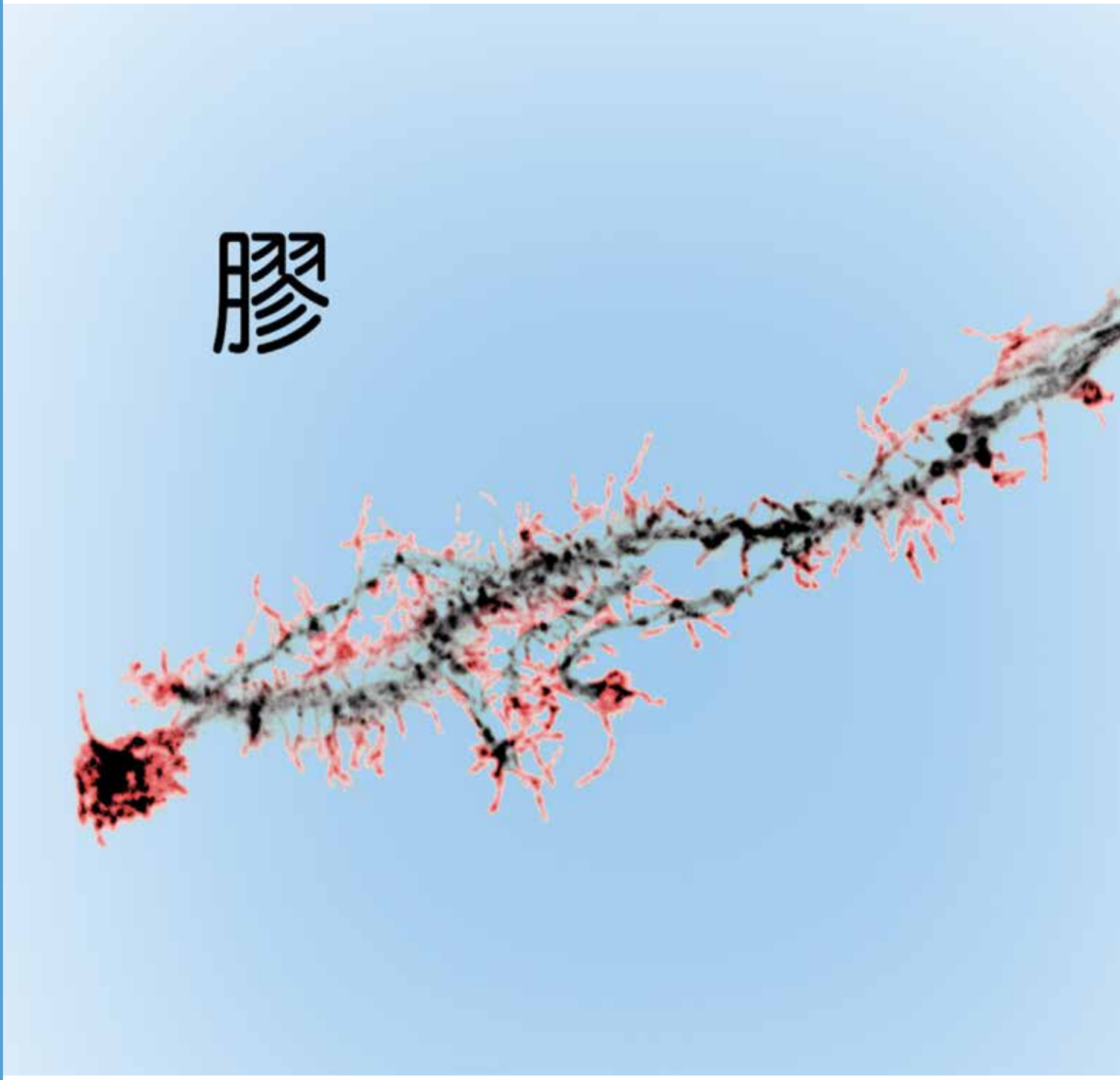
Neuroscience 2016

San Diego | November 12–16

Sunday



Scientific Session Listings 98–272

Society for Neuroscience

Information at a Glance

Important Phone Numbers

Annual Meeting Headquarters Office

Logistics and Programming

Logistics
San Diego Convention Center: Sails Pavilion
(619) 525-6200

Programming
San Diego Convention Center: Sails Pavilion
(619) 525-6205

Volunteer Leadership Lounge
San Diego Convention Center: Room 14A
(619) 525-6235

General Information Booths

San Diego Convention Center
Front of Box Office A, (619) 525-6224
Lobby D, (619) 525-6225
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Press Office

Press Room
San Diego Convention Center: Room 15B
(619) 525-6230

Exhibit Management
San Diego Convention Center: Lobby D
(619) 525-6240

First Aid, Hospital and Urgent Care Numbers

First Aid Station
San Diego Convention Center:
Box Office G
(619) 525-6211

Scripps Mercy Hospital
4077 Fifth Avenue
San Diego, CA 92103
(619) 294-8111

Sharp Rees – Stealy Downtown San Diego Urgent Care
300 Fir Street
San Diego, CA 92101
(858) 499-2600

Note: The themes have been updated for Neuroscience 2016

Key to Poster Floor by Themes

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 located in Hall B beginning at 1 p.m. on Saturday, November 12, and will remain posted until 5 p.m., Sunday, November 13.

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.notalone.gov. 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. View the entire Code of Conduct at SfN Events statement for more information.

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

Cover Image: Radial glial cell from the optic tectum of a Xenopus laevis tadpole, represented as a cherry branch to celebrate the arrival of Spring. The accompanying Chinese character 膠 comes from the Japanese word for "glia" or "glue".

Mari Sild, Marion R. Van Horn, Anne Schohl, Dantong Jia, and Edward S. Ruthazer, 2016, *The Journal of Neuroscience*, 36(19): 5279-5288.

Complete Session Listing

Sunday AM

LECTURE *San Diego Convention Center*

098. Bitten: Understanding and Modulating Mosquito Attraction to Humans — CME

Sun. 8:30 AM - 9:40 AM — Ballroom 20

Speaker: L. B. VOSSHALL, *Rockefeller Univ.*

By the act of feeding on our blood, female mosquitoes spread dangerous infectious diseases such as malaria, dengue, zika, and yellow fever to humans. We attract mosquitoes via multiple sensory cues, including emitted body odor, body heat, and carbon dioxide in the breath. The mosquito perceives differences in these cues, both between and within species, to determine which animal or human to target for blood-feeding. This lecture will focus on the genes and circuits that drive this dangerous behavior and how it is modulated by the internal physiological state of the mosquito.

SYMPOSIUM *San Diego Convention Center*

099. Neuronal Cytoskeleton 2.0: A Revised View of an Ancient Edifice — CME

Sun. 8:30 AM - 11:00 AM — 6F

Chair: S. ROY
Co-Chair: C. HOOGENRAAD

The neuronal cytoskeleton is essential for trafficking molecules into axons and dendrites and also for maintaining the structural integrity of these elongated appendages. Recent advances in super-resolution, live imaging, and genetics have revealed a remarkable cytoskeletal organization in neurons, essentially revising canonical models. The goal of this symposium will be to inform the audience of these exciting new developments, present ongoing research, and foster cross-talk between participants.

8:30 **99.01** Introduction.

8:35 **99.02** Superresolution microscopy reveals the intricate nanostructure of the neuronal cytoskeleton. C. LETERRIER. *Aix Marseille Univ.*

9:10 **99.03** Actin rings and actin trails - a two-tier assembly in axons. S. ROY. *UCSD.*

9:45 **99.04** Combining live imaging and model organism genetics to understand microtubule organization in dendrites. M. ROLLS. *The Pennsylvania State Univ.*

10:20 **99.05** Novel regulators of neuronal polarity and axon specification. C. HOOGENRAAD. *Utrecht Univ.*

10:55 **99.06** Closing Remarks.

SYMPOSIUM *San Diego Convention Center*

100. Neuroscience of Music: Novel Discoveries and Their Implications in the Understanding of Music and the Brain — CME

Sun. 8:30 AM - 11:00 AM — 6B

Chair: E. STEGEMÖLLER
Co-Chair: P. IZBICKI

Recent developments in understanding the effects of music on the brain have revolutionized music therapy, musical neuroeducation, music perception, and music cognition. This symposium will highlight the neurological mechanisms and significance of music used in the clinical setting, neuroeducation, and daily experiences. Experts in the areas of neuroscience and music will speak on topics including music and neuroplasticity, music and neurochemistry, and the biology of auditory learning.

8:30 **100.01** Introduction.

8:35 **100.02** The neurochemistry of music. D. LEVITIN. *McGill Univ.*

9:10 **100.03** ● Unraveling the biology of auditory learning: What have we learned from music? N. KRAUS. *Northwestern Univ.*

9:45 **100.04** Rhythms in music, language, and brain. J. R. IVERSEN. *UC San Diego.*

10:20 **100.05** Music therapy and neuroplasticity. E. STEGEMÖLLER. *Iowa State Univ.*

10:55 **100.06** Closing Remarks.

SYMPOSIUM *San Diego Convention Center*

101. New Developments in Understanding the Complexity of Human Speaking — CME

Sun. 8:30 AM - 11:00 AM — 6A

Chair: K. SIMONYAN

Speech is one of the most unique features of human existence and communication. Our ability to articulate our thoughts depends critically on the integrity of the motor cortex. Long thought to be a low-order brain region, exciting work in the past years is overturning this notion. In this symposium, speakers will highlight major experimental advances in speech motor control research and discuss emerging findings about the complexity of speech motor cortex organization and its large-scale networks.

8:30 **101.01** Introduction.

8:35 **101.02** Gestural encoding in human speech cortex. E. CHANG. *Univ. of California, San Francisco.*

9:10 **101.03** Multi-modal studies of human speech motor control: Direct brain recording and manipulation. J. D. GREENLEE. *Univ. of Iowa.*

9:45 **101.04** Large-scale neural networks of speech production. K. SIMONYAN. *Icahn Sch. of Med. at Mount Sinai.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:20 **101.05** The contributions of the basal ganglia and the cerebellum to speech motor control. H. ACKERMANN. *Univ. of Tuebingen.*

10:55 **101.06** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

102. Second Generation AD Mouse Models for Reproducible Preclinical Studies — CME

Sun. 8:30 AM - 11:00 AM — 28A

Chair: T. C. SAIDO
Co-Chair: B. DE STROOPER

First-generation mouse models of AD overexpress mutant APP or APP and PS, resulting in artificial phenotypes due to overexpression of membrane proteins. This includes non-specific ER stress, perturbed axonal transport, destruction of genetic loci in host animals, and overproduction of non-Aβ APP fragments such as CTF-β, which is more toxic than Aβ. This minisymposium will introduce second-generation mouse models of AD exhibiting Aβ pathology without APP overexpression for more accurate disease studies.

8:30 **102.01** Introduction.

8:35 **102.02** ● Using iPS-mice chimera to understand the cellular phase of Alzheimer Disease. B. DE STROOPER. *VIB and K U Leuven.*

8:55 **102.03** ● Use of APP knock-in mice to study synaptic spine loss and calcium dysregulation in AD. I. BEZPROZVANNY. *Univ. of Texas Southwestern Med. Ctr.*

9:15 **102.04** Pathological impact of astrocyte-mediated proteolytic processing on amyloid-ß deposition. T. TOMITA. *The Univ. of Tokyo.*

9:35 **102.05** Understanding GPCR dysfunction in AD with humanized APP mouse models. A. THATHIAH. *Univ. of Pittsburgh Sch. of Med.*

9:55 **102.06** Analysis of APP knock-in mice crossed with mice transgenic for human P301S τ. J. MACDONALD. *MRC Lab. of Mol. Biol.*

10:15 **102.07** Biology of Time: Humanization of entire murine τ gene for a better model of AD. T. SAITO. *RIKEN Brain Sci. Inst.*

10:35 **102.08** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

103. Food for Thought: How Diet Influences Cognitive Function and Emotion — CME

Sun. 8:30 AM - 11:00 AM — 6E

Chair: S. SPENCER
Co-Chair: R. M. BARRIENTOS

Diet influences cognition and emotional behavior, but the neural mechanisms for these effects are not well understood. This minisymposium discusses recent work linking dietary fat intake and omega-3 dietary imbalance with inflammation in the brains of developing, adult, and aged rodents. Recent advances in understanding how microglia detect and integrate peripheral signaling patterns associated with diet and the role of dietary polyphenols in cognitive processes will also be discussed.

8:30 **103.01** Introduction.

8:35 **103.02** Role of essential nutrients and lipid metabolism in programming cognitive functions by early-life stress: Potential for nutritional interventions. A. KOROSI. *Univ. of Amsterdam.*

8:55 **103.03** Perinatal overfeeding impairs learning and memory, an essential role for microglia. S. SPENCER. *Royal Melbourne Inst. of Technol. Univ.*

9:15 **103.04** Acute high-fat diet consumption sensitizes the neuroinflammatory response to a mild immune challenge causing long-term memory deficits. R. M. BARRIENTOS. *Univ. of Colorado Boulder.*

9:35 **103.05** Dietary omega-3 and depression: How does it work? S. LAYE. *Univ. of Bordeaux.*

9:55 **103.06** Synaptic stripping by microglia impairs hippocampus-dependent memory in obesity. A. M. STRANAHAN. *Med. Col. of Georgia.*

10:15 **103.07** Dietary interventions with polyphenolic-rich foods can improve neuronal and behavior deficits associated with aging. B. SHUKITT-HALE. *Human Nutr. Res. Ctr. On Aging.*

10:35 **103.08** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

104. Spanning the Central-Peripheral Divide: Bridging the Gap to Find Novel Strategies to Target Depression — CME

Sun. 8:30 AM - 11:00 AM — 29D

Chair: A. J. EISCH
Co-Chair: S. YUN

Major depressive disorder (MDD) is among the most common of mental illnesses, yet many people prescribed antidepressants or non-pharmaceutical medications will relapse. MDD is increasingly being recognized as a disorder that spans the "central-peripheral divide," yet no SfN sessions have ever tackled this segregation of MDD research. This session will provide a cutting-edge, translational view of modern MDD research and relevant novel therapies to combat depression symptoms.

8:30 **104.01** Introduction.

8:35 **104.02** A key role for 5-HT2A receptors in programming psychiatric vulnerability. V. A. VAIDYA. *Tata Inst. of Fundamental Res.*

8:55 **104.03** Differential modulation of the reward circuit and encoding of depression related behaviours. D. CHAUDHURY. *New York Univ. Abu Dhabi.*

9:15 **104.04** Molecular phenotyping of cortical circuits mediating antidepressant responses. E. F. SCHMIDT. *Rockefeller Univ.*

9:35 **104.05** Stimulation of entorhinal cortex-dentate gyrus circuitry is antidepressive. S. YUN. *Univ. of Texas Southwestern Med. Ctr.*

9:55 **104.06** Skeletal muscle PGC-1a1 modulates kynurenine metabolism and mediates resilience to stress-induced depression. J. L. RUAS. *Karolinska Institutet.*

10:15 **104.07** Coordinated messenger RNA/MicroRNA changes in fibroblasts of patients with major depression. K. A. GARBETT. *Vanderbilt Univ.*

10:35 **104.08** Closing Remarks.

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▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

LECTURE *San Diego Convention Center*

105. Dendritic Spines Shaping Memory and Behaviors — CME

Sun. 10:00 AM - 11:10 AM — Ballroom 20

Speaker: H. KASAI, *Grad. Sch. of Medicine, The Univ. of Tokyo.*

Spiny protrusions of dendrite, called dendritic spines, are the major postsynaptic sites for excitatory synaptic transmission in the brain. New studies indicate that spines act as memory elements, and do so by their structural plasticity. Such cell motility regulates functional connectivity, and enables Hebbian and reinforcement learning in the cortex and basal ganglia. Motility can be spontaneous, and such fluctuations may determine memory persistence and stabilize recurrently connected networks. Spine motility connects cell biology to mental functions and disorders.

LECTURE *San Diego Convention Center*

106. Translational Neuroepigenetic Insights of Addiction Vulnerability — CME

Sun. 11:30 AM - 12:40 PM — Ballroom 20

Speaker: Y. L. HURD, *Icahn Sch. of Med. at Mount Sinai.*

Drug addiction involves complex interactions of dynamic processes that contribute to individual vulnerability from early stages of development and during different phases of life by linking genetic factors with environmental experiences. This lecture will focus on neurobiological insights recently gained about the molecular underpinnings of substance abuse (particularly cannabis and opiates) using multidisciplinary translational approaches in humans and animal models. The work presented will illuminate epigenetic mechanisms associated with addiction risk that extend even across generations.

NANOSYMPOSIUM

107. Mechanisms of Neurotransmitter Release

Theme B: Neural Excitability, Synapses, and Glia

Sun. 8:00 AM – *San Diego Convention Center*, 25A

8:00 **107.01** Neuronal signaling at single active zone contained central synapses. J. SUN*; J. DAI; Q. ZHU; K. MA; P. SAH. *Chinese Acad. of Sci., Inst. of Biophysics, Chinese Acad. of Sci., The Queensland Brain Institute, The Univ. of Queensland.*

8:15 **107.02** Dissecting molecular mechanisms of synaptic and large dense-core vesicle docking and priming. C. IMIG*; K. M. MAN; J. RHEE; N. BROSE; S. M. WOJCIK; B. H. COOPER. *Max Planck Inst. of Exptl. Med.*

8:30 **107.03** Syntaxin-1a is in a closed conformation and bound to Munc18 where secretory granules dock in live cells. W. ALMERS*; X. CHEN; L. WAN. *Oregon Hlth. and Sci. Univ.*

8:45 **107.04** Distinct functions of syntaxin-1 in neuronal maintenance, synaptic vesicle docking and fusion in mouse neurons. G. VARDAR*; S. CHANG; M. ARANCILLO; Y. WU; T. TRIMBUCH; C. ROSENMUND. *Charité - Universitätsmedizin Berlin, Charité - Universitätsmedizin.*

9:00 **107.05** *In vivo* single molecule imaging of syntaxin-1A reveals change in lateral mobility required for neurotranmsitter release. A. D. BADEMOSI*; L. ODIERNA; Y. CHAI; A. PAPADOPULOS; E. LAUWERS; O. ZALUCKI; M. TROUP; R. GORMAL; B. KOTTLER; J. STEVES; P. VERSTREKEN; V. ANGGONO; B. VAN SWINDEREN; F. MEUNIER. *Univ. of Queensland, VIB Ctr. for Biol. of Dis.*

9:15 **107.06** The polybasic juxtamembrane stretch of syntaxin 1 has a role in Ca^{2+}-dependent evoked neurotransmitter release in PC12 cells. I. LOTAN*; D. SINGER-LAHAT; N. BARAK-BRONER; D. CHIKVASHVILI. *Tel-Aviv Univ.*

9:30 **107.07** Molecular steps between Ca^{2+} influx, a conformational change of SNAP25, and vesicle fusion. Y. ZHAO; Q. FANG; S. SHARMA; M. LINDAU*. *Max-Planck-Institute for Biophysical Chem., Cornell Univ.*

9:45 **107.08** Molecular mechanism of the synaptotagmin-SNARE interaction in Ca^{2+}-triggered synaptic neurotransmitter release. Q. ZHOU*; A. BRUNGER. *Stanford Univ. / HHMI, Stanford Univ. / HHMI.*

10:00 **107.09** Complexin increases Ca^{2+} coupling in vesicle fusion at nano and micro domains. R. A. JORQUERA*; E. QUIROZ; A. GONZALEZ-RUIZ. *Univ. Central Del Caribe, Sch. of Med., Univ. de Chile.*

10:15 **107.10** Nanoscale imaging of presynaptic calcium signaling. N. T. URBAN*; J. NEEF; T. OHN; T. FRANK; S. W. HELL; K. I. WILLIG; T. MOSER. *Max-Planck-Institute for Biophysical Chem., Ctr. for Nanoscopy and Mol. Physiol. of the Brain, Univ. Med. Ctr. Goettingen, Collaborative Res. Ctr. 889, Univ. of Goettingen, Bernstein Focus for Neurotechnology, Univ. of Goettingen, Max-Planck-Institute for Biophysical Chem., Max-Planck-Institute for Biophysical Chem., Univ. Med. Ctr. Goettingen, Bernstein Ctr. for Computat. Neuroscience, Univ. of Goettingen.*

10:30 **107.11** An *in vitro* fusion assay utilizing endogenous excitatory synaptic vesicles. J. LEITZ*; J. J. PETERS; A. L. WANG; R. A. PFUETZNER; J. DIAO; A. T. BRUNGER. *Stanford Univ., Howard Hughes Med. Inst., Univ. of Cincinnati Col. of Med.*

10:45 **107.12** Identification of an activity-induced, calcium-dependent glutamine transporter in hippocampal axon terminals. J. D. ERICKSON*. *LSUHSC.*

NANOSYMPOSIUM

108. Energy Metabolism and Mitochondria Function in Health, Disease, and Aging

Theme C: Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *San Diego Convention Center*, 32B

8:00 **108.01** A glucose-sensing circuit in the insular cortex. I. DE ARAUJO SALGADO*; N. BENFREDJ; C. LAMY. *Univ. of Fribourg.*

8:15 **108.02** Bi-directional manipulation of ventromedial hypothalamic SF1 neuron activity has opposing effects on feeding and adiposity. P. VISKAITIS*; E. E. IRVINE; M. A. SMITH; S. M. A. PEDRONI; A. CHOUDHURY; J. GLEGOLA; D. HARDY; M. PAIVA PESSOA; L. KATSOURI; D. J. WITHERS. *Imperial Col. London.*

8:30 **108.03** Hypothermia in mouse is caused by AMP and A1 and A3 adenosine receptor agonists via three distinct mechanisms. J. CARLIN*; D. K. TOSH; S. JAIN; K. A. JACOBSON; O. GAVRILOVA; M. L. REITMAN. *Natl. Inst. of Hlth., NIH, NIH.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:45 **108.04** ▲ Attenuation of d-galactose induced cognitive impairment by Trigonelline via its antioxidative, anticholinesterase & antiglycative pathways. A. A. CHOWDHURY*; N. GAWALI; V. BULANI; P. KOTHAVADE; A. R. JUVEKAR. *Inst. of Chem. Technol.*

9:00 **108.05** ● Improving mitochondrial function to treat age-related visual decline. N. M. ALAM*; S. LI; W. C. MILLS, 3rd; Y. SOONG; H. H. SZETO; G. T. PRUSKY. *Burke Med. Res. Inst., Weill Cornell Med. Col.*

9:15 **108.06** Effects of long-term Rice Bran Extract supplementation on survival, cognition and brain mitochondrial function in aged NMRI mice. G. P. ECKERT*; H. ASSEBURG; M. HEINRICH; N. SUS; E. BLUMRICH; R. DRINGEN; J. FRANK; S. HAGL. *Justus-Liebig-University, Goethe-University Frankfurt, Univ. Hohenheim, Univ. Bremen.*

9:30 **108.07** Reduction in ATP levels in the axon during aging and the role of mitochondrial distribution. M. OKA*; E. SUZUKI; S. HISANAGA; K. M. IIJIMA; K. ANDO. *Tokyo Metropolitan Univ., Natl. Inst. of Genet., Dept. of Alzheimer's Dis. Research, Natl. Ctr. for Geriatrics and Gerontology.*

9:45 **108.08** Dissecting mitochondrial dysfunction in alzheimer´s disease by metabolic imaging. P. M. SCHAEFER*; B. VON EINEM; E. CALZIA; A. RÜCK; C. A. F. VON ARNIM. *Ulm Univ., Ulm Univ., Ulm Univ.*

10:00 **108.09** Mitochondrial metabolism controls early lineage progression and ageing phenotypes in adult hippocampal neurogenesis. R. BECKERVORDERSANDFORTH; B. EBERT; L. DIMOU*; I. SCHÄFFNER; C. FIEBIG; J. SHIN; J. MOSS; D. MOORE; L. GOSH; M. F. TRINCHERO; C. STOCKBURGER; K. FRIEDLAND; S. KEINER; R. JAGASIA; A. F. SCHINDER; S. JESSBERGER; G. MING; H. SONG; N. TONI; D. C. LIE. *Inst. of Biochem., Inst. of Developmental Genet., Inst. of Physiol., Physiological Genomics, Inst. for Cell Engin., Dept. of Fundamental Neurosci., Brain Res. Inst., Lab. of Neuronal Plasticity, Mol. and Clin. Pharm., Hans Berger Dept. of Neurol., F. Hoffmann-La Roche Ltd.*

NANOSYMPOSIUM

109. Glia and Immune Responses in Alzheimer's Disease

Theme C: Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *San Diego Convention Center*, 33C

8:00 **109.01** ▲ Modeling chronic inflammation mediated by microglial Trem2 expression. C. J. MILLER*; B. P. LEUNG; K. R. DOTY; T. TOWN. *USC, Keck Sch. of Med. of USC.*

8:15 **109.02** Over-expressed pathogenic miRNAs in Alzheimer's disease (AD) and prion disease (PrD) drive deficits in TREM2-mediated Aβ42 peptide clearance. W. J. LUKIW*; Y. ZHAO; V. JABER. *LSU NEUROSCIENCE CENTER.*

8:30 **109.03** Aging-related dysregulation of glial cells: Untangling their participation in Alzheimer's disease. R. VON BERNHARDI*; F. CORNEJO; F. HEREDIA; J. CARDENAS. *Pontificia U Catolica De Chile, Fac Med.*

8:45 **109.04** Long lifespan of microglia mitigates the ability to temporally induce Cre^{ERT} activity but definitively demonstrates microglia as the dominant source of C1q in a mouse model of Alzheimer's disease. M. I. FONSECA*; S. CHU; M. X. HERNANDEZ; M. FANG; L. MODARRESI; A. J. TENNER. *Univ. California, Univ. California, Univ. California.*

9:00 **109.05** Microglial PD-1 modulates neuroinflammation and AD pathology by astrocytic PD-L1. M. P. KUMMER*; C. KUMMER; H. SARLUS; A. GRIEP; S. SCHWARTZ; A. VIEIRA-SAECKER; M. BRÜCKNER; A. HALLE; K. HÄNDLER; M. BEYER; J. SCHULTZE; E. LATZ; M. HENEKA. *Univ. of Bonn, DZNE, Ceasar, Caesar.*

9:15 **109.06** Pathological activation of the spleen tyrosine kinase in microglia and neurons of different mouse models of Alzheimer's disease. J. E. SCHWEIG*; D. BEAULIEU-ABDELAHAD; Y. LIN; M. MULLAN; F. CRAWFORD; D. PARIS. *Roskamp Inst.*

9:30 **109.07** Using pluripotent stem cells to study microglial function and the genetics of Alzheimer's disease. M. BLURTON-JONES*; E. ABUD; R. RAMIREZ; E. MARTINEZ; L. HEALY; C. NGUYEN; A. MADANY; K. GYLYS; W. POON; J. ANTEL; M. CARSON. *Univ. of California, Irvine, McGill Univ., Univ. of California, Riverside, UCLA.*

9:45 **109.08** Role of microglial C5aR1 in the arctic Alzheimer's disease mouse model. M. X. HERNANDEZ*; M. I. FONSECA; S. CHU; A. J. TENNER. *UC-Irvine, UC-Irvine.*

10:00 **109.09** T cell TGF-β signaling control of the immune response to cerebral Amyloid-β deposition. M. GUILLOT-SESTIER*; A. W. VESLING; J. RODRIGUEZ, Jr.; K. REZAI-ZADEH; T. TOWN. *Zilkha Neurogenetic Institute, Keck Sch. of Med. of USC, Univ. of Maryland.*

10:15 **109.10** The inflammation connection between PTSD, Alzheimer's disease, and infection. B. MANIFOLD-WHEELER*; C. M. FLORUTA; C. S. MEDINA; A. J. ZIMMERMAN; F. CHAVEZ; R. E. JACOBS; E. L. BEARER. *Univ. of New Mexico, Univ. of New Mexico, Univ. of New Mexico, The California Inst. of Technol.*

10:30 **109.11** STAT3 signaling referees microglial amyloid clearance in Alzheimer's disease. K. R. DOTY*; M. GUILLOT-SESTIER; B. P. LEUNG; T. TOWN. *Zilkha Neurogenetic Institute, Keck Sch. of Med. of USC, USC.*

NANOSYMPOSIUM

110. Retina Photoreceptor and Circuitry

Theme D: Sensory Systems

Sun. 8:00 AM – *San Diego Convention Center*, 24A

8:00 **110.01** Shedding light on melanopsin-expressing retinal ganglion cell circuitry. Y. C. LIU*; K. KIM; M. ELLISMAN; S. PANDA. *The Salk Inst. For Biol. Studies, UCSD, The Salk Inst. For Biol. Studies.*

8:15 **110.02** β arrestins shape melanopsin dependent responses to light. L. S. MURE*; M. HATORI; K. RUDA; J. DEMAS; S. PANDA. *Salk Inst. Lab. of Genet., the Salk Inst., St Olaf Col.*

8:30 **110.03** Toward complete ganglion cell classification in the mouse retina: Cross-validation of electron microscopic anatomy with visual physiology. S. MU*; J. S. KIM; K. L. BRIGGMAN; H. S. SEUNG. *Princeton Univ., Korea Brain Res. Inst., NIH.*

8:45 **110.04** Identification and characterization of low-density ganglion cells in the primate retina. C. RHOADES*; A. TIKIDJI-HAMBURYAN; G. GOETZ; N. BRACKBILL; N. SHAH; A. SHER; A. LITKE; E. J. CHICHILNISKY. *Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Santa Cruz Inst. for Particle Physics, Univ. of California Santa Cruz.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 **110.05** Developing retinal ganglion cells balance input from bipolar cell types to ensure response homeostasis. N. TIEN*; D. KERSCHENSTEINER. *Washington Univ. In St. Louis.*

9:15 **110.06** Color components under joint recording from the human retina and cortex with a high-density electrode net. C. W. TYLER*; S. C. NICHOLAS; L. T. LIKOVA. *Smith-Kettlewell Eye Res. Inst.*

9:30 **110.07** Deep convolutional neural network models of the retinal response to natural scenes. L. T. MCINTOSH*; N. MAHESWARANATHAN; A. NAYEBI; S. GANGULI; S. A. BACCUS. *Stanford Univ., Stanford Univ., Stanford Univ.*

9:45 **110.08** Vision at its sensitivity limit: Linking neural circuit function with behavior. L. SMEDS*; D. TAKESHITA; T. TURUNEN; J. TIIHONEN; P. ALA-LAURILA. *Univ. of Helsinki, Aalto Univ. Sch. of Sci.*

10:00 **110.09** Multifocal steady-state visual evoked potential-based assessment for visual field defects using ngoggle. Y. WANG*; F. MEDEIROS; M. NAKANISHI; Y. CHIEN; C. WEI; J. ZAO. *Swartz Ctr. For Computat. Neurosci., Univ. of California San Diego, Cerebra Technologies, Co. Ltd.*

NANOSYMPOSIUM

111. Neuroethology of Auditory Communication

Theme F: Integrative Physiology and Behavior

Sun. 8:00 AM – *San Diego Convention Center*, 30B

8:00 **111.01** Predicting song structure from social context. A. J. CALHOUN*; P. COEN; M. MURTHY. *Princeton Univ., UCL, Princeton Univ.*

8:15 **111.02** Behavioural dissection of a song-pattern recognition network. B. HEDWIG*; E. J. SARMIENTO-PONCE. *Univ. of Cambridge, Dept. of Zoology.*

8:30 **111.03** Arousal state-dependent neural activity in the songbird premotor nucleus HVC: An investigation by local field potentials. S. SHIBA*; K. OKANOYA. *Grad. Sch. of Arts and Sciences, the Universi, The Univ. of Tokyo.*

8:45 **111.04** Auditory selectivity in the songbird nucleus taeniae of the amygdala. T. FUJII*; M. IKEBUCHI; K. OKANOYA. *The Univ. of Tokyo, RIKEN Brain Sci. Inst.*

9:00 **111.05** A distributed neurogenomic response in a songbird to the experience of sound chamber isolation. J. M. GEORGE; Z. W. BELL; D. F. CLAYTON*. *Queen Mary, Univ. of London.*

9:15 **111.06** New insights into extreme synchrony of neuronal firing: Neurochemical profile of a vocal central pattern generator. E. WEISE*; A. BASS; B. CHAGNAUD. *Ludwig-Maximilians-University Munich, Cornell Univ.*

9:30 **111.07** Function and mechanism of the female song system, mating preferences, and social behaviour in the brown-headed cowbird (*Molothrus ater*). E. L. COLDIN; H. DAVIES; A. PERKES; S. A. MACDOUGALL-SHACKLETON; M. F. SCHMIDT; D. J. WHITE*. *Wilfrid Laurier Univ., Univ. of Pennsylvania, Univ. of Western Ontario.*

NANOSYMPOSIUM

112. Interactions Between Stress and Immune Function

Theme F: Integrative Physiology and Behavior

Sun. 8:00 AM – *San Diego Convention Center*, 5B

8:00 **112.01** Effects of microglia depletion on behavior, stress reactivity, and recovery. T. K. WEIGEL*; M. L. LEHMANN; M. HERKENHAM. *NIH.*

8:15 **112.02** Lipopolysaccharide-induced changes in adolescent prefrontal cortex AMPA receptors after early life stress. P. GANGULY; S. SHAH; E. COLEY; H. C. BRENHOUSE*. *Northeastern Univ., Northeastern Univ.*

8:30 **112.03** ▲ Early life stress increases microglia activation in juvenile rats and confers sensitization in microglia to LPS induced immune activation. S. A. GOFF*; V. THOMPSON; P. GANGULY; H. C. BRENHOUSE. *Northeastern Univ.*

8:45 **112.04** Neonatal inflammation induces mechanical allodynia and sex-specific gene expression in brain areas involved in the active modulationof neuropathic and inflammatory pain. S. YAN; A. C. KENTNER*. *MCPHS Univ.*

9:00 **112.05** ● The effects of cyclooxygenase-2 inhibition on stress-induced behavioral and synaptic pathologies. J. C. GAMBLE-GEORGE*; R. BALDI; L. HALLADAY; A. KOCHARIAN; N. D. HARTLEY; C. G. SILVA; H. ROBERTS; A. HAYMER; L. J. MARNETT; A. HOLMES; S. PATEL. *Vanderbilt Univ. Sch. of Med., Natl. Inst. on Alcoholism and Alcohol Abuse (NIAAA), Vanderbilt Univ. Sch. of Med., Vanderbilt Univ. Sch. of Med.*

9:15 **112.06** Extramedullary monopoiesis underlies stress-sensitization and recurring anxiety. D. B. MCKIM*; J. P. GODBOUT, 43004; J. F. SHERIDAN. *The Ohio State Univ.*

9:30 **112.07** Anxiety-like behavior induced by repeated social defeat stress is caused by IL-1b producing monocytes selectively recruited to the brain by resident microglia. A. NIRAULA*. *Ohio State Univ.*

9:45 **112.08** Short and long-term behavioral and neuroinflammatory changes induced by repeated social defeat stress in mice are attenuated by a cannabinoid receptors agonist: Implications for PTSD. S. F. LISBOA*; A. NIRAULA; D. SHEA; L. B. RESSTEL; F. S. GUIMARAES; J. P. GODBOUT; J. F. SHERIDAN. *Univ. of São Paulo - FMRP, Ohio State University, Inst. for Behavioral Med. Res., Ohio State University, Inst. for Behavioral Med. Res., Med. Sch. of Ribeirao Preto - Univ. of Sao Paulo.*

10:00 **112.09** Social stress and the induction of neuronal IL-1 expression in the hippocampus activate microglia and cause the recruitment of leukocytes to the brain and spleen. D. J. DISABATO*; D. P. NEMETH; X. LIU; J. P. GODBOUT; N. QUAN. *The Ohio State Univ., The Ohio State Univ.*

10:15 **112.10** Role of microglia in stress-induced changes in ventromedial prefrontal cortex structure. M. L. LEHMANN*; H. A. COOPER; T. K. WEIGEL; M. A. HERKENHAM. *NIH.*

10:30 **112.11** Role of blood-brain barrier permeability and tight junction protein claudin 5 in vulnerability to social stress and major depressive disorder. C. MENARD*; M. L. PFAU; V. X. WANG; V. KANA; G. E. HODES; H. ALEYASIN; M. E. FLANIGAN; A. TAKAHASHI; S. A. GOLDEN; M. HESHMATI; M. CAMPBELL; M. MERAD; C. Y. TANG; S. J. RUSSO. *Icahn Sch. of Med. At Mount Sinai, Translational and Mol. Imaging Inst. at Mount Sinai, Univ. of Tsukuba, Trinity Col.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:45 **112.12** C1 neurons mediate a stress-induced anti-inflammatory reflex in mice. P. G. GUYENET*; C. ABE; T. INOUE; R. L. STORNETTA; D. L. ROSIN; M. D. OKUSA. *Univ. Virginia Sch. Med., Univ. of Virginia, Univ. of Virginia.*

11:00 **112.13** ● IL-1β signaling in response to stress and modulation by the COMTval158met polymorphism: An *in vivo* study to understand the role of inflammation in PTSD. J. DESLAURIERS; X. ZHOU; V. B. RISBROUGH*. *Univ. of California San Diego, Veterans Affairs Ctr. of Excellence for Stress and Mental Hlth.*

11:15 **112.14** Cell type specific IL-1R1 mediates distinct functions in neuroinflammation and anxiety. X. LIU*; D. P. NEMETH; D. B. MCKIM; J. P. GODBOUT; J. F. SHERIDAN; N. QUAN; D. J. DISABATO; L. ZHU. *The Ohio State Univ.*

NANOSYMPOSIUM

113. Ingestive Behavior

Theme F: Integrative Physiology and Behavior

Sun. 8:00 AM – *San Diego Convention Center*, 2

8:00 **113.01** Feeding states regulate excitatory synaptic transmission onto oxytocin neurons in the hypothalamic paraventricular nucleus. S. SUYAMA*; M. KODAIRA-HIRANO; Y. UETA; M. NAKATA; T. YADA. *Jichi Med. Univ., Univ. of Occup. and Envrn. Hlth.*

8:15 **113.02** TGF-β signaling in PVN neurons regulates body weight and food intake. I. PAPAZOGLOU*; Z. CUI; J. LEE; O. GAVRILOVA; S. G. RANE. *NIDDK.*

8:30 **113.03** A brainstem circuit for controlling feeding-related behaviors. A. R. NECTOW*; B. C. FIELD; N. RENIER; H. ZHANG; Y. LIANG; M. HAN; J. M. FRIEDMAN. *Princeton Univ., The Rockefeller Univ., The Rockefeller Univ., Mount Sinai Sch. of Med.*

8:45 **113.04** Prenatal CXCL12 mediates effects of perinatal exposure to dietary fat on neuropeptides and behavior in offspring. K. POON*; J. R. BARSON; H. SHI; G. Q. CHANG; S. F. LEIBOWITZ. *The Rockefeller Univ., Drexel Univ.*

9:00 **113.05** vmat2-mediated neurotransmission in mediating midbrain leptin action on feeding regulation. Y. XU, 77030; Y. LU; E. ISINGRINI; Y. XU; B. GIROS; Q. TONG*. *Univ. of Texas Hlth. Sci. Ctr. at Houston, Douglas Hospital, McGill Univ., Baylor Col. of Med., Univ. of Texas Hlth. Sci. Ctr. at Houston.*

9:15 **113.06** Loss of MHC class I protein H2-K1 leads to dysregulated energy balance and obesity. N. W. DEKORVER*; T. CHAUDOIN; J. ARIKKATH; S. J. BONASERA. *Univ. of Nebraska Med. Ctr., Univ. of Nebraska Med. Ctr., Univ. of Nebraska Med. Ctr.*

