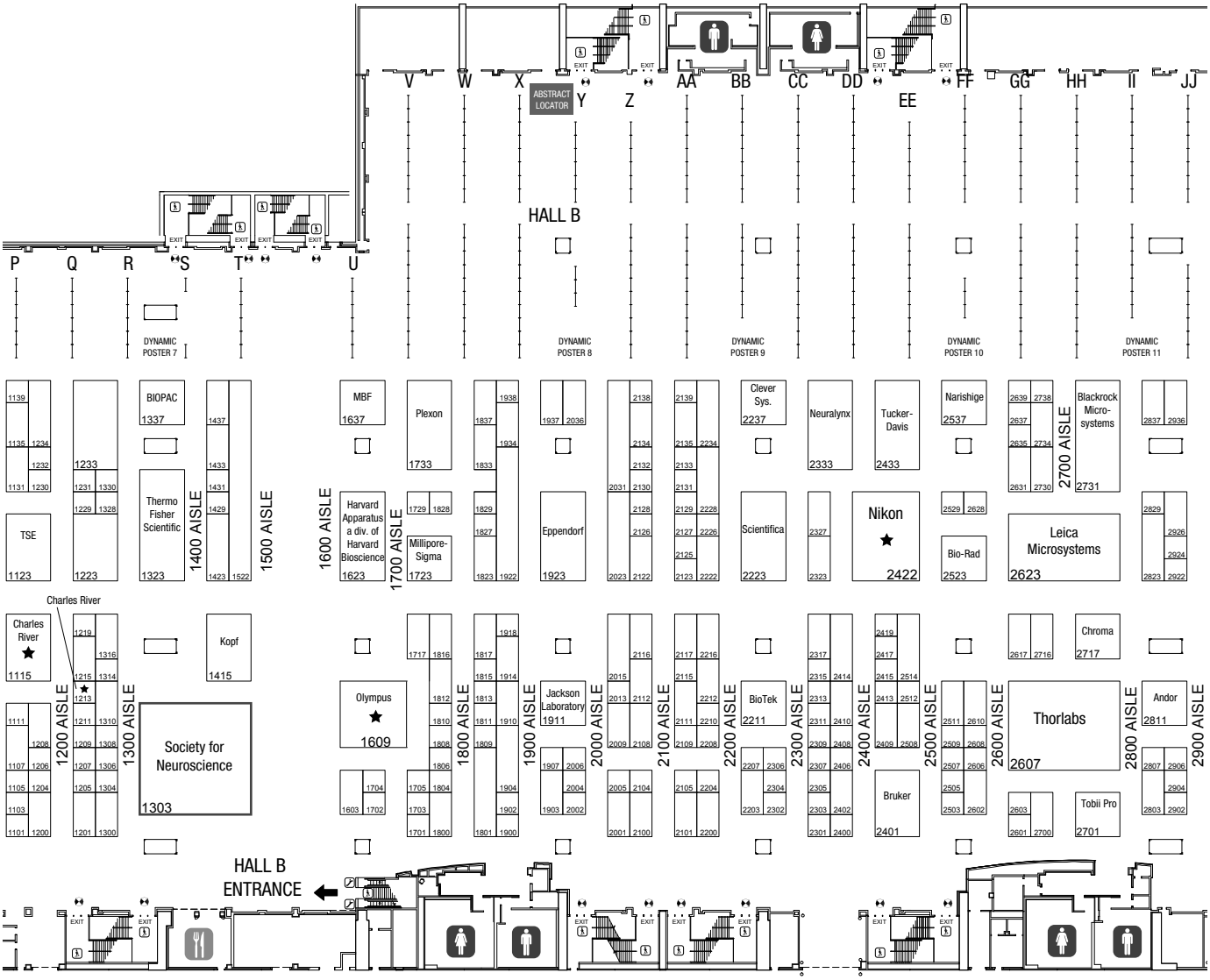
Floor plans subject to change. For current floor plan, visit **SfN.org/exhibits.**

KEY

- ☐ Institutions / Nonprofits
- ■ Abstract Locators
- ■ Concession Areas
- ☐ Publishers Row
- ☐ SfN Booth
- ■ Restrooms
- ★ Sustaining Associate Members
- \+ First Aid Station
- Emergency Exit