NANOSYMPOSIUM

114. Neural Mechanisms Underlying Risk/Reward Decision-Making

Theme G: Motivation and Emotion

Sun. 8:00 AM – *San Diego Convention Center*, 23A

8:00 **114.01** A role for basolateral amygdala in updating expected outcome value in volatile environments. A. STOLYAROVA*; A. IZQUIERDO. *UCLA.*

8:15 **114.02** Temporal dynamics of amygdala-ventral striatal interactions mediating risk/reward decision-making. D. BERCOVICI*; S. B. FLORESCO. *Univ. of British Colombia.*

8:30 **114.03** A subcortical competition to manage the explore-exploit tradeoff. V. D. COSTA*; R. VICARIO-FELICIANO; K. ROTHENHOEFER; E. A. MURRAY; B. B. AVERBECK. *NIMH/NIH.*

8:45 **114.04** Integration of reward probability, reward based salience and new information in monkey lateral intraparietal cells. N. DADDAOUA*; J. GOTTLIEB. *New York State Psychiatric Inst., Columbia Univ.*

9:00 **114.05** Novelty and uncertainty as separable exploratory drives. J. COCKBURN*; J. P. O'DOHERTY. *Caltech.*

9:15 **114.06** Neuroanatomy accounts for age-related changes in risk preferences. M. A. GRUBB*; P. W. GLIMCHER; I. LEVY. *New York Univ., Trinity Col., Yale Sch. of Med.*

9:30 **114.07** Dynamic control models for strategic interaction. J. M. PEARSON*; S. N. IQBAL; C. B. DRUCKER; M. L. PLATT. *Duke Univ., Duke Univ., Univ. of Pennsylvania.*

9:45 **114.08** Posterior cingulate cortex integrates information from the environment and internal state to set foraging policy. D. L. BARACK*; M. L. PLATT. *Columbia Univ., Univ. of Pennsylvania.*

10:00 **114.09** Dopaminergic error signals support associative structures used for model based behaviors. M. SHARPE*; C. CHANG; M. A. LIU; Y. NIV; J. L. JONES; G. SCHOENBAUM. *Natl. Inst. on Drug Abuse, Princeton Univ., Univ. of California at Los Angeles, Princeton Univ., Univ. of Maryland, The John Hopkins Univ.*

10:15 **114.10** Modulation of probabilistic discounting and reversal learning by dopamine within the medial orbitofrontal cortex. N. L. JENNI*; S. B. FLORESCO. *Univ. of British Columbia.*

10:30 **114.11** The behavioral and neuronal processing of risk and value. W. R. STAUFFER*; A. LAK; W. GENEST; W. SCHULTZ. *Univ. of Pittsburgh, Univ. Col. London, Univ. of Cambridge.*

10:45 **114.12** Increase in preference for uncertainty in rats following chronic dopamine $D_{2/3}$ agonist ropinirole treatment for Parkinson's disease: Potential recruitment of the Akt/GSK3β signalling pathway. M. TREMBLAY*; M. M. SILVEIRA; S. KAUR; J. G. HOSKING; W. K. ADAMS; C. BAUNEZ; C. A. WINSTANLEY. *Univ. of British Columbia, Univ. of British Columbia, Harvard Univ., Aix-Marseille Univ.*

11:00 **114.13** Neural implementation of reinforcement learning models that underlie learning and decision-making in *Drosophila*. L. MCCURDY*; M. N. NITABACH. *Yale Univ., Yale Univ., Yale Univ.*

11:15 **114.14** Reward rule learning in *Drosophila*. R. YANG*; R. HE; U. STERN. *Duke Univ.*

NANOSYMPOSIUM

115. Attentional Networks

Theme H: Cognition

Sun. 8:00 AM – *San Diego Convention Center*, 1B

8:00 **115.01** Left hemisphere provides compensatory mechanisms in neglect: fMRI evidence from prismatic adaptation intervention. S. CLARKE*; C. BINDSCHAEDLER; E. FORNARI; S. CROTTAZ-HERBETTE. *CHUV, CHUV, CHUV.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:15 **115.02** Paired-pulse parietal-motor stimulation can act as a neuromodulator when combined with prism adaptation. S. SCHINTU*; E. MARTÍN-ARÉVALO; M. VESIA; Y. ROSSETTI; R. SALEMME; L. PISELLA; A. FARNÉ; K. T. REILLY. *Lyon Neurosci. Res. Ctr., Lyon Neurosci. Res. Ctr. (CRNL), Univ. of Lyon 1, Krembil Res. Inst., Hospices Civils de Lyon.*

8:30 **115.03** Probabilistic beliefs are updated in the right temporoparietal junction. P. MENGOTTI*; P. L. DOMBERT; G. R. FINK; S. VOSSEL. *Res. Ctr. Juelich, Univ. Hosp. Cologne.*

8:45 **115.04** Dissociation between spatial shifting and attentional selection in superior parietal cortex: An electrocorticography study. R. R. VANDENBERGHE*; E. GHUMARE; L. SEYNAEVE; P. DUPONT; W. VAN PAESSCHEN; T. THEYS; M. SCHROOTEN. *Univ. Hosp Gasthuisberg, KU Leuven, Univ. Hosp. Leuven, Univ. Hosp. Leuven, KU Leuven.*

9:00 **115.05** Task based functional homologies of human superior parietal lobe in monkey. N. S. CASPARI*; R. VANDENBERGHE; W. VANDUFFEL. *Lab. For Neuro- and Psychophysiology, Univ. Hosp. Leuven, Lab. for Cognitive Neurol., Harvard Med. Sch., Massachusetts Gen. Hosp., Athinoula A. Martinos Ctr. for Biomed. Imaging.*

9:15 **115.06** rTMS modulates network-wise brain activity during rest and sustained attention. W. PENG*; S. XUE; D. LI; Y. GUO; Q. GE; J. ZHANG; Z. WANG. *Ctr. of Cognition & Brain Disorders.*

9:30 **115.07** Neural substrates for modulating task-adaptive functional connectivity patterns. K. HWANG*; J. M. SHINE; A. JAGADEESH; M. D'ESPOSITO. *Univ. of California Berkeley, Stanford Univ.*

9:45 **115.08** Differential effects on network dynamics following stimulation of cortical nodes within default and frontoparietal networks. J. M. SHINE*; J. PARVIZI. *Stanford Univ., Stanford Univ.*

10:00 **115.09** Frontal and occipital brain regions interaction in spatial attentional competition: Selection overrides inhibition. J. A. FRANCO-RODRIGUEZ*; T. V. ROMÁN-LÓPEZ; M. MÉNDEZ-DÍAZ; O. PROSPÉRO-GARCÍA; A. E. RUIZ-CONTRERAS. *Facultad De Psicología, UNAM, Fac. Medicina.*

10:15 **115.10** Network dynamics of control over enhancement versus suppression in sustained attention. A. LENARTOWICZ*; S. LU; E. LAU; G. V. SIMPSON; M. S. COHEN. *Univ. of California Los Angeles, ThinkNow Inc.*

10:30 **115.11** Visuospatial representations within cerebellar node of the dorsal attention network. J. A. BRISSENDEN*; D. E. OSHER; E. J. LEVIN; M. A. HALKO; D. C. SOMERS. *Boston Univ., Beth Israel Deaconess Med. Ctr.*

10:45 **115.12** Functional connectivity predicts individual differences in sensory-biased caudolateral prefrontal cortex response to attention and working memory. S. M. TOBYNE*; D. E. OSHER; S. W. MICHALKA; A. L. NOYCE; D. C. SOMERS. *Boston Univ., Boston Univ., Boston Univ.*

11:00 **115.13** ● Relationship between pre-stimulus individual α oscillations and reaction times in visual search. A. PASTUSZAK*; S. HANSLMAYR; K. L. SHAPIRO. *Univ. of Birmingham.*

NANOSYMPOSIUM

116. Techniques in Electrophysiological Recording and Stimulation

Theme I: Techniques

Sun. 8:00 AM – *San Diego Convention Center*, 7B

8:00 **116.01** Simultaneous optimization of spike detection thresholds and cluster sorting. P. N. STEINMETZ*. *Nakamoto Brain Res. Inst.*

8:15 **116.02** Towards an implantable integrated neural recording system for neonatal mice. A. BAHR*; L. ABU SALEH; D. SCHROEDER; W. H. KRAUTSCHNEIDER. *Hamburg Univ. of Technol.*

8:30 **116.03** Direct current stimulation modulates LTP and LTD: Activity-dependence and dendritic effects. G. KRONBERG*; M. BRIDI; T. ABEL; L. C. PARRA. *The City Col. of New York, Univ. of Pennsylvania.*

8:45 **116.04** Neurophysiological investigation of resting state functional connectivity in the rat striatum--concurrent multi-channel electrophysiological recording and fMRI. S. JAIME; H. GU; E. A. STEIN; J. E. CAVAZOS; Y. YANG; H. LU*. *Univ. of Texas Hlth. Sci. Ctr. at San Antonio, Natl. Inst. on Drug Abuse.*

9:00 **116.05** Targeted intracellular recordings from deep-layer cortical neurons *in vivo* using nano-pipettes. K. JAYANT*; M. WENZEL; J. P. HAMM; Y. BANDO; O. SAHIN; K. L. SHEPARD; R. M. YUSTE. *Columbia Univ., Columbia Univ., Columbia Univ.*

9:15 **116.06** ● Noninvasive deep brain stimulation via delivery of temporally interfering electric fields. N. GROSSMAN*; D. BONO; S. KODANDARAMAIAH; A. RUDENKO; A. CASSARA; E. NEUFELD; S. A. ANTERAPER; A. TAKAHASHI; N. KUSTER; L. TSAI; A. PASCUAL-LEONE; E. S. BOYDEN. *Imperial Col. London, MIT, Harvard, MIT, MIT, Univ. of Minnesota, Twin Cities, MIT, City Col. of the City Univ. of York, Fndn. for Res. on Information Technologies in Society, Broad Inst., MIT, MIT, MIT.*

9:30 **116.07** Biophysical and cellular basis of ultrasonic neuromodulation investigated using *C. elegans*. J. KUBANEK*; S. BACCUS; M. GOODMAN. *Stanford Univ. Sch. of Med., Stanford Univ., Stanford Univ.*

9:45 **116.08** Control of neuron activity by sonogenetics. Z. QIU*; J. GUO; L. YANG; Y. YANG; Y. HUANG; S. KALA; H. CHAN; L. SUN. *The Hong Kong Polytechnic Univ., Epithelial Cell Biol. Res. Center, Fac. of Medicine, Sch. of Biomed. Sciences, The Chinese Univ. of Hong Kong.*

THEME J POSTER *San Diego Convention Center*

025. Public Awareness of Neuroscience: Education

Theme J posters will be on display from Sat. 1 p.m.-Sun. 5 p.m., with one-hour presentations occurring either Saturday afternoon (presentation numbers ending in SA) or Sunday morning (presentation numbers ending in SU)—San Diego Convention Center, Halls B-H

8:00 NNN28 **25.01SU** 2016 Brain awareness season in the Lehigh Valley: Enhancing service learning and scientific advocacy. L. KANAKAMEDALA; C. FOX. *Moravian Col.*

9:00 NNN29 **25.02SU** A regional model for concussion education and outreach. E. LARSON; M. ORTIZ; A. MENDONCA; J. ORTEGA. *Humboldt State Univ., Humboldt State Univ.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 DP10 **25.03SU** (Dynamic Poster) Knowing Neurons: A creative neuroscience education website by young neuroscientists. K. E. FEHLHABER; J. FROHLICH; J. TRIBBLE; A. RAMANATHAN; J. LEE. *UCLA, USC.*

10:00 NNN30 **25.04SU** Interactive neuroscience workshops for high school students. S. B. KHANNA. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

11:00 NNN31 **25.05SU** Nonprofit partnerships for neuroscience education. J. S. JANOWSKY; S. SHUGERMAN; J. C. CRABBE. *Saturday Acad., Oregon Hlth. & Sci. Univ., VA Portland Hlth. Care Syst., Oregon Hlth. & Sci. Univ.*

8:00 NNN32 **25.06SU** The 2016 United States regional brain bee championship. N. MYSLINSKI; J. D. GREENSPAN. *Univ. Maryland Dent. Sch.*

9:00 NNN33 **25.07SU** Do it yourself biology in Los Angeles. D. FOSTER. *C/O The LAB.*

10:00 NNN34 **25.08SU** A decade of NeuroMorpho.Org: Lessons learned and future prospects. R. ARMANANZAS; S. POLAVARAM; S. NANDA; P. MARAVER; G. A. ASCOLI. *George Mason Univ.*

11:00 NNN35 **25.09SU** Neuromyths and learning myths: A science of learning intervention for teachers reduces misconceptions about teaching and learning. M. R. UNCAPHER; M. K. THIEU; K. S. WEINER. *Stanford Univ. Dept. of Psychology, Univ. of California San Francisco, Inst. for Applied Neurosci., Stanford Univ.*

8:00 NNN36 **25.10SU** Establishing a student led neuroscience outreach program using human brain specimens in Detroit Public Schools. M. J. LISIESKI; H. A. MARUSAK; S. A. PERRINE; T. FISCHER. *Wayne State Univ. Sch. of Med., Wayne State Univ., Wayne State Univ.*

9:00 NNN37 **25.11SU** Memory challenge - a Brain Awareness Week activity. J. E. OLSON; D. I. CLAFLIN. *Wright State Univ. Boonshoft Sch. Med., Wright State Univ.*

10:00 NNN38 **25.12SU** We must educate mothers for breastfeeding: Lactancy disruption as a possible risk factor for development of breast cancer tumors. D. G. GARCÍA-LAGUNA; M. F. GERENA-CRUZ; Z. DUENAS. *Univ. Nacional de Colombia, Univ. Nacional De Colombia.*

11:00 NNN39 **25.13SU** A higher education training program that reduces students'stress and anxiety and improves behavioral regulation. M. BRESCIANI; M. EVRARD. *San Diego State Univ., SUNY Downstate.*

8:00 NNN40 **25.14SU** Crafting young neuroscientists through educational outreach by FSU Neuroscience. A. K. DENOBREGA; M. TABAA; K. KORSHUNOV; B. J. CARROLL; M. A. GREENWOOD; M. DONOVAN; J. BREWER; S. OGDEN. *Florida State Univ.*

9:00 NNN41 **25.15SU** Best practices and achievements of the Neuroscience undergraduate training Program to Increase Diversity (NeuroID) at the University of Puerto Rico-Piedras. C. S. MALDONADO-VLAAR; J. E. GARCIA ARRRARAS. *Univ. Puerto Rico, Univ. Puerto Rico.*

10:00 NNN42 **25.16SU** Research how the university student accepted "body and mind unifying science" education program. Y. ATOMI; Y. HIGASHI; M. SHIMIZU; E. FUJITA; T. ATOMI; K. HASEGAWA. *Tokyo Univ. of Agr. and Technol., Teikyo Univ. of Sci., Japan Aerospace Exploration Agency.*

THEME J POSTER *San Diego Convention Center*

026. Public Awareness of Neuroscience: Outreach

Theme J posters will be on display from Sat. 1 p.m.-Sun. 5 p.m., with one-hour presentations occurring either Saturday afternoon (presentation numbers ending in SA) or Sunday morning (presentation numbers ending in SU)—San Diego Convention Center, Halls B-H

8:00 NNN43 **26.01SU** Society for neuroscience Ottawa chapter - continued growth and success. K. FARMER; A. THOMPSON; C. NESBITT; A. DEDEK; C. PASTRANA; Z. DWYER; R. HAY; S. COATES; K. DIXON; E. ALI; S. KING; R. WOODS; L. HYLAND; S. PARK; J. LANDRIGAN; A. EDWARDS; N. TZAKIS; K. SZYSZKOWICZ; M. BEDARD; J. HOWELL; K. VENTURA; N. PROWSE; N. RUSTOM; C. RUDYK; U. SHANMUGA; A. ABIZAID. *Carleton Univ.*

9:00 NNN44 **26.02SU** ▲ Boston university's mind and brain society outreach exposes boston youth and families to neuroscience through undergraduate-run activities. A. KOHLEY; P. LIPTON; S. HATTORI; N. ABRAHAM; T. LI. *Boston Univ., Undergraduate Program In Neurosci. Boston Univ.*

10:00 NNN45 **26.03SU** DOPAteam: Demystifying drugs through science communication. A. B. THOMPSON; R. ROMERO-CALDERÓN; M. Y. IGUCHI; C. EVANS. *UCLA, RAND Corp., UCLA.*

11:00 NNN46 **26.04SU** NW Noggin: Arts-integrated neuroscience outreach from the northwest to DC. W. S. GRIESAR; J. LEAKE. *Washington State Univ. Vancouver.*

8:00 NNN47 **26.05SU** ▲ Raising awareness of the dangers of traumatic brain injuries as a part of the Brain Program conducted by the Pittsburgh chapter of the Society for Neuroscience. H. L. RADABAUGH; C. O. BONDI; R. S. TURNER; A. E. KLINE. *Univ. of Pittsburgh, Safar Ctr. For Resusci, Univ. of Pittsburgh, Safar Ctr. For Resuscitation Res., Univ. of Pittsburgh.*

9:00 NNN48 **26.06SU** Neuroscience outreach to the greater Los Angeles K-12 community. K. Y. CHENG; E. M. SPARCK; C. YAEGER; C. A. GHIANI; W. GE; E. M. CARPENTER. *UCLA, UCLA, UCLA Sch. Med.*

10:00 NNN49 **26.07SU** Science for incarcerated teens: A new horizon for STEM enrichment. S. A. FLEMING; S. M. MATT; J. L. SEYMOUR; E. G. CENTER; I. M. TRANIELLO. *Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign.*

11:00 NNN50 **26.08SU** Brain Awareness Week outreach to fifth through twelfth grade students by Psychology undergraduate students. J. A. JOHNSON; E. L. FUNK; E. F. MATUSZ; J. F. MINNICH. *Bloomsburg Univ.*

8:00 NNN51 **26.09SU** Augustana College 'NeurdFest': A neuroscience outreach event that impacts both elementary school-age attendees and undergraduate volunteers. S. STOUGH; L. NGUYEN; P. STRELL; S. TODOROV. *Augustana Col.*

9:00 NNN52 **26.10SU** Neuroscience outreach by the Louisville Chapter. K. K. RAU; C. CORBITT; D. HOWLAND; P. MOORE; P. SCOTT; T. STOICA; C. STEADMAN; B. BORGHUIS; J. PETRUSKA. *Univ. of Louisville, Univ. of Louisville, Univ. of Louisville, Univ. of Louisville, Univ. of Louisville, Univ. of Louisville.*

10:00 OOO1 **26.11SU** Northwestern University brain awareness outreach promotes neuroscience education in the Chicago community. L. K. SHANAHAN; N. M. FREDERICK; É. B. RYAN; N. E. BUSH; S. R. MCIVER. *Northwestern Univ.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 DP10 **26.12SU** (Dynamic Poster) NIH contributions to the BRAIN Initiative. A. ADAMS; B. CUTHBERT; G. FARBER; W. KOROSHETZ; M. MOTT; K. RAMOS; N. TALLEY; S. L. WHITE; A. WILLARD. *NIH, NIH.*

8:00 OOO2 **26.13SU** Graduate-led outreach initiatives: Improving neuroscience literacy in children and adults. D. REINER; K. L. CHRISTISON-LAGAY; K. FOLWEILER; M. HEALEY; J. B. KAHN; P. MURPHY; T. PARTHASARATHI; I. J. PERRON; M. M. TAYLOR. *Univ. of Pennsylvania.*

9:00 OOO3 **26.14SU** Protect the brain - concussion! An interactive exhibit for Brain Awareness Week and beyond. D. L. ROBINSON; J. BESHEER. *Univ. of North Carolina at Chapel Hill, Univ. of North Carolina.*

10:00 OOO4 **26.15SU** Neuroscience in Nicaragua: Bringing brain awareness to developing nations. E. RATZAN; P. PARKER; J. SIMCOX; D. CHAVEZ. *Univ. of Utah, Univ. of Utah, Univ. of Utah, Univ. of Utah.*

11:00 OOO5 **26.16SU** UNE's center for excellence in the neurosciences k-12 neuroscience outreach program: Investigating strategies that support science competency and neuroscience awareness among youth. E. J. BILSKY; B. POTTHOFF; J. MALON; D. LANDRY; M. DIONNE; J. RAY; I. MENG; M. BURMAN. *Univ. of New England, LearningWorks Afterschool Biddeford, Biddeford Sch. Syst.*

8:00 OOO6 **26.17SU** Sharing your science: A practical outreach workflow for researchers to promote responsible public engagement with neuroscience. S. F. SASSE; M. BIALIK; J. ZAKI; A. WATSON; G. ABESAMIS; L. H. SOMERVILLE. *Harvard Univ., Harvard Grad. Sch. of Educ., Stanford Univ.*

9:00 OOO7 **26.18SU** ▲ Understanding brain aesthetic responses in natural complex settings: A citizen science approach. A. E. KOPTEVA; J. G. CRUZ-GARZA; A. Y. PAEK; J. L. CONTRERAS-VIDAL. *Univ. of Houston.*

10:00 OOO8 **26.19SU** Neuro Transmissions - using YouTube to communicate neuroscience. A. L. CALDWELL; M. J. R. CALDWELL, 92037. *UCSD, Neuro Transmissions.*

THEME J POSTER *San Diego Convention Center*

027. Ethical and Policy Issues in Neuroscience

Theme J posters will be on display from Sat. 1 p.m.-Sun. 5 p.m., with one-hour presentations occurring either Saturday afternoon (presentation numbers ending in SA) or Sunday morning (presentation numbers ending in SU)—San Diego Convention Center, Halls B-H

8:00 OOO9 **27.01SU** Ethical considerations in head transplantation research. J. A. CUOCO; G. W. KOUTSOURAS. *New York Inst. of Technol. Col. of Osteop.*

9:00 OOO10 **27.02SU** More research and education is needed to expand our knowledge on the neurotoxicity of nanomaterials for therapeutic strategies in CNS diseases. L. FENG; A. SHARMA; D. F. MURESANU; A. NOZARI; A. OZKIZILCIK; R. TIAN; H. S. SHARMA. *Bethune Intl. Peace Hosp., Uppsala Univ. Hosp., Univ. of Med. & Pharm., Massachusetts Gen. Hospital, Harvard Med. Sch., Univ. of Arkansas, Univ. of Arkansas.*

10:00 OOO11 **27.03SU** Elon BrainCARE: Concussion knowledge and education for faculty and staff in a university setting. C. J. KETCHAM; M. GRIFFIN; K. PATEL; E. E. HALL. *Elon Univ., Elon Univ.*

11:00 OOO12 **27.04SU** Elon BrainCARE: Concussion knowledge, attitudes and education for varsity and club student-athletes. E. E. HALL; N. DENNION; K. PATEL; C. J. KETCHAM. *Elon Universtiy, Elon Universtiy.*

8:00 OOO13 **27.05SU** An exploration of the scientific legislation process. A. M. DETTMER. *Natl. Inst. of Child Hlth. and Human Develop.*

9:00 OOO14 **27.06SU** Need to educate researchers, clinicians and policy makers about nanodelivery of drugs in neuroscience for effective management of clinical strategies in healthcare. D. F. MURESANU; A. SHARMA; A. OZKIZILCIK; R. TIAN; H. S. SHARMA. *THE FOUNDATION OF THE SOCIETY FOR THE STUDY OF NEU, "RoNeuro" Inst. for Neurolog. Res. and Diagnostic, Uppsala Univ. Hosp., Univ. of Arkansas, Univ. of Arkansas.*

10:00 OOO15 **27.07SU** The importance of student advocacy at the science-policy intersect: My journey as an early career neuroscientist. N. CHARALAMBAKIS; W. GUIDO. *Univ. of Louisville.*

11:00 OOO16 **27.08SU** Systems or symbiosis, engineers only? ethical appraisal at the intersection of neuro-systems convergence. D. C. LARRIVEE; A. LARRIVEE. *Intl. Assn. Catholic Bioethicists, Catholic Univ. of America.*

8:00 OOO17 **27.09SU** Researchers should be educated to use disease model of experiments for drug testing to simulate real life situations for clinical strategies in neuroscience. R. PATNAIK; A. SHARMA; D. F. MURESANU; A. NOZARI; H. S. SHARMA. *Indian Inst. of Technology,Banaras Hindu Univ., Uppsala Univ. Hosp., Univ. of Med. & Pharm., Massachusetts Gen. Hospital, Harvard Med. Sch.*

9:00 OOO18 **27.10SU** Computation without comprehension: How neuroscientists have projected a false impression of engineering expertise. I. R. NIZAMI. *Independent Res. Scholar.*

10:00 OOO19 **27.11SU** The LASA - BAP - BNA - ESSWAP guiding principles in behavioural laboratory animal science. C. STANFORD. *UCL.*

11:00 OOO20 **27.12SU** Recommendations by Global Council on Brain Health for promoting brain wellness and healthy aging. L. R. CHURA; S. L. LOCK. *AARP.*

8:00 OOO21 **27.13SU** Fighting for our futures: An effort to increase early career scientists' involvement in science advocacy. S. S. PISTORIUS; J. D. OBRAY; S. C. STEFFENSEN. *Brigham Young Univ.*

9:00 OOO22 **27.14SU** Mentoring institute for neuroscience diversity scholars (minds). M. ZIGMOND; B. FISCHER; T. BAUST; G. E. TORRES. *Univ. of Pittsburgh, Univ. of Florida Col. of Med.*

10:00 OOO23 **27.15SU** Implementation of GLP-inspired good research practices in academia to support transparency, rigor and reproducibility. O. M. LITTRELL; R. C. GRONDIN; G. A. GERHARDT; D. M. GASH. *Univ. Kentucky, Univ. of Kentucky.*

11:00 OOO24 **27.16SU** Rigor and reproducibility in neuroscience: Six Sigma and its implications on the training of future neuroscientists. L. R. MILLER; C. E. BROOKS; A. C. MISTRETTA; J. L. PLANK-BAZINET; T. L. CORNELISON. *NIH, NIH.*

8:00 OOO25 **27.17SU** How and why to advocate for science at the state and local level. D. E. O'BRIEN. *Vanderbilt Univ.*

9:00 OOO26 **27.18SU** How should we regulate pervasive neurotechnology? M. IENCA; F. JOTTERAND; B. ELGER. *Univ. of Basel.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

117. Neurogenesis and Patterning

Theme A: Development

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 A1 **117.01** The role of novel subset of mesencephalic neural crest derived neurons in cerebellar nuclei development in mice. M. RAHIMI-BALAEI*; K. BAILEY; N. ASHTARI; X. JIAO; H. MARZBAN. *Univ. of Manitoba, Univ. of Manitoba.*

9:00 A2 **117.02** ● Evidence of GDNF receptor α-like protein (GFRAL) as a new GDNF family ligand receptor. G. WANG*; L. XIONG; T. GERASSENKOV; V. KALABOKIS; A. PERSON. *Bio-techne.*

10:00 A3 **117.03** Transitory expression of vasopressin in developing hippocampus of male rats. M. A. ROQUE*; R. RUIZ; S. HERNANDEZ; J. VALDEZ; L. ZHANG; N. LAJUD. *Univ. Autonoma De Mexico, Ctr. de Investigacion Biomedica de Michoacán, Ctr. Multidisciplinario de Estudios en Biotecnologia, Dept. de Fisiología, Facultad de Medicina-UNAM.*

11:00 A4 **117.04** Formation of neuronal circuits by interactions between neuronal populations derived from different origins in the *Drosophila* visual center. M. SATO*; T. SUZUKI. *Kanazawa Univ., Kanazawa Univ., Kanazawa Univ.*

8:00 A5 **117.05** Toward a genomic perspective of interneuron lineage specification *in vivo*. A. S. NORD*; M. SANDBERG; L. SU-FEHER; S. SILBERBERG; A. RUBIN; I. ZDILAR; S. LINDTNER; J. L. R. RUBENSTEIN. *Univ. of California Davis Ctr. for Neurosci., UCSF, UC Davis.*

9:00 A6 **117.06** Pax6 control of gene expression in developing mouse diencephalon. I. QUINTANA-URZAINQUI*; Z. KOZIC; D. J. PRICE. *Univ. of Edinburgh.*

10:00 A7 **117.07** FGF8 locally promotes formation of olfactory bulb-like structures. E. A. GROVE*; S. ASSIMACOPOULOS. *Univ. Chicago.*

11:00 A8 **117.08** Characterization of axon growth repellents in the developing spinal column. J. SCHAEFFER; G. M. COOK; R. J. KEYNES*. *Univ. of Cambridge.*

8:00 A9 **117.09** Elucidating the function of GABAergic signaling during neural development in larval zebrafish. A. J. VANLEUVEN*; S. L. WILLIAMS; B. M. KIDD; R. E. BALL; J. D. LAUDERDALE. *Univ. of Georgia.*

9:00 A10 **117.10** Haploinsufficiency of the homeodomain protein Six3 abolishes male reproductive behavior through disrupted olfactory epithelium development and impaired GnRH neuron migration. E. PANDOLFI*; H. H. HOFFMANN; E. L. SCHOELLER; P. L. MELLON. *UCSD, UCSD.*

10:00 A11 **117.11** Protocadherin clusters require neural wiring in reticular formation in spinal cord and brainstem. T. YAGI*; S. HASEGAWA; A. OKAYAMA; R. KANEKO; T. HIRAYAMA; M. KUMAGAI; T. HIRABAYASHI. *Osaka Univ., Gumma Univ.*

11:00 A12 **117.12** A neurodevelopmental source of extracellular vesicles. D. M. FELICIANO*; M. C. MORTON; C. M. SELUZICKI; J. C. HOLMBERG. *Clemson Univ., Clemson Univ.*

8:00 A13 **117.13** A working module of the neurovascular unit in the sexually dimorphic nucleus of the preoptic area. Z. HE*; L. CUI; S. A. FERGUSON; M. G. PAULE. *Natl. Ctr. For Toxicology Res., UAMS.*

POSTER

118. Axon Outgrowth and Guidance

Theme A: Development

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 B1 **118.01** Roles of transcription factor Runx1 in BMP4-regulated neurite outgrowth and CGRP expression of dorsal root ganglion neurouns. M. YOSHIKAWA*; T. MASUDA; A. KOBAYASHI; S. OZAKI; S. AIZAWA; T. SHIGA. *Nihon Univ. Sch. of Med., Univ. of Tsukuba.*

9:00 B2 **118.02** cAMP-induced activation of PKA and p190B mediates down-regulation of plasmalemmal TC10 activity and neurite outgrowth. S. KOINUMA*; T. NANAO; N. WADA; T. NAKAMURA. *Tokyo Univ. Of Science, RIBS, Ctr. for Animal Dis. Models, Tokyo Univ. of Science, Fac. of Sci. and Technol.*

10:00 B3 **118.03** ERK/MAPK hyperactivation leads to altered corticospinal neuron connectivity and motor learning deficits. G. R. BJORKLUND*; L. T. HEWITT; L. XING; V. NIKOLOVA; S. S. MOY; W. D. SNIDER; J. M. NEWBERN. *Arizona State Univ., Univ. of North Carolina, Carolina Inst. for Developmental Disabilities.*

11:00 B4 **118.04** Muscarinic acetylcholine receptor type-1 antagonists modulate post-translational modifications of $Ca^{2+/}$ calmodulin-dependent protein kinase kinase β in adult dorsal root ganglion neurons. P. FERNYHOUGH*; M. G. SABBIR. *Univ. of Manitoba, St Boniface Res. Ctr.*

8:00 B5 **118.05** Cell autonomous and non-cell autonomous functions of Vax1 in mouse embryo. K. MIN*; Y. SUNG; N. KIM; H. LEE; J. KIM. *KAIST, Yonsei university.*

9:00 B6 **118.06** Molecular controls over corticospinal motor neuron axonal branching at specific spinal segments. Y. ITOH*; V. SAHNI; S. J. SHNIDER; J. D. MACKLIS. *Harvard Univ.*

10:00 B7 **118.07** Transcriptional mechanisms governing serotonin neuron axonal architecture. L. J. DONOVAN*; E. DENERIS. *Case Western Reserve Univ.*

11:00 B8 **118.08** A heterogeneous population of nuclear-encoded mitochondrial mrnas are present in the axons of primary sympathetic neurons. A. ASCHRAFI*; A. N. KAR; J. GALE; A. G. ELKAHLOUN; A. E. GIOIO; B. B. KAPLAN. *Natl. Inst. of Mental Hlth. USA, Univ. of South Carolina, Natl. Human Genome Res. Inst.*

8:00 B9 **118.09** ▲ Axonal trafficking of mitochondrial ATP synthase mRNA. N. SALES; J. GALE; S. S. SCOTT; C. CHEN; A. ASCHRAFI; A. E. GIOIO*; B. B. KAPLAN. *NIH, NIMH-.*

9:00 B10 **118.10** Mitochondrial dynamics in retinal ganglion cell development and regeneration. A. KREYMERMAN*; J. WEINSTEIN; D. BUICKIANS; T. TRAN; N. SUN; L. BAZIK; M. STEKETEE; J. L. GOLDBERG. *Stanford, Louisiana State Univ., UCSD, Univ. of Pittsburgh.*

10:00 B11 **118.11** Simultaneous imaging of ATP levels and membrane potential in mitochondria during axonal transport. R. SUZUKI*; K. HOTTA; K. OKA. *Keio Univ.*

11:00 B12 **118.12** Axonal transport mediates exosomes derived from cerebral endothelial cells on axonal growth. Y. ZHANG*; M. CHOPP; C. LI; X. LIU; X. WANG; L. ZHANG; Z. ZHANG. *HENRY FORD HOSPITAL, OAKLAND UNIVERSITY.*

8:00 B13 **118.13** ▲ apl1 intracellular domain overexpression affects axonal guidance in c elegans gaba neurons. J. JENKINS*; R. EL BEJJANI. *Davidson Col., Davidson Col.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 B14 **118.14** Understanding axon regeneration: Regulatory roles for RNA binding proteins. M. ANDRUSIAK*; P. SHARIFNIA; Y. JIN. *UCSD, UCSD.*

10:00 B15 **118.15** The role of type iii nrg 1 in cortical axon outgrowth. A. LUSSENDEN*; L. W. ROLE; D. A. TALMAGE. *Stony Brook Univ., Stony Brook Univ., Stony Brook Univ., Stony Brook Univ.*

11:00 B16 **118.16** KSRP RIP-seq reveals targets important for neuronal development and function. A. S. GARDINER*; G. PERALES; S. L. OLGUIN; A. SUNDARARAJAN; J. MUDGE; F. D. SCHILKEY; J. L. TWISS; N. I. PERRONE-BIZZOZERO. *Universtiy of New Mexico, Natl. Ctr. for Genome Resources, Univ. of South Carolina.*

8:00 B17 **118.17** Elucidating mechanisms of tactile afferent targeting. B. A. JENKINS*; N. M. FONTECILLA; L. BAI; D. D. GINTY; E. A. LUMPKIN. *Columbia Univ. Med. Ctr., Harvard Med. Sch., Johns Hopkins Univ. Sch. of Med., Columbia Univ. Med. Ctr.*

9:00 B18 **118.18** Neurite guidance and elongation on anisotropic micropillar arrays. M. PARK*; K. KANG; I. S. CHOI. *KAIST, Kyung Hee Univ.*

10:00 B19 **118.19** Synaptic phospholipid signaling modulates axon outgrowth via glutamate dependent Ca^{2+}-mediated molecular pathways. J. VOGT; S. KIRISCHUK; P. UNICHENKO; L. SCHLÜTER; A. PELOSI; J. CHENG; J. YANG; C. THALMAN; U. STRAUSS; A. PRODUKIN; B. BHARATI; J. AOKI; J. CHUN; B. LUTZ; H. J. LUHMANN*; R. NITSCH. *Univ. Med. Ctr. Mainz, Univ. Med. Ctr. Mainz, Charite - Univ. Med. Berlin, Tohoku Univ., Scripps Res. Inst., Univ. Med. Ctr. Mainz, Univ. Med. Ctr. Mainz.*

11:00 B20 **118.20** Midline radial glial-like cells promote longitudinal growth of dorsal column axons during development. K. KRIDSADA*; J. NIU; P. HALDIPUR; K. MILLEN; W. LUO. *Univ. of Pennsylvania, Seattle Children's Res. Inst. Ctr. for Integrative Brain Res.*

8:00 B21 **118.21** Identification of a novel axon guidance factor expressed in Cajal-Retzius cells. J. TANG*; J. PENG; Z. LUO. *Inst. of Neuroscience,Chinese Acad. of Scien.*

9:00 B22 **118.22** ● Involvement of ecto-nucleotide pyrophosphatase/phosphodiesterase 1 (ENPP1) in regulation of insulin-induced neurite outgrowth in sensory neurons. K. NISHIDA*; R. IKEDA; A. HOSODA; R. HIRAI; A. OHISHI; K. NAGASAWA. *Kyoto Pharmaceut. Univ.*

10:00 B23 **118.23** Differential fasciculation of ipsilateral and contralateral retinal ganglion cell axons. A. A. SITKO*; F. FIEDERLING; F. WETH; C. A. MASON. *Columbia Univ. Press, Karlsruher Inst. fuer Technologie, Columbia Univ.*

11:00 B24 **118.24** Differential expression of axon-sorting molecules in mouse olfactory sensory neurons. H. TAKEUCHI*; N. IHARA; A. NAKASHIMA; Y. IKEGAYA. *The Univ. of Tokyo.*

8:00 B25 **118.25** Effect of maternal obesity on fetal brain development: Impairment in the expression of axon guidance cues. N. MERABOVA*; G. TATEVOSIAN; S. G. BOURET; S. PARK; N. DARBINIAN; A. E. EDLOW; R. A. SIMMONS; L. GOETZL. *Lewis Katz Sch. of Med. at Temple Univ., Shriners Hosp. Pediatric Res. Ctr. (Center for Neural Repair and Rehabilitation), Keck Sch. of Medicine, Univ. of Southern California, Mother Infant Res. Institute, Dept. of Obstetrics & Gynecology,Tufts Med. Ctr., Univ. of Pennsylvania, Dept. of Obstetrics & Gynecology.*

9:00 B26 **118.26** A novel developmental requirement for NMDA receptors in axon guidance is disrupted by hypoxic injury. J. BONKOWSKY*; J. GAO; T. STEVENSON. *Univ. of Utah Sch. of Med., Univ. of Utah.*

10:00 C1 **118.27** Neurexin restricts l4 columnar targeting through promoting ephrin clustering. L. LIU*; Y. TIAN; J. HAN. *Inst. of Life Sci.*

11:00 C2 **118.28** Celsr3 modulates visual development and function in mice. L. ZHOU*. *GHM Inst. of CNS Regeneration, Jinan Univ.*

8:00 C3 **118.29** Study of genes critical for retinal axon navigational error associated with ocular albinism. S. GUHA*; Y. HE; D. FARBER. *Jules Stein Eye Institute/ UCLA.*

9:00 C4 **118.30** Dysregulation of *Dscam* mRNA localization and local translation in Down syndrome model mice. S. JAIN*; K. WELSHHANS. *Kent State Univ., Kent State Unviersity.*

POSTER

119. Neural Circuit Activity and Maturation I

Theme A: Development

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 C5 **119.01** Stage II retinal waves promote glutamate release in developing rat retinas. C. YANG*; C. WANG. *Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ. and Academia Sinica.*

9:00 C6 **119.02** Distinct roles of pro- and mature bdnf signaling in retinotectal axon remodeling in the developing xenopus visual system. E. KUTSAROVA*; M. MUNZ; A. SCHOHL; A. WANG; O. BILASH; Y. ZHANG; C. LEE; E. S. RUTHAZER. *Montreal Neurolog. Institute, McGill Univ.*

10:00 C7 **119.03** Investigating the electrical and morphological changes of Cajal-Retzius cells during cortical development. L. SUN*; Y. BAI; X. WANG. *Inst. of Biophysics, Inst. of Biophysics.*

11:00 C8 **119.04** Tuning mouse embryonic stem cell-derived motor neurons' activity using optogenetic stimulation. G. PAGAN-DIAZ; C. CVETKOVIC; R. BASHIR; P. SENGUPTA*. *Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign.*

8:00 C9 **119.05** Synaptotagmin III in developing retinal ganglion cells regulates patterned spontaneous activity and visual circuit development. W. SHU*; C. WANG. *Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ. and Academia Sinica.*

9:00 C10 **119.06** An unanticipated role for activity in olfactory circuit assembly and stability. B. THROESCH*; K. N. JAMES; W. DAVINI; S. A. SILVER; K. T. EADE; N. TORABI-RANDER; K. K. BALDWIN. *TSRI, UCSD.*

10:00 C11 **119.07** ▲ Dysbindin, a schizophrenia susceptibility gene, regulates patterned spontaneous activity in the developing rat retina. M. LU*; C. WANG. *Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ. and Academia Sinica.*

11:00 C12 **119.08** Independent regulation of 'feedforward' and 'feedback' E-I ratios following visual deprivation in a canonical V1 microcircuit. N. J. MISKA*; G. G. TURRIGIANO. *Brandeis Univ.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 C13 **119.09** Action potential firing by neighboring inputs promotes branch elaboration of developing retinotectal axons. T. N. RAHMAN*; M. C. MUNZ; E. S. RUTHAZER. *McGill, Montreal Neurolog. Inst.*

9:00 C14 **119.10** Illuminating calcium flux in the *C. elegans* embryo. E. ARDIEL*; A. KUMAR; R. CHRISTENSEN; J. MARBACH; R. GUPTA; B. DUNCAN; D. COLON-RAMOS; H. SHROFF. *NIH, Yale.*

10:00 C15 **119.11** Remodelling of neuronal network activity via selective interaction of hippocampal nerve cells with graphene based materials. D. SCAINI*; R. RAUTI; N. PAMPALONI; N. SECOMANDI; K. KOSTARELOS; J. A. GARRIDO; L. BALLERINI. *Univ. of Trieste, ELETTRA Synchrotron Light Source, Intl. Sch. for Advanced Studies, Univ. of Manchester, Catalan Inst. of Nanoscience and Nanotechnology.*

11:00 C16 **119.12** Mechanisms of spontaneous electrical activity in the developing cerebral cortex - subplate zone. M. B. SINGH*; S. D. ANTIC. *Dept. of Neuroscience, UCONN HEALTH, Inst. of Systems Genomics, Dept. of Neuroscience, UConn Hlth.*

8:00 C17 **119.13** Postnatal activation of Erk1/2 in astrocytes promotes excitatory synaptogenesis in immune challenge-induced seizure susceptibility. J. CHEN*; H. QIN; L. MOU; Y. HE; Y. YAN; H. ZHOU; Y. LV; J. WANG; Y. SHEN; Z. YUDONG. *Mail Box 22,Zhejiang Univ. Sch. of Med., The First Affiliated Hosp. of Wenzhou Med. Univ.*

POSTER

120. Autism: Clinical Studies I

Theme A: Development

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 C18 **120.01** ● Outcomes with environmental enrichment therapy for autism. M. A. LEON*; E. ARONOFF; R. HILLYER. *Univ. California, Mendability, Mendability, LLC.*

9:00 C19 **120.02** Longitudinal development of social visual engagement in infants later diagnosed with autism spectrum disorder. L. OLSON*; A. KLIN; S. SHULTZ; W. JONES. *SDSU/UCSD, Marcus Autism Center/Emory Univ. Sch. of Med.*

10:00 C20 **120.03** Gaze behavior and joint attention in dynamic scenes of school classes by children with autistic spectrum disorders; an eye-tracking study for early diagnosis and intervention. T. HIGUCHI*; Y. ISHIZAKI; A. NORITAKE; Y. YANAGIMOTO; H. KOBAYASHI; K. NAKAMURA; K. KANEKO. *Kansai Med. Univ. Takii Hosp., Kansai Med. Univ., Dept. of Developmental Pediatrics Donated by Nabari City, Kansai Med. Univ., Kansai Med. Univ.*

11:00 C21 **120.04** Altered maturation of the fusiform face area and the extrastriate body area for individuals with autism spectrum disorders. Y. OKAMOTO*; H. KOSAKA; R. KITADA; A. SEKI; H. C. TANABE; M. J. HAYASHI; T. KOCHIYAMA; D. N. SAITO; H. YANAKA; T. MUNESUE; M. ISHITOBI; M. OMORI; Y. WADA; H. OKAZAWA; T. KOEDA; N. SADATO. *Univ. of Fukui, Natl. Inst. for Physiological Sci., Tottori Univ., Nagoya Univ., Osaka Univ., Advanced Telecommunications Res. Inst. Intl., Kanazawa Univ., Natl. Ctr. of Neurol. and Psychiatry, Fukui Prefectural Univ., Univ. of Fukui, Univ. of Fukui.*

8:00 C22 **120.05** Amygdala responses to subliminal and supraliminal faces in adults with high function autism spectrum disorder: A MEG study. T. MAEKAWA*; K. OGATA; T. YAMASAKI; M. TANAKA; S. TOBIMATSU. *Kyushu Univ., Amekudai Hosp., Kyushu Univ.*

9:00 C23 **120.06** Tactile temporal resolution might correlate with the degree of hypersensitivity in individuals with autism-spectrum disorders. A. YAGUCHI*; M. IDE; M. WADA. *Res. Inst. of NRCD, Rikkyo Univ., Japan Society for the Promotion of Sci.*

10:00 C24 **120.07** Impact of virtual stimulation on the ability of autistic children for playing real-sports. C. CRESPO-CORTES*; G. CORIA; L. GARCIA; R. TOLEDO; M. HERNANDEZ; J. MANZO. *Univ. Veracruzana.*

11:00 C25 **120.08** ● Patients with autism spectrum disorder show age-dependent differences in GABA-dependent propofol-induced electroencephalogram oscillations. E. C. WALSH*; J. M. LEE; K. TERZAKIS; D. W. ZHOU; P. G. FIRTH; E. S. SHANK; T. M. BUIE; E. N. BROWN; P. L. PURDON. *Massachusetts Gen. Hosp., Harvard Med. Sch., Villanova Univ., MIT, Massachusetts Gen. Hosp., Lurie Ctr. for Autism, Harvard Med. Sch., MIT, MIT.*

8:00 C26 **120.09** Global and regional brain enlargement in autism spectrum disorder persists through adolescence in a large sample. L. D. YANKOWITZ; J. D. HERRINGTON*; J. A. PEREIRA; B. E. YERYS; J. PANDEY; R. T. SCHULTZ. *Univ. of Pennsylvania, Children's Hosp. of Philadelphia, Children's Hosp. of Philadelphia.*

9:00 C27 **120.10** ▲ Cortical activation for reading semantic words in children with Autism Spectrum Disorder: A MEG study. R. OGAWA*. *Osaka Univ.*

10:00 C28 **120.11** Effect of age and autism diagnosis on oxytocin and vasopressin 1a receptors in the basal forebrain and superior colliculus of the human brain. S. M. FREEMAN*; M. C. PALUMBO; A. L. SMITH; M. M. GOODMAN; K. L. BALES. *UC-Davis, Emory Univ.*

11:00 C29 **120.12** Increased internal noise in autism spectrum disorder is associated with higher response variability in a predictive motion task and overall symptom severity. K. B. SCHAUDER*; W. PARK; D. TADIN; L. BENNETTO. *Univ. of Rochester, Univ. of Rochester, Univ. of Rochester.*

8:00 C30 **120.13** Visual and auditory responses elicited by movie task in autism spectrum disorder: A magnetoencephalographic study. J. MATSUZAKI*; K. KAGITANI-SHIMONO; S. AOKI; Y. KATO; R. HANAIE; M. NAKANISHI; A. TATSUMI; T. YAMAMOTO; K. TOMINAGA; Y. NAGAI; I. MOHRI; M. TANIIKE. *United Grad. Sch. of Child Development, Osaka Univ., Dept. of Pediatrics, Osaka Univ., Grad. Sch. of Engineering, Osaka Univ.*

9:00 C31 **120.14** Cortical thickness abnormalities in autism spectrum disorders throughout development: A large scale mri study. B. S. KHUNDRAKPAM*; J. LEWIS; P. KOSTOPOULOS; A. EVANS. *Montreal Neurolog. Inst.*

10:00 C32 **120.15** Task-dependent modulation of face gaze in high-functioning autism. A. GHARIB*; R. ADOLPHS; S. SHIMOJO. *Caltech.*

11:00 C33 **120.16** Electrophysiological markers of atypical auditory temporal processing associated with symptom severity in autism spectrum disorder. J. H. FOSS-FEIG*; K. K. M. STAVROPOULOS; E. ISENSTEIN; J. C. MCPARTLAND; M. T. WALLACE; W. L. STONE; A. KEY. *Yale Univ., Mount Sinai Hosp. Icahn Sch. of Med., Univ. of California - Riverside, Vanderbilt Univ., Univ. of Washington.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 C34 **120.17** A slower speed in early coding phase of happy facial processing in children with autism spectrum disorder. Q. LIN*; Y. JIN. *Sch. of Publ. Health, Sun Yat-Sen Univ.*

9:00 D1 **120.18** ▲ Atypical eye gaze as a biomarker in autism spectrum children: An eye tracking study. J. HAN*; Y. LI; X. LI. *State Key Lab. of Cognitive Neurosci. and, Instituteof Electrical Engin., State Key Lab. of Cognitive Neurosci. and Learning.*

10:00 D2 **120.19** Atypical lateralization of face processing in autism spectrum disorder. L. M. SOLOMON-HARRIS*; N. KHAN; V. REPLETE; C. S. PENG; W. D. STEVENS; A. MARTIN. *York Univ., Natl. Inst. of Mental Health, Natl. Inst. of Hlth.*

11:00 D3 **120.20** Anatomical heterogeneity of autism spectrum disorder based on cortical thickness. S. JEON*; B. KHUNDRAKPAM; A. EVANS. *Montreal Neurolog. Inst. & Hospital, McGill.*

8:00 D4 **120.21** fMRI brain-computer interfaces for self-regulation of fusiform face area in autism spectrum disorders. J. A. PEREIRA; R. SITARAM; P. SEPULVEDA; M. RANA; C. MONTALBA; R. TORRES; C. TEJOS; S. RUIZ*. *Pontifiia Univ. Católica de Chile, Pontifiia Univ. Católica de Chile, Pontifiia Univ. Católica de Chile, Escuela de Medicina, Pontificia Univ. Catol.*

9:00 D5 **120.22** ● A small number of abnormal functional connections in the brain predicts adult autism spectrum disorder. N. YAHATA*; J. MORIMOTO; R. HASHIMOTO; G. LISI; K. SHIBATA; Y. KAWAKUBO; H. KUWABARA; M. KURODA; T. YAMADA; F. MEGUMI; H. IMAMIZU; J. E. NANEZ, Sr.; H. TAKAHASHI; Y. OKAMOTO; K. KASAI; N. KATO; Y. SASAKI; T. WATANABE; M. KAWATO. *Natl. Inst. of Radiological Sci., The Univ. of Tokyo, ATR Brain Information Communication Res. Lab. Group, ATR Brain Information Communication Res. Lab. Group, Showa Univ. Karasuyama Hosp., Tokyo Metropolitan Univ., Brown Univ., The Univ. of Tokyo, The Univ. of Tokyo, Fukushima Univ., Univ. Col. London, The Univ. of Tokyo, Arizona State Univ., Kyoto Univ. Grad. Sch. of Med., Grad. Sch. of Biomed. Sciences, Hiroshima Univ., The Univ. of Tokyo.*

10:00 D6 **120.23** Genome-wide DNA methylation profiles in postmortem brains from subjects with autism. K. IWATA*; K. NAKABAYASHI; K. HATA; K. NAKAMURA; N. SHINTANI; H. MTSUZAKI; N. MORI. *Univ. of Fukui, NCCHD, Hirosaki Univ. Sch. of Med., Osaka Univ., Hamamatsu Univ. Sch. of Med.*

11:00 D7 **120.24** Social attention is context-dependent in adolescents with autism spectrum disorder. K. UNRUH*; J. BODFISH. *Vanderbilt Univ.*

POSTER

121. Kainate and Other Non-NMDA Receptors

Theme B: Neural Excitability, Synapses, and Glia

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 D8 **121.01** Pharmacological characterisation of novel kainate receptor antagonists based on kynurenic acid. A. V. EAPEN*; R. J. THATCHER; M. W. IRVINE; J. WOOD; S. MALLAH; G. CULLEY; A. VOLIANSKIS; E. MOLNAR; G. L. COLLINGRIDGE; D. E. JANE. *Univ. of Bristol, Queen Mary Univ. of London, Univ. of Toronto, Mount Sinai Hosp.*

9:00 D9 **121.02** Design, Synthesis and SAR study of novel kainate receptor antagonists based on kynurenic acid. R. J. THATCHER*; A. V. EAPEN; M. IRVINE; J. WOOD; S. MALLAH; G. CULLEY; A. VOLIANSKIS; G. L. COLLINGRIDGE; E. MOLNAR; D. E. JANE. *Univ. of Bristol, Queen Mary Univ. of London, Univ. of Toronto, Lunenfeld-Tanenbaum Res. Inst.*

10:00 D10 **121.03** GluK2-containing kainate receptors mediate the effects of hypoxia in area CA3 of the neonatal mouse. D. K. GROSENBAUGH*; B. M. ROSS; S. A. ZANELLI. *Univ. of Virginia.*

11:00 D11 **121.04** Neto regulation of somatodendritic and presynaptic kainate receptors expressed by hippocampal interneurons. K. A. PELKEY*; M. WYETH; G. VARGISH; C. FANG; A. JOHNSTON; X. YUAN; S. HUNT; R. MCINNES; M. W. SALTER; C. J. MCBAIN. *NIH, Stanford, UCLA, McGill U, Hopsital for Sick Children.*

8:00 D12 **121.05** ● Low-affinity kainate receptor subunit, gluk1, gluk2 and gluk3, are responsible for mouse anxiety-like behavior. I. WATANABE*. *Dept. of Cell. Neurobio. Basic Neurosci.*

9:00 D13 **121.06** Kainate receptors and metabotropic glutamate receptors mobilize 2-AG in striatal direct pathway SPNs. J. MARSHALL*; J. XU; A. CONTRACTOR. *Northwestern Univ. Dept. of Physiol., Northwestern Univ.*

10:00 D14 **121.07** Enhanced fear memory as a result of neuronal TDP-43 depletion. P. KOZA*; A. SUSKA; A. KONOPKA; T. GÓRKIEWICZ; E. KNAPSKA; W. KONOPKA; L. KACZMAREK. *Nencki Inst. of Exptl. Biol., Experts' Ctr. for Anatlytical Chem. Biol. and Chem. Res. Centre, Univ. of Warsaw.*

11:00 D15 **121.08** Acute methylmercury exposure leads to alterations in AMPA and NMDA receptor expression in the motor neuron NSC34 cell line. A. COLON-RODRIGUEZ*; W. D. ATCHISON. *Michigan State Univ., Michigan State Univ., Michigan State Univ.*

8:00 D16 **121.09** AMPA and Kainate Receptors are required for navigation in taxis behaviors in *C. elegans*. P. J. MALDONADO-CATALA*; P. J. BROCKIE; J. MELLEM; D. MADSEN; A. V. MARICQ. *Univ. of Utah, Univ. of Utah.*

9:00 D17 **121.10** Deletion of Neurexin 1 binding glutamate δ-1 subunit produces cortico-striatal dysfunction: Relevance to autism. J. LIU; S. DRAVID*. *Creighton Univ.*

10:00 D18 **121.11** Functional characterisation of glutamate receptors of the δ subfamily. T. STRASDEIT*; M. HOLLMANN. *Ruhr Univ. Bochum.*

11:00 D19 **121.12** Characterization of a P2X7 clinical candidate: *In-vitro* human brain autoradiography and pharmacology. B. LORD*; B. SAVALL; Q. WANG; T. KOUDRIAKOVA; N. CARRUTHERS; A. WICKENDEN; T. LOVENBERG; P. BONAVENTURE; M. LETAVIC; A. BHATTACHARYA. *Janssen PRD, L.L.C.*

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POSTER

122. Ligand-Gated Ion Channels

Theme B: Neural Excitability, Synapses, and Glia

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 D20 **122.01** Antidepressant escitalopram blocks 5-hydroxytryptamine$_3$ (5-ht$_3$) receptor-mediated currents in ncb-20 neuroblastoma cells. K. SUNG*; S. JEUN; Y. JOO; S. HAHN. *The Catholic Univ. of Korea, Med. Col., The Catholic Univ. of Korea, Med. Col.*

9:00 D21 **122.02** Activation and modulation of recombinant glycine and GABA$_A$ receptors by 4-halogenated analogues of propofol. G. AKK*; A. GERMANN; D. SHIN; B. MANION; C. J. EDGE; E. H. SMITH; N. P. FRANKS; A. S. EVERS. *Washington Univ. Sch. of Med., Imperial Col. London.*

10:00 D22 **122.03** The deactivation of acid sensing ion channel 1a is strikingly pH-dependent. D. M. MACLEAN*; V. JAYARAMAN. *UTHealth.*

11:00 D23 **122.04** The role of prolines in ELIC. S. C. LUMMIS*; F. LOVE; M. RIENZO; D. A. DOUGHERTY. *Univ. of Cambridge, Caltech.*

8:00 D24 **122.05** Cannabinoid receptor ligands differently modulate acetylcholine-induced Ca^{2+} signals in pancreatic acinar cells. K. XIA*; Z. HUANG; D. CHEN; M. GAO; S. ZHANG; J. WU. *St.joseph's Hosp. and Med. Ctr., The First Affiliated Hosp. of Zhengzhou Univ.*

9:00 D25 **122.06** Modulation of inflammation-primed glycine receptors alleviates pain. M. A. ACUNA*; G. E. YEVENES; W. T. RALVENIUS; D. BENKE; A. DI LIO; C. O. LARA; B. MUNOZ; C. F. BURGOS; G. MORAGA-CID; P. CORRINGER; H. U. ZEILHOFER. *Univ. of Zurich, Neurosci. Ctr. Zurich (ZNZ), Univ. of Concepcion, Drug Discovery Network Zurich (DDNZ), Inst. Pasteur, Swiss Federal Inst. of Technol. (ETH).*

10:00 D26 **122.07** Acid-sensing ion channels in ventrolateral medulla contribute to central chemoreception. Q. JIANG; N. SONG; R. GUAN; C. J. HASSANZADEH; Y. CHU; X. WANG; L. SHEN; X. CHU*. *Univ. of Missouri Kansas City, Fudan Univ. Shanghai Med. Col.*

11:00 D27 **122.08** A missense mutation A384P associated with human hyperekplexia reveals a desensitization site of glycine receptors. D. WU*; C. WANG; M. SHEN; N. ZHOU. *China Med. University, Grad. Inst. of Clin. Med. Science, Grad. Inst. of Chinese Med., China Med. Univ.*

8:00 D28 **122.09** Glycine-activated outward currents in neurons of the hippocampus. S. SATO*; N. EGUCHI; M. MORI. *Kobe Univ., Kobe Univ.*

9:00 D29 **122.10** Potentiation of glycinergic IPSCs in the dorsal horn by Ca^{2+}, NMDA, and cAMP. M. KLOC*; A. CHIRILA; R. STEVENSON; J. A. KAUER. *Brown Univ.*

10:00 D30 **122.11** Extracellular glycine receptors of lateral habenula and alcohol related behaviors. W. LI*; W. WU; W. ZUO; J. LI; R. FU; A. BEKKER; J. YE. *Anesthesiol., Inst. of Basic Med. Sciences,Chinese Acad. of Med. Sci., Gen. Hosp. of Chengdu Military Area Command.*

11:00 D31 **122.12** TRPA1 channel modifies membrane current induced by TRPV1 channels activation in dorsal root ganglion neurons. T. MASUOKA*; M. KUDO; T. ISHIBASHI; M. NISHIO. *Kanazawa Med. Univ., Kanazawa Med. Univ.*

8:00 D32 **122.13** TRPV1 receptor activation triggers intracellular calcium responses in hippocampal Cajal-Retzius cells. G. MACCAFERRI*; M. ANSTOETZ; S. K. LEE. *Northwestern Univ. Dept. of Physiol.*

9:00 D33 **122.14** ● Osthole inhibits histamine-dependent itch via modulating TRPV1 activity. Z. TANG*; N. YANG; H. SHI; G. YU; C. WANG; C. ZHU; Y. YANG; X. YUAN; M. TANG; Z. WANG; T. GEGEN; Q. HE; K. TANG; L. LAN; G. WU. *Nanjing Univ. of Chinese Med., Nanjing Univ. of Chinese Med., Jishou Univ., The Jiangsu Collaborative Innovation Ctr. of Traditional Chinese Med. (TCM) Prevention and Treatment of Tumor, Nanjing Normal Univ., Guangxi Univ. of Chinese Med.*

POSTER

123. Potassium Channels I

Theme B: Neural Excitability, Synapses, and Glia

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 D34 **123.01** SK channels regulate resting and firing properties of MNTB neurons. Y. ZHANG; H. HUANG*. *Tulane Univ.*

9:00 E1 **123.02** ▲ Allosteric modulation of SK channels. B. WHITMORE; Y. NAM; M. ZHANG*. *Chapman Univ. Sch. of Pharm., Chapman Univ. Sch. of Pharm.*

10:00 E2 **123.03** Development of stable recombinant cell lines expressing human small-conductance (SK) calcium-activated potassium channels. D. PAU*; P. MADAU; L. HUTCHISON; P. CONWAY; N. BRYSON; D. DALRYMPLE; I. MCPHEE. *SB Drug Discovery.*

11:00 E3 **123.04** A unique human N-terminal point mutation in the Slack potassium channel causes early onset epilepsy and exhibits gain of function. J. KRONENGOLD*; R. NABBOUT; L. K. KACZMAREK. *Yale Univ. Sch. of Med., Ctr. de Reference Epilepsies Rares.*

8:00 E4 **123.05** Slack (K_{Na}1.1) potassium channels can regulate their own rate of protein synthesis. T. J. MALONE*; G. E. KIM; M. R. FLEMING; L. K. KACZMAREK. *Yale Univ., Yale Univ., Yale Univ.*

9:00 E5 **123.06** Loss of Slack K^+ channels prevents mortality during electroshock-induced seizures and impairs motor skill learning. I. H. QURAISHI*; R. L. COUTURE; M. L. SCHWARTZ; K. I. CLAYCOMB; G. F. BUCHANAN; R. LUKOWSKI; P. RUTH; L. K. KACZMAREK. *Yale Sch. of Med., Yale Sch. of Med., Univ. of Tübingen, Yale Sch. of Med.*

10:00 E6 **123.07** Insights from molecular modeling, docking and simulation of the Fragile X Mental Retardation protein and the Na^+-dependent K^+ channel Slack. D. P. JENKINS*; L. K. KACZMAREK. *Yale Univ.*

11:00 E7 **123.08** Regulation of electric organ discharge frequency by the Slack and Slick sodium activated potassium channels in the weakly electric fish Eigenmannia virescens. Y. BAN*; R. MALTBY; M. R. MARKHAM. *Univ. of Oklahoma.*

8:00 E8 **123.09** Scaffolding of the sodium-activated potassium (k_{na}) channels slack and slick by magi-1. K. D. PRYCE*; D. AGWA; D. TOMASELLO; A. NIP; A. BHATTACHARJEE. *State Univ. of New York At Buffalo, State Univ. of New York at Buffalo, State Univ. of New York at Buffalo, State Univ. of New York at Buffalo.*

9:00 E9 **123.10** ● Store-operated calcium channels modulate of A-type potassium currents in excitatory dorsal horn neurons. Y. DOU*; J. XIA; R. GAO; H. HU. *Drexel Univ. Col. of Med.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 E10 **123.11** Novel photoaffinity derivative of the inhalational anesthetic sevoflurane reveals sites of voltage-gated ion channel modulation. K. WOLL*; W. PENG; Q. LIANG; J. JACOBS; N. V. BHANU; B. GARCIA; M. COVARRUBIAS; P. LOLL; W. DAILEY; R. ECKENHOFF. *Univ. of Pennsylvania Perlman Sch. of Med., Univ. of Pennsylvania, Thomas Jefferson Univ., Univ. of Pennsylvania Perelman Sch. of Med., Univ. of Pennsylvania Perelman Sch. of Med., Drexel Univ.*

11:00 E11 **123.12** Neonatal epileptic encephalopathy-associated KCNQ2 channels set layer 2/3 pyramidal neuron excitability. Z. NIDAY*; V. HAWKINS; H. SOH; D. K. MULKEY; A. V. TZINGOUNIS. *Univ. of Connecticut.*

8:00 E12 **123.13** ▲ Differential regulation of action potentials by potassium channels. H. E. SMALL; C. A. VILLALBA-GALEA; L. M. BOLAND*. *Univ. of Richmond, Virginia Commonwealth Univ.*

9:00 E13 **123.14** GIRK channels modulate Purkinje cell excitability and synaptic response to climbing fiber stimulation in mice cerebellum. M. C. MINIACI*; P. LIPPIELLO; E. HOXHA; F. TEMPIA. *Univ. of Naples Federico II, Univ. of Turin.*

10:00 E14 **123.15** Functional roles of kv1 channels in genetically-identified neocortical layer 5 pyramidal cells. R. C. FOEHRING*; D. GUAN. *Univ. Tennessee Hlth. Sci. Ctr., Univ. of Tennessee Hlth. Sci. Ctr.*

11:00 E15 **123.16** Zn^{2+}-induced Ca^{2+} release via ryanodine receptors triggers calcineurin-dependent redistribution of cortical neuronal Kv2.1 K^+ channels. A. J. SCHULIEN*; J. A. JUSTICE; R. DI MAIO; Z. P. WILLS; N. H. SHAH; E. AIZENMAN. *Univ. of Pittsburgh Sch. of Med., Univ. of Pittsburgh Sch. of Med., Univ. of Pittsburgh Sch. of Med.*

8:00 E16 **123.17** Distinct association of the Kv2 family of voltage-gated potassium channels with ER:PM junctions. M. KIRMIZ*; J. S. TRIMMER. *UC Davis.*

9:00 E17 **123.18** Low pH_o boosts burst firing and enhances catecholamine release by blocking TASK1-3 and BK channels while preserving Cav1 channels in mouse chromaffin cells. L. GUARINA; D. H. F. VANDAEL; V. CARABELLI; E. CARBONE*. *Univ. of Turin, Inst. of Sci. and Technol. Austria.*

10:00 E18 **123.19** ● The potassium channel Kv1.3 as a target for inhibiting detrimental M1 microglia functions in ischemic stroke. H. WULFF*; H. M. NGUYEN; I. MAEZAWA; L. JIN; Y. CHEN. *Univ. of California Davis, Univ. of California, Davis.*

11:00 E19 **123.20** Kv3.3 channels regulate the activation of tank binding kinase 1, tbk1. Y. ZHANG*; L. VARELA; T. L. HORVATH; L. K. KACZMAREK. *Yale Univ. Sch. Med.*

8:00 E20 **123.21** Therapeutic dose of Li^+ dually modulates the function of G protein-activated inwardly rectifying K^+ channels in CA1 pyramidal neurons. M. RUBINSTEIN*; N. DASCAL. *Tel Aviv Univ.*

9:00 E21 **123.22** Functional role of kir4.1 channel-expressing ng2 cells in a mouse model of stroke. G. MA*; F. SONG; Y. PENG; N. SHENG; Y. LI; X. TONG. *Shanghai Jiao Tong Univ. Sch. of Med., Shanghai Jiao Tong Univ. Sch. of Med.*

10:00 E22 **123.23** Unique cellular distribution of voltage gated potassium channel expression in the CA2 region of the mouse hippocampus. S. PALACIO*; J. D. LEWIS; D. H. BRANN; K. D. MURRAY; J. S. TRIMMER. *Univ. of California Davis, Brigham Young Univ. Idaho, Columbia Univ., Univ. of California Davis.*

11:00 E23 **123.24** Generation of a transgenic mouse expressing BK channels tagged with a fluorogen-activating peptide. C. PRATT*; D. KULJIS; G. HOMANICS; S. DUDEM; M. A. HOLLYWOOD; A. L. BARTH; M. P. BRUCHEZ. *Carnegie Mellon Univ., Univ. of Pittsburgh, Dundalk Inst. of Technol.*

8:00 E24 **123.25** Sk3 channel overexpression in mice causes hippocampal shrinkage associated to cognitive impairment. E. DEL BEL*; S. MARTIN; M. LAZZARINI; C. DULLIN; S. BALAKRISHNAN; F. V. GOMES; M. NINKOVIC; A. EL HADY1; L. A. PARDO; W. STÜHMER. *Univ. of Sao Paulo- Ribeirao Preto Dent. Sch., Max Planck Inst. of Exptl. Med., Ctr. Nanoscale Microscopy and Mol. Physiol. of the Brain (CNMPB), Georg-August Univ. Med. Ctr., Ctr. Nanoscale Microscopy and Mol. Physiol. of the Brain (CNMPB), Dept. of Neuro- and Sensory Physiology, Georg-August Univ. Med. Center, Dept. of Pharmacology, Med. Sch. of Ribeirão Preto, Univ. of São Paulo, 6Department of Neurosurgery, Georg-August Univ. Med. Center, 37075 Göttingen, Germany, Dept. of Mol. Biol. of Neuronal Signals, Max Planck Inst. of Exptl. Med., 7Bernstein Focus for Neurotechnology and Bernstein Ctr. for Computat. Neurosci., Theoretical Neurophysics, Dept. of Non-linear Dynamics, Max Planck Inst. for Dynamics and Self-Organization, 9The Interdisciplinary Collaborative Res. Ctr. 889 "Cellular Mechanisms of Sensory Processing", Ctr. Nanoscale Microscopy and Mol. Physiol. of the Brain (CNMPB).*

POSTER

124. GABA

Theme B: Neural Excitability, Synapses, and Glia

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 E25 **124.01** Comparisons of GABAergic synapses between a reduced synaptic preparation and a slice preparation of the basal forebrain in vGAT ChR2-eYFP BAC mice using minimal optogenetic stimulation. K. S. MONTGOMERY*; D. W. DUBOIS; D. MURCHISON; A. S. FINCHER; E. A. BANCROFT; W. H. GRIFFITH. *Texas A&M Hlth. Sci. Ctr., Texas A&M Hlth. Sci. Ctr.*

9:00 E26 **124.02** Optogenetic channelrhodopsin (chr2) function is maintained through middle age (10-14 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; W. H. GRIFFITH. *Texas A&M Univ. Hlth. Sci. Ctr.*

10:00 E27 **124.03** Functional characterization of VIP-expressing interneurons in the hippocampal dentate gyrus. Y. WEI*; C. LIEN. *Natl. Yang-Ming Univ., Inst. Of Brain Science, Natl. Yang-Ming Univ., Inst. Of Brain Res. Center, Natl. Yang-Ming Univ.*

11:00 E28 **124.04** Excitatory GABAB receptors. J. ZHANG*; L. TAN; Y. REN; J. LIANG; R. LIN; Q. FENG; J. ZHOU; B. BETTLER; F. WANG; M. LUO. *Natl. Inst. of Biol. Sciences, Beijing, Sch. of Life Sciences, Tsinghua Univ., Inst. of Physiol.*

8:00 E29 **124.05** Characterization of transmission at synapse of inhibitory interneuron onto noradrenergic neuron in locus coeruleus. C. KUO*; M. MIN; H. YANG. *Natl. Taiwan Univ., Dept. Biomed. Sci., Chung-Shan Med. Univ.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 E30 **124.06** ● Targeting vesicular gaba transporter (vgat)-expressing cells with a polyclonal antibody to the lumenal domain of vgat: Results with a saporin conjugate. C. A. FRIEDMAN; B. J. RUSSELL; M. D. KOHLS; L. R. ANCHETA; P. A. SHRAMM; D. A. LAPPI*. *Advanced Targeting Systems.*

10:00 E31 **124.07** Depletion of synaptic vesicles inhibits the nitric oxide-dependent release of internal chloride. V. K. DUNN*, JR; E. GLEASON. *Louisiana State Univ.*

11:00 E32 **124.08** Changes in the striatal neuronal inhibition in the MMP-1 transgenic mouse. N. AL-MUHTASIB*; M. ALLEN; K. CONANT; S. VICINI. *Georgetown Univ., Georgetown Univ., Georgetown Univ.*

8:00 E33 **124.09** Inhibitory GABAergic signaling is strengthened by NMDAR derived reactive oxygen species. E. A. LARSON*; M. V. ACCARDI; D. BOWIE. *McGill Univ.*

9:00 E34 **124.10** Effects of oxytocin on gabaergic circuits in the lateral septum. S. M. SINGHAL*; S. W. HARDEN; C. J. FRAZIER. *Univ. of Florida, Univ. of Florida, Univ. of Florida.*

10:00 E35 **124.11** μ and δ opioidergic modulation of inhibitory synaptic transmission in the rat insular corte. E. YOKOTA; Y. OI*; M. KOBAYASHI. *Nihon Univ. Sch. of Dentisitry, Nihon Univ. Sch. of Dentisitry.*

11:00 E36 **124.12** Intermittent alcohol exposure alters gabaergic function in the central nuclei of amygadala in mice lacking BK channel β1 or β4 subunits. Q. LI*; C. CONTET; S. N. TREISTMAN; S. D. MOORE. *Duke Univ. Med. Ctr., The Scripps Res. Inst., Univ. of Puerto Rico.*

8:00 E37 **124.13** ▲ Comparison of distribution of parvalbumin immunoreactive interneuron in the telecephalon between pigeon and mouse. C. JEONG-HWI*; J. AHN; J. PARK; T. LEE; I. KIM; K. SEO; M. WON. *Kangwon Natl. Univ., hallym university, Seoul Natl. Univ.*

9:00 E38 **124.14** Insulin modulates gaba-a receptor trafficking to membranes of prefrontal cortex. S. TRUJEQUE-RAMOS; G. ARENAS; S. MIHAILESCU; S. L. HERNANDEZ*. *Facultad de Medicina, Facultad de Medicina, Facultad de Med.*

10:00 F1 **124.15** ● Electrophysiological studies of $GABA_A$α5 negative allosteric modulators in naive and amyloid β-treated hippocampal neurons. M. NAKANISHI; S. KAWAHARADA; B. BADER; O. SCHRÖDER; T. YASUHIRO*; S. KATSUMATA. *ONO Pharmaceut. CO.,LTD, NeuroProof GmbH.*

11:00 F2 **124.16** ● Selective targeting of extra-synaptic α5-$GABA_A$ receptors by S44819 (Egis-13529), a novel competitive $GABA_A$ receptor inhibitor compound. A. PALVOLGYI; L. ETHERINGTON; B. MIHALIK; I. LING; K. PALLAGI; S. KERTESZ; B. G. GUNN; A. R. BROWN; M. R. LIVESEY; D. BELELLI; J. BARKOCZI; P. VARGA; M. SPEDDING*; I. GACSALYI; J. J. LAMBERT; F. ANTONI. *Egis Pharmaceuticals PLC, Dundee Univ., Spedding Res. Solutions Sarl, Inst. de Recherches Servier.*

8:00 F3 **124.17** Long-term effects of an acute treatment of adult mice modelling down syndrome with gaba-α5 inverse agonist. M. POTIER*; A. DUCHON; A. GRUART; C. ALBAC; J. DELGADO6GARCIA; Y. HÉRAULT. *CNRS INSERM UPMC, IGBMC, CNRS, INSERM, Univ. de Strasbourg, División de Neurociencias, Univ. Pablo de Olavide.*

9:00 F4 **124.18** A single restraint stress alters PACAP-38 modulation of GABA transmission in the rat central amygdala. F. P. VARODAYAN*; C. S. OLEATA; V. SABINO; M. ROBERTO. *The Scripps Res. Inst., Boston Univ. Sch. of Med.*

10:00 F5 **124.19** Substance P, like ethanol, increases GABAergic transmission in the central nucleus of the amygdala. S. KHOM*; M. ROBERTO. *The Scripps Res. Inst.*

11:00 F6 **124.20** CFTR is required for the NO dependent release of internal Cl^-. T. RODRIGUEZ*; V. S. KRISHNAN, PhD; J. W. MADDOX; E. GLEASON. *LSU Biol. Sci., Johns Hopkins Med. Inst.*

8:00 F7 **124.21** Potential use of hiPSC-derived neurons for studying botulinum toxin mechanism of action. C. E. NICOLEAU*; E. BOUDE; F. NOIRMAIN; E. RABAN; J. KRUPP. *IPSEN Innovation.*

9:00 F8 **124.22** $GABA_A$ α5 inverse agonism enhances long-term object recognition and contextual fear memory but not learning of a two-choice visual discrimination. B. MASATSUGU; S. XIA; R. BARIDO; B. PETROSKI; R. SCOTT; M. PETERS; N. J. BROADBENT*. *Dart Neurosci. LLC.*

POSTER

125. Synaptic Transmission: Modulation

Theme B: Neural Excitability, Synapses, and Glia

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 F9 **125.01** Behavioral characterization of the SNAP25Δ3 mouse, a putative mouse model deficient in the Gβγ-SNARE interaction. Z. ZURAWSKI*; M. BUBSER; K. HYDE; S. RODRIGUEZ; S. ALFORD; C. JONES; H. HAMM. *Vanderbilt Univ., Univ. of Illinois at Chicago.*

9:00 F10 **125.02** Role of intracellular calcium transients in the dopaminergic modulation of synaptic responses in layer II of the lateral entorhinal cortex. I. GLOVACI*; C. A. CHAPMAN. *Concordia Univ.*

10:00 F11 **125.03** Regulation of synaptic efficacy via the ubiquitin-proteasome system and tomosyn proteostasis. J. J. SALDATE*; J. SHIAU; E. L. STUENKEL. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

11:00 F12 **125.04** Functional role of the Ca^{2+}-binding site of Synapsin I in synaptic transmission. S. SACCHETTI*; E. CASTROFLORIO; L. MARAGLIANO; P. BALDELLI; F. BENFENATI. *Inst. Italiano di Tecnologia, Univ. of Genova.*

8:00 F13 **125.05** Paroxysmal behavior and excitation/inhibition imbalance in PRRT2 knockout mice. C. MICHETTI*; E. CASTROFLORIO; I. MARCHIONNI; N. FORTE; B. STERLINI; A. CORRADI; F. BENFENATI. *Italian Inst. of Technol. (IIT), Univ. of Genova Med. Sch.*