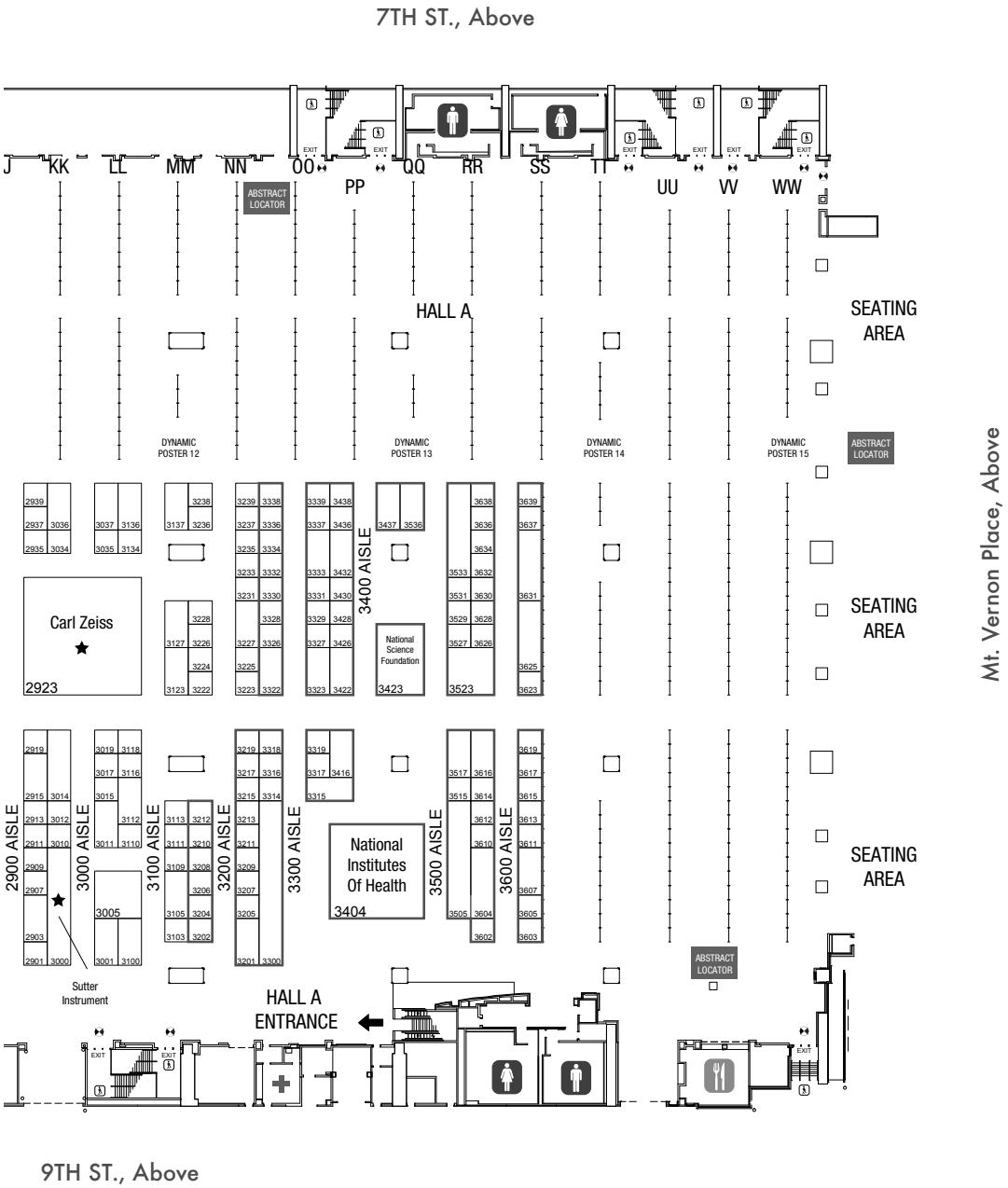
7TH ST., Above



9TH ST., Above

KEY

- ☐ Institutions / Nonprofits
- ☐ Publishers Row
- ★ Sustaining Associate Members
- ■ Abstract Locators
- ☐ SfN Booth
- \+ First Aid Station
- ■ Concession Areas
- ■ Restrooms
- Emergency Exit



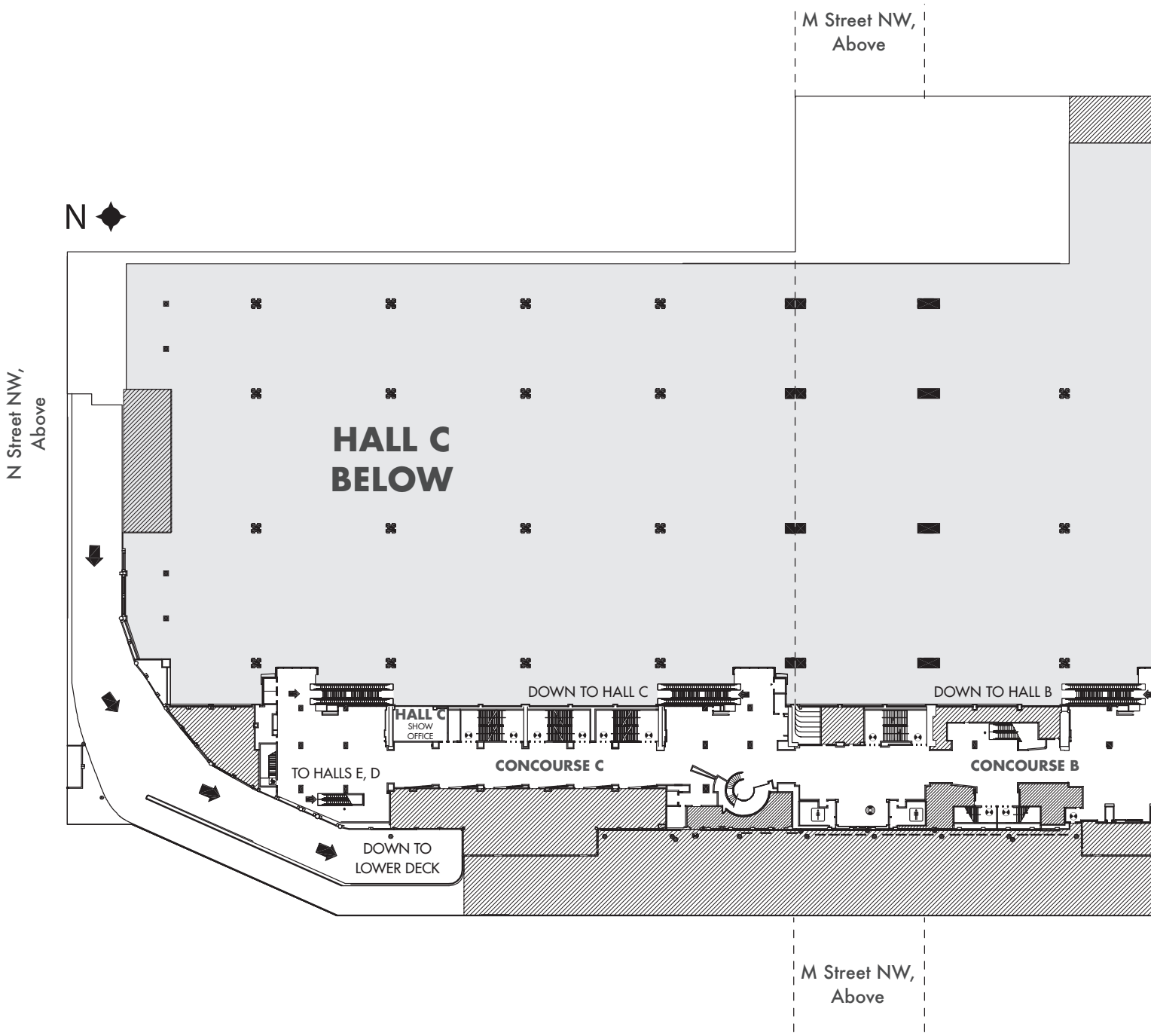
NOTE: Floor plans subject to change. For current floor plan, visit SfN.org/exhibits