9:00 F14 **125.06** APache is a novel regulator of the clathrin-mediated endocytosis of synaptic vesicles. E. CASTROFLORIO*; A. PICCINI; F. C. GUARNIERI; D. APRILE; A. BACHI; A. CATTANEO; A. FASSIO; J. WREN; F. VALTORTA; S. GIOVEDÌ; F. BENFENATI. *The Italian Inst. of Technol., Univ. of Genova, San Raffaele Scientific Inst. and Vita Salute Univ., IFOM, FIRC Inst. of Mol. Oncology, The Italian Inst. of Technol., Oklahoma Med. Res. Fndn., Univ. of Genova.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 F15 **125.07** ● TNIK inhibition in neurons affects synaptic P120 and δ catenin. L. C. JAMES*; T. LANZ; M. WEBER; J. EDGERTON; C. BUZBY; A. SRNKA; V. REINHART; A. GUTTERIDGE; H. XI; B. KORMOS; P. O'DONNELL. *Pfizer Inc, WW R&D, Pfizer Inc, WW R&D.*

11:00 F16 **125.08** Regulation of Neuronal SNAREs by accessory proteins. S. JAKHANWAL*; N. LAKOMEK; C. LEE; R. JAHN. *Max Planck Inst. For Biophysical Chem., ETH.*

8:00 F17 **125.09** Atypical dopamine transporter inhibitors R-Modafinil and JHW007 differentially alter excitability of midbrain dopamine neurons and reduce the cellular effects of cocaine. A. J. AVELAR*; A. H. NEWMAN; M. J. BECKSTEAD. *UT Hlth. Sci. Ctr. San Antonio, Natl. Inst. of Drug Abuse.*

9:00 F18 **125.10** Membrane-bound glucocorticoid receptors on distinct nociceptive neurons as potential targets for pain control by rapid non-genomic effects. S. A. MOUSA; M. SHAQURA; X. LI; M. AL-KHRASANI; S. FÜRST; A. BEYER; M. SCHAEFER*. *Dep. of Anaesthesiology and Intensive Care Medicine, Charité Univ. Berlin, Pharmacol. and Pharmacother., Semmelweis Univ., Depart.Anaesth., Ludwig-Maximilians-University Munich, Dep. of Anesthesiol & Intensive Care Medicine, Charité Univ. Berlin, CVK.*

10:00 F19 **125.11** Role of zinc on neuropeptide release from neurohypophysial terminals. J. R. LEMOS*; Q. C. CHAU; E. E. CUSTER; R. VILLANUEVA; S. ORTIZ-MIRANDA. *Univ. of Mass Med. Sch.*

11:00 F20 **125.12** Inhibiting protein synthesis reduces the ability to maintain sustained synaptic transmission at the calyx of Held synapse. M. S. SCARNATI; K. G. PARADISO*. *Rutgers Univ.*

8:00 F21 **125.13** Serotonin depresses the excitatory postsynaptic potentials in the dentate granule cells. K. NOZAKI*; R. KUBO; Y. FURUKAWA. *Hiroshima Univ., Hiroshima Univ.*

9:00 F22 **125.14** *In situ* determination of the binding capacity of calbindin. E. A. MATTHEWS*; D. DIETRICH. *Univ. Clin. Bonn, Univ. Clin. Bonn.*

10:00 F23 **125.15** *In vivo* striatal dopamine release is regulated by ACh in the nucleus accumbens and modulated by M4 Muscarinic Receptor Positive Allosteric Modulators (M4PAMs) and nicotinic antagonists. A. D. RAMIREZ*; L. YAO; S. M. SMITH. *Merck.*

11:00 F24 **125.16** Rapid alkalinization of a glutamatergic synaptic cleft by a single action potential. M. STAWARSKI*; G. MACLEOD. *Florida Atlantic Univ.*

8:00 F25 **125.17** Morphological and functional diversity of GABAergic interneurons in the prefrontal cortex of mouse. R. SAFFARI*; M. ZHANG; M. KRAVCHENKO; K. GROTEFELD; W. ZHANG. *Lab. For Mol. Psychiatry, Westfälische Wilhelms-Universität Münster.*

9:00 F26 **125.18** Modulation of synaptic transmission: Protein specificity of inhibitory adrenergic α_{2a} receptor. Y. YIM*; K. BETKE; W. MCDONALD; R. GILSBACH; Y. CHEN; K. HYDE; Q. WANG; L. HEIN; K. SCHEY; H. HAMM. *Vanderbilt Univ., Vanderbilt Univ., Univ. of Freiburg, Univ. of Alabama at Birmingham Sch. of Med.*

POSTER

126. Long-Term Potentiation: Intracellular Signaling

Theme B: Neural Excitability, Synapses, and Glia

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 F27 **126.01** Effects of glucagon-like peptide-1 (9-36) on *de novo* protein synthesis in mouse hippocampus. S. M. DAY*; S. E. EWIN; T. MA. *Wake Forest Sch. of Med., Wake Forest Sch. of Med.*

9:00 F28 **126.02** Interactions between the eIF2α and mTORC1 signaling pathways. H. R. ZIMMERMANN*; B. BECKELMAN; W. YANG; T. MA. *Wake Forest Univ. Sch. of Med.*

10:00 F29 **126.03** The role of adenylate cyclase 1 in reinforcement synaptic plasticity: A modeling and experimental study. H. URAKUBO*; K. AOKI; S. YAGISHITA; H. KASAI; S. ISHII. *Kyoto U, Natl. Inst. for Basic Biol., U Tokyo.*

11:00 F30 **126.04** Rational engineering of sensors for hierarchical and orthogonal Ca^{2+} signaling. H. FUJII*; M. INOUE; H. BITO. *Dept of Neurochemistry, Univ. of Tokyo Sch. of Med., Dept of Neurochemistry, Univ. of Tokyo Grad Sch. of Med.*

8:00 F31 **126.05** The Angelman syndrome protein UBE3A regulates mTOR signaling and synaptic plasticity by ubiquitinating P18. J. SUN*; Y. LIU; J. TRAN; X. HAO; M. BAUDRY; X. BI. *Western Univ. of Hlth. Sci.*

9:00 F32 **126.06** Role of microglia in long-term potentiation and synaptic tagging / capture. R. RAGHURAMAN*; P. RANGARAJAN; S. T. DHEEN; S. SREEDHARAN. *Natl. Univ. of Singapore, Natl. Univ. of Singapore, Natl. Univ. of Singapore, Natl. Univ. of Singapore.*

10:00 F33 **126.07** Applying proximity ligation assay to study interaction of PP1 with I-2 or CREB in response to neuronal activity. H. YANG*; H. HOU; H. XIA. *Louisiana State Univ. Hlth. Sci. Ctr., Louisiana State Univ. Hlth. Sci. Ctr.*

11:00 F34 **126.08** PKA-dependent phosphorylation of GluN2B on hippocampal plasticity and cognition. M. W. PORCH*; J. HWANG; A. E. CHÁVEZ; R. S. ZUKIN. *Albert Einstein Col. of Med.*

8:00 F35 **126.09** New synthesis of persistent PKMζ is crucial for spatial long-term memory. C. HSIEH*; P. TSOKAS; P. A. SERRANO; A. A. FENTON; T. C. SACKTOR. *SUNY Downstate Med. Ctr., SUNY Downstate Med. Ctr., CUNY Hunter Col., New York Univ., SUNY Downstate Med. Ctr.*

9:00 F36 **126.10** Exposure to stressors facilitates long-term synaptic potentiation in the lateral habenula. H. PARK*; J. RHEE; K. PARK; J. HAN; R. MALINOW; C. CHUNG. *Konkuk Univ., Univ. of California at San Diego.*

10:00 F37 **126.11** Regulation of synaptic plasticity by syngap and its roles in neurodevelopmental diseases. Y. ARAKI*; R. L. HUGANIR. *Johns Hopkins Univ. Sch. of Med., Kavli Neurosci. Discovery Inst.*

11:00 F38 **126.12** Defining S6K1's translational program. S. ARYAL*; E. KLANN. *New York Univ., New York Univ. Sch. of Med.*

8:00 F39 **126.13** Upregulation of Src homology 2 domain-containing phosphotyrosine phosphatase 2 (Shp2) is critical for ERK signaling mediated AMPA receptor surface trafficking during synaptic activity. Q. YANG*; B. ZHANG; Y. DU; W. LU; X. YAN; W. YANG; J. LUO. *Zhejiang Univ.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 F40 **126.14** LRP1 signaling occurs in lipid rafts. E. LAUDATI, 92093; A. GILDER; M. LAM; R. MISASI; M. SORICE; S. L. GONIAS*; E. MANTUANO. *UCSD, Sapienza Univ. of Rome.*

10:00 F41 **126.15** CA1 LTP modulates synaptic phosphorylation networks and postsynaptic interactomes. B. WILKINSON; J. LI; V. CLEMENTEL; J. HOU; T. J. O'DELL; M. P. COBA*. *USC, Zilkha Neurogenetic Inst., Natl. Lab. of Bio-macromolecules, Inst. of Biophysics, UCLA, Zilkha Neurogenetic Inst., Dept. of Psychiatry and Behavioral Sci.*

11:00 F42 **126.16** The protein kinase A-dependent form of LTP specifically involves an increase in the unitary channel conductance of AMPA receptor in the hippocampus. P. PARK*; Z. A. BORTOLOTTO; M. ZHUO; B. KAANG; G. L. COLLINGRIDGE. *Univ. of Bristol, Univ. of Toronto, Seoul Natl. Univ., Lunenfeld-Tanenbaum Res. Inst.*

8:00 F43 **126.17** Pharmacogenetic analysis demonstrates compensation for PKMζ function by PKCι/λ in long-term potentiation and spatial long-term memory in PKMζ-null mice. P. TSOKAS*; C. HSIEH; Y. YAO; E. LESBURGUÈRES; A. A. FENTON; T. C. SACKTOR. *SUNY Downstate Med. Ctr. Col. of Med., SUNY Downstate Med. Ctr., New York Univ., SUNY Downstate Med. Ctr.*

9:00 F44 **126.18** FRET-based cGMP imaging in cerebellar granule neurons reveals cGMP/Ca^{2+} crosstalk via a cGKI-independent mechanism. M. PAOLILLO*; S. PETERS; R. FEIL. *Univ. of Tuebingen.*

10:00 F45 **126.19** Paclitaxel increases presynaptic NMDA receptor activity through protein kinase c in the spinal dorsal horn. J. XIE; H. PAN; S. CHEN*. *MD Anderson Cancer Ctr., Univ. of Texas MD Anderson Cancer Ctr.*

11:00 F46 **126.20** High affinity copper I chelator suppresses long-term potentiation in mouse hippocampal neurons. B. YANG*; T. MORGAN; C. J. FAHRNI; C. R. FOREST. *Georgia Inst. of Technol., Georgia Inst. of Technol.*

8:00 F47 **126.21** Regulation of intracellular pH in dendritic spines: Role in NMDA receptor-CaMKII signaling. T. WIESNER; T. JINADASA; L. TRUDEL; K. SEHGAL; V. CLAVET-FOURNIER; P. DE KONINCK*. *Univ. Laval, Univ. Laval.*

9:00 F48 **126.22** Interplay between excitatory and inhibitory synaptic plasticity at dendritic synapses. T. RAVASENGA*; C. ROSILLO; E. PETRINI; A. BARBERIS. *Inst. Italiano Di Tecnologia.*

POSTER

127. Astrocyte Cell Biology and Modulation I

Theme B: Neural Excitability, Synapses, and Glia

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 F49 **127.01** Dicer conditional knock out in mature Muller glia leads to upregulation of Brevican and disorganization of the retina structure. S. G. WOHL*; T. A. REH. *Univ. of Washington.*

9:00 F50 **127.02** ▲ The effect of pH and potassium channel block on growth of glioma cell lines. C. OKOREN; E. PETROFF*. *Montclair State Univ.*

10:00 F51 **127.03** Mechanisms of CO_2/H^+ sensitivity of astrocytes. N. MARINA*; E. TUROVSKY; V. KASYMOV; S. KASPAROV; A. GOURINE. *Univ. Col. London, Russian Acad. of Sci., Univ. of Bristol.*

11:00 F52 **127.04** Histamine as a modulator of astrocyte signaling. A. KARPATI*; T. YOSHIKAWA; T. NAKAMURA; F. NAGANUMA; T. IIDA; Y. MIURA; K. YANAI. *Tohoku Univ. Grad. Sch. of Med., Tohoku Med. and Pharmaceut. Univ.*

8:00 F53 **127.05** Polyamines facilitate connexin43-mediated gap junctional communication during hypercalcemia- and acidosis-like conditions. L. Y. KUCHERYAVYKH; J. BENEDIKT*; L. A. CUBANO; F. F. BUKAUSKAS; S. N. SKATCHKOV; Y. V. KUCHERYAVYKH. *Univ. Central Del Caribe, Albert Einstein Col. of Med.*

9:00 G1 **127.06** ● Selective, reversible monoacylglycerol lipase (MGL) inhibitor blocks stimulation of brain prostaglandin E2 (PGE2) and cytokines induced by peripherally dosed lipopolysaccharides (LPS) in mice. S. SUTTON*; B. ZHU; C. FLORES; M. MACIELAG; P. J. CONNOLLY; K. CHEVALIER; S. ZHANG; A. BHATTACHARYA; M. AMERIKS; N. CARRUTHERS; T. LOVENBERG; P. BONAVENTURE. *Janssen Res. and Develop. La Jolla, Janssen Res. & Development, LLC, Johnson & Johnson Consumer, Inc., Janssen Res. & Development, LLC, Janssen Res. & Development, LLC.*

10:00 G2 **127.07** Decreased levels of GLAST lead to alterations in cortical development and inhibitory neurotransmission. J. SHIH*; E. L. HANSON; N. C. DANBOLT; Y. YANG; C. G. DULLA. *Tufts Univ., Univ. of Oslo.*

11:00 G3 **127.08** Tracking astrocyte-synapse proximity dynamics in the striatum. J. OCTEAU*; B. S. KHAKH. *UCLA.*

8:00 G4 **127.09** Purification and and characterization of progenitor and mature human astrocytes reveal transcriptional and functional differences with mouse. Y. ZHANG*; S. A. SLOAN; L. E. CLARKE; C. CANEDA; C. A. PLAZA; P. D. BLUMENTHAL; H. VOGEL; G. K. STEINBERG; M. S. B. EDWARDS; G. LI; J. A. DUNCAN, III; S. H. CHESHIER; L. M. SHUER; E. F. CHANG; G. A. GRANT; M. G. HAYDEN GEPHART; B. A. BARRES. *Stanford Univ., Kaiser Permanente Santa Clara Med. Ctr., Univ. of California.*

9:00 G5 **127.10** Functional and molecular profile of ventral midbrain astrocytes. W. XIN*; K. SCHUEBEL; K. JAIR; D. GOLDMAN; A. BONCI. *Johns Hopkins Univ., Natl. Inst. on Drug Abuse IRP, Natl. Inst. on Alcohol Abuse and Alcoholism IRP, George Washington Univ.*

8:00 DP01 **127.11** (Dynamic Poster) Heterogeneity of glial populations in 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.*

11:00 G6 **127.12** Pre-Bötzinger complex astrocytes contribute to homeostatic control of breathing at rest and during exercise. S. SHEIKHBAHAEI*; E. TUROVSKY; N. MARINA; S. KASPAROV; J. C. SMITH; A. V. GOURINE. *Natl. Inst. of Hlth. (NIH)- NINDS, Univ. Col. London, Univ. of Bristol.*

8:00 G7 **127.13** Immunohistochemical visualization of glycogen reveals age-dependent astrocytic distribution in the mouse brain. Y. OE*; O. BABA; H. ASHIDA; K. C. NAKAMURA; H. HIRASE. *RIKEN BSI, Tokushima Univ., Kobe Univ., Univ. of Oxford, Saitama Univ.*

9:00 G8 **127.14** Prodromal events in the propagation of cortical spreading depression. P. M. SAWANT*; J. M. MENDEZ; P. SURYAVANSHI; J. THERIOT; K. C. BRENNAN. *Univ. of Utah.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 G9 **127.15** The role of SOC channels and other calcium fluxes in astrocyte calcium signaling investigated through mathematical modeling. G. HANDY; M. TAHERI; J. A. WHITE; A. BORISYUK*. *Univ. of Utah, Boston U.*

11:00 G10 **127.16** Diversity of GPCR-evoked calcium signaling in astrocytes investigated through experimental measurements and mathematical modeling. M. TAHERI*; G. HANDY; A. BORISYUK; J. A. WHITE. *Univ. of Utah, Boston Univ.*

8:00 G11 **127.17** Panglial calcium signaling in the olfactory bulb. C. LOHR*; A. B. BEIERSDORFER; D. DROSTE. *Univ. of Hamburg.*

9:00 G12 **127.18** Calcium signaling in hippocampal astrocytes *in vivo* during learning. A. KAUFMAN*; E. BALOUGH; J. BOWLER; N. DANIELSON; M. LADOW; W. LI; G. TURI; A. LOSONCZY. *Columbia Univ., Columbia Univ.*

10:00 G13 **127.19** Computational modeling of Ca^{2+} signals in astrocytic processes. F. OSCHMANN*; K. OBERMAYER. *Neural Information Processing Group, Bernstein Ctr. for Computat. Neurosci.*

11:00 G14 **127.20** Astrocyte calcium signals show distinct cellular compartmentation and cortical layer-dependent responses to sensory stimulation *in vivo*. K. D. FERRARI*; J. L. STOBART; M. J. P. BARRETT; B. WEBER. *Univ. Zürich, Neurosci. Ctr. Zurich, Univ. and ETH Zurich.*

8:00 G15 **127.21** Origin and dynamics of astrocytic Ca^{2+} signals at activated hippocampal CA3-CA1 synapses of adult mouse. W. TANG*; G. F. VINDEDAL; J. B. HJUKSE; V. JENSEN; E. A. NAGELHUS. *Inst. of Basic Med. Sciences,University of Oslo.*

9:00 G16 **127.22** Both chemical and genetically encoded Ca^{2+} indicators reveal fast Ca^{2+} responses in astrocyte processes and end-feet to somatosensory stimulation. B. L. LIND*; S. JESSEN; M. LØNSTRUP; M. LAURITZEN. *Univ. Copenhagen.*

10:00 G17 **127.23** External K+ elevation causes a decrease in astrocyte resting calcium. S. S. SHIN*; G. R. GORDON. *Univ. of Calgary.*

11:00 G18 **127.24** Calcium signaling in fibroblast growth factor receptor 1 knockout astrocytes from cortex, hippocampus and tanycyte cultures. D. J. ROGERS*; B. BERGERON, 70504; M. SIDES; L. GATHANGA; K. M. SMITH, 70504. *Univ. of Louisiana at Lafayette, Univ. of Louisiana at Lafayette.*

8:00 G19 **127.25** Mediators of astrocyte Ca^{2+}-independent neurovascular coupling. A. INSTITORIS*; G. R. GORDON. *Hotchkiss Brain Inst.*

9:00 G20 **127.26** Fast scanning 2-photon microscopy of the blood-brain barrier properties in single capillaries in living mice. N. KUTUZOV*; H. FLYVBJERG; M. LAURITZEN. *Univ. of Copenhagen, Tech. Univ. of Denmark.*

10:00 G21 **127.27** *In vivo* imaging of astrocytic cAMP by Flamindo2 in mouse cerebral cortex. X. WANG*; M. TANAKA; Y. OE; A. KONNO; H. HIRAI; T. KITAGUCHI; H. HIRASE. *RIKEN Brain Sci. Inst., Gunma Univ., WASEDA Biosci. Res. Inst. in Singapore (WABIOS).*

11:00 G22 **127.28** Region- and age-dependent heterogeneity of receptors involved in calcium signaling in rat astrocytes. V. KASYMOV*; I. DOMINOVA; L. KLIMAVICIUSA; N. FILIAKOVA; A. VASILEV; M. PATRUSHEV; O. TUCHINA. *Baltic State Federal Univ., Baltic Federal Univ.*

8:00 G23 **127.29** Quantitative evaluation of optogenetically-induced calcium signaling in astrocytes. L. BALACHANDAR*; D. BORREGO; J. CHAMBERS; J. DIAZ. *Florida Intl. Univ., Florida Intl. Univ.*

9:00 G24 **127.30** Layer specific adult astroglia subtypes: Influenced by neuronal subtypes and promote neuronal health. S. J. MILLER*; J. D. ROTHSTEIN. *Johns Hopkins Sch. of Med.*

POSTER

128. Astrocytes in Disease

Theme B: Neural Excitability, Synapses, and Glia

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 G25 **128.01** Activated microglia induce neurotoxic reactive astrocytes via Il-1a, TNFa, and C1q. S. A. LIDDELOW*; L. E. CLARKE; W. CHUNG; M. L. BENNETT; B. A. NAPIER; A. E. MÜNCH; K. A. GUTTENPLAN; L. SCHIRMER; D. H. ROWITCH; D. K. WILTON; A. FROUIN; B. STEVENS; B. A. BARRES. *Stanford Univ., Korea Advanced Inst. of Sci. and Technol., Stanford Univ., Univ. of California San Francisco, Univ. of Cambridge, Boston Children's Hosp.*

9:00 G26 **128.02** Astrocytes in the brain and chondrocytes in the joints are target cells of inflammation. E. L. HANSSON*; E. SKIÖLDEBRAND. *Inst. of Neurosci. and Physiol., Inst. of Biomedicine.*

10:00 G27 **128.03** Inflammatory process and impaired hippocampal adult neurogenesis in GFAP mutant mouse model of Alexander disease. M. ABUAWAD*; F. RENALDO; Z. CSABA; I. DORBOZ; O. BOESPFLUG-TANGUY; D. RODRIGUEZ. *INSERM U1141, INSERM U1141, AP-HP, Dept. of Neuropediatrics and Metabolic Diseases, Robert Debré Hosp., AP-HP, Dept. of Child Neurology, Armand Trousseau Hosp., GRC Concert-LD, Sorbonne Universités, UPMC Univ. Paris 06.*

11:00 G28 **128.04** Gene silencing of adenosine kinase in astrocytes reverses cranial radiation-induced cognitive impairments. M. M. ACHARYA*; J. E. BAULCH; B. D. ALLEN; Z. WANG; N. RU; T. H. NGUYEN; A. D. BADDOUR; V. K. PARIHAR; C. L. LIMOLI; D. BOISON. *Univ. of California Irvine, R. S. Dow Neurobio. Lab.*

8:00 G29 **128.05** The differential role of DRP1-mediated mitochondrial fission in the regional specific astroglial death in the rat brain. S. MIN; A. KO; H. HYUN; T. KANG; J. KIM*. *Dept. of Anat. and Neurobiology, Hallym Univ.*

9:00 G30 **128.06** Inflammatory signaling pathways up-regulate the cystine/glutamate antiporter system x_c^- in cortical murine astrocytes *in vitro* and in the brain *in vivo*. J. LEWERENZ*; F. APPELT; R. KLAUS; G. ALBERTINI; H. SATO; I. SMOLDERS; A. MASSIE. *Univ. of Ulm, Vrije Univ. Brussel, Niigata Univ.*

10:00 G31 **128.07** Hypoxia-induced changes in the phosphorylation and function of Cx43 are associated with degeneration of astrocytes in ischemic retinopathies. N. SLAVI*; A. H. TOYCHIEV; S. A. BLOOMFIELD; M. SRINIVAS. *SUNY Col. of Optometry.*

11:00 G32 **128.08** Olfactory ensheathing cells and neuroregeneration: Identification of the molecular mechanism(s). A. SAGLAM*; S. WRAY. *NIH, Neurosci. & Cognitive Sci. Program, Univ. of Maryland, Col. Park.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 G33 **128.09** The molecular mechanism underlying the cross talk between post-traumatic spinal axons and scar-forming cells. Y. LIU*. *Inst. of Neuroscience, Soochow Univ.*

9:00 G34 **128.10** Neurovascular astrocyte dysfunction as a key mediator of vascular cognitive impairment. T. L. SUDDUTH*; J. L. GOOCH; E. M. WEEKMAN; A. WOOLUMS; M. PLEISS; C. M. NORRIS; D. M. WILCOCK. *Univerisity of Kentucky, Univ. of Kentucky, Univ. of Kentucky.*

10:00 G35 **128.11** Enhanced astroglial GABA release via Best-1 channel in epileptic hippocampus. K. PARK; S. PANDIT; J. PARK*. *Col. of Med. Chungnam Natl. Univ., Col. of Med. Chungnam Natl. Univ.*

11:00 G36 **128.12** ● Role of astroglial α7 nicotinic acetylcholine receptors in neuroinflammation and oxidative stress. H. PATEL*; A. W. DUNAH; R. H. LORING. *Biogen, Northeastern Univ.*

8:00 G37 **128.13** Stress-induced structural and functional plasticity in Neuron-Glia interactions. C. MURPHY-ROYAL*; G. R. J. GORDON; J. S. BAINS. *Hotchkiss Brain Inst.*

9:00 G38 **128.14** Reduction of Kir4.1 potassium channel expression in diabetic mice: Relevance to stroke. D. E. RIVERA-APONTE*; M. P. MÉNDEZ-GONZÁLEZ; L. MIRANDA; L. A. CUBANO; S. N. SKATCHKOV; M. J. EATON. *Univ. Central Del Caribe, Univ. Central Del Caribe, Univ. Central Del Caribe, Univ. Central Del Caribe.*

10:00 G39 **128.15** Mechanisms and effects of remote astrocyte reactivity in response to axotomy. G. E. TYZACK*; R. PATANI; A. LAKATOS. *UCL, Univ. of Cambridge.*

11:00 G40 **128.16** Prolactin protects rat cortical astrocytes against oxidative stress. E. ARNOLD*; K. G. ORTIZ-GOMEZ; 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), Campus UNAM-Juriquilla.*

8:00 G41 **128.17** Disease-related alteration and recovery of corticostriatal synaptic transmission and astrocytic glutamate transport in Q175 Huntington mice. A. DVORZHAK; T. VAGNER; A. M. WÓJTOWICZ; I. MELNICK; R. GRANTYN*. *Univ. Med. Charité, Bogomoletz Inst. of Physiol.*

9:00 G42 **128.18** Analyzing post-stroke astrocyte heterogeneity to guide neural repair. A. J. GLEICHMAN*; R. KAWAGUCHI; M. V. SOFRONIEW; G. COPPOLA; S. T. CARMICHAEL. *UCLA, UCLA, UCLA.*

10:00 G43 **128.19** Relative role of extracellular and intracellular calcium concentration in MeHg induced cytotoxicity in mouse primary cerebellar and cortical astrocytes. R. JAIMAN*; J. ORTIZ-RODRÍGUEZ; W. D. ATCHISON. *Michigan State Univ., RISE Program Univ. of Puerto Rico, Michigan State Univ.*

11:00 G44 **128.20** Astrocyte genetic risk factors and cognitive impairment following adolescence cannabis use. Y. JOUROUKHIN*; X. ZHU; B. ABAZYAN; A. SAITO; A. KAMIYA; M. PLETNIKOV. *Johns Hopkins Univ. Sch. of Med., Johns Hopkins Bloomberg Sch. of Publ. Hlth., Johns Hopkins Univ. Sch. of Med.*

8:00 G45 **128.21** ● Electrical neuromodulation of astrocytes as a regulator of neuroinflammation. S. L. ALBARRACIN*; M. L. GUTIERREZ; L. S. RODRIGUEZ; J. N. SIERRA-AGUDELO; N. FLOREZ-LUNA; M. GUILLERMO; J. J. SUTACHAN. *Pontificia Univ. Javeriana, Pontificia Univ. Javeriana, Pontificia Univ. Javeriana, Univ. el Rosario, Univ. el Rosario, Clínica de Parkinson y Trastornos del movimiento.Hospital Universitario Fundación Santa Fe de Bogotá.*

9:00 G46 **128.22** MeCP2 deficient astrocytes have altered signaling pathway activation and reduced visually-evoked microdomain sizes. R. GARCIA*; R. V. RIKHYE; J. PETRAVICZ; C. DELÉPINE; M. SUR. *MIT.*

10:00 G47 **128.23** ▲ Characterization of glutamate release during cellular edema induced by osmotic stress. J. B. HJUKSE*. *Univ. of Oslo.*

11:00 G48 **128.24** Recovery from cortical spreading depression by systemic administration of noradrenaline (norepinepherine) blockers. H. MONAI*; Y. IWAI; H. HIRASE. *RIKEN BSI, Saitama Univ.*

POSTER

129. APP Processing and Metabolism

Theme C: Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 G49 **129.01** Essential role of FE65 phosphorylation in APP metabolism. K. LAU*; W. CHOW; W. LI; H. CHAN; J. NGO. *The Chinese Univ. of Hong Kong, The Chinese Univ. of Hong Kong.*

9:00 G50 **129.02** Direct imaging of APP proteolysis in living cells. M. CALAMAI*; N. PARENTI; A. DEL GROSSO; M. CECCHINI; F. S. PAVONE. *CNR-INO, Univ. of Florence, Scuola Normale Superiore, CNR-NANO.*

10:00 H1 **129.03** Effects of U18666A on APP metabolism in cultured astrocytes. H. YANG*; Y. WANG; S. KAR. *Univ. of Alberta, Qiqihar Med. Univ., Univ. of Alberta, Univ. of Alberta.*

11:00 H2 **129.04** Accumulation of APP-C99 in mitochondria-associated ER membranes causes mitochondrial dysfunction in Alzheimer disease. M. PERA*; D. LARREA; C. GUARDIA-LAGUARTA; R. B. CHAN; M. F. MEHLER; G. DI PAOLO; K. VELASCO; R. ACIN-PEREZ; J. ENRIQUEZ; E. A. SCHON; E. AREA-GOMEZ. *Columbia Univ., Columbia Univ., Albert Einstein Col. of Med., Columbia Univ., Ctr. Nacional de investigaciones Carlos III, Columbia Univ.*

8:00 H3 **129.05** Effects of age and the expression of wild type human APP (hAPPwt) on synaptic plasticity and spine morphology in transgenic knock-in mice expressing an Alzheimer's disease related mutant Presenilin-1 (PS1(M146V)) gene. H. S. ZANJANI*; K. KINUGAWA; M. W. VOGEL; J. MARIANI; C. ROVIRA. *UMR 8256, Univ. of P. & M. Curie and CNRS, Charles Foix Hosp., Lab. of Neurosciences.*

9:00 H4 **129.06** Function and processing of the Alzheimer's disease associated amyloid precursor protein in the endocrine pancreas. J. KULAS*; C. K. COMBS. *Univ. of North Dakota.*

10:00 H5 **129.07** App aβ hsp60 functional interaction. relevance to Alzheimer's disease. C. MARINO*; F. CAPPELLO; P. SAN BIAGIO; G. TAGLIALATELA. *Univ. of Texas Med. Br., Univ. of Palermo, Euro-Mediterranean Inst. of Sci. and Technol., Natl. Res. Council.*

11:00 H6 **129.08** ● Role of SorLA in APP trafficking and implications for amyloidogenesis. M. C. MICSENYI*; R. PANDIT; M. WITTMANN; T. BUSSIERE. *Biogen.*

8:00 H7 **129.09** Rac and Rho GTPases affect production of Alzheimer's disease proteins: APP, Aβ, and τ. R. CHABAYTA*; J. REDDY; D. HYNDS. *Texas Woman's Univ., Texas Woman's Univ.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 H8 **129.10** NEP versus IDE in *in vivo* Aβ metabolism. H. SASAGURI*; T. SAITO; Y. MATSUBA; T. C. SAIDO. *RIKEN Brain Sci. Inst.*

10:00 H9 **129.11** Endosomal-lysosomal sequestration of cholesterol alters metabolism of Amyloid Precursor Protein (APP) in cultured N2a cells. J. CHUNG; A. MOHAMED; M. MAULIK; G. THINAKARAN; E. POSSE DE CHAVES; S. KAR*. *Univ. of Alberta, Univ. of Alberta, Univ. of Alberta, The Univ. of Chicago, Univ. Alberta.*

11:00 H10 **129.12** Generation of N-terminal truncated amyloid β peptides by meprin β. C. U. PIETRZIK*; C. SCHOENHERR; R. WICHERT; H. ALTMEPPEN; S. KUMAR; S. F. LICHTENTHALER; J. WALTER; S. WEGGEN; M. GLATZEL; C. BECKER-PAULY. *Univ. Med. Ctr. of the Johannes Gutenber, Univ. Med. Ctr. of the Johannes Gutenberg Univ. Mainz, Christian-Albrechts-University, Univ. Med. Ctr. Hamburg-Eppendorf, Univ. of Bonn, German Ctr. for Neurodegenerative Dis. (DZNE) and Neuroproteomics, Klinikum rechts der Isar, TU Munich, Heinrich Heine Univ.*

8:00 H11 **129.13** Insulin promotes non-amyloidogenic processing of amyloid precursor protein through PI3K/Akt signaling. O. KWON*; Y. CHO; H. OH; S. CHUNG. *Sungkyunkwan Univ. Sch. of Med.*

9:00 H12 **129.14** MiR-20b reduces levels of amyloid precursor protein (APP) and β-amyloid in human cells. N. CHOPRA*; K. NHO; B. L. BAYON; D. K. LAHIRI. *Indiana Univ. Sch. of Med.*

10:00 H13 **129.15** APP expression in mammary gland secretory epithelium. K. L. PUIG*; S. A. URQUHART; A. A. REBEL; C. K. COMBS. *Univ. of North Dakota.*

11:00 H14 **129.16** ▲ Utilizing strain-specific Toxoplasma gondii infection to investigate APP processing pathways. J. B. FRANCO*; C. M. CABRAL; W. R. MCDONALD; A. A. KOSHY. *Univ. of Arizona.*

8:00 H15 **129.17** Ciliary receptors modulate neuronal autophagy: Impact of amyloid β. O. PAMPLIEGA*; E. BEZARD. *Univ. De Bordeaux, CNRS, Univ. de Bordeaux.*

9:00 H16 **129.18** ● Hindlimb locomotion deficits are related to spinal cord β amyloid levels in both intact and spinal Alzheimer's disease model J20 mice. R. HUANG*; M. S. JOSEPH; H. ZHONG; Y. SEO; X. LIU; W. GUO; S. SHAHRESTANI; R. R. ROY; E. KOO; V. R. EDGERTON; D. C. LU. *Univ. of California Los Angeles, Univ. of California Los Angeles, Univ. of California Los Angeles, Univ. of California Los Angeles, Univ. of California Los Angeles, UCSD.*

10:00 H17 **129.19** Behavioral characterization of a novel transgenic rat model of cerebral amyloid angiopathy. D. POPESCU*; F. XU; J. DAVIS; S. M. FITZGERALD; A. E. KUZMINA; W. LIU; S. I. BEIGELMAN; D. A. LITUMA; S. AMREIN; S. SUBZWARI; J. K. ROBINSON; W. E. VAN NOSTRAND. *Stony Brook Univ., Stony Brook Univ., Stony Brook Univ.*

11:00 H18 **129.20** Fate of hippocampal neural stem cells in human amyloid precursor protein transgenic mice. C. FU*; D. M. IASCONE; A. HAZRA; M. S. PYFER; X. ZHANG; J. CHIN. *Baylor Col. of Med.*

8:00 H19 **129.21** ▲ The 1-42 isoform of amyloid β reduces cell viability of Salmonella enterica. A. O'MEARA; B. ELLSWORTH; G. D. GRIFFIN*. *Hope Col., Hope Col.*

9:00 H20 **129.22** Amyloid β levels are influenced by the circadian system. G. J. KRESS*; F. LIAO; D. M. HOLTZMAN; E. S. MUSIEK. *Washington Univ. Sch. of Med.*

10:00 H21 **129.23** Regulation of neurotrophins and GSK-3/CREB signal transduction pathways by Amyloid β oligomers in human hippocampal neural precursor cells (hHippNPCs). G. LOPEZ-TOLEDO*; L. GOMEZ-VIRGILIO; U. GARCIA; M. CARDENAS-AGUAYO. *CINVESTAV, Ctr. for Res. and Advanced Studies of the Natl. Polytechnic Inst., Ctr. for Res. and Advanced Studies of the Natl. Polytechnic Inst., Natl. Autonomous Univ. of Mexico.*

11:00 H22 **129.24** A common mechanism of proteasome impairment by neurodegenerative disease-associated oligomers. R. T. ANDERSON*; T. A. THIBAUDEAU; D. M. SMITH. *Howard Hughes Med. Inst. - West Virginia Un, West Virginia Univ.*

8:00 H23 **129.25** Mutations in the cholesterol-binding site of the Amyloid Precursor Protein (APP) reduce drastically the secretion of amyloid peptides 40 and 42. L. HANBOUCH*; C. MARQUER; L. BOUSSICAULT; G. FONTAINE; J. MOREAU; K. PERRONET; N. GILLES; C. LOUIS; M. J.MILLAN; M. POTIER. *ICM-Brain and Spine Inst., Inst. d'Optique Grad. School, Paris-Saclay Univ., Res. center of CEA/DSV/iBiTec-S/SIMOPRO Toxins, Inst. de Recherches Servier.*

9:00 H24 **129.26** New modeling to find the co-relation between Alzheimer's disease and Metabolic diseases. M. JO*; A. ASFAQ; F. UL AMIN; M. KIM. *Gyeongsang Natl. Univ.*

10:00 H25 **129.27** Role of vascular amylin receptors in the development of amyloid pathology in Alzheimer's disease. W. FU*; R. SOUDY; A. PATEL; D. WESTAWAY; J. JHAMANDAS. *Univ. of Alberta.*

POSTER

130. Tau: Biochemistry

Theme C: Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 H26 **130.01** Abnormal axonal transport in τ 45-230-transfected hippocampal neurons. A. B. FERREIRA*; N. D. RIHERD-METHNER; S. AFREEN; A. E. RUBINO. *Northwestern Univ.*

9:00 I1 **130.02** TNT mediated neuron to neuron transfer of pathological τ assemblies. M. TARDIVEL*; S. BEGARD; L. BOUSSET; S. DUJARDIN; R. MELKI; L. BUEE; M. COLIN. *Alzheimer & Tauopathies - UMR-S 1172 - Inserm/Lil, Alzheimer & Tauopathies, UMR-S1172, Inserm, Univ. Lille, Paris-Saclay Inst. of Neuroscience, Ctr. Natl. de la Recherche Scientifique, Univ. Paris-Saclay.*

10:00 I2 **130.03** The role of selective autophagy in neurofibrillary tangle pathology. Y. XU*; A. COLE; H. ZHENG. *Baylor Col. of Med.*

11:00 I3 **130.04** Reproducible τ oligomer preparations enable Alzheimer models for target validation and drug development. T. PILLOT*; Y. TERROIRE; A. ALLOUCHE; P. GOETGHEBEUR; N. FISCHER; P. HOUSSET; S. COLIN; P. MACHADO; C. LOUIS; F. PANAYI; V. KOZIEL; A. KÖPKE. *Synaging SAS, Inst. de Recherches Servier.*

8:00 I4 **130.05** Stages of toxic impact of aggregating τ on cells. J. BIERNAT; M. PICKHARDT; S. HÜBSCHMANN; T. TIMM; A. AHO; E. MANDELKOW; E. MANDELKOW*. *DZNE (German Ctr. for Neurodegenerative Diseases), Caesar Res. Ctr., Inst.of Biochem., Fac. of Medicine, Justus-Liebig-Univ., Max-Planck-Inst. for Metabolism Res., DZNE, C/O CAESAR.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 I5 **130.06** Characterization of neurofibrillary tangles and hyperphosphorylated τ in olfactory neural precursors obtained from living Alzheimer's disease patients. M. VALDES-TOVAR*; A. RIQUELME; V. MAYA-AMPUDIA; L. MENDOZA-DURÁN; J. ARGUETA; A. LORA-CASTELLANOS; O. UGALDE; G. BENÍTEZ-KING. *Inst. Nacional De Psiquiatría Ramón De La Fuen, Inst. Nacional De Psiquiatría Ramón De La Fuen.*

10:00 I6 **130.07** Determining the half-life of τ in rat serum. F. D. TINGLEY*, III; N. C. REISING; M. L. HAYASHI. *Eli Lilly and Co.*

11:00 I7 **130.08** Pro-aggregant chaperone complexes regulate τ neurotoxicity. L. B. SHELTON*; J. D. BAKER; D. ZHENG; L. J. BLAIR; J. J. SABBAGH; A. SUNTHARALINGAM; B. NORDHUES; C. A. DICKEY. *Univ. of South Florida.*

8:00 I8 **130.09** Supplemented zinc on learning and memory in τ mice (P301L/CaMKII) using contextual and cued fear extinction. C. M. HERNANDEZ*; C. L. C. NEELY; W. R. KOCHEN; K. M. CRAVEN; M. L. SMITH; A. B. BOOTH; J. M. FLINN. *George Mason Univ.*

9:00 I9 **130.10** The effects of zinc on expression of phosphorylated τ and zinc fluorescence. K. M. CRAVEN*; W. R. KOCHEN; M. R. HARBOUR; C. M. HERNANDEZ; J. M. FLINN. *George Mason Univ.*

10:00 I10 **130.11** Zinc exacerbates tauopathy deficits in measures of daily living in mice. W. R. KOCHEN*; K. M. CRAVEN; J. M. FLINN. *George Mason Univ.*

11:00 I11 **130.12** The stress granule protein TIA1 regulates τ pathophysiology and toxicity. D. APICCO*; P. ASH; B. MAZIUK; B. WOLOZIN. *Boston Univ. Sch. of Med., Boston Univ.*

8:00 I12 **130.13** ▲ A meta-analysis assessing the influence of τ and amyloid-β on cognitive decline in a preclinical model of Alzheimer's disease. C. HUBER*; T. MAY; G. COAN; C. S. MITCHELL. *Georgia Inst. of Technol.*

9:00 J1 **130.14** ▲ The effect of chronic excess zinc on memory tasks in tauopathic mice. M. HARBOUR*; W. R. KOCHEN; K. M. CRAVEN; J. M. FLINN. *George Mason Univ.*

10:00 J2 **130.15** ● Neuron based *in vitro* model to study spreading of pathogenic τ proteins in Alzheimer's disease. C. C. BANOS*; H. PATEL; A. CHEUNG; A. VALENCIA; P. WEINREB; T. BUSSIERE; M. WITTMANN; C. HENDERSON; A. W. DUNAH. *Biogen, Biogen.*

11:00 J3 **130.16** ● Evaluation of the propagation properites of τ species from different disease states in multiple cellular models. A. M. JABLONSKI*; B. CONNOLLY; M. USENOVIC; R. GENTZEL; S. PARMENTIER-BATTEUR; B. VOLETI. *Merck and Co.*

8:00 DP02 **130.17** (Dynamic Poster) Disrupted nuclear export in presence of τ protein in neurodegenerative diseases. B. EFTEKHARZADEH*; S. WEGMANN; J. MERTENS; F. H. GAGE; B. T. HYMAN. *MGH, MassGeneral Inst. for Neurodegenerative Dis., The Salk Inst. for Biol. Studies.*

9:00 J4 **130.18** ● The interplay between brain circuit oscillations during an attentional task in a transgenic mouse model of τ pathology: Assessment of Alzheimer's disease as a neuronal disconnection disorder. J. JOYES; S. JACOB; A. AHNAOU; K. TAHON; L. RAEYMAEKERS; K. VAN KOLEN; W. H. DRINKENBURG*. *Neuroscience, Janssen Res. & Development, Div. of Janssen Pharmaceutica, Lab. of Biol. Psychology, Univ. of Leuven.*

10:00 J5 **130.19** Hypothermia causes T hyperphosphorylation in the brain of diabetic ob/ob mice: Importance of thermoregulation in linking diabetes and Alzheimer's disease. M. GRATUZE*; N. EL KHOURY; F. MORIN; C. JULIEN; A. MARETTE; F. CALON; E. PLANEL. *CRCHUL, CRCHUL, Ctr. de Recherche de l'Institut Universitaire de Cardiologie et de Pneumologie de Québec.*

11:00 J6 **130.20** τ pathology is required for significant stress granule and RNA binding protein pathology in mouse models of Alzheimer's disease. B. MAZIUK*; D. APICCO; K. DUFF; H. YU; W. QIU; N. AYTAN; A. DEDEOGLU; M. OU-YANG; R. VASSAR; B. WOLOZIN. *Boston Univ., Columbia Univ., Boston Univ., Northwestern Univ.*

8:00 J7 **130.21** Alternative splicing of τ exon 10 is directly regulated by temperature. F. PETRY*; L. MORANT; I. POITRAS; F. MORIN; L. BUÉE; V. VINGTDEUX; N. SERGEANT; E. PLANEL. *CHUL Res. Ctr., Inserm UMR-S 1172 - JPArc.*

9:00 J8 **130.22** Effects of fractalkine on τ pathology in a mouse model of τ deposition. D. J. FINNERAN*; A. DAWDY; J. COLEY; K. MALE; M. N. GORDON; D. MORGAN; K. R. NASH. *Univ. of South Florida, Univ. of South Florida, Univ. of South Florida.*

10:00 J9 **130.23** Leptin regulation of τ phosphorylation in both *in vitro* and *in vivo* models of Alzheimer's disease. J. GRIZZANTI*; S. PATRICK; G. CASADESUS. *Kent State Univ., Kent State Univ.*

11:00 J10 **130.24** ● Targeting the τ-fyn interaction for ameliorating Aβ-induced neurotoxicity. T. RUSH*; S. J. THOMPSON; J. N. COCHRAN; P. V. DIGGS; E. D. ROBERSON. *Univ. of Alabama At Birmingham, Univ. of Alabama at Birmingham, Hudson-Alpha Inst.*

8:00 J11 **130.25** IL-10 deficiency enhances τ phosphorylation in a mouse model of LPS-induced systemic inflammation. L. WESTON*; S. JIANG; N. MAPHIS; K. BHASKAR. *Univ. of New Mexico.*

9:00 J12 **130.26** τ oligomeric strains spread from the eye to the brain, inducing diverse phenotypes. J. GERSON*; U. SENGUPTA; Y. HA; K. FARMER; W. ZHANG; R. KAYED. *UTMB, UTMB.*

10:00 J13 **130.27** ROCK inhibitors for modulation of τ phosphorylation, targeting Alzheimer's disease pathology and enhancing memory. M. TURK*; A. L. SINIARD; M. DE BOTH; T. WANG; T. DUNKLEY; P. PIRROTTE; S. ODDO; M. J. HUENTELMAN. *Arizona State Univ., TGen, Arizona Alzheimer's Consortium, Evelyn F McKnight Brain Inst. at the Univ. of Arizona, Arizona State Univ.*

11:00 J14 **130.28** *In vivo* microglial activation and τ deposition in dementia with Lewy bodies. T. BUNAI*; T. TERADA; M. YOKOKURA; M. FUTATSUBASHI; E. YOSHIKAWA; Y. OUCHI. *HAMAMATSU UNIVERSITY SCHOOL OF MEDICINE, HAMAMATSU UNIVERSITY SCHOOL OF MEDICINE, Hamamatsu Photonics KK.*

8:00 J15 **130.29** Aβ pathology drives τ toxicity in a new mouse model of Alzheimer's disease. S. DUJARDIN*; S. L. DEVOS; R. E. BENNETT; S. WEGMANN; B. T. HYMAN. *Massachusetts Gen. Hospital, Harvard Med. Sc.*

9:00 J16 **130.30** CYFIP2: A potential link between Aβ and τ pathologies in Alzheimer's disease. A. GHOSH*; S. S. TIWARI; K. MIZUNO; C. TROAKES; T. HORTOBAGYI; K. P. GIESE. *King's Col. London, Univ. of Debrecen.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

131. Alzheimer's Synaptic Dysfunction

Theme C: Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 J17 **131.01** Differences in synaptic dysfunction between rTg4510 and APP_PS1 mouse models of Alzheimer's disease. S. GELMAN; J. SANCHEZ-PADILLA; J. PALMA; P. KABITZKE; G. TOMBAUGH; A. GHAVAMI*. *PsychoGenics.*

9:00 J18 **131.02** Late phase LTD in transgenic mouse models of AD and tauopathies as a synaptic readout of imbalanced τ phosphorylation. T. AHMED*; H. DEVIJVER; P. BORGHGRAEF; B. LECHAT; F. VAN LEUVEN; D. BALSCHUN. *KU Leuven, KU Leuven, KU Leuven.*

10:00 K1 **131.03** ▲ Activation of astrocytes in the early stage ameliorated synaptic deficits without affecting amyloid plaque loads in an animal model of Alzheimer's disease. X. ZHANG*. *Zhejiang Univ.*

11:00 K2 **131.04** Spread of τ down neural circuits precedes synapse and neuronal loss in the rTgTauEC model of early Alzheimer's disease. E. PICKETT*; C. M. HENSTRIDGE; R. PITSTICK; A. M. POOLER; S. WEGMANN; B. T. HYMAN; G. A. CARLSON; T. L. SPIRES-JONES. *Univ. of Edinburgh, McLaughlin Res. Inst., Massachusetts Gen. Hosp. and Harvard Med. Sch.*

8:00 K3 **131.05** Expression of pathological forms of τ affects synaptic function in cultured neurons. C. JARA; R. A. QUINTANILLA*. *Ctr. de Investigación Biomédica, Univ. Aut, Ctr. de Investigación y Estudio del Consumo de Alcohol en Adolescentes (CIAA).*

9:00 K4 **131.06** Rescue of synaptic depotentiation in the τ22 mouse model of Alzheimer's disease by sodium selenate. E. FALDINI; T. AHMED; D. BLUM; L. BUEE; D. K. BALSCHUN*. *Katholieke Univ. Leuven, Univ. Lille-Nord de France, Katholieke Univ. Leuven.*

10:00 K5 **131.07** ● Effects of τ reduction in excitatory and inhibitory neurons on seizure susceptibility. Y. VOSKOBIYNYK*; J. N. COCHRAN; E. D. ROBERSON. *Univ. of Alabama At Birmingham.*

11:00 K6 **131.08** Diabetes induces τ dependent synaptic and cognitive impairments. D. BAGLIETTO-VARGAS*; L. TRUJILLO-ESTRADA; J. SHI; A. C. MARTINI; L. CAI; C. DA CUNHA; S. FORNER; F. M. LAFERLA. *Univ. of California, Irvine|910005640|0.*

8:00 K7 **131.09** ● Analysis of network dysfunction in hτ-A152T transgenic mice identifies potential new biomarker and opportunity for therapeutic intervention. S. MAEDA*; B. HU; G. YU; E. MASLIAH; L. MUCKE. *Gladstone Inst. of Neurolog. Dis., Univ. of California, San Francisco, UCSD.*

9:00 K8 **131.10** Early induction of phosphorylated τ in synapse from APP transgenic mice. T. KAWARABAYASHI*; S. NARITA; T. NAKAMURA; Y. WAKASAYA; N. NAKAHATA; M. SHOJI. *Hirosaki Univ. Grad. Sch. of Med., Hirosaki Univ. Grad. Sch. of Med.*

10:00 K9 **131.11** Intracellular Amyloid-β (Aβ) protein impairs neuronal excitability and postsynaptic response in the CA1 pyramidal cells. H. YE*; J. NG; E. LENCZOWSKI; P. RADKOWSKI; J. YANG; C. RAN; J. SCHLUEP. *Loyola Univ. Chicago Dept. of Biol., Massachusetts Gen. Hospital/ Harvard Med. Sch.*

11:00 K10 **131.12** Monomeric amyloid β influences neuronal excitability in immature cortical neurons. E. PIZZI*; G. SERRATTO; C. ARZUFFI; M. MAZZANTI. *Univ. of Milan, CNR.*

8:00 K11 **131.13** *In vivo* characterization of epilepsy-associated short discharges in mice modeling Alzheimer's disease. I. ISHCHENKO; I. GUREVICIENE; K. GUREVICIUS; H. TANILA*. *Univ. Eastern Finland, A.B. Kogan Res. Inst. for Neurocybernetics, Southern Fedederal Univ., Dept. of Psychology, Univ. of Jyväskylä.*

9:00 K12 **131.14** Neuronal activity regulates Aß precursor protein processing through NMDA receptor signaling. Y. GENG*; X. NIU; Y. CHEN. *IRCBC, SIOC, Chinese Acad. of Sci.*

10:00 K13 **131.15** Levetiracetam inhibits oligomeric A β-induced glutamate release from human astrocytes. J. PINA CRESPO; S. SANZ-BLASCO; X. ZHANG; S. MCKERCHER; M. V. TALANTOVA*; S. A. LIPTON. *Sanford Burnham Prebys Med. Discovery Inst., Scintillon Inst., Scintillon Inst.*

11:00 K14 **131.16** APP knock-in (NLGF) mouse model of Alzheimer's disease: Endogenous Aβ pathology leads to impaired cognition and synaptic plasticity deficits. A. L. HERNANDEZ*; T. AHMED; D. SHAH; L. CAMBIER; J. LUYTEN; R. CAMBIER; B. DE STROOPER; A. VAN DER LINDEN; D. BALSCHUN; R. D'HOOGE. *Katholieke Univ. Leuven (KUL), Univ. of Antwerp, VIB Ctr. for the Biol. of Dis.*

8:00 K15 **131.17** Enhancing inhibitory interneuron function improves neuronal network activity and cognitive function in multiple mouse models of Alzheimer's disease. K. MA*; S. SAILLET; A. GUTIÉRREZ; Z. CHOU; J. J. PALOP. *Gladstone Inst.*

9:00 K16 **131.18** Optogenetic modulation of interneuron-dependent oscillatory activity in a mouse model of Alzheimer's disease. S. SAILLET; A. GUTIERREZ-LERMA; Z. CHOU; K. MA; J. PAZ; J. J. PALOP*. *Gladstone Inst. and UCSF.*

10:00 K17 **131.19** Peptides of amyloid precursor protein α mimic the parent molecule's enhancement of hippocampal LTP. J. MORRISSEY*; B. G. MOCKETT; K. PEPPERCORN; W. P. TATE; S. M. HUGHES; W. C. ABRAHAM. *Univ. of Otago, Univ. of Otago, Univ. of Otago.*

11:00 L1 **131.20** ● Conditional deletion of Prnp rescues synaptic and behavioral deficits in mouse model of Alzheimer's disease. S. V. SALAZAR*; A. C. KAUFMAN; S. M. STRITTMATTER. *Yale Univ., Yale Univ.*

8:00 L2 **131.21** Cholinergic modulation of LTP depends on the activity of glutamatergic neuron and protects synaptic plasticity from synthesized amyloid β oligomers in hippocampus of adult mice. T. SATO*; Y. OHI; D. KATO; M. MIZUNO; A. HAJI; N. MATSUKAWA. *Nagoya City Univ., Aichi Gakuin Univ.*

9:00 L3 **131.22** ● BACE1 inhibition impairs synaptic plasticity via seizure protein 6. K. ZHU*; X. XIANG; M. M. DOROSTKAR; S. FILSER; S. CRUX; P. MARINKOVIĆ; U. NEUMANN; D. R. SHIMSHEK; G. RAMMES; C. HAASS; S. F. LICHTENTHALER; J. M. GUNNERSEN; J. HERMS. *German Ctr. For Neurodegenerative Dis., Ludwig-Maximilians-Universität München, Ludwig-Maximilians-Universität München, Novartis Inst. for BioMedical Res. (NIBR), Dept. of Anesthesiology, Klinikum rechts der Isar, Technische Univ. München, Technische Univ. München, Univ. of Melbourne.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 L4 **131.23** A search for novel interacting proteins to modulate synaptic BACE1 activity. M. MIYAMOTO*; A. KUZUYA; Y. NODA; K. UEMURA; M. ASADA-UTSUGI; S. ITO; Y. FUKUSUMI; H. KAWACHI; R. TAKAHASHI; A. KINOSHITA. *Kyoto Univ. Grad. Sch. of Med., Grad. Sch. of Medicine, Kyoto Univ., Grad. Sch. of Medicine, Kyoto Univ., Grad. Sch. of Med. and Dent. Science, Niigata Univ.*

11:00 L5 **131.24** Basal forebrain epigenetic, neurotrophic, and synaptic dysregulation during the progression of Alzheimer's disease. L. MAHADY*; M. NADEEM; B. HE; S. PEREZ; E. MUFSON. *Barrow Neurolog. Inst., Arizona State Univ.*

8:00 L6 **131.25** Role of G Protein-Gated Potassium (GirK/Kir3) channels in hippocampal functions in a mouse model of Alzheimer´s disease. L. JIMENEZ-DIAZ; I. SANCHEZ-RODRIGUEZ; S. TEMPRANO-CARAZO; J. MAYORDOMO-CAVA; A. NAJERA-LOPEZ; J. YAJEYA; A. GRUART; J. M. DELGADO-GARCIA; J. NAVARRO-LOPEZ*. *Univ. of Castilla-La Mancha, Univ. of Castilla-La Mancha, Univ. of Salamanca, Univ. Pablo de Olavide, Univ. of Castilla-La Mancha.*

9:00 L7 **131.26** The pathological role of isomerase ptpa at synapse in Alzheimer's disease. Y. GONG*; F. CHOW; C. LIPPA. *Nanjing Univ. Chinese Med., Drexel Univ. Col. of Med.*

10:00 L8 **131.27** Rapid memory dissipation in Alzheimer's diease can be ameliorated by reducing Rac1 activity. W. SHI*; S. DU; Y. ZHONG. *Tsinghua Univ.*

11:00 L9 **131.28** ● Modeling calcium signaling in human induced neurons from Alzheimer's and non-Alzheimer's patients. R. A. MARR*; C. BRIGGS; J. MCDAID; M. HOSHIZAKI; V. BOTTERO; G. E. STUTZMANN. *Rosalind Franklin Univ. of Med. and Sci.*

8:00 L10 **131.29** Amyloid-β-mediated disruption of calcium signaling in Alzheimer's disease and its role in neuronal cell cycle re-entry. E. J. KODIS; G. S. BLOOM*. *Univ. of Virginia.*

POSTER

132. Parkinson's Disease: Imaging Studies and Connectomes

Theme C: Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 L11 **132.01** ● Functional connectivity differences across Parkinson disease subtypes. M. C. CAMPBELL*; C. GRATTON; J. KOLLER; W. SHANNON; C. LESSOV-SCHLAGGAR; S. PETERSEN; J. PERLMUTTER. *Washington Univ. Sch. of Med., Washington Univ. Sch. of Med., Washington Univ. Sch. of Med.*

9:00 L12 **132.02** Improving connectome based classification of Parkinson's disease. M. HARRISON*; G. PRASAD; A. RAGOTHAMAN; P. THOMPSON. *USC Imaging Genet. Ctr.*

10:00 L13 **132.03** Anatomical evidence for functional diversity in the human mesencephalic locomotor region. S. B. SÉBILLE*; H. BELAID; A. PHILIPPE; B. LAU; C. FRANÇOIS; C. KARACHI; E. BARDINET. *UMR S 1127, CNRS UMR 7225, ICM, Ctr. de Neuro-Imagerie de Recherche (CENIR), Hôpital de la Pitié Salpêtrière, AP-HP.*

11:00 L14 **132.04** Alterations of regional cortical thickness associated with Parkinson's disease and essential tremor. J. DUANN*; C. CHEN; M. LU; C. TSAI. *China Med. Univ., China Med. Univ. Hosp.*

8:00 M1 **132.05** Free-water diffusion mri and bold imaging in Parkinson's disease patients tested off and on antiParkinsonian medication. J. CHUNG*; R. G. BURCIU; E. OFORI; P. SHUKLA; M. S. OKUN; C. W. HESS; D. E. VAILLANCOURT. *Univ. of Florida, Univ. of Florida, Ctr. for Movement Disorders and Neurorestoration, Univ. of Florida.*

9:00 M2 **132.06** ▲ Parkinson's disease and insula: A vbm analysis. P. DMITRIEV*; H. HUANG; C. PRICE; M. DING. *Univ. of Florida, Univ. of Florida.*

10:00 M3 **132.07** Disrupted nodal and hub organization account for abnormalities across brain networks and clinical manifestations of Parkinson's disease. Y. KOSHIMORI*; S. CHO; M. CRIAUD; L. CHRISTOPHER; M. JACOBS; C. GHADERY; S. COAKELEY; R. MIZRAHI; C. HAMANI; A. E. LANG; S. HOULE; A. P. STRAFELLA. *Ctr. For Addiction and Mental Hlth., Toronto Krembil Res. Institute, UHN, Univ. of Toronto, Ctr. for Addiction and Mental Health, Univ. of Toronto, Toronto Western Hospital, UHN, Univ. of Toronto, Toronto Western Hospital, UHN, Univ. of Toronto.*

11:00 M4 **132.08** Intrinsic connectivity network activation during dual task performance in Parkinson's disease patients with MCI. B. JARRAHI*; S. MCEWEN; L. HAWTHORNE; M. GOMEZ; B. FISHER; V. FILOTEO; G. PETZINGER. *UCLA (university of California, Los Angeles), USC, USC, UCSD.*

8:00 M5 **132.09** Structural changes associated with falls in Parkinson's disease. H. OTOMUNE; M. MIHARA*; H. FUJIMOTO; Y. KAJIYAMA; K. KONAKA; H. MOCHIZUKI. *Osaka Univ. Grad. Sch. of Med., Morinomiya Hosp., Osaka Univ.*

9:00 M6 **132.10** Effects of dopaminergic medication on resting-state functional connectivity in Parkinson's disease. H. TOGO*; J. ROKICKI; H. MATSUDA; N. HAGA; M. MURATA; T. HANAKAWA. *Natl. Ctr. of Neurol. and Psychiatry, The Univ. of Tokyo, Natl. Ctr. of Neurol. and Psychiatry, Natl. Ctr. Hospital, Natl. Ctr. of Neurol. and Psychiatry.*

10:00 M7 **132.11** Altered limbic connectivity is associated with anxiety in Parkinson's disease. H. MORGAN*; C. LEDBETTER; E. DISBROW. *LSUHSC Shreveport Sch. of Med., LSUHSC Shreveport, LSUHSC Shreveport.*

11:00 M8 **132.12** Three-dimensional representation of the human mesencephalic locomotor region. A. ROLLAND*; F. PÉREZ-GARCIA; A. COLLOMB-CLERC; M. SANTIN; B. LAU; C. FRANÇOIS; M. WELTER; E. BARDINET; C. KARACHI. *ICM, Ctr. de Neuro-Imagerie de Recherche (CENIR), Dept. de Neurochirurgie, AP-HP.*

8:00 M9 **132.13** Novel 2D standard coordinate space for sensorimotor cortex validated with high-resolution 7T rs-fMRI functional connectivity. M. BRUURMIJN*; P. A. CORNELISSE; W. SCHELLEKENS; M. A. H. RAEMAEKERS; M. J. VANSTEENSEL; N. F. RAMSEY. *Univ. Med. Ctr. Utrecht.*

9:00 M10 **132.14** Parkinson's disease 6-OHDA model characterization using pharmacological MRI and MR spectroscopy in rats. A. SHATILLO; K. LEHTIMÄKI; L. KOISTINEN*; R. PUSSINEN; A. NURMI. *Charles River Discovery.*

10:00 M11 **132.15** Pet imaging of τ pathology in progressive supranuclear palsy. S. COAKELEY*; S. CHO; Y. KOSHIMORI; P. RUSJAN; A. GRAFF-GUERRERO; R. CHEN; A. LANG; L. KALIA; E. SLOW; S. HOULE; A. STRAFELLA. *Movement Disorder Unit, Univ. Hlth. Network, Krembil Res. Institute, Univ. Hlth. Network, Res. Imaging Centre, Ctr. For Addiction and Mental Hlth.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 M12 **132.16** Dopaminergic modulation of cognitive control and brain activation during stop signal task performance in early stage Parkinson's disease. P. MANZA*; M. MASSON; G. SCHWARTZ; J. IDE; S. ZHANG; C. R. LI; H. LEUNG. *Stony Brook Univ., Yale Univ.*

8:00 M13 **132.17** Flexibility of behavior and thinking in Parkinson's disease. H. M. NGUYEN*; C. I. HIGGINSON; K. LANNI; E. A. DISBROW. *Louisiana State Univ. Hlth. Sci. Ctr. Shreveport, Loyola Univ., Valley Psychological Ctr., Louisiana State Univ. Hlth. Sci. Ctr. in Shreveport.*

9:00 M14 **132.18** Internally guided lower limb movement recruits compensatory cerebellar activity in Parkinson's disease. J. H. DRUCKER*; K. SATHIAN; B. CROSSON; K. M. MCGREGOR; L. C. KRISHNAMURTHY; V. KRISHNAMURTHY; A. BOZZORG; D. M. CORCOS; S. L. WOLF; M. E. HACKNEY. *Emory Univ., Atlanta VA Med. Ctr., Georgia State Univ., Univ. of Queensland, Georgia State Univ., Northwestern Univ., Emory Univ., Emory Univ.*

POSTER

133. Animal Models of Parkinson's Disease and LID Therapy

Theme C: Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 M15 **133.01** Striatal Nurr1 expression causes pathophysiological changes which mimic levodopa-induced dyskinesias. R. C. SELLNOW*; E. FLORES-BARRERA; A. R. WEST; K. STEECE-COLLIER; M. J. BENSKEY; I. M. SANDOVAL; N. KUHN; K. Y. TSENG; F. P. MANFREDSSON. *Michigan State Univ., Michigan State Univ., Rosalind Franklin Univ., Rosalind Franklin Univ., Mercy Heath Hauenstein Neurosci. Ctr.*

9:00 M16 **133.02** Priming of L-DOPA-induced dyskinesia in a mouse model of PD with 6-hydroxydopamine lesion. Y. DING*; J. GARCIA; T. CHEUNG; N. JOSHI; T. C. MA; U. J. KANG. *Columbia Univ.*

10:00 M17 **133.03** Development of L-DOPA-induced dyskinesias in a rat model is reduced by sub-anesthetic ketamine infusions. A. J. FLORES; M. J. BARTLETT; A. H. ZEHRI; K. L. PARENT; M. L. HEIEN; S. J. SHERMAN; T. FALK*. *Univ. of Arizona Col. of Med., Univ. of Arizona.*

11:00 M18 **133.04** ▲ Analysis of inflammatory mediators in a mouse model of L-DOPA induced dyskinesia. G. D. ABREU*; M. S. PEREIRA; L. A. DA COSTA; M. A. DA ROCHA; E. A. DEL BEL. *Univ. of Sao Paulo, Univ. of Sao Paulo, Univ. of Sao Paulo.*

8:00 N1 **133.05** Inhibition of 5-α reductase reduces L-DOPA-induced dyskinesia in a rat model of Parkinson's disease. R. FRAU*; S. FANNI; C. FIDALGO; E. TRONCI; P. SABA; R. STANCAMPIANO; P. DEVOTO; M. BORTOLATO. *Univ. of Cagliari, Univ. of Oviedo, Univ. of Utah.*

9:00 N2 **133.06** ▲ Prophylactic effects of atypical anti-depressant Vilazodone on L-DOPA-induced dyskinesia and striatal gene expression. A. TAYLOR*; S. MEADOWS; N. CHAMBERS; Y. AVNOR; N. VILCEUS; L. GROSS; C. BISHOP. *Binghamton Univ.*

10:00 N3 **133.07** Investigations of the mechanism(s) of action of xenon inhalation for the treatment of L-DOPA-induced dyskinesia. J. M. BAUFRETON*; G. PORRAS; Q. LI; D. KO; E. PIOLI; M. CHAZALON; S. MORIN; J. PYPE; G. FARJOT; B. BESSIERE; E. BEZARD. *CNRS UMR 5293 - Univ. Bordeaux 2, Motac Neurosci., Air Liquide Sante Intl.*

11:00 N4 **133.08** MPTP (1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine)-induced mouse model of Parkinson's disease - comparison of different dosing approaches. J. PUOLIVÄLI; R. O. PUSSINEN*; J. KURKIPURO; T. HUHTALA; A. NURMI. *Charles River Discovery.*

8:00 N5 **133.09** ▲ The impact of dopaminergic lesions on cognition; insights into non-motor Parkinson's disease symptomology. E. HERNANDEZ; J. RAMOS; C. AVILA; L. C. GUTIERREZ; A. PEREZ; L. DE LA TORRE; E. CASTANEDA*. *Univ. of Texas at El Paso.*

9:00 N6 **133.10** ▲ Evaluation of the effects an implant TiO2DA inserted in the caudate nucleus in hemiparkinsonism rat model induced on motor activity and its relationship to the levels of dopamine and serotonin. D. DIAZ DIAZ*; P. VERGARA ARAGON; J. J. SANTILLAN-CIGALES; A. MIRELES-MONZON; R. GONZALEZ TREJO; G. VALVERDE AGUILAR. *UNAM, UNAM, Inst. Politecnico Nacional.*

10:00 N7 **133.11** Evaluating the efficacy of the DJ-1 knockout rat as a model for the prodromal stage of Parkinson's disease. T. L. KYSER*; A. M. HEMMERLE; K. H. LUNDGREN; A. J. DOURSON; B. P. PHILLIPS; J. RICH; E. C. EMMERT; A. GUTIERREZ; K. C. UDOBI; J. L. MCGUIRE; S. M. FLEMING; K. B. SEROOGY. *Univ. of Cincinnati, Cincinnati Children's Hosp. Med. Ctr., Univ. of Cincinnati, Univ. of Cincinnati.*

11:00 N8 **133.12** ▲ Sociosexual motivation deficits in the absence of olfactory dysfunction in the Pink1 -/- rat model of Parkinson disease. H. N. MULHOLLAND*; M. P. KURUP; K. M. YANG; M. R. CIUCCI. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

8:00 N9 **133.13** Levodopa improves a subset of motor function associated with nigrostriatal deficits in a Pink1 -/- rat model of Parkinson disease. C. A. KELM-NELSON*; K. M. YANG; M. R. CIUCCI. *Univ. of Wisconsin Madison Dept. of Surgery.*

9:00 N10 **133.14** Microglial and astroglial cell morphological and functional changes in a Pink1 knockout rat model of Parkinson Disease. K. YANG*; H. N. MULHOLLAND; M. P. KURUP; M. R. CIUCCI. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

10:00 N11 **133.15** Immune effect in brain substantial nigra induced by endogenous neurotoxins on rat Parkinson's disease model. F. SUN; Y. DENG*; Z. CHEN; H. MA. *Beijing Inst. of Technol.*

11:00 N12 **133.16** The PLP-αSYN mouse model for multiple system atrophy as a drug screening tool. L. HÄRTNER; T. KEIL; M. KREUZER; E. M. FRITZ; G. WENNING; N. STEFANOVA; T. FENZL*. *Univ. of Innsbruck, Emory Univ., Med. Univ. Innsbruck.*

8:00 N13 **133.17** Investigating the influence of erythropoietin in a 6-OHDA mouse model of Parkinson's disease. A. M. THOMPSON*; S. P. HAYLEY. *Carleton Univ.*

9:00 N14 **133.18** α-synuclein oligomer preparations induce neurodegeneration and cognitive decline: A novel model for Parkinson's disease. P. GOETGHEBEUR*; P. HOUSSET; N. FISCHER; Y. TERROIRE; S. COLIN; A. ALLOUCHE; V. KOZIEL; A. KÖPKE; T. PILLOT. *Synaging.*

10:00 N15 **133.19** Exploring the role of HIF-1 as a facilitator of exercise-induced neuroplasticity in the MPTP mouse model of Parkinson's disease. M. R. HALLIDAY*; M. W. JAKOWEC; G. M. PETZINGER. *USC.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 N16 **133.20** Investigating the effect of exendin (EX-4) on hyposmia and the piriform cortex in a novel rat model of early stage Parkinson's disease (ESPD). E. SCHUL*; A. CONSTANTI; A. MERCER. *UCL Sch. of Pharm.*

8:00 N17 **133.21** ● DPI-289, a novel δ opioid agonist / μ opioid antagonist, has potential to provide an L-DOPA-sparing approach in Parkinson's disease. T. H. JOHNSTON; M. P. HILL*; E. VERSI; S. H. FOX; B. E. REIDENBERG; J. M. BROTCHIE. *Atuka Inc., Eboo Paharmaceuticals Inc., Weill Cornell Med.*

POSTER

134. Cellular Models to Study Disease Mechanisms and Protection in Parkinson's Disease and Related Neurodegenerative Disease

Theme C: Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 N18 **134.01** Dopamine neurons of the substantia nigra, cultured from Parkin, but not Pink1 or DJ-1 KO mice show altered survival, mitochondrial oxidative phosphorylation and axonal growth. N. GIGUERE*; C. PACELLI; M. BOURQUE; D. LÉVESQUE; S. RUTH; L. TRUDEAU. *Univ. De Montreal, Univ. De Montreal, Univ. of Ottawa.*

9:00 O1 **134.02** Differential vulnerability to a-synuclein pathology among neuronal subpopulations. E. LUNA*; D. RIDDLE; V. M. Y. LEE; K. C. LUK. *Perelman Sch. of Med. At the Univ. of P, Perelman Sch. of Med. at the Univ. of Pennsylvania.*

10:00 O2 **134.03** High-content screening using PARK2 iPSC-derived DA neurons to identify neuroprotective compounds for PD treatment. Y. TABATA*; Y. IMAIZUMI; M. SUGAWARA; K. YAMAZAKI; M. ITO; K. TSUKAHARA; H. SAYA; N. HATTORI; J. KOHYAMA; H. OKANO. *Eisai Co., Ltd., Keio Univ., Keio Univ., Juntendo Univ.*

11:00 O3 **134.04** Selective deletion of Vglut2 in dopamine neurons increases vulnerability of midbrain dopamine neurons to MPTP. H. SHEN*; R. M. MARINO; G. BI; K. CHEN; G. MADEO; P. LEE; T. SU; Z. XI; A. BONCI. *NIDA/IRP.*

8:00 O4 **134.05** ▲ Development of evaluation system for drug efficacy and toxicity based in canine somatic cells with Parkinson's disease. S. CHOI*; S. KIM; D. KIM; D. LEE; S. LEE; H. LEE. *Chung-Ang Univ. Col. of Med., Soonchunhyang Univ., Chung-Ang Univ. Col. of Med., Kyungpook Natl. Univ., Natl. Inst. of Animal Sci.*

9:00 O5 **134.06** Inhibition of intraneuronal acidification causes the retraction of human A9/A10 dopaminergic neurites in culture. A. ESSEX; E. BATCHELDER; J. EVANS; O. COOPER*. *Phenovista Biosci., People Biosci.*

10:00 O6 **134.07** ● Functional electrophysiological phenotyping of human iPSC-derived neurons grown on MEAs - a novel approach for *in vitro* disease modeling of neurodegenerative diseases. B. M. BADER*; K. JUEGELT; O. H. SCHRÖDER. *NeuroProof GmbH.*

11:00 O7 **134.08** Single cell longitudinal changes in golgi complex in a human neuron model of Parkinson's disease and its prognostic value for degeneration. A. RAVISANKAR*; A. K. LEE; G. SKIBINSKI; S. FINKBEINER. *The J.David Gladstone Institutes, UCSF, The Taube/Koret Ctr. for Neurodegenerative Dis., Taube/Koret Ctr. for Neurodegenerative Dis., Univ. of California, San Francisco, Univ. of California, San Francisco, Univ. of California, San Francisco.*

8:00 O8 **134.09** Hla critically determines human neural stem cell immune tolerance. K. W. IM*; K. DOTY; J. BIANCOTTI; D. GATE; B. LEUNG; G. LIU; T. TOWN. *USC, USC, Stanford Univ., Univ. of California Los Angeles.*

9:00 O9 **134.10** Nna1 and NnaD proteins promote mitochondrial fusion, implicating deranged mitochondrial dynamics as a basis for neuron cell death in purkinje cell degeneration mice. A. R. LA SPADA*; S. GILMORE-HALL; J. KUO; C. BENNETT; M. ELLISMAN; G. PERKINS. *Univ. of California San Diego, Univ. of California San Diego, UCSD.*

10:00 O10 **134.11** Transcriptome profiling in the cynomolgus monkey hippocampus after methamphetamine administration. S. KWAK*; M. CHOI; S. BANG; Y. JIN; H. KIM; K. CHANG; Y. CHAI; S. LEE; D. KIM. *Seoul St. Mary's Hospital, The Catholic Univ., Seoul St. Mary's Hospital, The Catholic Univ. of Korea Col. of Med., Natl. Primate Res. Ctr. (NPRC), Korea Res. Inst. of Biosci. and Biotech. (KRIBB), Hanyang Univ.*

11:00 O11 **134.12** Primary neuronal cell culture model for cortical spreading depression and membrane permeability changes detected in this model. Y. CETIN TAS*; E. SEKERDAG; Y. GURSOY-OZDEMIR. *Koc Univ.*

POSTER

135. Parkinson's Disease: Dopamine and Non-Dopamine Pathways

Theme C: Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 O12 **135.01** Biased agonists of the dopamine d3 receptor alleviate motor and dyskinesia symptoms of parkinsons disease. S. KORTAGERE*; W. XU. *Drexel Univ. Col. of Med.*

9:00 O13 **135.02** Neurochemical profile of a novel allosteric potentiator of the dopamine D1 receptor. J. FALCONE*; S. N. MITCHELL; G. CARTER; D. L. MAREN; J. KATNER; E. CHERNET; R. WRIGHT; H. WANG; J. W. RYDER; M. S. MORIN; D. GEHLERT; M. P. JOHNSON; J. P. BECK; J. HAO; M. M. MENEZES; R. F. BRUNS; K. A. SVENSSON. *Eli Lilly and Co., Eli Lilly and Co.*

10:00 O14 **135.03** Optogenetic activation of striatal D1 medium spiny neurons regulates dyskinesias in Parkinsonian mice. X. A. PEREZ*; D. ZHANG; T. BORDIA; M. QUIK. *SRI Intl.*

11:00 O15 **135.04** ● The allosteric dopamine D1 receptor potentiator, DETQ, ameliorates the impairment in NOR induced by subchronic phencyclidine in humanized D1 knock-in mice: A potential new strategy for treating cognitive disorders. L. RAJAGOPAL*; F. MATRISCIANO; M. HUANG; K. A. SVENSSON; H. Y. MELTZER. *Northwestern Univ. Feinberg Sch. of Med., Eli Lilly & Co.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 O16 **135.05** ● Behavioral effects of DETQ, a novel allosteric dopamine D1 receptor potentiator in human D1 knock-in mice and rhesus monkeys. K. A. SVENSSON*; J. P. BECK; J. HAO; J. M. SCHAUS; M. M. MENEZES; D. L. MAREN; J. F. FALCONE; W. A. ANDERSON; K. L. KNOPP; B. L. ADAMS; A. J. HARPER; K. A. WAFFORD; C. R. YANG; L. ZHANG; M. M. MASQUELIN; J. M. WITKIN; X. LI; J. W. CRAMER; R. F. BRUNS. *Eli Lilly and Co., Eli Lilly and Co., Eli Lilly and Co., Chempartner.*