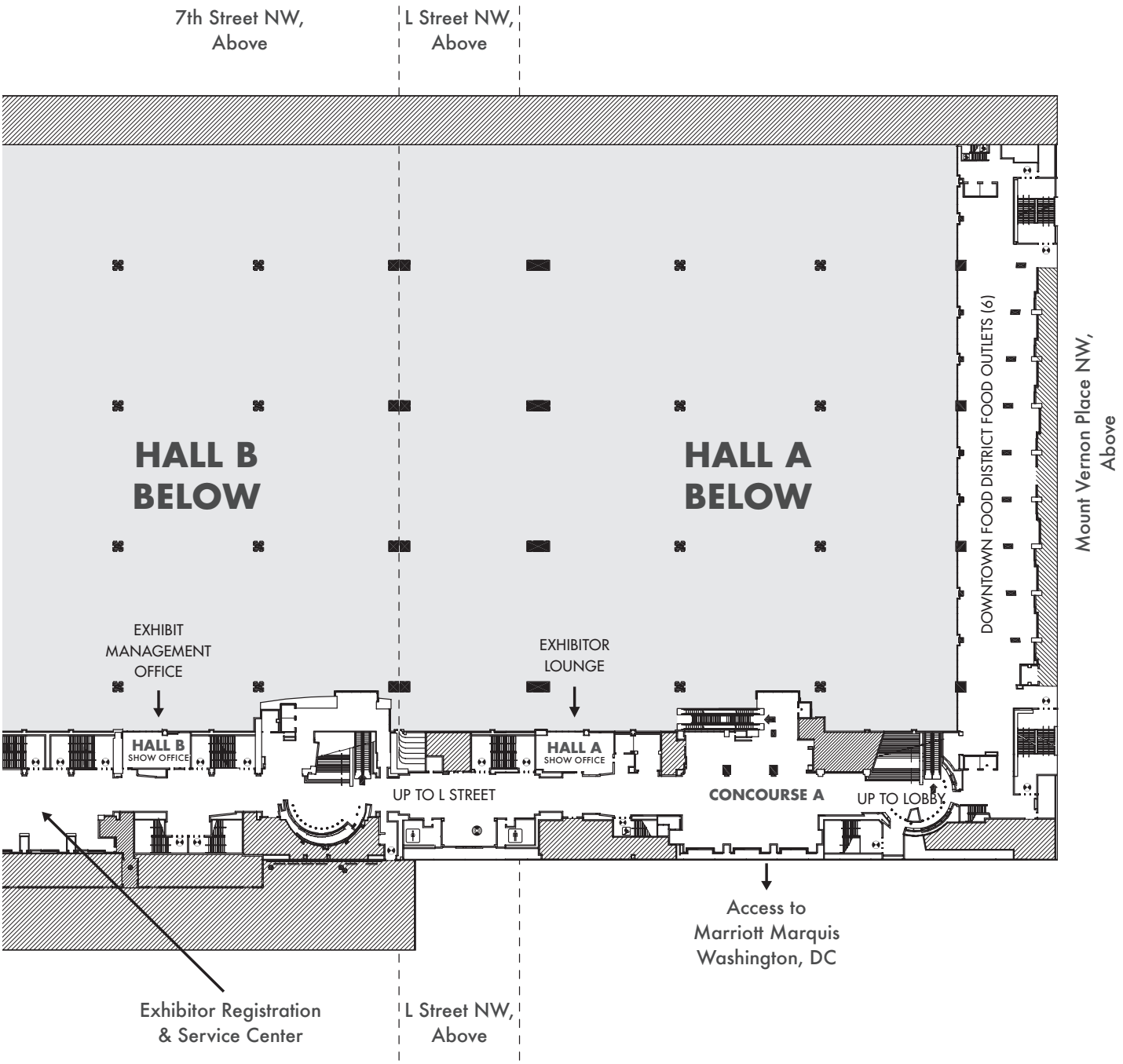
CONVENTION CENTER FLOOR PLANS

Concourse Level

Access to Exhibit Halls A–C

Show Offices A–C

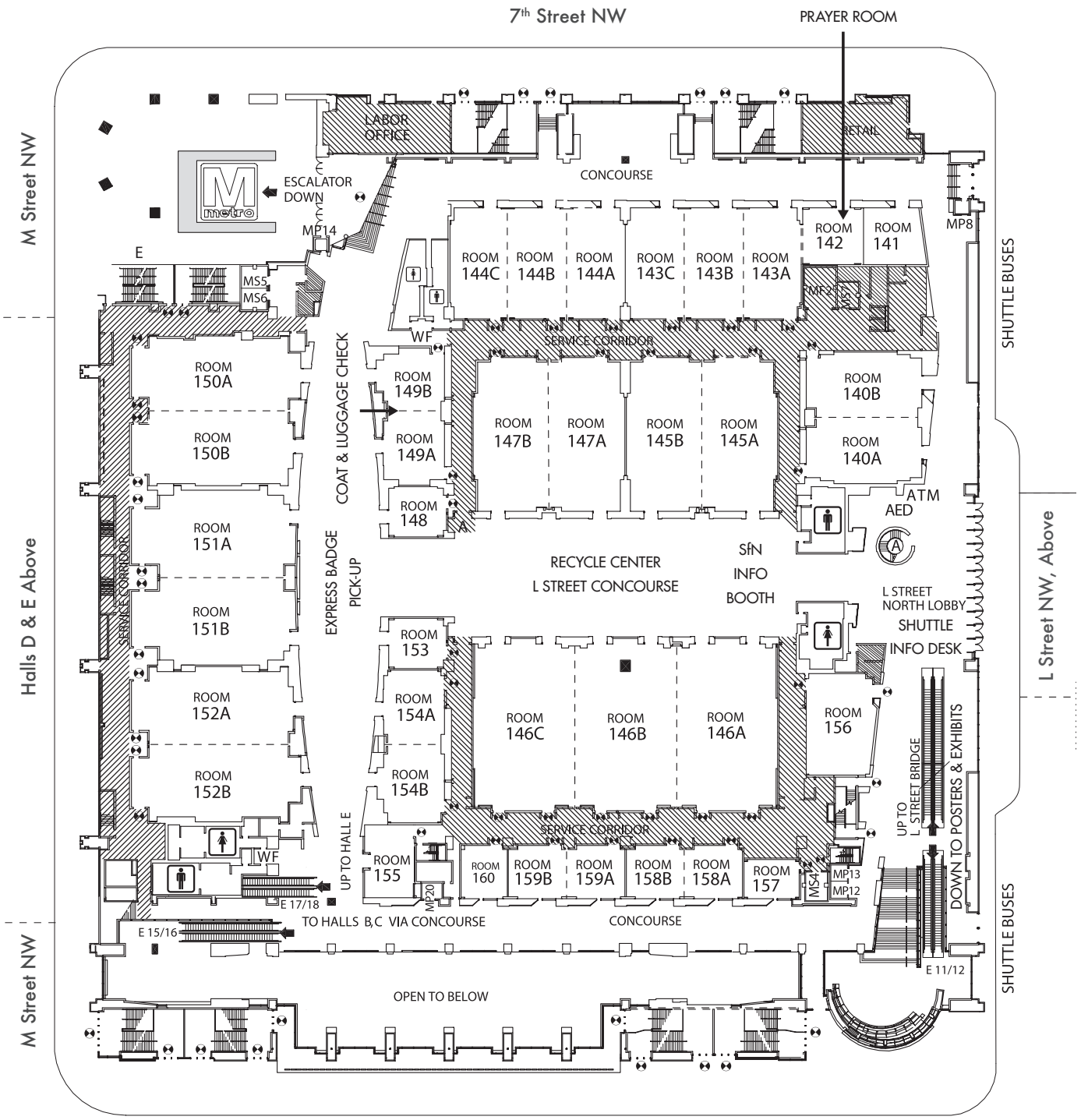


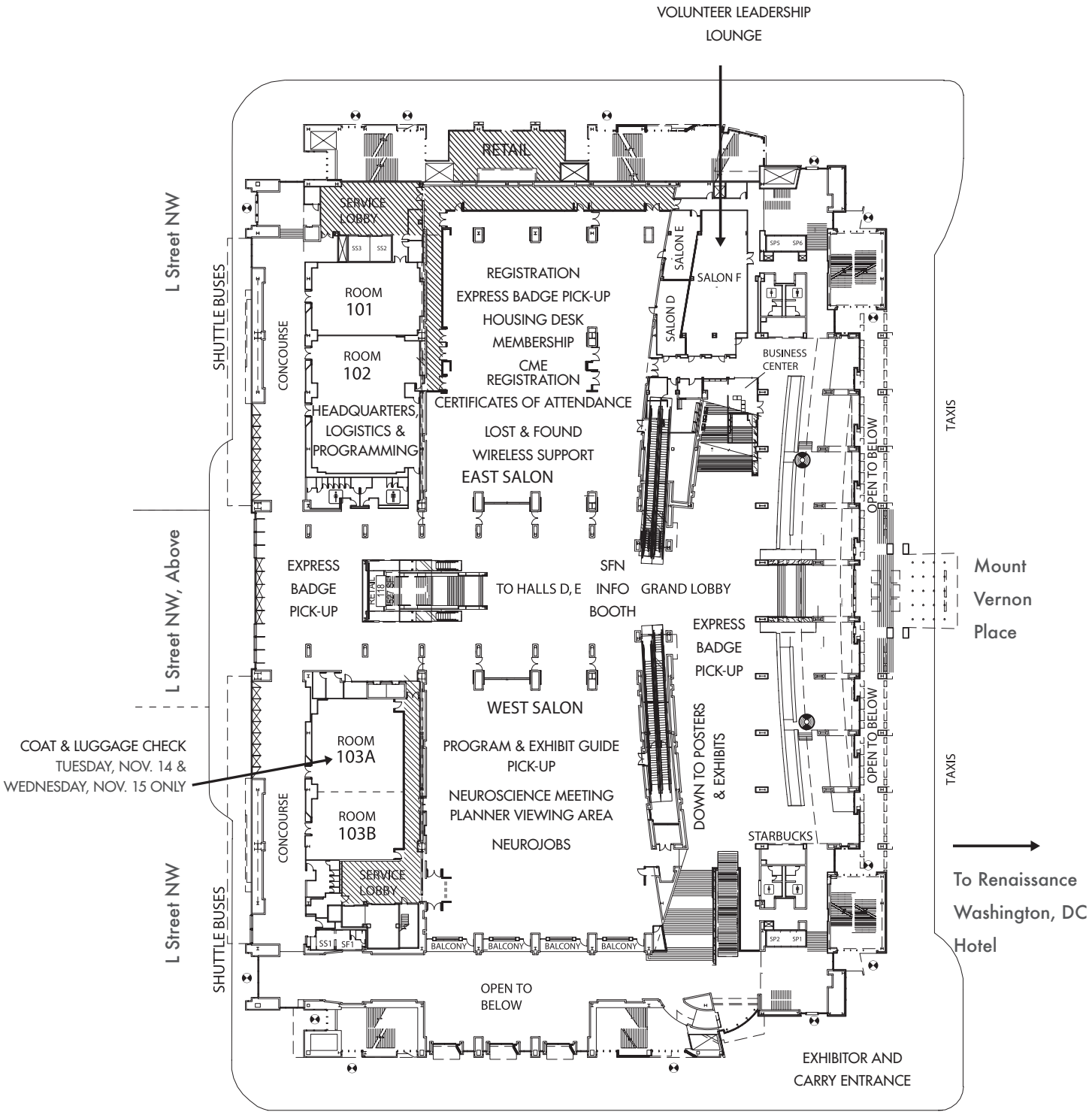

7th Street NW,
Above
L Street NW,
Above
HALL B
BELOW
HALL A
BELOW
DOWNTOWN FOOD DISTRICT FOOD OUTLETS (6)
Mount Vernon Place NW,
Above
EXHIBIT
MANAGEMENT
OFFICE
EXHIBITOR
LOUNGE
HALL B
SHOW OFFICE
HALL A
SHOW OFFICE
UP TO L STREET
CONCOURSE A
UP TO LOBBY
Access to
Marriott Marquis
Washington, DC
Exhibitor Registration
& Service Center
L Street NW,
Above

CONVENTION CENTER FLOOR PLANS

Lobby Level/Level 1

Meeting Rooms 101–103 & 140–160



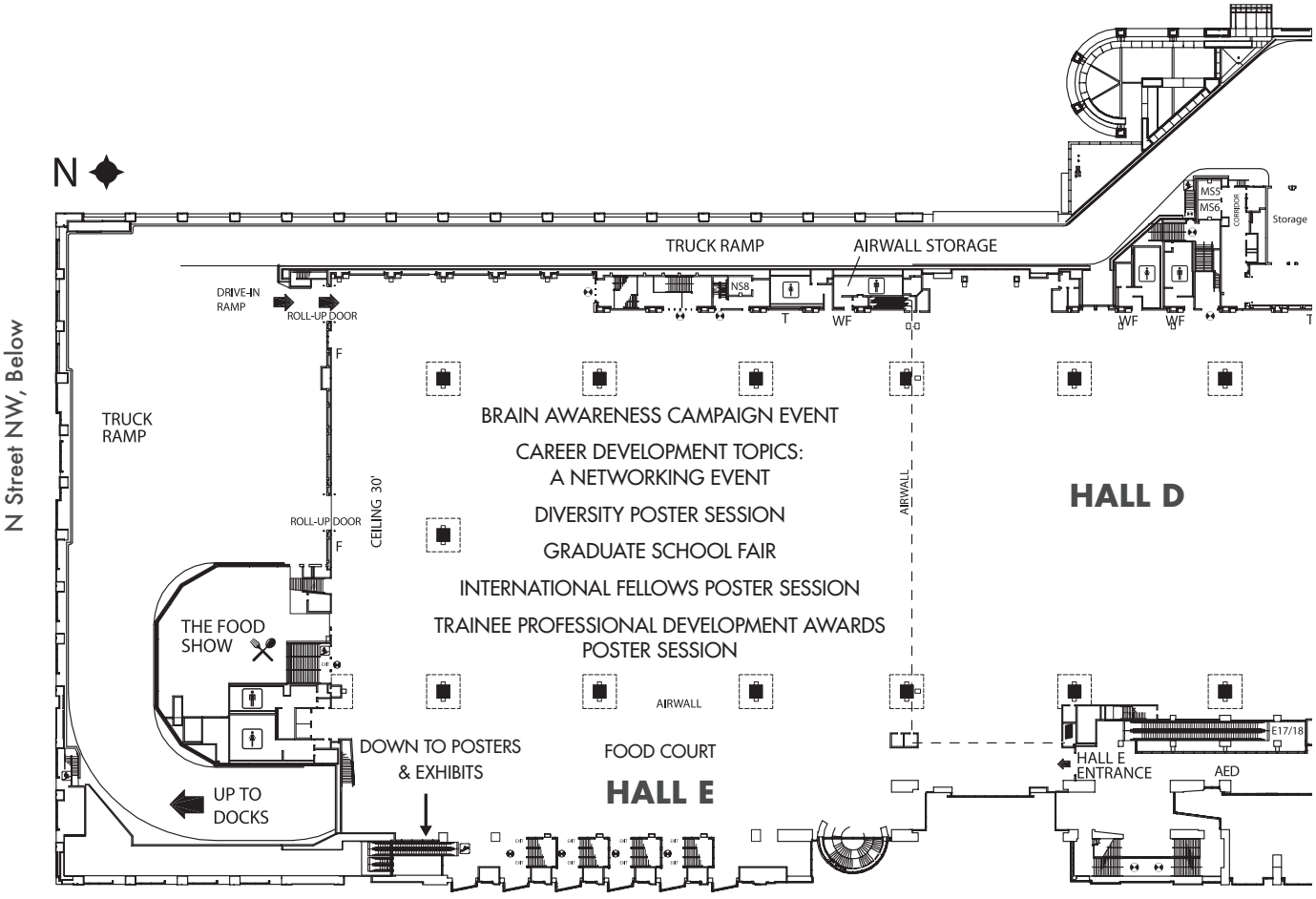

VOLUNTEER LEADERSHIP LOUNGE
RETAIL
SERVICE LOBBY
SS3
SS2
ROOM 101
ROOM 102
HEADQUARTERS, LOGISTICS & PROGRAMMING
REGISTRATION
EXPRESS BADGE PICK-UP
HOUSING DESK
MEMBERSHIP
CME REGISTRATION
CERTIFICATES OF ATTENDANCE
LOST & FOUND
WIRELESS SUPPORT
EAST SALON
SALON E
SALON F
SALON D
SP5
SP6
BUSINESS CENTER
L Street NW
SHUTTLE BUSES
CONCOURSE
L Street NW, Above
EXPRESS BADGE PICK-UP
RETAIL
T18
SS4
TO HALLS D, E
SFN INFO BOOTH
GRAND LOBBY
WEST SALON
ROOM 103A
ROOM 103B
PROGRAM & EXHIBIT GUIDE PICK-UP
NEUROSCIENCE MEETING PLANNER VIEWING AREA
NEUROJOBS
DOWN TO POSTERS & EXHIBITS
EXPRESS BADGE PICK-UP
STARBUCKS
SERVICE LOBBY
SS1
SF1
BALCONY
BALCONY
BALCONY
BALCONY
SP2
SP1
OPEN TO BELOW
OPEN TO BELOW
TAXIS
TAXIS
Mount Vernon Place
COAT & LUGGAGE CHECK
TUESDAY, NOV. 14 &
WEDNESDAY, NOV. 15 ONLY
To Renaissance Washington, DC Hotel
OPEN TO BELOW
EXHIBITOR AND CARRY ENTRANCE