9:00 O17 **135.06** *In vitro* characterization of DETQ, a novel allosteric potentiator of the dopamine D1 receptor. D. A. SCHOBER*; B. A. HEINZ; J. M. SCHAUS; J. P. BECK; J. HAO; J. H. KRUSHINSKY; M. R. REINHARD; M. P. COHEN; S. L. HELLMAN; B. G. GETMAN; X. WANG; T. M. SUTER; D. NELSON; V. LUCAITES; R. EMKEY; N. DELAPP; T. R. WIERNICKI; C. YANG; K. A. SVENSSON; R. F. BRUNS. *Eli Lilly & Co., Eli Lilly & Co.*

10:00 O18 **135.07** Neurodegeneration of the nigrostriatal dopaminergic pathway in a rat model of chronic hyperglycemia. J. RENAUD; K. DUFRESNE; C. LAVOIE; M. MARTINOLI*. *Univ. Quebec.*

11:00 P1 **135.08** A locus coeruleus-ventral periaqueductal gray arousal circuit: Subcellular localization of the α-1 adrenergic receptor. D. A. MITRANO*; S. FEKIR; L. ODIL; D. WEINSHENKER. *Christopher Newport Univ., Christopher Newport Univ., Emory Univ.*

8:00 P2 **135.09** Effects of monoaminergic systems degeneration on the neuronal activity of suprachiasmatic nucleus. A. TINAKOUA*; N. LAKHDAR-GHAZAL; A. BENAZZOUZ. *Univ. Mohammed V- Fac. of Sciences, URBRNE, Bordeaux University, Neurodegenerative diseases Institute, CNRS UMR 5293.*

9:00 P3 **135.10** DJ1 deficiency disrupts mitochondrial function and neuronal growth. R. CHEN*; J. WU; P. MIRANDA; K. ALAVIAN; E. JONAS. *Yale Sch. of Med.*

10:00 P4 **135.11** Human COMT over-expression increases L-DOPA-induced dyskinesia in male but not in female mice. O. SOLÍS CASTREJÓN*; J. GARCÍA-MONTES; P. GARCÍA-SANZ; A. S. HERRANZ; M. ASENSIO; G. KANG; N. HIROI; R. MORATALLA. *Cajal Inst., CIBERNED, ISC III, Servicio Neurobiología, Hosp. Universitario Ramón y Cajal, IRYCIS, Albert Einstein Col. of Med.*

11:00 P5 **135.12** Lack of histamine increases levodopa-induced axial dyskinesia in mice. S. K. NOUSIAINEN*; S. LEINO; P. PANULA; S. RANNANPÄÄ; O. SALMINEN. *Univ. of Helsinki, Univ. of Helsinki.*

8:00 P6 **135.13** M4 muscarinic receptor antagonism worsens L-DOPA- induced dyskinesia. N. E. CHAMBERS*; E. SHEENA; A. TAYLOR; L. GROSS; C. TASBER; S. SINGER; S. BOSSERT; M. CONTI; S. MEADOWS; K. LANZA; C. BISHOP. *Binghamton Univ.*

9:00 P7 **135.14** Prolyl oligopeptidase regulates dopamine transporters in the nigrostriatal tract in mice. U. JULKU*; A. PANHELAINEN; S. TIILIKAINEN; M. SAVOLAINEN; T. MYÖHÄNEN. *Univ. of Helsinki, Univ. of Helsinki.*

10:00 P8 **135.15** Dopamine transporter deficiency syndrome: Disease modelling in zebrafish. K. REID*; A. ELSER; J. RIHEL; M. A. KURIAN; R. J. HARVEY. *UCL Sch. of Pharm., UCL Sch. of Pharm., UCL, UCL Inst. of Child Hlth.*

11:00 P9 **135.16** Teleost ventral diencephalon and mammalian substantia nigra as homologs. B. FRESHNER; D. DOLCE; C. GOHLICH; R. LAUX; E. B. GAHTAN*. *Humboldt State Univ., Humboldt State Univ.*

8:00 P10 **135.17** A *Drosophila melanogaster* model of Parkinson's disease has reduced photoaffinity and sleep pattern disruption in early adulthood. R. P. CHAMBERS; G. B. CALL; L. M. BUHLMAN*. *Midwestern Univ., Midwestern Univ., Midwestern Univ.*

9:00 P11 **135.18** The Synaptojanin SAC1 domain, mutated in Parkinson's disease, is required for synaptic macroautophagy. R. VANHAUWAERT*; S. SOUKUP; S. KUENEN; N. SCHOOVAERTS; L. BOUNTI; J. SWERTS; S. VILLAIN; P. VERSTREKEN. *KU Leuven / VIB.*

10:00 P12 **135.19** DREADD modulation of transplanted dopamine neurons reveals a novel Parkinsonian dyskinesia mechanism mediated by the serotonin 5-HT6 receptor. P. ALDRIN*; A. HEUER; G. WANG; B. MATTSSON; M. LUNDBLAD; M. PARMAR; T. BJÖRKLUND. *Exptl. Med. Sci., Developmental and Regenerative Neurobiology, Dept. of Exptl. Med. Sci., Mol. Neuromodulation, Dept. of Exptl. Med. Sci.*

11:00 Q1 **135.20** Inhibition of leukotriene receptors restores cognition in an animal model of PD. J. MARSCHALLINGER; N. PILLICHSHAMMER; J. GARNWEIDNER-RAITH; B. KLEIN; E. ROCKENSTEIN; S. COUILLARD-DESPRES; E. MASLIAH; L. J. AIGNER*. *Paracelsus Med. Univ., UC San Diego.*

8:00 Q2 **135.21** ▲ Antipsychotics and extrapyramidal side-effects in rats: There are circadian and age differences. S. HUSSAIN; I. C. SUMAYA*. *California State Univ. Bakersfield.*

9:00 Q3 **135.22** Intra-accumbens but not intra-striatal infusions of haloperidol, induce inverse incentive learning in rats. J. F. ROCCA*; C. J. RATTRAY; C. DI PROSPERO; R. J. BENINGER. *Queen's Univ., Queen's Univ.*

10:00 Q4 **135.23** Local dopamine release induced by nucleus accumbens deep brain stimulation confirmed by electrochemistry. L. G. ANDRES-BECK*; M. L. SETTELL; H. MIN; K. LEE. *Mayo Grad. Sch., Mayo Clin., Mayo Clin., Mayo Clin.*

POSTER

136. Parkinson's Neuroprotection I

Theme C: Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 Q5 **136.01** Reduced protein translation is neuroprotective in multiple Parkinson 's disease models. S. GHOSH DASTIDAR*; M. MITCHELL; A. CHANG; S. JORDAN; A. RISBUD; S. YEOM; O. PUCKETT; J. HSU; J. J. OH; E. LOPEZ; B. L. SOPHER; A. R. LA SPADA. *Univ. of California San Diego, Univ. of California San Diego, Univ. of Washington, Univ. of California San Diego, Univ. of California San Diego, Univ. of California San Diego, Univ. of California San Diego.*

9:00 Q6 **136.02** ● Astaxanthin attenuates neurodegeneration and neuroinflammation in a mouse model of Parkinson's disease. B. GRIMMIG; L. DALY; C. HUDSON; P. C. BICKFORD*. *Univ. of South Florida, James A Haley Veterans Hosp., USF Morsani Col. of Med.*

10:00 Q7 **136.03** Which dopamine neurons live or die in Parkinson's: A balancing act between protective astrocytes and damaging microglia. E. W. KOSTUK*; J. CAI; L. IACOVITTI. *Thomas Jefferson Univ.*

● Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 Q8 **136.04** Upregulation of inhibitory rage variants in striatal astrocytes in early experimental Parkinson's disease. F. C. PEREIRA*; S. D. VIANA; J. VALERO; P. RODRIGUES-SANTOS; P. COUCEIRO; A. M. SILVA; F. CARVALHO; S. F. ALI; C. A. FONTES-RIBEIRO. *IBILI/Faculty of Medicine, Univ. of Coimbra, CNC.IBILI – Univ. of Coimbra, Polytechnic Inst. of Coimbra, ESTESC-Coimbra Hlth. School, Pharm., Achucarro Basque Ctr. for Neuroscience, Zamudio, Ikerbasque Foundation, Bilbao, Inst. of Immunol. - Fac. of Medicine, Univ. of Coimbra, Immunol. and Oncology Laboratory, Ctr. for Neurosciences and Cell Biol. (CNC), Univ. of Coimbra, Ctr. of Investigation in Environment, Genet. and Oncobiology (CIMAGO), Fac. of Medicine, Univ. of Coimbra, UCIBIO-REQUIMTE, Lab. of Toxicology, Dept. of Biol. Sciences, Fac. of Pharmacy, Univ. of Porto, Neurochemistry Laboratory, Div. of Neurotoxicology, Natl. Ctr. of Toxicological Research/Food and Drug Admin.*

8:00 Q9 **136.05** Neuroprotective effects of GDNF splice isoforms. A. PENTTINEN*; M. H. VOUTILAINEN; M. KOSKELA; R. K. TUOMINEN; B. K. HARVEY; M. SAARMA; M. AIRAVAARA. *Univ. of Helsinki, Univ. of Helsinki, NIH.*

9:00 Q10 **136.06** BDNF's role in the action of vagus nerve stimulation to treat Parkinson's disease. A. FARRAND*; R. GREGORY; K. HELKE; V. HINSON; H. BOGER. *Med. Univ. of South Carolina, Med. Univ. of South Carolina, Med. Univ. of South Carolina, Med. Univ. of South Carolina, Med. Univ. of South Carolina.*

10:00 Q11 **136.07** Transcription Factor EB neurotrophic and pro-survival effects prevent neurodegeneration in the MPTP mouse model of Parkinson's disease. A. TORRA; B. RODRÍGUEZ; E. RUIZ-BRONCHAL; A. BORTOLOZZI; M. VILA*; J. BOVÉ. *Vall d'Hebron Res. Inst., Ctr. for Networked Biomed. Res. on Neurodegenerative Dis. (CIBERNED), Inst. d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS) – Consejo Superior de Investigaciones Científicas (CSIC); Ctr. de Investigación Biomédica en Red de Salud Mental (CIBERSAM), Dept. of Biochem. and Mol. Biology, Autonomous Univ. of Barcelona, Catalan Inst. for Res. and Advanced Studies (ICREA).*

11:00 Q12 **136.08** Neuroprotective effect of β-estradiol-3-benzoate in the Parkinson MPP^+ rat model. Y. AGUIRRE VIDAL*; S. MONTES; M. ARTEAGA-SILVA; C. RIOS; A. MONROY. *Univ. Autónoma Del Estado De Morelos, Inst. Nacional de Neurología y Neurocirugía, Univ. Autónoma Metropolitana-Iztapalapa.*

8:00 Q13 **136.09** Inhibitory effect of hidroxytyrosol on brain monoamine oxidase activity: *In vivo* and *in vitro* studies. G. A. PÉREZ-BARRÓN*; S. MONTES; M. RUBIO-OSORNIO; J. G. AVILA-ACEVEDO; S. GARCIA-JIMÉNEZ; A. MONROY-NOYOLA. *Univ. Autónoma Del Estado De Morelos, Inst. Nacional de Neurología y Neurocirugia, M.V.S., Inst. Nacional de Neurología y Neurocirugia, M.V.S., Univ. Nacional Autónoma de México.*

POSTER

137. Dystonia

Theme C: Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 Q14 **137.01** Developmentally dependent perinuclear ubiquitin accumulation in a symptomatic model of DYT1 dystonia. S. S. PAPPAS*; W. DAUER. *Univ. of Michigan.*

9:00 R1 **137.02** Resting state brain connectivity in musician's dystonia. K. KITA*; J. ROKICKI; S. FURUYA; L. M. LI; H. MATSUDA; T. SAKAMOTO; T. HANAKAWA. *Chiba Univ., Natl. Ctr. of Neurol. and Psychiatry, Sophia Univ., Imperial Col. London.*

10:00 R2 **137.03** Consequences of inducing acute endoplasmic reticulum stress in DYT1 rodent brain *in vivo*. G. BEAUVAIS*; J. L. WATSON; C. MELIS; M. E. EHRLICH; P. GONZALEZ-ALEGRE. *The Children's Hosp. of Philadelphia, Mount Sinai Sch. of Med., Perelman Sch. of Med. at the Univ. of Pennsylvania.*

11:00 R3 **137.04** Increase in the number of striatal cholinergic interneurons in a mouse model of DOPA-responsive dystonia. G. YALCIN CAKMAKLI*; R. M. VILLALBA; S. J. ROSE; E. J. HESS; Y. SMITH. *Yerkes Natl. Primate Res. Ctr., Emory Univ., Duke Univ., Emory Univ. Sch. of Med., Emory Univ. Sch. of Med.*

8:00 R4 **137.05** τ oscillations in the internal pallidum correlate with dystonic symptom severity in patients with cervical dystonia. W. NEUMANN*; C. BRÜCKE; J. HUEBL; C. SLENTZ; G. SCHNEIDER; A. A. KÜHN. *Charité - Univ. Med. Berlin, Charité - Univ. Med. Berlin, Charité - Univ. Med. Berlin.*

9:00 R5 **137.06** Withdrawn.

10:00 R6 **137.07** Structural correlates of distinct clinical phenotypes and putative genotypes in spasmodic dysphonia. S. BIANCHI*; G. BATTISTELLA; H. P. HUDDLESTON; R. SCHARF; L. FLEYSHER; L. J. OZELIUS; K. SIMONYAN. *Mount Sinai Icahn Sch. of Med., Mount Sinai Icahn Sch. of Med., Massachusetts Gen. Hosp., Mount Sinai Icahn Sch. of Med.*

11:00 R7 **137.08** Connectome-wide phenotypical and genotypical associations in laryngeal dystonia. S. FUERTINGER*; K. SIMONYAN. *Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. At Mount Sinai.*

8:00 R8 **137.09** Symptoms and ketamine sensitivity in mouse models of dystonia: ATP1A3 and Lamb1. K. J. SWEADNER*; Y. B. LIU, 02114; M. V. SZABARI, 02114; A. SACINO; L. J. OZELIUS; J. B. LINGREL; K. LYKKE-HARTMANN; A. BRASHEAR. *Massachusetts Gen. Hosp., Johns Hopkins Sch. of Med., Univ. of Cincinnati, Univ. of Aarhus, Wake Forest Univ. Med. Sch.*

9:00 R9 **137.10** Acute cerebellar shRNA-mediated knockdown of sgce reproduces salient features of Myoclonus-Dystonia. S. G. KEE*; R. FREMONT; K. KHODAKHAH. *Albert Einstein Col. of Med.*

10:00 R10 **137.11** Immune system activation and neurodegenerative phenotypes in aged CIZ1 knock out mice. M. KHAN*; J. XIAO; M. LEDOUX. *Univ. of Tennessee Hlth. Sci. Ctr., Univ. of Tennessee Hlth. Sci. Ctr.*

11:00 R11 **137.12** DYT1 transgenic rats evolve dystonia after peripheral nerve injury. S. KNORR*; K. GRUNDMANN-HAUSER; J. VOLKMANN; C. IP. *Univ. of Wuerzburg, Univ. Tuebingen.*

8:00 R12 **137.13** Deep brain stimulation evoked potentials reveal functional mechanisms of DBS treatment. E. ARGUELLES*; D. FERMAN; M. BERTUCCO; T. D. SANGER. *USC.*

9:00 R13 **137.14** Rs-fmri in cervical dystonia - associations between functional networks and temporal discrimination thresholds. S. NARASIMHAM; E. MCGOVERN; O. KILLIAN; B. QUINLIVAN; J. S. BUTLER; M. HUTCHINSON; R. REILLY*. *Trinity Col. Dublin, St. Vincent's Univ. Hosp., Dublin Inst. of Technol., Trinity College, Dublin|910004852|0.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 R14 **137.15** *In vivo* imaging reveals impaired connectivity across cortical and subcortical networks in a mouse model of DYT1 dystonia. J. C. DESIMONE*; M. FEBO; P. SHUKLA; E. OFORI; L. M. COLON-PEREZ; Y. LI; D. E. VAILLANCOURT. *Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida.*

11:00 R15 **137.16** Elucidating the effects of the Thap1^{C54Y} and null alleles on the gene transcription signatures in P1 mice by RNAseq. Z. ZAKIROVA*; Z. YI; J. BONET; G. PEREZ-GARCIA; G. BEAUVAIS; P. GONZALEZ-ALEGRE; L. OZELIUS; W. ZHANG; M. E. EHRLICH. *Icahn Sch. of Med. At Mount Sinai, The Children's Hosp. of Philadelphia, Massachusetts Gen. Hosp.*

8:00 R16 **137.17** A circuit theory for the pathogenesis of blepharospasm. D. A. PETERSON*; T. J. SEJNOWSKI. *Salk Inst. CNL-S.*

9:00 R17 **137.18** MR imaging following a single low dose of trihexyphenidyl in patients with cervical dystonia. R. G. BURCIU*; P. SHUKLA; E. OFORI; J. CHUNG; C. HESS; N. MCFARLAND; A. WAGLE SHUKLA; M. OKUN; D. VAILLANCOURT. *Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida.*

POSTER

138. Neuroprotective Mechanisms: Drugs, Alcohol, and Nicotine

Theme C: Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 S1 **138.01** The novel organelle autophagoproteasome is recruited to limit methamphetamine toxicity. F. FULCERI; P. LENZI; F. BIAGIONI; M. T. CALIERNO; A. SALVETTI; M. FERRUCCI; G. LAZZERI; F. E. FORNAI*. *Univ. Pisa, Univ. Pisa, I.R.C.C.S. Neuromed, Univ. Pisa.*

9:00 S2 **138.02** PACAP protects against toxicity induced by combination of low alcohol and nicotine in SH-SY5Y cells. S. MANAVALAN*; B. GETACHEW; K. F. MANAYE; S. J. KHUNDMIRI; A. B. CSOKA; A. TAMAS; D. REGLODI; Y. TIZABI. *Univ. of Pecs, Natl. Univ. of Hlth. Sci., Howard Univ. Col. of Med., Howard Univ. Col. of Med., Howard Univ. Col. of Med.*

10:00 S3 **138.03** Understanding the regeneration mechanisms in the hippocampus of control and fetal alcohol rats during the first two postnatal months. B. ELIBOL*; M. BEKER; U. KILIC; E. JAKUBOWSKA-DOGRU. *Bezmialem Vakif Univ., Istanbul Medipol Univ., Middle East Tech. Univ.*

11:00 S4 **138.04** Exercise mitigates cognitive dysfunction through mitochondrial remodeling in alcohol administrated mice. A. K. GEORGE, 40202; Y. ZHAI; M. NURU; N. TYAGI*. *Univ. of Louisville, Univ. Of Louisville.*

8:00 S5 **138.05** Alcohol exacerbates ketamine-induced neurotoxicity and the involvement of CREB pathway. D. ZUO*; Y. LIU; F. SUN; Z. LI; Y. SUN; Y. WU. *Shenyang Pharmaceut. Univ., Jilin Provincial Inst. for Food and Drug Control.*

9:00 S6 **138.06** ● Alcohol increases olfactory manganese uptake into the brain and exacerbates neurotoxicity. M. HAN*; J. KIM. *Northeastern Univ.*

10:00 S7 **138.07** The effects of alcohol on lipopolysaccharide-induced inflammatory response in rat mixed glial cultures. J. WANG*; C. CHEN; S. CHEN. *Dept Nursing (Basic Med. Sci), Hungkuang Univ., Li-Shin Hosp.*

11:00 S8 **138.08** Transcriptomic immaturity of the hippocampus and prefrontal cortex in patients with alcoholism. T. MURANO*. *Natl. Inst. For Physiological Sci., Fujita Hlth. Univ.*

8:00 S9 **138.09** Frequency-dependent changes of brain signal oscillations in alcoholism. J. HONG; E. M. MÜLLER-OEHRING; A. PFEFFERBAUM; E. V. SULLIVAN; D. KWON; T. SCHULTE*. *SRI Intl., Stanford Univ., Pacific Grad. Sch. of Psychology.*

9:00 S10 **138.10** Vitamin A deficiency affects the hippocampal molecular composition of the rats exposed to chronic ethanol intoxication and ethanol withdrawal- an FT-IR study. I. DURSUN*; B. ELIBOL; F. SEVERCAN; E. JAKUBOWSKA DOGRU. *Istanbul Kemerburgaz University, Fac of Med., Bezmialem Vakif Univ., Middle East Tech. Univ.*

10:00 S11 **138.11** ▲ Neural and behavioural changes in periadolescent male mice after prolonged nicotine and MDMA treatment. P. A. ADENIYI*; P. D. SHALLIE; O. M. OGUNDELE. *Afe Babalola Univ. Ado-Ekiti (ABUAD), Olabisi Onabanjo Univ., Afe Babalola Univ.*

11:00 S12 **138.12** Regulation of tyrosine hydroxylase in response to co-administration of nalbuphine in opiate dependent rats. R. RAGHAV*; R. JAIN; T. S. ROY; A. DHAWAN; P. KUMAR. *ALL INDIA INSTITUTE OF MEDICAL SCIENCES, All India Inst. of Med. Sci.*

8:00 S13 **138.13** Prolonged sedation with opioids and benzodiazepines in full-term infants is associated with decreased subcortical volumes: A pilot study. S. L. WILCOX; M. DROTTAR; J. SOLODIUK; R. W. JENNINGS; P. E. GRANT; D. BAJIC*. *Boston Children's Hosp., Boston Children's Hosp., Boston Children's Hosp., Boston Children's Hosp.*

9:00 S14 **138.14** The effects of commonly used opioids on neuronal cell cultures. E. H. NYLANDER*; A. GRÖNBLADH; E. FLAIEH; L. LEOSON; S. ZELLEROTH; M. HALLBERG. *Uppsala Univ.*

POSTER

139. Neuroprotective Mechanisms: Oxidative Stress

Theme C: Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 T1 **139.01** ● Nrf2 activators with distinct mechanisms of action induce divergent pharmacodynamic and functional responses in primary human astrocytes. K. E. RICHTER*; M. S. BRENNAN; Z. XIN; E. Y. S. LIN; B. LUCAS; R. H. SCANNEVIN. *Biogen, Inc.*

9:00 T2 **139.02** ● Tocotrienols affect on the antioxidant enzyme protein expressions of high-fat diet-treated mice. M. SHIRAI*; K. FUKUI. *Shibaura Inst. of Technol., Shibaura Inst. of Technol.*

10:00 T3 **139.03** SK2 channels regulate mitochondrial respiration and mitochondrial Ca^{2+} uptake. B. HONRATH*; L. MATSCHKE; T. MEYER; L. MAGERHANS; F. PEROCCHI; G. K. GANJAM; C. KRASEL; B. BAKKER; S. STRACK; N. DECHER; C. CULMSEE; A. DOLGA. *Univ. of Marburg, Univ. of Marburg, Fac. of Mathematics and Natural Sci., Univ. of Marburg, Univ. of Groningen, Univ. of Iowa Carver Col. of Med.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 T4 **139.04** ● First-in-class molecule to reduce lipid peroxidation and -associated neurodegeneration. M. H. KEUTERS*; H. DHUNGANA; V. KEKSA-GOLDSTEINE; Š. LEHTONEN; M. HUUSKONEN; Y. POMESHCHIK; K. KANNINEN; T. MALM; J. SIRVIÖ; A. MUONA; M. KOISTINAHO; G. GOLDSTEINS; J. KOISTINAHO. *Univ. of Eastern Finland, Sauloner Oy, Aranda Pharma Ltd.*

8:00 T5 **139.05** ● Neuroprotective effect of epigallocatechin-3-gallate on methamphetamine-induced glial activation and dopamine terminal damage in the mouse striatum. A. L. PAN*; J. A. ANGULO. *Hunter Col.*

9:00 T6 **139.06** A vital role of Kv2.1 somato-dendritic clusters in oxidative stress-induced apoptogenic trafficking of Kv2.1. J. A. JUSTICE*; A. SCHULIEN; K. HE; K. HARTNETT; E. AIZENMAN; N. SHAH. *Univ. of Pittsburgh.*

10:00 T7 **139.07** ▲ Regulatory effects of neuroinflammatory responses through bdnf-derived neurotrophic factor signaling in microglial cells. S. LAI*; D. LU; H. LIN. *China Med. Univ., China Med. Univ.*

11:00 T8 **139.08** Protective effects of a multiple-ingredient supplement from γ-irradiation induced chemofog. S. THARMALINGAM*; J. A. LEMON; F. SOLEIMANI; S. JOUET; K. MONSTER; D. C. ROLLO; T. C. TAI; D. R. BOREHAM. *Laurentian Univ., McMaster Univ.*

8:00 T9 **139.09** A systems biology view of the neuroprotection from oxidative stress induced ferroptosis by HDAC inhibition. M. BOURASSA*; S. S. KARUPPAGOUNDER; Y. CHEN; F. DUENDAR; P. ZUMBO; L. SKRABANEK; G. COPPOLA; R. R. RATAN. *Burke-Cornell Med. Res. Inst., Weill Cornell Med. Col., Univ. of California Los Angeles.*

9:00 T10 **139.10** ● Reactive oxygen species induce axonal degeneration via microtubule-associated protein alterations and its prevention by tocotrienols. K. FUKUI*. *Shibaura Inst. Technol.*

POSTER

140. Physiology and Pathophysiology of Blood Brain Barrier Function

Theme C: Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 T11 **140.01** ApoE isoforms differentially regulate vascular stabilization in pericytes. Y. YAMAZAKI*; T. KANEKIYO; G. BU. *Mayo Clin., Mayo Clin.*

9:00 T12 **140.02** Corticosterone and exogenous glucose alter blood glucose levels, neurotoxicity and vascular toxicity produced by methamphetamine. J. F. BOWYER*; K. M. TRANTER; S. SARKAR; N. I. GEORGE; J. P. HANIG; K. A. KELLY; L. T. LINDSAY; D. B. MILLER; J. P. O'CALLAGHAN. *NCTR/FDA, NCTR/FDA, Ctr. for Drug Evaluation and Research/FDA, CDC/ NIOSH.*

10:00 T13 **140.03** Time-dependent vascular remodeling and inflammation following decompression in cervical myelopathy. W. YU*; A. BADNER; T. KIEHL; M. G. FEHLINGS. *Krembil Institute, Univ. Hlth. Network, Krembil institute, Toronto Western Hospital, Univ. Hlth. Network, Krembil institute, Toronto Western Hospital, Univ. Hlth. Network.*

11:00 T14 **140.04** Exploring the transcriptional response of hippocampal vasculature to focused ultrasound-mediated blood-brain barrier opening. D. MCMAHON*; K. HYNYNEN. *Sunnybrook Res. Inst.*

8:00 T15 **140.05** Blood brain barrier disruption during viral encephalitis is associated with endothelial-mesenchymal transition in the neurovasculature. S. BONNEY*; S. SEITZ; K. TYLER; J. SIEGENTHALER. *Univ. of Colorado Anschutz Med. Campus, Univ. of Colorado Anschutz Med. Campus.*

9:00 T16 **140.06** Epidermal growth factor prevents amyloid-β induced angiogenesis deficits and cognitive deficits *in vivo*. R. R. THOMAS*; K. P. KOSTER; F. M. MAROTTOLI; A. W. J. MORRIS; L. M. TAI. *Univ. of Illinois At Chicago.*

10:00 T17 **140.07** Lifespan of one focused ultrasound mediated blood-brain barrier opening treatment in a mouse model of Alzheimer's disease. C. POON*; K. HYNYNEN. *Sunnybrook Hlth. Sci. Ctr., Univ. of Toronto, Univ. of Toronto.*

8:00 DP05 **140.08** (Dynamic Poster) Optogenetic regulation of pericytes. A. R. NELSON*; Z. ZHAO; B. V. ZLOKOVIC. *USC.*

8:00 T18 **140.09** Study of the anatomical basis for a volume transmission mechanism on the melanin-concentrating hormone (MCH) peptidergic system. G. B. DINIZ*; C. A. S. HAEMMERLE; F. PRESSE; J. NAHON; J. C. BITTENCOURT. *Inst. of Biomed. Sci. of the Univ., Inst. de Pharmacologie Moléculaire et Cellulaire, Univ. of Nice Sophia Antipolis, Station de Primatologie, UPS 846, Inst. of Psychology.*

9:00 U1 **140.10** Synthesis and deposition of basement membrane proteins by primary brain capillary endothelial cells in a murine model of the blood-brain barrier. T. MOOS*; L. ROUTHE; S. BIRKELUND; A. BURKHART; A. STEENSBALLE; M. THOMSEN. *Aalborg Univ.*

10:00 U2 **140.11** Soluble Gas1 is present in the cerebrospinal fluid and it is expressed in the stroma of the choroid plexus of the adult rat brain. E. AYALA*; E. ESTUDILLO; G. PEREZ-SANCHEZ; A. SIERRA-SANCHEZ; L. GONZALEZ-MARISCAL; D. MARTINEZ-FONG; J. SEGOVIA-VILA. *CINVESTAV.*

11:00 U3 **140.12** Anatomical basis for interstitial fluid transport through the cribriform plate. J. N. NORWOOD*; D. CARD; A. CRAINE; P. J. DREW. *Pennsylvania State Univ., Pennsylvania State Univ., Pennsylvania State Univ., Pennsylvania State Univ., Pennsylvania State Univ.*

8:00 U4 **140.13** Targeting immunoliposomes to transferrin receptors on brain capillary endothelial cells as a mean for cargo transport across the blood-brain barrier. T. MOOS; K. JOHNSEN; A. BURKHART; J. BRUUN; P. SIUPKA; M. S. NIELSEN*; T. ANDRESEN. *Aalborg Univ., Tech. Univ. of Denmark, Univ. of AARHUS.*

9:00 U5 **140.14** Genome wide identification and validation of microRNAs differentially expressed in cerebral cavernous malformations. S. KAR*; A. BAISANTRY; K. K. BALI; R. GEFFERS; O. DITTRICH-BREIHOLZ; H. BERTALANFFY. *Intl. Neurosci. Inst. Hannover Gmbh, Children's Hosp. Hannover Med. Sch., Heidelberg Univ., Helmholtz Ctr. for Infection Res., Hannover Med. Sch., Intl. Neurosci. Inst. GmbH.*

10:00 U6 **140.15** Capillary ischemia produces MMP-9 dependent blood-brain barrier degeneration localized to cerebral pericyte somata. R. G. UNDERLY*; M. LEVY; D. A. HARTMANN; R. I. GRANT; A. N. WATSON; A. Y. SHIH. *Med. Univ. of South Carolina.*

11:00 U7 **140.16** Construction of a new *in vitro* blood-brain barrier (BBB) model that incorporates triple culturing system of BBB components. Y. TAKESHITA*; Y. TOMOE; H. NISHIHARA; T. MAEDA; Y. SANO; T. KANDA. *Yamaguchi Univ. Grad. Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

141. Pharmacological Strategies to Prevent Injury from Stroke Molecular Factors.

Theme C: Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 U8 **141.01** Elevation of extracellular glycine levels leads to NMDAR internalization *in vitro* and ameliorates stroke outcomes *in vivo*. A. SOKOLOVSKI*; N. AHLSKOG; S. MORUZ; A. WONG; R. BERGERON. *Ottawa Hosp. Res. Inst.*

9:00 U9 **141.02** The curcumin analog CNB-001 promotes clinical improvement in a rabbit embolic stroke model by down-regulating inflammatory markers and enhancing brain-derived neurotrophic factor. P. A. LAPCHAK*; P. BOITANO; D. SCHUBERT. *Cedars-Sinai Med. Ctr., Cedars-Sinai Med. Ctr., Salk Inst.*

10:00 U10 **141.03** Early post treatment with (+) phenserine reduces ischemic brain injury in stroke rats. Y. WANG*; S. YU; E. BAE; K. WU. *Natl. Hlth. Res. Inst.*

11:00 U11 **141.04** ▲ Sodium transport through the cerebral sodium-glucose transporter exacerbates the development of cerebral ischemic neuronal damage. Y. YAMAZAKI*; S. HARADA; S. TOKUYAMA. *Kobe Gakuin Univ.*

8:00 U12 **141.05** Anti-Nogo-A immunotherapy does not alter hippocampal neurogenesis after stroke in adult rats. D. SHEPHERD; S. TSAI; R. FARRER; G. KARTJE*. *Loyola Univ. Chicago Hlth. Sci. Div., Edward Hines Junior VA Hosp.*

9:00 U13 **141.06** Triiodothyronine neuroprotection after ischemia is mediated by astrocyte fatty acid oxidation. M. M. SIFUENTES`*; N. SAYRE; D. HOLSTEIN; J. D. LECHLEITER. *Univ. of Texas Hlth. Sci. Ctr. At San Antonio, Univ. of Texas Hlth. Sci. Ctr. At San Antonio, Univ. of Texas Hlth. Sci. Ctr. At San Antonio.*

10:00 U14 **141.07** The effect of extracellular zinc on the blood clot lysis induced by thrombolytic agents, streptokinase(SK) and tissue plasminogen activator(tPA). Z. WANG*; X. YU; Y. LI. *Ohio Univ. Dept. of Biomed. Sci.*

11:00 U15 **141.08** ● Preservation of neurological function by 4R-cembranoid following an ischemic stroke. W. CASTRO*; H. MARTINS; B. CUADRADO; Y. FERRER; G. GRUDZIAK; P. FERCHMIN; V. ETEROVIC. *Univ. Central Del Caribe, Univ. Central del Caribe, Univ. Central del Caribe, Bromedicon.*

8:00 U16 **141.09** A novel therapeutic target for stroke by inhibition of GAPDH aggregation. M. ITAKURA*; T. KUBO; A. KANESHIGE; Y. AZUMA; T. HIKIDA; T. TAKEUCHI; H. NAKAJIMA. *Osaka Prefecture Univ., Kyoto Univ.*

9:00 U17 **141.10** Effects of pomegranate supplementation on recovery following ischemic stroke: A randomized, placebo-controlled, double-blind trial. J. R. MURRAY*; J. A. BELLONE; P. JORGE; T. G. FOGEL; M. KIM; D. WALLACE; R. E. HARTMAN. *Loma Linda Univ., Loma Linda Univ., Loma Linda Univ. Med. Ctr., Loma Linda Univ. Med. Ctr.*

10:00 U18 **141.11** Xo along with Xd might be important regulative enzymes for recovery and regeneration after stroke in rats. K. DANIELYAN*; A. A. SIMONYAN. *H. Buniatian Inst. of Biochem.*

11:00 V1 **141.12** Hydrogen peroxide acts as an endogenous regulating factor for phagocytotic function of microglia: Role of nrf2. X. ZHAO*; G. SUN; S. TING; J. ARONOWSKI. *UT Med. Sch.*

8:00 V2 **141.13** MicroRNA-103-1 is involved in the pathogenesis of ischemic brain damage and may represent a stroke peripheral diagnostic marker. P. CEPPARULO; F. MICELI*; A. VINCIGUERRA; O. CUOMO; G. DI RENZO; G. PIGNATARO; L. ANNUNZIATO. *Fac. of Medicine, Univ. of Naples Federico II.*

9:00 V3 **141.14** ● Role of β-adrenoreceptor partial agonist in pathophysiology and recovery of ischemic stroke. K. RAVINA; Z. WARRAICH; S. KISLAL; M. SHAMLOO*. *Stanford Univ. Sch. of Med.*

10:00 V4 **141.15** ● Procognitive property and antischemic effect of S 44819 a novel promising candidate drug for stroke therapy. I. GACSÁLYI; G. GIGLER; K. MORICZ; J. WELLMANN; E. MOCAER*; P. MACHADO; F. ANTONI. *Egis Pharmaceuticals, I.R.I.S.*

11:00 V5 **141.16** The neuroprotective capabilities of glial-derived neurotrophic factor following intraluminal filament middle cerebral artery occlusion in mice. G. P. MORRIS*; A. L. WRIGHT; S. STAYTE; R. ZINN; R. P. TAN; B. VISSEL. *Garvan Inst. of Med. Res., Univ. of New South Wales, Univ. of New South Wales, Heart Res. Inst., Univ. of Technol.*

8:00 V6 **141.17** Tissue plasminogen activator is essential for functional recovery after stroke by promoting axonal outgrowth. S. MA*; H. PU; L. ZHANG; C. WEI; Z. LU; X. HU; J. CHEN. *Univ. of Pittsburgh.*

9:00 V7 **141.18** Mesenchymal stem cell transplantation affords therapeutic benefits against retinal ganglion cell death in adult rats with experimentally induced ischemic stroke. J. LEE*; H. NGUYEN; S. ACOSTA; C. V. BORLONGAN. *Univ. of South Florida.*

10:00 V8 **141.19** Neuro-rehabilitation with virtual reality training in upper limb function of stroke patients after botulinum toxin injection. Y. LU*; Y. HO; T. KUO; K. CHENG; T. CHAO; C. LIN; L. KO; W. CHEN. *Inst. of Bioinformatics and Systems Biol., Inst. of Bioinformatics and Systems Biology, Natl. Chiao-Tung Univ., Natl. Taiwan Univ. Hosp. Hsin-Chu Br., Inst. of Mol. Med. and Biochem. Engineering, Natl. Chiao-Tung Univ., Brain Res. Center, Natl. Chiao-Tung Univ.*

11:00 V9 **141.20** Thyroid hormones effect in mice experimental MCAO brain stroke model. A. MDZINARISHVILI*; W. GELDENHUYS; P. SADANA; V. SUTARIYA. *Univ. of Oklahoma, Col. of Allied Hlth., Col. of Pharmacy, West Virginia Univ., Sch. of Pharmacy, Northeast Ohio Med. Univ. (NEOMED), Sch. of Pharmacy, Univ. of South Florida.*

8:00 V10 **141.21** Elucidating the molecular mechanisms behind the long-term cerebral ischemic tolerance mediated by resveratrol preconditioning. N. KHOURY*; K. B. KORONOWSKI; I. SAUL; K. R. DAVE; J. I. YOUNG; M. A. PEREZ-PINZON. *Miller Sch. of Medicine, Univ. of Miami, Miller Sch. of Medicine, Univ. of Miami.*

9:00 V11 **141.22** Anti-inflammatory effects of the AVP receptor blocker conivaptan. S. M. JONES*; E. ZEYNALOV; J. ELLIOTT. *Swedish Med. Ctr., Colorado Brain and Spine Inst.*

10:00 V12 **141.23** Neurotrophin regulation of neuronal death after injury. L. E. MONTROULL*; D. ROTHBARD; J. P. ZANIN; S. W. LEVISON; W. J. FRIEDMAN. *Rutgers University, Life Sci. Ctr., Rutgers Univ.*

11:00 V13 **141.24** BLM-l, an isoform of BLM as a BH3-only protein of the BCL-2 superfamily, plays a role in regulating neuronal survival in stroke. C. HO; P. HUANG*. *Grad. Inst. of Pathology, Grad. Inst. of Pathology.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 V14 **141.25** Neuroinflammation and free-radical damage after hemorrhagic stroke in streptozotocin/nod mouse models of type-i diabetes. K. M. NASH*; Q. M. ALHADIDI; Z. A. SHAH. *The Univ. of Toledo, The Univ. of Toledo.*

9:00 V15 **141.26** Withdrawn.