CONVENTION CENTER FLOOR PLANS

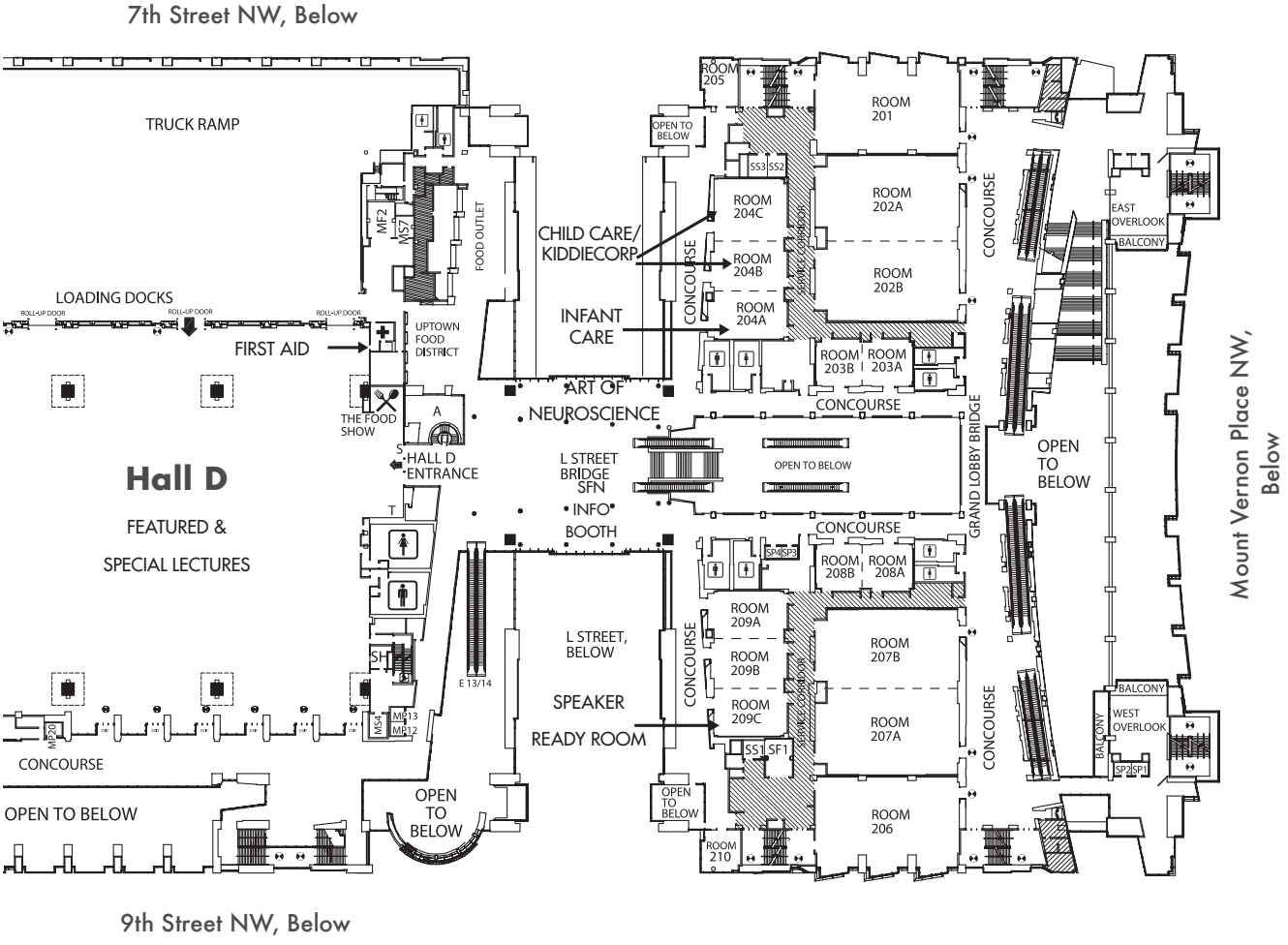
Level 2

Halls D & E

Meeting Rooms 201–210



NORTH BUILDING

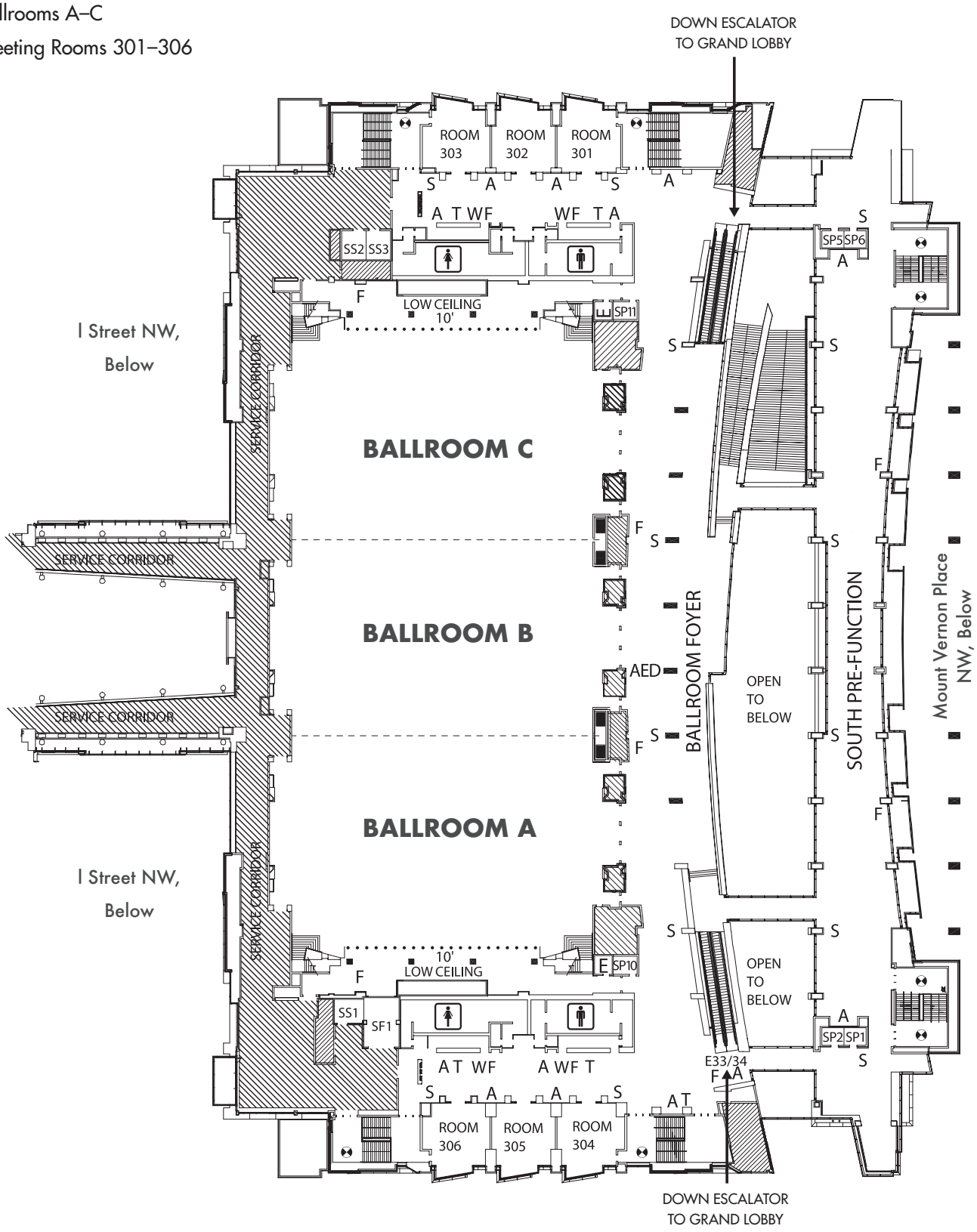

7th Street NW, Below
TRUCK RAMP
LOADING DOCKS
ROLL-UP DOOR
ROLL-UP DOOR
ROLL-UP DOOR
FIRST AID
THE FOOD SHOW
UPTOWN FOOD DISTRICT
FOOD OUTLET
MF2
MS7
A
S
HALL D ENTRANCE
Hall D
FEATURED &
SPECIAL LECTURES
T
SH
E 13/14
MS4
MS13
MS12
MP20
CONCOURSE
OPEN TO BELOW
OPEN TO BELOW
CHILD CARE/ KIDDIECORP
INFANT CARE
ART OF NEUROSCIENCE
L STREET BRIDGE SFN
INFO BOOTH
L STREET, BELOW
SPEAKER READY ROOM
ROOM 205
OPEN TO BELOW
ROOM 201
SS3
SS2
ROOM 204C
ROOM 204B
ROOM 204A
ROOM 202A
ROOM 202B
CONCOURSE
SOUTH CORRIDOR
CONCOURSE
EAST OVERLOOK
BALCONY
ROOM 203B
ROOM 203A
CONCOURSE
OPEN TO BELOW
GRAND LOBBY BRIDGE
OPEN TO BELOW
SP4
SP3
ROOM 208B
ROOM 208A
CONCOURSE
ROOM 209A
ROOM 209B
ROOM 209C
ROOM 207B
ROOM 207A
SOUTH CORRIDOR
CONCOURSE
BALCONY
WEST OVERLOOK
BALCONY
SS1
SF1
SP2
SP1
OPEN TO BELOW
ROOM 210
ROOM 206
Mount Vernon Place NW, Below
9th Street NW, Below
MIDDLE BUILDING
SOUTH BUILDING