10:00 V16 **141.27** AntiParkinsonian evaluation of neuroprotective peptide Fraternina, isolated from the venom of social wasp Parachartergus fraternus, in murine model for Parkinson's disease. A. B. MAYER*. *Univ. of Brasília.*

11:00 V17 **141.28** Targeting the therapeutic properties of cannabidiol: Focus on depression and pain. G. GOBBI; R. MCLAUGHLIN; D. DE GREGORIO*; R. OCHOA-SANCHEZ; L. LUONGO; S. MAIONE. *McGill Univ., Washington State Univ., McGill Univ., Second Univ. of Naples.*

8:00 V18 **141.29** Intranasal orexin-A treatment to boost arousal in an asphyxial cardiac arrest rodent model. D. GARIKAPATI*; H. R. MODI; Q. WANG; D. SHERMAN; E. GREENWALD; R. G. GEOCADIN; N. V. THAKOR. *Johns Hopkins Univ., Johns Hopkins Univ. Sch. of Med.*

9:00 W1 **141.30** ▲ Effect of antihypertensive drugs on learning, memory and neuronal morphology in Prefrontal Cortex and Hippocampus in Spontaneously Hypertensive Rats. H. COATL CUAYA*; L. M. DE JESÚS VASQUEZ; M. GÓMEZ-VILLALOBOS; G. FLORES ALVARES. *Benemerita Univ. Atonoma De Puebla.*

10:00 W2 **141.31** Linking development with regeneration: Ephrin-A1 attenuates glial scarring after adulthood stroke. L. TEO*; J. HOMMAN-LUDIYE; J. A. BOURNE. *Australian Regenerative Med. Inst.*

POSTER

142. Mechanisms in Spinal Cord Injury

Theme C: Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 W3 **142.01** ● Expression and role of IL-12 and IL-23 in spinal cord injury. A. KRONER-MILSCH*; B. APERI; K. STEHLIK; S. DAVID. *Med. Col. of Wisconsin, Ctr. for Res. in Neuroscience, McGill.*

9:00 W4 **142.02** The molecular mechanism underlying pruning of collaterals in the compensatory neural pathway after incomplete spinal cord injury. T. NAKANISHI*; Y. FUJITA; T. YAMASHITA. *Grad Sch. Med, Osaka Univ.*

10:00 W5 **142.03** Neuregulin-1 signalling controls an endogenous repair mechanism after spinal cord injury. K. BARTUS*; J. GALINO; N. D. JAMES; C. BIRCHMEIER; D. L. H. BENNETT; E. J. BRADBURY. *King's Col. London, Univ. of Oxford, Max Delbrück Ctr. for Mol. Med.*

11:00 W6 **142.04** Targeting TRPV4 to attenuate systemic and spinal immune activation in a mouse model of SCI. R. J. GRILL*; K. R. CLARK; H. HU. *Univ. of Mississippi Med. Ctr., Washington Univ. Sch. of Med. in St. Louis.*

8:00 W7 **142.05** $cPLA_2$ activation-mediated mitochondrial dysfunction and neuronal death after spinal cord injury. N. LIU*; L. DENG; Q. LU; J. LI; S. YOU; X. XU. *Indiana Univ., Fourth Military Med. Univ., Fourth Military Med. Univ.*

9:00 W8 **142.06** Extracellular vimentin. M. SHIGYO*; C. TOHDA. *Univ. of California San Diego Thornton Hospit, Div. of Neuromedical Science, Inst. of Natural Med.*

10:00 W9 **142.07** LPA pathway modulates intrinsic axon growth of intact CNS neurons after spinal cord injury. K. FINK*; S. STRITTMATTER; W. CAFFERTY. *Yale Univ.*

11:00 W10 **142.08** PCAF and axonal injury pathways- a model system of epigenetic and transcriptional cross-talk for the control of axonal regeneration. R. PUTTAGUNTA*; V. KAMPANIS; L. ZHOU; A. HERVERA; S. CZEMMEL; M. EDWARDS; N. ISLAM; A. BOUTILLIER; N. WEIDNER; S. DI GIOVANNI. *Univ. of Heidelberg, Univ. of Tuebingen, Univ. of Tuebingen, Imperial Col. London, Univ. of Tuebingen, Univ. of Colorado, Universite´ de Strasbourg-CNRS, GDR CNRS, Heidelberg Univ. Hosp.*

8:00 W11 **142.09** Activation of NLRP3 inflammasomes in a rat spinal cord injury model. S. YANAGISAWA*; H. KATOH; M. KUROIWA; T. IMAI; M. WATANABE. *Tokai Univ.*

9:00 W12 **142.10** Astrocyte scar formation aids CNS axon regeneration. M. A. ANDERSON; J. E. BURDA; Y. REN; Y. AO; T. M. O'SHEA; R. KAWAGUCHI; G. COPPOLA; B. S. KHAKH; T. J. DEMING; M. V. SOFRONIEW*. *UCLA Schl Med., UCLA Engin.*

10:00 X1 **142.11** E2F4 promotes recovery after spinal cord injury in zebrafish. S. SASAGAWA*; Y. NISHIMURA; Y. HAYAKAWA; S. MURAKAMI; Y. ASHIKAWA; M. YUGE; S. OKABE; K. KAWAGUCHI; R. KAWASE; Y. SHIMADA; T. TANAKA. *Mie Univ. Sch. of Med., Mie Univ. Grad. Sch. of Med.*

11:00 X2 **142.12** Deep sequencing transcriptome of axoplasm from regenerating axon tips in the lamprey spinal cord. L. JIN*; C. R. PENNISE; M. E. SELZER. *Lewis Katz Sch. of Med. at Temple Univ., Lewis Katz Sch. of Med. at Temple Univ.*

8:00 X3 **142.13** The effect of transplanted olfactory ensheathing cells on endogenous stem/progenitor cells after spinal cord injury. X. LI*; A. HONORE; N. GUÉROUT. *Karolinska Institutet, Univ. of Rouen.*

9:00 X4 **142.14** Acute hyperglycemia is a treatable risk factor for spinal cord injury - translational research from animals to humans -. K. KOBAYAKAWA*; K. SHIBA; K. HARIMAYA; Y. MATSUMOTO; K. KAWAGUCHI; M. HAYASHIDA; R. IDETA; Y. OHKAWA; H. TOZAKI-SAITOH; K. INOUE; Y. OHKAWA; Y. MAEHARA; Y. IWAMOTO; S. OKADA. *Kyushu Univ., Kyushu Univ., Spinal Injuries Ctr., Kyushu Rosai Hosp.*

10:00 X5 **142.15** Locomotor-respiratory coupling after spinal cord injury and the effects of locomotor rehabilitation. T. SUTOR*; N. J. TESTER; D. FULLER; K. STREETER; K. A. BUTERA; E. J. FOX. *Univ. of Florida, Brooks Rehabil., Malcom Randall V.A. Med. Ctr.*

11:00 X6 **142.16** Spinal cord injury in rats disrupts bowel function and daily activity rhythms. A. D. GAUDET*; M. AYALA; L. K. FONKEN; S. F. MAIER; L. R. WATKINS. *Univ. of Colorado Boulder.*

8:00 X7 **142.17** Time course of axon initial segment plasticity caudal to a complete spinal cord transection in rats. K. P. DIMINTIYANOVA*; J. WIENECKE; D. B. JENSEN; C. F. MEEHAN. *Univ. of Copenhagen.*

9:00 X8 **142.18** Transcranial magnetic stimulation (TMS) evoked responses from hind limb muscles are diminished in spinal cord injured animals and partially recovered following improved plasticity induced by repetitive electromagnetic stimulation at spinal levels. V. ALESSI*; H. PETROSYAN; J. SNIFFEN; S. A. SISTO; M. A. KAUFMAN; V. L. ARVANIAN. *Northport VAMC, Stony Brook Univ., Stony Brook Univ., Stony Brook Univ.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 X9 **142.19** Assessing motor deficits in a rodent model of spinal cord hemisection that mimics the human Brown-Sequard syndrome. X. LIN*; T. ZHAO; M. WALKER; W. WU; X. XU. *Indiana Univ. Sch. of Med., Gen. Hosp. of Jinan Military Region.*

11:00 X10 **142.20** Comparative transcriptomic analysis of sprouting and regenerating corticospinal neurons. G. H. POPLAWSKI*; K. KHOO; N. MEHTA; R. KAWAGUCHI; E. ROSENZWEIG; K. KADOYA; P. LU; G. COPPOLA; M. TUSZYNSKI. *Univ. of California San Diego, UC Los Angeles.*

8:00 X11 **142.21** Effect of iron oxide nanocarriers on the morphology of rat cortical neuron. S. SEBASTIAN*; R. A VEETTIL; T. MCALLISTER; S. GHOSH; D. HYNDS. *Texas Woman's Univ., Southeast Missouri State Univ.*

9:00 X12 **142.22** Uptake efficiency of surface functionalized nanospheres by different cells in rat mixed cortical culture. R. AMMASSAM VEETTIL*; S. SEBASTIAN; T. MCALLISTER; S. GHOSH; D. HYNDS. *Texas Woman's Univ., Southeast Missouri State Univ.*

10:00 X13 **142.23** Endothelin B receptor agonist, IRL-1620, enhances neurogenesis in an *ex vivo* model of adult mouse spinal cord injury. M. FORNARO*; A. ZURNEY; B. PAUS; A. CHANG; D. LAWLOR; H. SHARTHIYA; S. BRIYAL; A. GULATI. *Midwestern Univ., Midwestern Univ., Midwestern Univ.*

11:00 X14 **142.24** Virtual adiposity: Relationship with glucose metabolism in persons with and without spinal cord injury. A. L. KIMBALL*; R. K. SHIELDS. *Univ. of Iowa Carver Col. of Med.*

8:00 X15 **142.25** *In vivo* observation of acute vascular dysfunction following spinal cord injury. C. CHEN*; Y. ZHANG; Y. SUN; C. SHIELDS; W. XIONG; X. JIN; X. XU. *Indiana Univ. Dept. of Neurolog. Surg, Spinal Cord and Brain Injury Res. Group, Stark Neurosciences Res. Institute, Goodman and Campbell Brain and Spine, Indiana Univ. Sch. of Med., Norton Neurosci. Institute, Norton Healthcare.*

9:00 X16 **142.26** Developing models of spinal cord injury using optogenetic cellular ablation. K. MRUK*; J. K. CHEN. *Stanford Univ.*

10:00 X17 **142.27** Spinal cord injury in mice - functional performance by kinematic motion analysis and tissue pathology by mri. E. LATONUMMI*; J. KHABBAL; K. LEHTIMÄKI; L. TOLPPANEN; A. NURMI. *Charles River Discovery.*

11:00 Y1 **142.30** Sympathetic control enhances heart rate variation in humans with spinal cord injury. C. L. MCHENRY*; R. K. SHIELDS. *Univ. of Iowa.*

8:00 DP04 **142.28** ● (Dynamic Poster) The in-cage automation of the single pellet reaching task. A test for dexterity in rats. D. GADIAGELLAN*; T. NANAYAKKARA; L. D. F. MOON. *Kings Col. London.*

9:00 X18 **142.29** Spinal cord stimulation in sheep models of chronic neuropathic pain and spinal cord injury-induced spasticity. J. W. MILLER*; C. G. REDDY; S. WILSON; K. O. ABODE-IYAMAH; N. A. DEVRIES-WATSON; D. C. FREDERICKS; G. T. GILLIES; T. J. BRENNAN; M. A. HOWARD, III. *Univ. of Iowa, Univ. of Iowa, Univ. of Virginia, Univ. of Iowa.*

POSTER

143. Nociceptors: Anatomical and Physiological Studies

Theme D: Sensory Systems

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 Y2 **143.01** Selective activation of TRPV1-lineage neurons and analyses of nocifensive behavior and synaptic transmission in acute spinal cord slices reveal synaptic plasticity of inhibitory, but not excitatory circuits. D. M. DUBREUIL*; D. KIM; E. J. LOPEZ SOTO; S. DENOME; J. A. KAUER; D. LIPSCOMBE. *Brown Univ., Soonchunhyang Univ.*

9:00 Y3 **143.02** A transcription factor essential for organ differentiation is expressed in sensory neurons and regulated by nerve injury. J. L. SALOMAN*; B. M. DAVIS. *Univ. of Pittsburgh.*

10:00 Y4 **143.03** A trpv1-/nav1.8+ subset of neurons mediates lymphatic antigen restriction. G. H. IMPERATO*; M. GUNASEKARAN; T. TSAAVA; W. HANES; S. S. CHAVAN; K. J. TRACEY. *Feinstein Inst. For Med. Res., Stony Brook Univ.*

11:00 Y5 **143.04** *In vivo* optogenetic activation of nociceptors expressing voltage-gated sodium channel Nav1.8 and their response properties to natural stimuli. M. L. UHELSKI*; D. BRUCE; P. SÉGUÉLA; G. WILCOX; D. SIMONE. *Univ. of Minnesota Twin Cities, McGill Univ.*

8:00 Y6 **143.05** A subset of vagal sensory neurons mediating bronchoconstriction. L. HAN*; N. LIMJUNYAWONG; Z. LI; O. HALL; W. MITZNER; B. UNDEM; B. CANNING; X. DONG. *Georgia Inst. of Technol., Johns Hopkins Univ.*

9:00 Y7 **143.06** Axonal properties distinguish C-tactile from C-nociceptive afferents in humans. R. H. WATKINS*; J. WESSBEG; H. BACKLUND WASLING; J. DUNHAM; H. OLAUSSON; R. D. JOHNSON; R. ACKERLEY. *Univ. of Gothenburg, Univ. of Bristol, Cambridge Univ. Hosp., Linköping Univ., Univ. of Florida Col. of Vet. Med., Aix-Marseille Univ.*

10:00 Y8 **143.07** Reduction of axonal transport and chemosensitive receptor accumulation following cfa or vinblastine treatment. R. M. GOVEA*; G. BOVE. *Univ. of New England.*

11:00 Y9 **143.08** AAV-mediated transduction of primary afferent neurons following intracolonic viral vector administration. M. S. RIEDL*; R. GORE; H. HEYDER; C. N. HONDA; L. VULCHANOVA. *Univ. Minnesota.*

8:00 Y10 **143.09** Localization of the sixteen currently recognized glutamate receptors in the rat cornea: A western blotting and immunofluorescent study. B. K. CARR*; K. E. MILLER. *Oklahoma State Univ. Ctr. For Hlth. Sci.*

9:00 Y11 **143.10** ● DWN10899, a novel Nav1.7 blocker inhibits human DRG neuroexcitability and neuropathic pain. S. PARK*; I. KIM; S. KIM; M. JUNG; H. LEE; C. LEE; B. LEE. *Daewoong Pharmaceut. Co. Ltd.*

10:00 Y12 **143.11** Activateion of Aδ and Aβ fibers by one electrode at the same site. M. NISHIHARA*. *Aichi Med. Univ.*

11:00 Y13 **143.12** Anethole inhibit neuronal excitability of dorsal root ganglia neurons via voltage-dependent sodium channel blockade. L. MOREIRA-JÚNIOR; F. W. FERREIRA-DA-SILVA; K. S. SILVA-ALVES; V. B. CAVALCANTE; T. SANTOS-NASCIMENTO; N. M. SILVA-DOS-SANTOS; J. H. CARDOSO*. *State Univ. of Ceará, State Univ. of Ceará, Univ. Estadual do Ceara.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

144. Sensory Disorders: Somatosensation

Theme D: Sensory Systems

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 Y14 **144.01** ▲ Position dependent burning mouth syndrome. P. SALARIA*; A. R. HIRSCH. *Aureus Univ. Sch. of Med., Smell and Taste Treatment and Res. Fndn.*

9:00 Y15 **144.02** ▲ Mechanisms of fractional calcium currents through trpv1 channels in primary sensory neurons. Z. ZHOU*; M. HU; L. ZHENG; L. SUN; Y. LI; Q. WU; S. SHANG; T. LIU; Y. WANG; L. JIANG; X. ZHU; C. WANG. *Inst. Mol. Med, Peking Univ., Inst. Mol. Med,Peking Univ., Sch. of Biomedical, Univ. of Leeds, Dept. of Integrative Biol. and Pharmacology, Univ. of Texas Hlth. Sci. Ctr. at Houston.*

10:00 Y16 **144.03** Repeated low-level blast exposure increases transient receptor potential vanilloid 1 (TRPV1) and endothelin-A (ET-A) co-expression. E. D. POR*; J. CHOI; M. L. SANDOVAL; C. THOMAS-BENSON; B. J. LUND. *United States Army Inst. of Surgical Res.*

11:00 Y17 **144.04** Eukaryotic elongation factor 2-mediated activity-dependent inhibition of translation in mouse sensory neurons: Impact of metformin and pterostilbene. D. C. MOLLIVER; C. ESANCY; B. K. DRAGOO; M. A. SHAH; K. E. HANLON*; R. GEGUCHADZE. *Univ. of New England, Univ. of Pittsburgh, Univ. of New England Col. of Osteo. M.*

8:00 Y18 **144.05** Modulation of TRPA1 activation by AMP activated protein kinase. S. WANG*; K. KOBAYASHI; H. YAMANAKA; S. YAMAMOTO; Y. KOGURE; K. NOGUCHI; Y. DAI. *Hyogo Univ. of Hlth. Sci., Chinese Med. Confucius Inst. at Hyogo Col. of Med., Hyogo Col. of Med.*

9:00 Z1 **144.06** Evaluation of sensory function and thermal pain withdrawal reflexes in MEIS1 knockout mice, a possible animal model for Restless Legs Syndrome (RLS). S. MENEELY; M. DINKINS; Y. LI; S. CLEMENS*. *East Carolina Univ., Univ. of Florida, East Carolina Univ.*

10:00 Z2 **144.07** Characterization of behavioral and histopathological changes in a mia model of osteoarthritis of the rat ankle joint. V. BOURASSA*; A. RIBEIRO-DA-SILVA. *McGill Univ., McGill Univ.*

11:00 Z3 **144.08** Increased susceptibility to cortical spreading depression and epilepsy in a mouse model for familial hemiplegic migraine type 2. L. KROS*; K. LYKKE-HARTMANN; K. KHODAKHAH. *Albert Einstein Col. of Med., Aarhus Univ.*

8:00 Z4 **144.09** Subcortical volume across development in male migraineurs. A. LUDWICK*; S. L. WILCOX; A. LEBEL; R. BURSTEIN; L. BECERRA; D. BORSOOK. *Boston Children's Hosp., Beth Israel Deaconess Med. Ctr.*

9:00 Z5 **144.10** ● Whisker stimulation can induce cortical spreading depression in pharmacologically primed mouse brain. S. HANALIOGLU*; A. TASKIRAN-SAG; H. KARATAS; E. EREN-KOCAK; M. YEMISCI; Y. GURSOY-OZDEMIR; T. DALKARA. *Hacettepe Univ., Hacettepe Univ., Koc Univ.*

POSTER

145. Treatments for Persistent Pain

Theme D: Sensory Systems

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 Z6 **145.01** ● Nicotinamide riboside: A novel approach to treating peripheral neuropathy induced by paclitaxel. M. V. HAMITY*; S. R. WHITE; R. Y. WALDER; M. S. SCHMIDT; C. M. BRENNER; D. L. HAMMOND. *Univ. of Iowa Dept. of Anesthesia, Univ. of Iowa, Univ. of Iowa.*

9:00 Z7 **145.02** ● Relating spinal cord stimulation to the recruitment and modulation of sensory signaling in the isolated *in vitro* adult mouse spinal cord. S. IDLETT*; M. HALDER; M. SAWCHUK; J. QUEVEDO; W. GU; M. MOFFITT; S. HOCHMAN. *Emory Univ., Georgia Inst. of Technol., Emory Univ., Ctr. de Investigacion y de Estudios Avanzados del Inst. Politecnico Nacional, Boston Scientific.*

10:00 Z8 **145.03** ● Activation and conduction block of dorsal column axons by kilohertz-frequency spinal cord stimulation. N. D. CROSBY*; J. J. JANIK; W. M. GRILL. *Duke Univ., Stryker Corp.*

11:00 Z9 **145.04** The nNOS-NOS1AP protein-protein interface is an analgesic target. W. LEE*; Y. LAI; M. COURTNEY; A. HOHMANN. *Indiana Univ. Bloomington Dept. of Psychological and Brain Sci., Indiana Univ. Bloomington Dept. of Psychological and Brain Sci., Univ. of Turku and Åbo Akademy Univ.*

8:00 Z10 **145.05** Dissecting the mechanisms by which dietary polyphenols may modulate lower back pain. S. TIANO*; L. HO; A. LAI; J. IATRIDIS; G. M. PASINETTI. *Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai, James J. Peters Veterans Affairs Med. Ctr., Icahn Sch. of Med. at Mount Sinai.*

9:00 Z11 **145.06** ● Non-invasive transcranial focal electrical stimulation induced analgesic effects. W. G. BESIO*; A. ROSILLO-DE LA TORRE; L. L. ROCHA-ARRIETA. *Univ. of Rhode Island, CINVESTAV.*

10:00 Z12 **145.07** The stress regulator FKBP51 drives chronic pain by modulating spinal glucocorticoids signalling. M. MAIARU*; K. K. TOCHIKI; M. B. COX; X. FENG; F. HAUSCH; S. M. GERANTON. *Univ. Col. London, Border Biomed. Res. Ctr., Max Planck Inst. of Psychiatry.*

11:00 Z13 **145.08** Electroacupuncture at st36 acupoint ameliorates reserpine-induced depression and pain in mice. D. KANG; J. CHOI; J. CHOI; J. PARK; H. KIM*. *Col. of Medicine, Chungnam Natl. Univ.*

8:00 Z14 **145.09** Neurobiological mechanisms of electroacupuncture inhibiting chronification of acute pain by endocannabinoid system. X. YUAN*; C. WU; H. LI; F. GAO; M. LI. *Huazhong Univ. of Sci. and Technol., Huazhong Univ. of Sci. and Technol.*

9:00 AA1 **145.10** Improving blood-brain barrier penetration to convert neurotensin bioactive peptides into painkillers. J. COTE*; É. BESSERER-OFFROY; A. MURZA; K. BELLEVILLE; É. EISELT; A. LAROCQUE; A. REGINA; J. LONGPRÉ; M. DEMEULE; P. SARRET. *Univ. de Sherbrooke (FMSS), Angiochem Inc.*

10:00 AA2 **145.11** Use of a non-invasive Trojan horse strategy to improve the delivery of opioid pain relief medications to the brain. E. EISELT*; V. OTIS; K. BELLEVILLE; A. LAROCQUE; A. RÉGINA; J. LONGPRÉ; M. DEMEULE; P. SARRET; L. GENDRON. *Sherbrooke Univ., Angiochem Inc.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 AA3 **145.12** ● Distribution and efficacy of centrally and systemically administered antisense oligonucleotides in the pain system. B. FITZSIMMONS*; A. MOHAN; H. ZHAO; Y. JIANG; S. CHUN; F. RIGO; H. KORDASIEWICZ; E. SWAYZE. *Ionis Pharmaceuticals.*

8:00 AA4 **145.13** Hydrocodone is more effective than morphine or oxycodone in suppressing burn-induced hyperalgesia at the injury site, but not in the contralateral limb. M. A. EMERY*; M. L. S. BATES; C. HORRAX; P. J. WELLMAN; S. EITAN. *Texas A&M Univ.*

9:00 AA5 **145.14** resolvin d1 and resolvin d2 in oral cancer pain. Y. YE*; D. BERNABE; J. CURTIN; N. SCHEFF; P. SARAITHONG; B. SCHMIDT. *New York Univ., New York Univ.*

10:00 AA6 **145.15** Intraganglionic gene delivery of the photosensitive chloride channel, iC++, facilitates transdermal light-mediated inhibition of neuropathic pain in rodents. C. TOWNE*; S. KHAN; C. DISCENZA; A. ARGUELLO; J. AGUADO; T. GALFIN; M. KAPLITT. *Circuit Therapeut. Inc.*

11:00 AA7 **145.16** ● Monoclonal antibodies that block the binding of artemin to GFRα3 significantly attenuate nociceptive responses in two mouse models of joint pain. L. A. CORTES-BURGOS*; E. F. THAYER; M. GAO; L. XIE; A. RAFIQUE; J. FAIRHURST; A. BADITHE; R. BABB; F. DELFINO; C. HUNT; W. T. POUEYMIROU; A. J. MURPHY; L. E. MACDONALD; S. D. CROLL. *Regeneron Pharmaceuticals Inc.*

8:00 AA8 **145.17** Rosmarinus officinalis extract enhances the antinociceptive effect of ketorolac in rat formalin-induced nociception: An isobolographyc analysis. K. BELTRÁN-VILLALOBOS*; M. DÉCIGA-CAMPOS; F. J. LÓPEZ-MUÑOZ; H. AGUILAR-MARISCAL; M. E. GONZÁLEZ-TRUJANO. *IPN, Inst. Politécnico Nacional, Inst. Politécnico Nacional, Univ. Juárez Autónoma de Tabasco, Inst. Nacional de Psiquiatría Ramón de la Fuente Muñiz.*

9:00 AA9 **145.18** Novel indole-like Trk receptor inhibitors as potential therapeutics for pain and cancer. K. LUBERG*; R. PARK; J. TAMMIKU-TAUL; K. JAANSON; D. DOBCHEV; D. KANANOVICH; A. NOOLE; M. MANDEL; A. KAASIK; M. LOPP; M. KARELSON; T. TIMMUSK. *Tallinn Univ. of Technol., Ctr. of Microbial and Plant Genet. (CMPG), Tallinn Univ. of Technol., Univ. of Tartu, Univ. of Tartu.*

10:00 AA10 **145.19** ● Dorsal root ganglionic field stimulation relieves both spontaneous and induced neuropathic pain in rats. B. PAN*; H. YU; G. FISCHER; J. M. KRAMER; Q. H. HOGAN. *Med. Col. of Wisconsin, St. Jude Medical, Inc.*

11:00 AA11 **145.20** ● Neuromodulation of cranial nerves for migraine and trigeminal neuropathy pain. R. M. HARPER*; D. SNODGRASS; F. YAN-GO; J. JEN; R. K. HARPER; M. YAZDIZADEH; E. K. SAUERLAND. *Univ. of California at Los Angeles, UCLA, Univ. of California at Los Angeles, UCLA, Univ. of California at Los Angeles, UCLA, Univ. of California at Los Angeles, UCLA, Univ. of California at Los Angeles, Univ. of Nevada Sch. of Med.*

POSTER

146. Pain Models: Pharmacology

Theme D: Sensory Systems

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 AA12 **146.01** ● Endocannabinoid enzyme inhibition synergistically potentiates the antiallodynic effects of gabapentin and diclofenac in mice. M. CROWE*; R. GUJJAR; A. MAHADEVAN; M. BANKS; S. G. KINSEY. *West Virginia Univ., Organix Inc., Virginia Commonwealth Univ.*

9:00 AA13 **146.02** Behavioral investigation of central and peripheral roles of endothelins in evoked and ongoing pain in a rat model of facial cancer. C. KOPRUSZINSKI*; E. GAMBETA; R. C. DOS REIS; G. A. RAE; A. ACCO; T. KING; J. G. CHICHORRO. *Federal Univ. of Parana, Federal Univ. of Santa Catarina, Univ. of New England.*

10:00 AA14 **146.03** The analgesic efficacy of MMG22 in targeting a putative MOR/mGluR5 heteromer in a murine model of bone cancer pain. S. S. SHUEB; M. LUNZER; E. AKGÜN; G. CATALDO; P. S. PORTOGHESE; D. A. SIMONE*. *Univ. Minnesota, Univ. Minnesota.*

11:00 AA15 **146.04** ● Screening for analgesic activity using a panel of behavioral pain models: Potential utility in combination studies to assess synergy. Y. DARBAKY; V. MAFFRE; L. DIOP*. *ANS Biotech, ANS Biotech, ANS Biotech.*

8:00 AA16 **146.05** Imbalances between Glutamate and GABA within rat insula differentially alter insular levels of amino acid and monoamine neurotransmitters and metabolites. I. C. ST CHARLES*; C. J. WATSON. *The Univ. of Michigan.*

9:00 AA17 **146.06** Buprenorphine-induced antinociception varies as a function of leptin status in obese mice. S. MIHALKO; Z. GLOVAK; K. T. WILES; C. ANGEL; J. E. JOHNSON; H. A. BAGHDOYAN; R. LYDIC*. *Univ. of Tennessee, Univ. of Tennessee, Univ. of Tennessee.*

10:00 AA18 **146.07** Targeting putative μ opioid/chemokine ccr5 heteromers potently reduces hyperalgesia in a mouse model of sickle cell disease. G. CATALDO*; M. M. LUNZER; S. SHUEB; E. AKGÜN; J. D. BELCHER; G. M. VERCELLOTTI; P. S. PORTOGHESE; D. A. SIMONE. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota.*

11:00 BB1 **146.08** Antiallodynic and antinociceptive effects produced by neuroprotectors in rats. D. Y. BERMÚDEZ-OCAÑA*; J. DÍAZ-ZAGOYA; C. TOVILLA-ZÁRATE; I. JUÁREZ-ROJOP; J. TORRES-LÓPEZ; V. GRANADOS-SOTO. *Div. Academica Multidisciplinaria De Comalcalc, UNAM, UJAT-DACS, CINVESTAV-Coapa.*

8:00 BB2 **146.09** The positive allosteric GABAB receptor modulator rac-BHFF enhances baclofen-mediated analgesia in neuropathic mice. K. ZEMOURA*; D. BENKE, 8051; W. RALVENIUS. *Inst. of Pharmacol. and Toxicology, Inst. of Pharmacol. and Toxicology.*

9:00 BB3 **146.10** ● Development of a clinically-translatable acute heat pain behavioral model in non-human primates. P. S. PALL; J. D. VARDIGAN; H. S. LANGE*; J. BALLARD; A. K. HOUGHTON; C. BURGEY; M. E. LAYTON; R. M. KIM; J. M. USLANER. *Merck Res. Labs.*

10:00 BB4 **146.11** ▲ Haloperidol decreases the hyperalgesia in rats with chronic constriction of the sciatic nerve. J. ESPINOSA*; O. A. JARAMILLO-MORALES; F. J. LOPEZ-MUÑOZ. *Cinvestav-Ipn, Cinvestav-sede sur.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 BB5 **146.12** The long-term effects of saccharin-induced analgesia in infancy on learning and memory during adulthood in rats: Role of endogenous opioid system. K. NUSEIR*; K. H. ALZOUBI; M. AL-AZZANI. *Jordan Univ. of Sci. and Technol., Jordan Univ. of Sci. and Technol.*

8:00 BB6 **146.13** *In vitro* pain responses of dorsal root ganglion neurons using multi-electrode arrays. I. SUZUKI*; T. IIDA; N. MATSUDA; A. ODAWARA. *Tohoku Inst. of Technol., Tohoku Univ., JST.*

9:00 BB7 **146.14** PI3K isoforms change expression patterns in spinal cord and DRG after inflammation and nerve injury. L. S. SORKIN*; R. A. PRITCHARD. *Univ. of California San Diego.*

8:00 DP03 **146.15** ● (Dynamic Poster) Development of PainScan: An automated videotracking system to measure pain behavior in rodents. B. L. ADAMS*; R. T. GORS; F. LI; X. BAI; R. M. A. SIMMONS; B. FORSTER; V. KOBLA; Y. LIANG; K. L. KNOPP. *Lilly Res. Labs, CleverSys, Inc.*

11:00 BB8 **146.16** The antiallodynic and antihyperalgesic effects of α7 nicotinic receptor dual allosteric agonist and positive allosteric modulator GAT107 in inflammatory pain. M. DAMAJ*; D. BAGDAS; J. WILKERSON; A. KULKARNI; S. ALSHARARI; A. LICHTMAN; R. PAPKE; G. THAKUR. *Virginia Commonwealth Univ., Virginia Commonwealth Univ., Northeastern Univ., King Saud Univ., virginia Commonwealth Univ., Univ. of Florida.*

8:00 BB9 **146.17** ● Endomorphin analogs provide potent and long-lasting antinociception in multiple pain models relative to morphine. A. K. FEEHAN*; J. MORGENWECK; A. AMGOTT-KWAN; X. ZHANG; J. E. ZADINA. *Tulane Univ., Jackson Lab., Tulane Univ., SE Louisiana Veterans HCS, Tulane Univ.*

9:00 BB10 **146.18** ▲ Characterization of new stable NTS2-selective neurotensin analogs. M. VIVANCOS*; R. FANELLI; M. ORLIAGUET; J. COTÉ; É. BESSERER-OFFROY; A. MURZA; J. LONGPRÉ; J. THOMAS; J. MARTINEZ; F. CAVELIER; P. SARRET. *Univ. De Sherbrooke, IBMM, UMR-CNRS-5247, Univ. de Montpellier, Ctr. for Drug Discovery.*

10:00 BB11 **146.19** ● Novel RET agonist for the treatment of experimental peripheral diabetic neuropathy. H. VIISANEN-KUOPILA*; Y. A. SIDOROVA; U. NUOTIO; V. JOKINEN; T. LILIUS; P. RAUHALA; E. KALSO; M. KARELSON; M. SAARMA. *Univ. of Helsinki, Univ. of Helsinki, Helsinki Univ. and Helsinki Univ. Hosp., Tartu Univ.*

11:00 BB12 **146.20** Validation of a nitroglycerin-induced episodic migraine model in rats. H. M. HARRIS*; J. M. CARPENTER; J. R. BLACK; T. A. SMITHERMAN; K. J. SUFKA. *Univ. of Mississippi, Univ. of Mississippi.*

8:00 BB13 **146.21** ● A novel pain assay using a transgenic mouse expressing $hNa_v1.7$ with an inherited erythromelalgia mutation: Comparison with traditional models for inflammatory and neuropathic pain. S. HOWARD; G. BANKAR; K. NELKENBRECHER; M. WALDBROOK; Z. XIE; K. KHAKH; E. CHANG; C. YOUNG; S. LIN; J. P. JOHNSON, Jr.; L. E. SOJO; A. LINDGREN; N. CHAHAL; S. CHOWDHURY; S. DECKER; I. HEMEON; C. M. DEHNHARDT; J. CHANG; B. SAFINA; D. P. SUTHERLIN; D. HACKOS; C. L. ROBINETTE; C. J. COHEN*. *Xenon Pharmaceuticals, Genentech.*

9:00 BB14 **146.22** ▲ Systemic administration of quercetin produces antiallodynic effect in fibromyalgia-like pain in male rats. L. E. CORREA ROAN*; A. HERNANDEZ-LEON; *. E. GONZÁLEZ-TRUJANO. *Natl. Inst. of Psychiatry "Ramón de la Fuen, Natl. Autonomous Univ. of Mexico, Ctr. of Res. and Advanced Studies of the Natl. Polytechnic Inst., Natl. Inst. of Psychiatry "Ramón de la Fuente Muñiz.*

10:00 BB15 **146.23** Antinociception effects of Valeriana fauriei regulated BDNF signaling in a Fibromyalgia animal model. H. LEE; J. IM; H. WON; H. KIM; J. KWON; S. LEE; S. LEE; I. CHO; Y. KIM; H. KIM*. *Col. of Medicine, Soonchunhyang Univ., Develop. of Ginseng and Med. Plants Res. Institute, Rural Admin., Chung-Ang Univ., Brain Korea 21 Plus Program, and Inst. of Korean Medicine, Col. of Oriental Medicine, Kyung Hee Univ., Soonchunhyang Univ.*

11:00 BB16 **146.24** ● Mixed ς-1 / ς-2 ligands as analgesics: Studies with ANAVEX 1066 in animal models of neuropathic pain and visceral pain. J. S. SPROUSE*; N. REBOWE; Y. DARBAKY; L. DIOP; D. KLAMER; C. MISSLING. *Anavex Life Sci., ANS Biotech.*

8:00 BB17 **146.25** Endocannabinoid system alterations in chronic pain states. Y. MULPURI*; D. DANG; B. L. SCHMIDT; H. H. SELTZMAN; I. SPIGELMAN. *UCLA Sch. of Dent., New York Univ. Col. of Dent., Res. Triangle Inst. Intl.*

9:00 BB18 **146.26** ▲ Systemic administration of flavonoid rutin ameliorate pain and sleep architecture in hypoestrogenic female rats in fibromyalgia animal model. A. HERNÁNDEZ LEÓN*; M. GONZÁLEZ-TRUJANO; A. FERNÁNDEZ-GUASTI. *Ctr. De Investigacion Y De Estudios Avanzados De, Inst. Nacional de Psiquiatría "Ramón de la Fuente", Inst. Nacional de Psiquiatría.*

10:00 CC1 **146.27** An objective method to assess the anti-migraine properties of δ-9-tetrahydrocannabinol (THC) in the female rat. R. KANDASAMY*; C. M. MISKELL; M. M. MORGAN. *Washington State Univ., Washington State Univ. Vancouver.*

11:00 CC2 **146.28** Targeting NGF and TrkA to control neuropathic pain: Long lasting analgesic effect of anti-NGF and anti-TrkA antibodies in Chronic Constriction Injury mouse model. M. D'ONOFRIO*; E. FIORI; R. BRANDI; I. ARISI; F. MALERBA; F. LA REGINA; R. CERNA; S. TURTURRO; S. MARINELLI; V. VACCA; F. PAVONE; A. CATTANEO. *European Brain Res. Inst. (EBRI), Sapienza Univ., IBCN, CNR, Bio@SNS laboratory, Scuola Normale Superiore, IRCCS Fondazione Santa Lucia.*

8:00 CC3 **146.29** Structural basis of human glycine receptor potentiation by a novel class of analgesic small molecules. J. R. SIMARD*; X. HUANG; P. SHAFFER; S. AYUBE; H. BREGMAN; H. CHEN; S. LEHTO; J. LUTHER; D. MATSON; S. MCDONOUGH; S. SCHNEIDER; Y. TEFFERA; S. YI; M. ZHANG; E. DIMAURO; J. GINGRAS. *Amgen Inc., Amgen Inc., Amgen Inc., Amgen Inc., Amgen Inc., Amgen Inc.*

9:00 CC4 **146.30** ● Development of a high capacity assay for identification of compounds specifically modulating excitability in pain conducting sensory neurons. C. NODIN; C. LINDWALL-BLOM; Å. JÄGERVALL; J. PIHL; J. SVENSSON DALÉN; S. LARDELL; A. KARLSSON; M. KARLSSON; P. KARILA*. *Cellectricon AB.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

147. Musculoskeletal and Visceral Pain

Theme D: Sensory Systems

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 CC5 **147.01** Voluntary exercise can attenuate many abnormal behaviors and perigenital allodynia resulting from early life stress in male mice. I. FUENTES*; A. N. PIERCE; O. C. ELLER; R. WANG; J. A. CHRISTIANSON. *Univ. of Kansas Med. Ctr.*

9:00 CC6 **147.02** Investigating the impact of early life stress and voluntary exercise on comorbid chronic pain and mood disorders in mice. O. ELLER*; A. PIERCE; I. FUENTES; J. CHRISTIANSON. *Univ. of Kansas Med. Ctr.*

10:00 CC7 **147.03** Optogenetic investigation of epithelial-neuronal communication in the colon. S. NAJJAR*; P. PATEL; K. ALBERS; B. DAVIS. *Univ. of Pittsburgh.*

11:00 CC8 **147.04** Acute colitis alters the functional properties of mouse lumbosacral dorsal horn neurons - an *in vivo* study. K. E. FARRELL*; S. KEELY; B. A. GRAHAM; R. J. CALLISTER. *Univ. of Newcastle.*

8:00 CC9 **147.05** Pharmacological effects of different substances in the dextran sulfate sodium (DSS) - induced colitis model in the mouse. D. PUSHETT*; C. LE CUDENNEC; V. CASTAGNÉ. *Porsolt SAS.*

9:00 CC10 **147.06** Visceral pain: Identification of limbic circuitry using *in vivo* optogenetics. R. LATORRE*; A. C. JOHNSON; C. O. LIGON; B. GREENWOOD-VAN MEERVELD. *Oklahoma Ctr. For Neurosci., Oklahoma Univ. Hlth. Sci. Ctr., Dept. of Veteran Affairs.*