CONVENTION CENTER FLOOR PLANS

Level 3

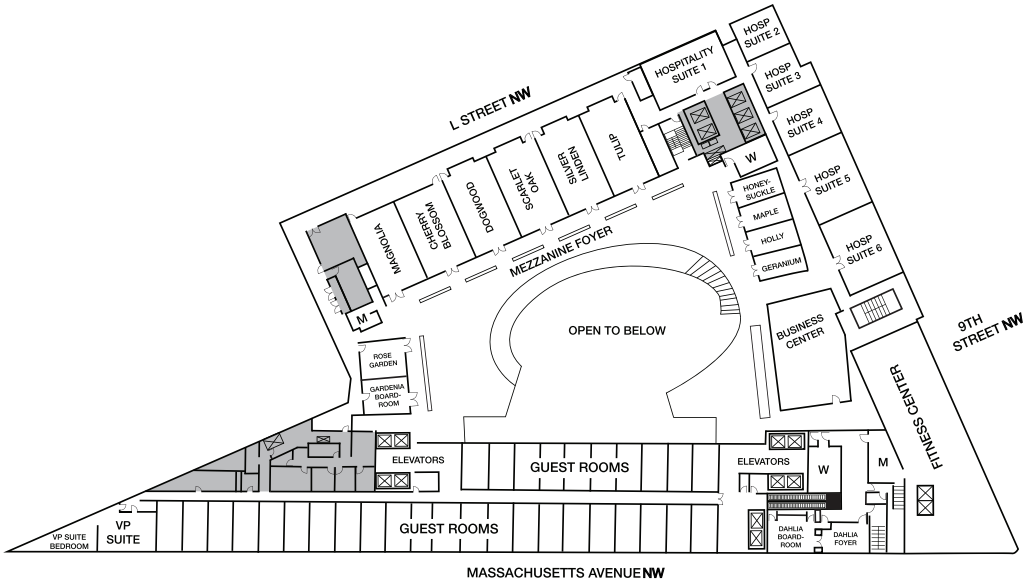
Ballrooms A–C

Meeting Rooms 301–306

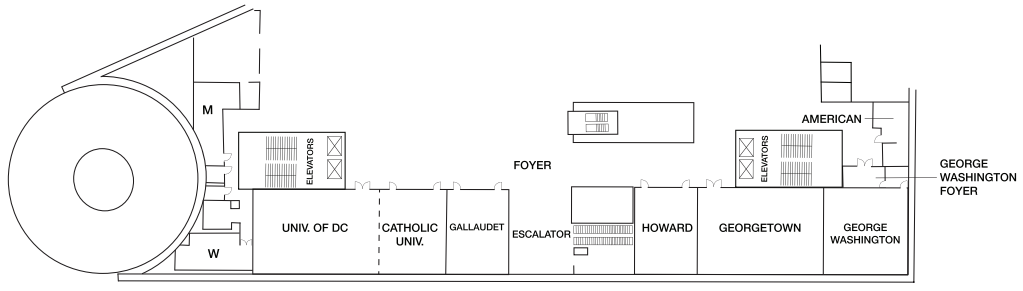


HOTEL FLOOR PLANS

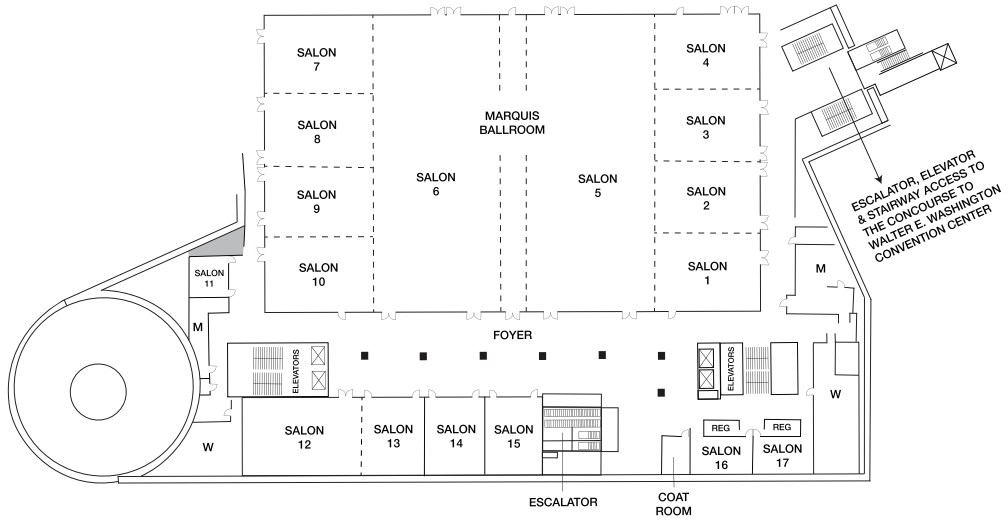
Marriott Marquis Washington, DC



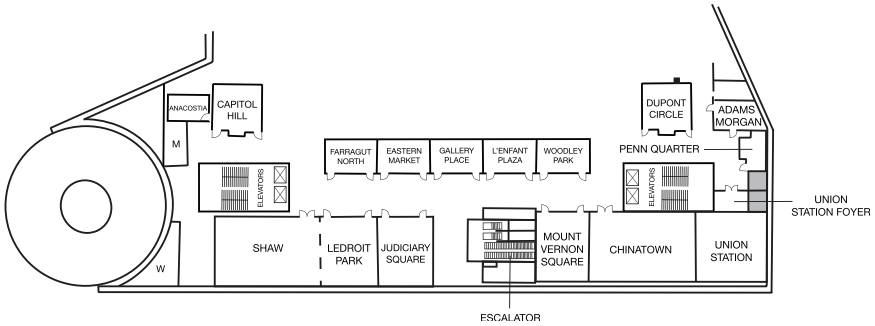
MEZZANINE LEVEL



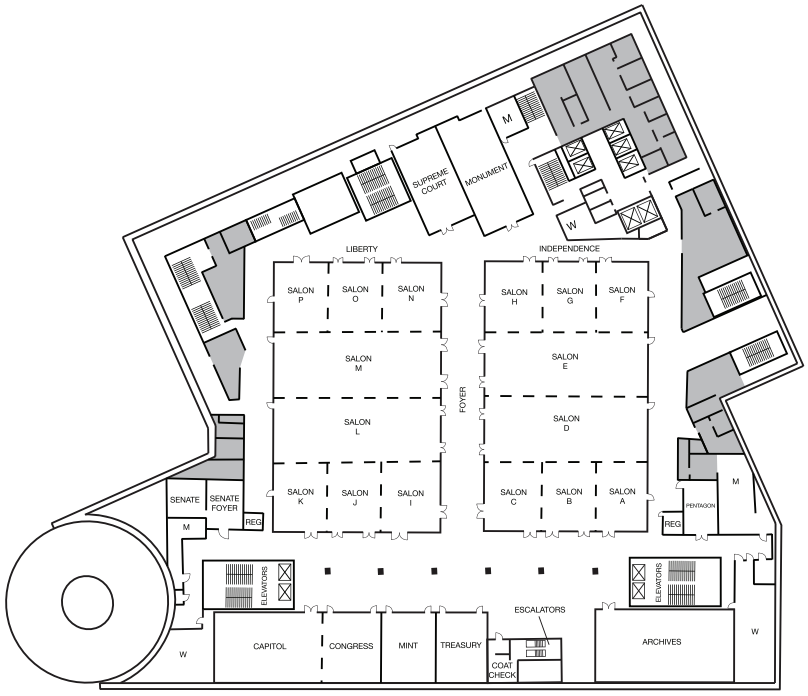
MEETING LEVEL 1



MEETING LEVEL 2

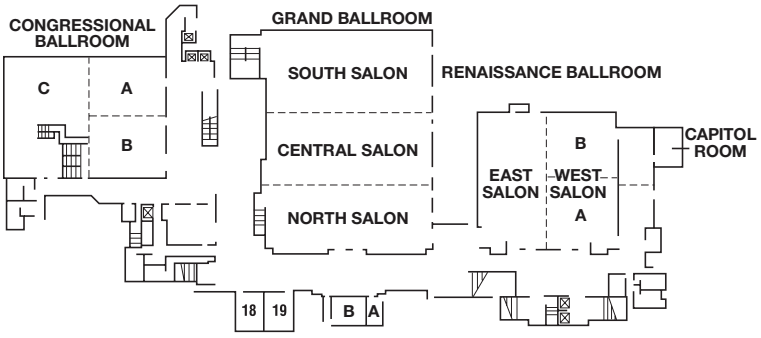


MEETING LEVEL 3

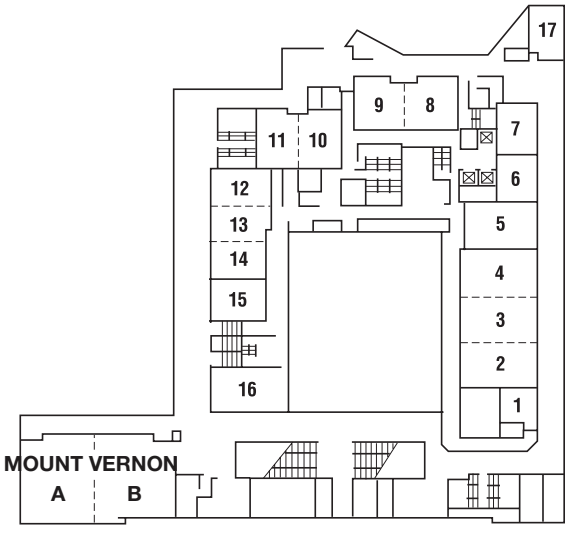


MEETING LEVEL 4

Renaissance Washington, DC Downtown



BALLROOM LEVEL



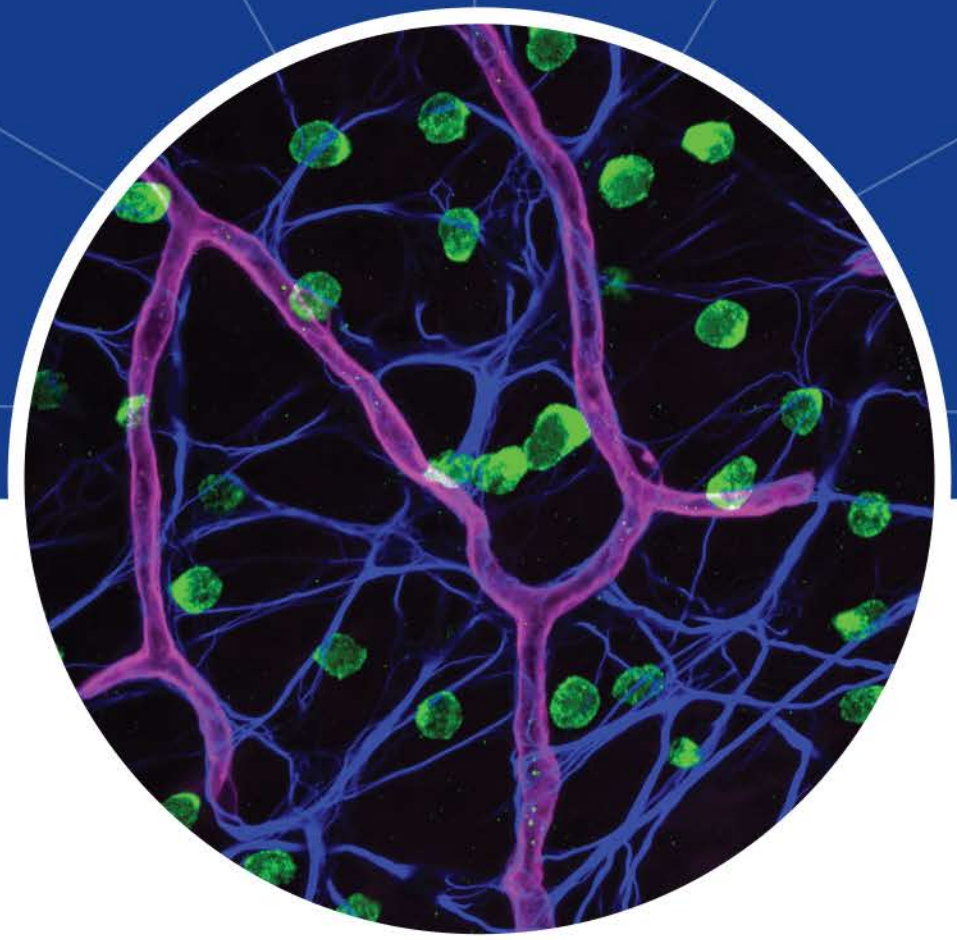
MEETING ROOM LEVEL

NEUROSCIENCE 2018

SEE YOU IN SAN DIEGO

NOVEMBER 3–7

SfN Society for Neuroscience



SOCIETY *for* NEUROSCIENCE

1121 14th Street NW, Suite 1010
Washington, DC 20005