10:00 CC11 **147.07** Brain signature in irritable bowel syndrome: Connectivity-based classification. E. A. VALESTRAND*; K. F. TEKIE; T. HAUSKEN; A. LUNDERVOLD. *Univ. of Bergen, Univ. of Bergen.*

11:00 DD1 **147.08** Urothelial barrier dysfunction increases the excitability and firing of bladder afferent sensory neurons. N. MONTALBETTI; A. RUED; F. KULLMANN; M. D. CARATTINO*. *Univ. of Pittsburgh.*

8:00 DD2 **147.09** 15d-PGJ_2 activates peripheral PPAR γ and opioids receptors to reduce inflammatory muscle pain. D. S. DOS SANTOS*; J. T. CLEMENTE-NAPIMOGA; B. K. TAYLOR; M. G. OLIVEIRA-FUSARO. *UNICAMP, State Univ. of Campinas, Univ. of Kentucky, UNICAMP.*

9:00 DD3 **147.10** Fibromyalgia syndrome: Cold stress reveals altered metabolic activity and thermoregulation. J. D. PASLEY*; J. V. PARDO; J. T. LEE; M. G. NUNEZ; R. C. LARSON; A. A. LARSON. *Georgia Gwinnett Col., Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota.*

10:00 DD4 **147.11** ▲ Mechanistic distinctions between cancer-induced ongoing pain and movement-triggered breakthrough pain. J. GENTRY; M. DEARBORN; J. HAVELIN; I. IMBERT; T. E. KING*. *Univ. of New England.*

11:00 DD5 **147.12** Contributions of DEET to a rat model of gulf war illness pain. B. Y. COOPER*; T. J. NUTTER; R. D. JOHNSON; L. FLUNKER. *Univ. Florida, Univ. Florida, Univ. Florida.*

8:00 DD6 **147.13** TrkA signalling is critical for the initiation of osteoarthritis pain in the monoiodoacetate model. J. D. VALENTE*; L. CALVO; J. C. AREVALO; M. MALCANGIO. *Kings Col. London, Inst. of Neurosciences Castilla y León, Univ. of Salamanca, Inst. of Biomed. Res. of Salamanca, Kings Col. London.*

9:00 DD7 **147.14** ● Characterization of nociceptive fibers in back of a patient with chronic pain. M. BACKONJA; D. C. YEOMANS*; M. KLUKINOV; M. NEMENOV. *Univ. of Wisconsin, Stanford Univ., Stanford Univ., LasMed.*

POSTER

148. Pain Imaging and Perception

Theme D: Sensory Systems

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 DD8 **148.01** The neuropsychological mechanisms of memory bias in chronic pain. E. VACHON-PRESSEAU; S. BERGER; A. T. BARIA; T. ABDULLAH; T. J. SCHNITZER; A. V. APKARIAN*. *Northwestern Univ., Northwestern Univ. Feinberg Sch. of Med.*

9:00 DD9 **148.02** Refined global intrinsic pain circuits of posterior insula and S2 in non-human primate brain using high-resolution functional magnetic resonance imaging. R. WU*; F. WANG; P. YANG; L. M. CHEN. *Vanderbilt Univ.*

10:00 DD10 **148.03** Pain perception in pediatric patients with cerebellar resection: Psychophysical results of an ongoing fMRI study. K. E. SILVA*; J. ROSNER; N. J. ULLRICH; C. CHORDAS; L. BECERRA; P. MANLEY; E. A. MOULTON. *Boston Children's Hosp., Boston Children's Hosp., Dana Farber Cancer Inst.*

11:00 DD11 **148.04** Brain circuitry underlying sex differences in deep tissue pain sensitivity in chronic low back pain. I. MAWLA; J. LEE; A. ORTIZ; J. GERBER; E. PROTSENKO; J. KIM; H. KIM; S. CHAN; M. L. LOGGIA*; R. EDWARDS; A. WASAN; C. BERNA; J. KONG; T. KAPTCHUK; R. L. GOLLUB; B. ROSEN; V. NAPADOW. *Martinos Ctr. for Biomed. Imaging, Massachusetts Gen. Hosp., Massachusetts Gen. Hosp. / Harvard Med. Sch.*

8:00 DD12 **148.05** Altered θ oscillation at anterior insula in women with primary dysmenorrhea during pain-free state. P. LEE*; Y. CHEN; C. TU; H. CHAO; J. HSIEH; L. CHEN. *Inst. of Biomed. Informatics, Natl. Yang-Ming Univ., Dept. of Computer Science, Natl. Chiao Tung Univ., Inst. of Brain Science, Natl. Yang-Ming Univ., Integrated Brain Res. Unit, Div. of Clin. Research, Dept. of Med. Research, Taipei Veterans Gen. Hosp., Dept. of Obstetrics and Gynecology, Taipei Veterans Gen. Hosp.*

9:00 DD13 **148.06** Machine learning approaches to discriminate clinical pain states from ASL brain imaging data in chronic low back pain patients. J. LEE; I. MAWLA; J. GERBER; A. ORTIZ; E. PROTSENKO; J. KIM; H. KIM; S. CHAN; M. L. LOGGIA; R. EDWARDS; A. WASAN; C. BERNA; J. KONG; T. KAPTCHUK; R. L. GOLLUB; B. ROSEN; V. NAPADOW*. *Massachusetts Gen. Hosp.*

10:00 DD14 **148.07** Impaired communication with the insular cortex is associated with a persistent awareness of pain in patients with complex regional pain syndrome. S. CHOI*; J. KIM; J. H. JANG; J. YUN; D. KANG. *Seoul Natl. Univ. Hosp., Seoul Natl. Univ., Samsung Med. Ctr.*

11:00 DD15 **148.08** Different modulation of the descending control during pain and itch. R. RINGLER*; V. VIEROW; M. RANK; K. DETMAR; R. LOOSE; H. O. HANDWERKER; C. FORSTER. *Univ. of Technol. Amberg-Weiden, Inst. of Physiol., Clin. Ctr. of Nuremberg.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 DD16 **148.09** Tai chi modulates the impaired resting state functional connectivity of the ventral striatum in fibromyalgia. J. KONG*; F. CUI; E. WOLCOTT; K. JORGENSON; A. ORTIZ; W. HARVEY; C. WANG. *Massachusetts Gen. Hosp., Tufts Med. Ctr.*

9:00 DD17 **148.10** ● Feasibility of noninvasive brain modulation for pain management in patients undergoing chemoradiotherapy for advanced head and neck cancer. X. HU*; C. A. FISHER; S. M. MUNZ; R. TOBACK; T. NASCIMENTO; E. BELLILE; L. ROZEK; A. EISBRUCH; F. P. WORDEN; T. E. DANCIU; A. F. DASILVA. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

10:00 EE1 **148.11** Cerebral and autonomic encoding of the location and intensity of tonic pain. M. M. NICKEL*; E. S. MAY; L. TIEMANN; M. POSTORINO; S. TA DINH; J. GROSS; P. SCHMIDT; M. PLONER. *Technische Univ. München, Univ. of Glasgow.*

11:00 EE2 **148.12** Spontaneous oscillations in low back pain patients. M. JUNG*; A. ORTIZ; K. JORGENSON; J. KONG. *Harvard Med. Sch.*

8:00 EE3 **148.13** Determining effect of chronic pain using EEG source imaging analysis of sickle cell disease patients. M. CASE*; S. SHIRINPOUR; Y. DATTA; S. NELSON; K. GUPTA; B. HE. *Univ. of Minnesota, Children's Hosp. and Clinics of Minnesota.*

9:00 EE4 **148.14** Effects of spinal cord injury on nociceptive heat evoked fMRI responses in cervical spinal cord of monkeys. L. CHEN*; P. YANG; F. WANG. *Vanderbilt Univ.*

10:00 EE5 **148.15** Neural habituation to painful stimuli is modulated by dopamine: Evidence from studies using EEG and pharmacological fMRI. E. M. BAUCH*; C. ANDREOU; N. BUNZECK. *Univ. Med. Ctr. Hamburg-Eppendorf, Ctr. for Gender Res. und Early Detection, Univ. of Lübeck.*

11:00 EE6 **148.16** ▲ Neural and behavioral changes in coping with acute pain after Cognitive Behavioral Therapy: A randomized controlled trial. A. KUBICKI; M. SHPANER*; D. A. SEMINOWICZ; N. D. LA ROSA; J. BISHOP; A. FRENCH; E. MCCALLION; J. MANTEGNA; F. J. KEEFE; M. R. NAYLOR. *Univ. of Vermont Col. of Med., Univ. of Maryland Sch. of Dent., Univ. of New Mexico, Duke Univ. Med. Ctr.*

8:00 EE7 **148.17** High density electroencephalography and automated classification of pain perception. S. COOMBES*; G. MISRA; W. WANG. *Univ. of Florida.*

9:00 EE8 **148.18** Effects of relationship and gender difference on pain. H. MAEOKA*; A. MATSUO; M. HIYAMIZU; S. MORIOKA. *Kio Univ.*

10:00 EE9 **148.19** ● Chronic pain patients show regional gray matter atrophy across the affective regions: A voxel-based morphometry study. T. LI; E. IKEDA; H. KOBINATA; S. ZHANG; T. OTA; K. MAKITA; J. KURATA*. *Tokyo Med. and Dent. Univ. Hosp. of Med.*

11:00 EE10 **148.20** Investigating the influence of prior information on the neural processing of pain using drift diffusion modelling. K. WIECH*; F. EIPPERT; J. VANDEKERCKHOVE; J. ZAMAN; I. TRACEY. *Univ. of Oxford, UC Irvine, Univ. of Leuven.*

8:00 EE11 **148.21** ▲ Persistence of pediatric post-traumatic headache (PTH) and disturbances in regional cerebral blood flow. H. SANTORO*; D. HODKINSON; P. SERRANO; M. O'BRIEN; A. LEBEL; R. BURSTEIN; L. BECERRA; D. BORSOOK. *Boston Children's Hosp., Boston Children's Hosp., Beth Israel.*

9:00 EE12 **148.22** Investigation of amygdala involvement in mediating the expectancy component of acupuncture treatment effects in patients with chronic pain. J. KONG; W. SONG; J. LEISER; D. MINICUCCI; R. EDWARDS; I. KIRSCH; A. WASAN; V. NAPADOW; T. KAPTCHUK; R. L. GOLLUB*. *Massachusetts Gen. Hosp., Brigham and Women's Hosp., Beth Israel Deaconess Med. Ctr., Univ. of Pittsburgh Sch. of Med., Massachusetts Gen. Hosp., Massachusetts Gen. Hosp. Dept. of Psychiatry.*

10:00 EE13 **148.23** ● Brain connectivity patterns provide insight into the mechanism of visual hypersensitivity in fibromyalgia. T. E. LARKIN*, JR; C. M. CUMMIFORD; E. ICHESCO; S. E. HARTE; D. J. CLAUW; R. E. HARRIS. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

11:00 EE14 **148.24** Behavioral responses to noxious stimuli shape the perception of pain. E. S. MAY*; L. TIEMANN; P. SCHMIDT; M. M. NICKEL; N. WIEDEMANN; C. DRESEL; M. PLONER. *Technische Univ. München, The Feinstein Inst. for Med. Res.*

8:00 EE15 **148.25** Relationship between the pain and brain activity during illusory kinesthesia in patients after surgery for a distal radius fracture. R. IMAI*; M. OSUMI; S. MORIOKA. *Kio Universsity, Neuro Rehabil. Res. Center, Kio Univ., Grad. Sch. of Hlth. Sciences, Kio Univ.*

9:00 EE16 **148.26** Treatment variability affects placebo responses through prediction error signaling. A. GRAHL*; C. BÜCHEL. *Univ. Med. Ctr. Hamburg-Eppendorf.*

10:00 EE17 **148.27** Sex differences in the functional connectivity of insular cortex during colorectal distension. Z. WANG*; Y. GUO; E. A. MAYER; D. P. HOLSCHNEIDER. *Univ. of Southern California, UCLA, Univ. of Southern California.*

11:00 EE18 **148.28** Acute pain perception is associated with decreased modularity of brain functional networks. M. N. BALIKI*; B. PETRE; M. A. FARMER; A. VANIA. *Rehabil. Inst. of Chicago, Northwestern Univ.*

8:00 FF1 **148.29** Simultaneous fMRI mapping of nociceptive pathways in brain and spinal cord of non-human primates. P. YANG*; F. WANG; L. CHEN. *Vanderbilt Univ.*

9:00 FF2 **148.30** Neural network of dysesthesia symptoms produced by sensorimotor incongruence in healthy volunteers. A functional connectivity analysis. O. KATAYAMA*; M. OSUMI; R. IMAI; T. KODAMA; S. MORIOKA. *Grad. Sch. of Hlth. Sciences,Kio Univ., Neuro Rehabil. Res. Center, Kio Univ., Fac. of Hlth. Sciences, Kyoto Tachibana Univ.*

POSTER

149. Somatosensation: Whisker System

Theme D: Sensory Systems

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 FF3 **149.01** Active vibrissal sensing in arboreal environments. K. ARKLEY*; B. MITCHINSON; T. J. PRESCOTT. *Univ. of Sheffield.*

9:00 FF4 **149.02** What tactile information do trigeminal projection pathways convey during behavior? V. PREVOSTO*; F. WANG. *Duke Univ., Duke Univ.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 FF5 **149.03** New ways to wiggle whiskers: Optogenetic control of whisker movement and active sensation. D. J. MARGOLIS*; S. PARK; A. BANDI; C. R. LEE. *Rutgers Univ., Rutgers Univ.*

11:00 FF6 **149.04** Motor cortex-directed movement of the mystacial vibrissae through pre-motor neurons in the spinal trigeminal nuclei. N. MERCER LINDSAY*; P. M. KNUTSEN; D. GIBBS; H. J. KARTEN; D. KLEINFELD. *Univ. of California San Diego, Univ. of California San Diego, Univ. of Oslo, Univ. of California San Diego.*

8:00 FF7 **149.05** Vibrissa motor cortex activity suppresses contralateral whisker movement. C. L. EBBESEN*; G. DORON; C. LENSCHOW; M. BRECHT. *BCCN Berlin.*

9:00 FF8 **149.06** Biomechanical coupling of frictional movements at the tip of a vibrissa to its base. M. OLADAZIMI*; T. PUTELAT; C. SCHWARZ; R. SZALAI; A. CHAMPNEYS. *IMPRS Grad. Sch., Systems Neurophysiology, Werner Reichardt Ctr. for Integrative Neurosci., Dept. of Cognitive Neurology, Hertie Inst. for Clin. Brain Res., Dept. of Engin. Mathematics, Univ. of Bristol.*

10:00 FF9 **149.07** A new dimension in multiple whisker tracking: Imaging and tracking whisking behaviour in 3D. M. S. LOFT*; M. H. EVANS; S. FOX; R. S. PETERSEN. *Univ. of Manchester.*

11:00 FF10 **149.08** Diverse strategies underlying active tactile discrimination in head-fixed mice: A novel, three-choice object localisation task. M. H. EVANS*; D. CAMPAGNER; S. FOX; K. CHLEBIKOVA; D. PETTIFER; M. D. HUMPHRIES; K. SVOBODA; R. S. PETERSEN. *Univ. of Manchester, Janelia Res. Campus, Howard Hughes Med. Inst.*

8:00 FF11 **149.09** Discrimination of tactile regularity : A novel 2-alternative forced-choice task in the rat. P. KEREKES; A. DARET; D. SHULZ; V. EGO-STENGEL*. *CNRS.*

9:00 FF12 **149.10** Layer-specific somatosensory processing in head-restrained mice during exploratory locomotion. A. AYAZ*; A. STÄUBLE; F. HELMCHEN. *Univ. of Zurich.*

10:00 FF13 **149.11** Activation of VIP-expressing interneurons in primary somatosensory cortex in head-restrained mice during exploratory locomotion. A. STÄUBLE*; A. AYAZ; F. HELMCHEN. *Univ. of Zurich.*

11:00 FF14 **149.12** The role of VPm thalamus in whisker related tactile perception. C. WAIBLINGER*; C. J. WHITMIRE; A. J. SEDERBERG; G. B. STANLEY; C. SCHWARZ. *Georgia Tech. and Emory, Werner Reichardt Ctr. for Integrative Neurosci., Hertie Inst. for Clin. Brain Res.*

8:00 FF15 **149.13** Thalamic control of cortical sensory representations. P. Y. BORDEN*; A. D. ORTIZ; A. J. SEDERBERG; A. E. MORRISSETTE; C. WAIBLINGER; D. JAEGER; G. B. STANLEY. *Georgia Tech., Emory Univ.*

9:00 FF16 **149.14** State-dependent encoding in the thalamocortical circuit. Modeling feature selectivity in different optogenetically induced thalamic states. C. WHITMIRE*; C. WAIBLINGER; Y. LIEW; C. SCHWARZ; G. B. STANLEY. *Georgia Tech/Emory, Univ. of Tübingen.*

10:00 FF17 **149.15** Brain state and spatiotemporal representations of tactile stimuli in sensory cortex explored with genetically expressed voltage-sensor imaging. A. J. SEDERBERG*; H. J. V. ZHENG; B. J. HE; G. B. STANLEY. *Georgia Inst. of Technol. & Emory Univ., Max Planck Florida Inst., Neurosci. Institute, New York Univ. Langone Med. Ctr.*

11:00 FF18 **149.16** Spatio-temporal population coding in layer 2/3 of rodent barrel cortex. S. MOLDAKARIMOV*; M. BAZHENOV; D. E. FELDMAN; T. J. SEJNOWSKI. *UCSD/ Salk Inst., UCSD, UC Berkeley, Salk Inst.*

8:00 GG1 **149.17** Widefield imaging of sensory-evoked and behavior-related cortical activity in GCaMP6 transgenic mice. C. R. LEE*; M. B. DELROCINI; J. H. FAROOQUI; D. J. MARGOLIS. *Rutgers The State Univ. of New Jersey.*

9:00 GG2 **149.18** Is S1 required for active sensory detection-transient versus chronic inactivation of primary sensory cortex. Y. HONG*; R. BRUNO. *Columbia Univ.*

10:00 GG3 **149.19** Rapid disinhibition during whisker map plasticity is mediated by reduced intrinsic excitability of PV interneurons in mouse S1. M. A. GAINEY*; D. E. FELDMAN. *UC Berkeley.*

11:00 GG4 **149.20** Dense statistical connectome of rat barrel cortex. D. UDVARY*; R. EGGER; V. J. DERCKSEN; M. OBERLAENDER. *Max Planck Inst. For Biol. Cybernetics, Zuse Inst. Berlin.*

8:00 GG5 **149.21** Cell-type-specific temporal dynamics of GABAergic interneurons in mouse barrel cortex during active sensation. J. YU*; A. AGMON; K. SVOBODA. *HHMI Janelia Res. Campus, West Virginia Univ.*

9:00 GG6 **149.22** ▲ Characterization of dendritic spines in the barrel cortex of mice, strain versus deprivation. M. A. ESPINOSA; C. CHEN; J. C. BRUMBERG*. *Queens Col., Univ. of California, Santa Cruz, Queens Col.*

POSTER

150. Touch and Proprioception: Peripheral Mechanisms

Theme D: Sensory Systems

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 GG7 **150.01** Fishing for the molecules and mechanisms that underlie sensory transduction in zebrafish Rohon-Beard cells. S. E. LOW*; D. MCCLURE; A. J. HUDSPETH. *Rockefeller Univ.*

9:00 GG8 **150.02** Cutaneous mechanoreceptor morphology and immunostaining as potential biomarkers for neuropathy. B. D. MCADAMS*; G. WENDELSCHAFER-CRABB; W. KENNEDY. *Univ. Minnesota.*

10:00 GG9 **150.03** Mechanotransduction of mouse Merkel cells in whisker hair follicles and effect of paclitaxel on whicker afferent SA1 response. W. CHANG*; H. KANDA; J. GU. *Univ. of Alabama At Birmingham, Univ. of Alabama at Birmingham.*

11:00 GG10 **150.04** A study of somatosensory neuron mechanics using the laser optical trapping system. H. KANDA*; J. GU. *Univ. of Alabama at Birmingham.*

8:00 GG11 **150.05** Acetylated microtubules are essential for touch sensation in mice. S. MORLEY*; Y. QI; L. IOVINO; C. PORTULANO; L. CASTALDI; N. KALEBIC; K. SHIRLEKAR; C. FUSCO; A. ASARO; L. ANDOLFI; C. TISCHER; U. MATTEI; A. DE NINNO; M. LAZZARINO; L. BUSINARO; J. RIES; Y. SCWAB; G. BOLASCO; J. HU; P. HEPPENSTALL. *EMBL Mouse Biol. Unit, CIN, Univ. of Tuebingen, EMBL, MPI-CBG, SISSA, CNR.*

9:00 GG12 **150.06** Tentonin 3 confers distinct mechanosensitive currents in dorsal root ganglion neurons with proprioceptive fuction. G. HONG*; H. KIM; J. WEE; H. LU; U. OH. *Seoul Natl. Univ.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 GG13 **150.07** The mechanotoxin GsMTx-4 inhibits the Stretch-Activated BK channel through the mechanism specific to mechano-gating. Q. TANG*; M. TANG; H. LI; X. DU; Y. FENG; X. TANG; F. ZHANG; S. KE; P. DONG; M. SOKABE; Z. ZHANG. *Xuzhou Med. Univ., Dept. of Pathology, Affiliated Hosp. of Southwest Med. Univ., Nagoya University, Grad. Sch. of Med.*

11:00 GG14 **150.08** ● Pressure induced mechanostimulation on patch clamped PC-12 cells provides access to drug discovery on Piezo currents. T. KNOTT*; J. ZHANG. *Cytocentrics Inc.*

8:00 HH1 **150.09** A combined technique for retrograde tracing and transcriptome analysis: Zeroing in on specific neural populations based on peripheral target. G. R. SCHMIDT-MCCORMACK*; A. KANTHASAMY; N. D. JEFFERY. *Iowa State Univ., Iowa State Univ., Iowa State Univ.*

9:00 HH2 **150.10** Compartmentalized co-cultures for studying interactions between central and peripheral nervous systems in various pain states. N. VYSOKOV*; S. B. MCMAHON; R. RAOUF. *King's Col. London.*

10:00 HH3 **150.11** Knockout of Nav1.6 in DRG neurons contributes to amelioration of mechanical allodynia. L. CHEN*; A. M. TAN; Z. PENG; J. HUANG; X. CHENG; S. G. WAXMAN; S. D. DIB-HAJJ. *Yale Univ. / VA Healthcare CT.*

11:00 HH4 **150.12** Voltage gated sodium channel NaV1.6 is expressed in muscle spindles. D. I. CARRASCO*; T. C. COPE. *Georgia Inst. Of Technol.*

POSTER

151. Neural Coding of Tactile Sensation

Theme D: Sensory Systems

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 HH5 **151.01** Cortical encoding of tactile roughness in primate primary somatosensory cortex (S1). W. YAÏCI; E. MEFTAH*; C. E. CHAPMAN. *Univ. de Montréal, Univ. De Montreal.*

9:00 HH6 **151.02** Human tactile afferent responses to skin strain patterns caused by fingertip shearing. A. BARREA*; E. JAROCKA; P. LEFÈVRE; J. THONNARD; B. B. EDIN; B. P. DELHAYE. *Univ. Catholique De Louvain, Umeå Univ., Univ. of Chicago.*

10:00 HH7 **151.03** Modulation of downstream targets by spatio-temporal pattern stimulation of primary somatosensory cortex. T. SCHRÖDER*; V. S. CONSTANTINESCU; M. SCHWAERZLE; S. AYUB; P. RUTHER; F. P. BATTAGLIA. *Radboud Univ., Univ. of Groningen, Univ. of Freiburg.*

11:00 HH8 **151.04** Unified framework for the perception of stimulus intensity and stimulus duration in humans and rats. A. TOSO*; A. FASSIHI; F. PULECCHI; M. E. DIAMOND. *SISSA.*

8:00 HH9 **151.05** Encoding of whisker mechanics and kinematics in trigeminal ganglion neurons of the rat. N. E. BUSH*; A. E. T. YANG; L. A. HUET; S. A. SOLLA; M. J. Z. HARTMANN. *Northwestern Univ. - Chicago, Northwestern Univ., Northwestern Univ., Northwestern Univ.*

9:00 HH10 **151.06** High-velocity whisker stimulation evokes "dense" population response in layer 2/3 vibrissal cortex. Y. RANJBAR-SLAMLOO*; E. ARABZADEH. *Australian Natl. Univ.*

10:00 HH11 **151.07** Neural representation of contact pressure in primary somatosensory cortex. T. CALLIER*; S. J. BENSMAIA. *Univ. of Chicago.*

11:00 HH12 **151.08** Coding of edge orientation in afferent responses of macaques. A. K. SURESH*; B. P. DELHAYE; H. P. SAAL; S. J. BENSMAIA. *Univ. of Chicago.*

8:00 HH13 **151.09** Dynamics of motion signals in the primary somatosensory cortex. F. PIRSCHEL*; J. E. WINBERRY; S. J. BENSMAIA. *Univ. of Chicago.*

9:00 HH14 **151.10** The transformation of texture representations from somatosensory periphery to cortex. J. D. LIEBER; H. P. SAAL; Z. M. BOUND-SINGER; A. I. WEBER; J. E. WINBERRY*; S. J. BENSMAIA. *Univ. of Chicago.*

10:00 HH15 **151.11** High-dimensional representation of hand movements in sensory and motor cortices. J. GOODMAN*, JR; G. A. TABOT; A. K. SURESH; N. G. HATSOPOULOS; S. J. BENSMAIA. *Univ. of Chicago.*

11:00 HH16 **151.12** Decoding motion speed from the responses of tactile afferents. B. P. DELHAYE*; A. I. WEBER; S. J. BENSMAIA. *Univ. of Chicago, The Univ. of Washington.*

8:00 HH17 **151.13** Using optogenetics to probe neuronal excitability in mechanosensory afferents. D. AL-BASHA*; S. A. PRESCOTT. *The Hosp. For Sick Children, Univ. of Toronto.*

9:00 II1 **151.14** Whisker-mediated shape recognition in head-fixed mice. C. RODGERS*; P. CALAFATI; A. KHANNA; R. BRUNO. *Columbia Univ. Med. Ctr.*

10:00 II2 **151.15** Neural encoding of raised gratings in vibrissal S1 during a head-fixed surface discrimination task. B. R. ISETT*; S. H. FEASEL; M. A. LANE; D. E. FELDMAN. *Univ. of California Berkeley.*

11:00 II3 **151.16** Conveying integrated whisker information through innate network and γ oscillation in the sensorimotor cortex of mice. H. LIM*; E. BAEG; S. BAE; M. SUH. *CNIR, Inst. For Basic Sci. (IBS), Sungkyunkwan Univ., Sungkyunkwan Univ.*

8:00 II4 **151.17** Spatio Temporal profile of neural activity in barrel cortex and perceptual decision. J. CAMON*; S. HUGUES; M. ERLANDSON; S. LAGOUN; E. MAROUANE; I. BUREAU. *Univ. Aix-Marseille, INMED, U901, INSERM.*

9:00 II5 **151.18** Dendritic activity underlying angular tuning of barrel cortex neurons *in vivo*. M. LAVZIN*; L. GARION; U. DUBIN; J. SCHILLER. *Technion.*

10:00 II6 **151.19** Muscle-based representation of reaching in macaque somatosensory cortex. R. H. CHOWDHURY*; J. GLASER; L. E. MILLER. *Northwestern Univ.*

11:00 II7 **151.20** Neural dynamics of sensory perception and decision making in the mouse posterior parietal cortex. S. B. SACHIDHANANDAM*; H. MOHAN; L. SHUMANOVSKI; A. GILAD; B. LAURENCZY; C. DE KOCK; F. HELMCHEN. *Univ. of Bern, Univ. of Zurich, VU Univ. Amsterdam.*

8:00 II8 **151.21** Active touch modulates cortical excitation and inhibition evoked by closed-loop optogenetic stimulation. S. SUNIL*; J. B. SCHROEDER; J. T. RITT. *Boston Univ.*

9:00 II9 **151.22** Does proprioceptive information contribute to illusory force sensation elicited by asymmetric vibration? S. TAKAMUKU*; T. TESHIMA; T. AMEMIYA; H. GOMI. *NTT Communication Sci. Labs., NTT Basic Res. Labs.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 II10 **151.23** GPU-accelerated calculation of an electric field generated by an electric fish and neural activities of the electrosensory system. K. FUJITA*; Y. KASHIMORI. *Tsuyama Natl. Col. of Technol., Univ. of Electro-Communications.*

11:00 II11 **151.24** Frontal-posterior interactions in mouse neocortex during a texture discrimination task. A. GILAD*; J. CHEN; F. HELMCHEN. *Brain Res. Inst., Boston Univ.*

8:00 II12 **151.25** Response of vibrissal-responsive trigeminal ganglion neurons to airflow. P. KUMARAPPAN*; N. E. BUSH; M. J. Z. HARTMANN. *Northwestern Univ., Northwestern Univ., Northwestern Univ.*

9:00 II13 **151.26** ● Brain encoding of saltatory velocity-scaled somatosensory array in glabrous hand among neurotypical adults. H. OH*; R. CUSTEAD; Y. WANG; S. BARLOW. *Univ. of Nebraska, Univ. of Nebraska, Univ. of Nebraska.*

10:00 II14 **151.27** Laminar and cross-columnar refinement of sensory-evoked activity in developing mouse barrel cortex. A. VAN DER BOURG*; J. YANG; V. REYES-PUERTA; M. C. STÜTTGEN; F. HELMCHEN; H. LUHMANN. *Brain Res. Inst., Johannes Gutenberg Uiversity, Johannes Gutenberg Uiversity.*

11:00 II15 **151.28** Touch and self-motion coding by Merkel cell-associated primary afferents. K. S. SEVERSON*; D. XU; L. BAI; D. D. GINTY; D. H. O'CONNOR. *Johns Hopkins Univ. Sch. of Med., Harvard Med. Sch.*

8:00 II16 **151.29** Characterizing tactile coding in the whisker-barrel system using calcium epifluorescence imaging in rats. M. M. MANSY; I. S. BADRELDIN; K. G. OWEISS*. *Univ. of Florida, Univ. of Florida, Univ. of Florida.*

POSTER

152. Olfactory Behavior

Theme D: Sensory Systems

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 II17 **152.01** Discrimination of temporally patterned stimuli in a high throughput, automated behavioural training system: AutonoMouse. A. ERSKINE*; T. ACKELS; D. DASGUPTA; I. FUKUNAGA; A. T. SCHAEFER. *Francis Crick Inst., Univ. Col. London.*

9:00 JJ1 **152.02** ● From Shape to Smell: Predicting olfactory perception of single molecules. R. C. GERKIN*; A. KELLER; J. MAINLAND; Y. IHARA; L. VOSSHALL; P. MEYER. *Arizona State Univ., The Rockefeller Univ., Monell Chem. Senses Ctr., Ajinomoto Co, Inc, IBM.*

10:00 JJ2 **152.03** Development of a new odor battery for testing odor quality discrimination. A. J. FISCELLA*; C. MURPHY. *San Diego State Univ., San Diego State Univ.*

11:00 JJ3 **152.04** ▲ Simple and affordable microcontroller based platform for quantifying odor preferences in rodents. S. JAGETIA; D. W. WESSON*. *Hathaway Brown High Sch., Case Western Reserve Univ.*

8:00 JJ4 **152.05** Neurophysiological mechanisms of the perception of natural odors in human. I. ZYMA*; S. TUKAIEV; S. KRYZHANOVSKYI; A. CHERNINSKYI; M. MAKARCHUK. *Natl. Taras Shevchenko Univ. of Kyiv.*

9:00 JJ5 **152.06** Human olfactory segmentation: Detecting targets among distractors. S. CORMIEA*; D. ROKNI; V. N. MURTHY; K. NAKAYAMA. *Harvard Univ. Dept. of Psychology, Harvard Univ.*

10:00 JJ6 **152.07** Classical olfactory fear conditioning non-selectively enhances olfactory bulb glomerular responses in awake behaving mice. J. M. ROSS*; M. L. FLETCHER. *Univ. of Tennessee Hlth. Sci. Ctr.*

11:00 JJ7 **152.08** Memory enhances search strategies during odor-guided foraging. B. J. JACKSON*; S. OH; V. GOPAL; A. SEMINARA; D. H. GIRE. *Univ. of Washington, Elmhurst Col., CNRS, Univ. Nice Sophia Antipolis.*

8:00 JJ8 **152.09** Contribution of olfactory sensory neurons in respiration entrained brain oscillations. A. H. MOBERLY*; M. MA. *Univ. of Pennsylvania.*

9:00 JJ9 **152.10** ▲ Multiunit activity in the granule layer of the cerebellum by olfactory stimulation during training of sexual behavior of male rats. A. TAMARIZ*; Z. S. HERNÁNDEZ-BRIONES; L. VÁSQUEZ; A. J. MARTÍNEZ-CHACÓN; P. CARRILLO; M. E. HERNÁNDEZ; G. A. CORIA-ÁVILA; J. MANZO-DÉNES; L. I. GARCÍA. *Ctr. De Investigaciones Cerebrales, Univ. Veracruzana.*

10:00 JJ10 **152.11** Attentional influences on odor-guided behavior and information processing in the ventral striatum. K. S. CARLSON*; E. S. DAUSTER; M. A. GADZIOLA; D. W. WESSON. *Case Western Reserve Univ., Case Western Reserve Univ.*

11:00 JJ11 **152.12** Investigating the neural correlates of olfactory-mediated memory consolidation in the sleeping human brain. L. K. SHANAHAN*; E. GJORGIEVA; J. A. GOTTFRIED. *Northwestern Univ.*

8:00 JJ12 **152.13** Switching between distinct neural ensembles mediates sensing and unsensing of a sensory stimulus. D. SAHA*; C. LI; W. PADOVANO; Z. CHEN; B. RAMAN. *Washington Univ. In St. Louis.*

9:00 JJ13 **152.14** ▲ Super-Fly-gym: An open-source, closed-loop stimulation and behavior tracking system for whole brain imaging in adult *Drosophila melanogaster*. K. YANG*; W. LI; R. S. MANN; E. M. C. HILLMAN. *Columbia Univ., Columbia Univ., Columbia Univ.*

10:00 JJ14 **152.15** Evaluating various properties of odor-evoked neural responses. S. NIZAMPATNAM*; D. SAHA; B. RAMAN. *Washington Univ. In St Louis.*

11:00 JJ15 **152.16** ▲ Effects of olfactory stimulation on activation of cerebellar Purkinje cells during training of sexual behavior of male rats. Z. S. HERNÁNDEZ*; M. PÉREZ-POUCHOULEN; L. VÁSQUEZ; A. TAMARIZ; P. CARRILLO; G. CORIA-AVILA; J. MANZO; L. GARCÍA. *Doctorado Investigaciones Cerebrales Univ. V, Univ. of Maryland Sch. of Med., Univ. Veracruzana, Univ. Veracruzana.*

8:00 JJ16 **152.17** ●▲ Objective chemosensory testing in subjective salty hypergeusia; report of three cases. N. KHANGURA*; A. R. HIRSCH. *Aureus Univ. Sch. of Med., Univ. of Michigan.*

9:00 JJ17 **152.18** Olfactory preferences are a matter of taste: Retronasal learning requires taste cortex. M. BLANKENSHIP*; M. GRIGOROVA; D. KATZ; J. X. MAIER. *Brandeis Univ., Brandeis Univ., Brandeis Univ., Wake Forest Sch. of Med.*

10:00 KK1 **152.19** Leptin modulates olfactory-driven feeding-related behaviors by a direct action on the olfactory bulb. M. BENDAHMANE*; M. C. OGG; J. M. ROSS; M. L. FLETCHER. *The Univ. of Tennessee Hlth. Sci. Ctr.*

11:00 KK2 **152.20** Citalopram induced chemosensory dysfunction. N. OKEKE*; S. KATCHY; A. R. HIRSCH. *Caribbean Med. Univ., Univ. of Nigeria, Smell and Taste Res. Fndn.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

153. Auditory Processing: Vocalizations

Theme D: Sensory Systems

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 KK3 **153.01** Vocal plasticity and engagement in adult zebra finches. J. HYLAND BRUNO*; E. GLOBERSON; O. TCHERNICHOVSKI. *Hunter Col., Grad. Ctr. of the City Univ. of New York (CUNY), Jerusalem Acad. of Music and Dance.*

9:00 KK4 **153.02** Word-form feature combinatorics in the human auditory ventral stream. I. DEWITT*; J. WITTIG, Jr.; J. COCJIN; W. THEODORE; S. INATI; K. ZAGHLOUL; J. P. RAUSCHECKER; B. HORWITZ. *NIDCD/NIH, Georgetown Univ. Med. Ctr., NINDS/NIH, NINDS/NIH, NINDS/NIH.*

10:00 KK5 **153.03** Slow rhythms in conspecific vocalisations are over-represented in the primary auditory cortex of common marmosets. T. BANNO*; W. SUZUKI; N. MIYAKAWA; T. TANI; N. ICHINOHE. *Univ. of Pennsylvania Sch. of Med., Natl. Ctr. of Neurol. and Psychiatry, RIKEN BSI.*

11:00 KK6 **153.04** Voice perception and recognition after lesion to face selective posterior temporal sulcus. J. GUO*; L. GARRIDO; R. LIU; T. SUSILO; J. BARTON; B. DUCHAINE. *Dartmouth Col., Brunel Univ. London, Univ. of British Columbia, Victoria Univ. of Wellington.*

8:00 KK7 **153.05** The effect of language familiarity on the cortical analysis of speech-specific temporal structure. T. OVERATH*; J. H. PAIK. *Duke Univ.*

9:00 KK8 **153.06** High-resolution intracranial recordings provide direct electrophysiological evidence for music and speech-selective neural populations in human auditory cortex. S. V. NORMAN-HAIGNERE*; J. FEATHER; P. BRUNNER; A. RITACCIO; J. H. MCDERMOTT; N. KANWISHER; G. SCHALK. *MIT, Natl. Ctr. for Adaptive Neurotechnologies, Wadsworth Ctr., Albany Med. Col.*

10:00 KK9 **153.07** Perceptual boundaries for species-specific vocalizations in the common marmoset (Callithrix jacchus). M. S. OSMANSKI*; X. WANG. *Johns Hopkins Univ.*

11:00 KK10 **153.08** Attentional modulation of phoneme related potentials in EEG responses to multi-talker speech. S. VYSYARAJU*; B. KHALIGHINEJAD; G. CRUZATTO DA SILVA; N. MESGARANI. *Columbia Univ.*

8:00 KK11 **153.09** Role of auditory cortex in feedback-dependant vocal control in marmoset monkeys. S. ELIADES*; J. TSUNADA. *Univ. of Pennsylvania Sch. of Med.*

9:00 KK12 **153.10** Exploring the effect of intelligibility on cortical entrainment. L. S. BALTZELL*; V. RICHARDS; R. SRINIVASAN. *UC Irvine.*

10:00 KK13 **153.11** Regional homogeneity of intrinsic brain activity correlates with auditory-motor integration for voice control. H. LIU*; Z. GUO; X. HUANG. *Dept. Rehabil. Medicine, The First Affiliated Hospital, Sun Yat-Sen Univer.*

11:00 KK14 **153.12** Neural coding of species identity in birdsong prosody. M. ARAKI; M. M. BANDI; Y. YAZAKI-SUGIYAMA*. *Okinawa Inst. of Sci. and Technol. (OIST) Grad. Univ.*

8:00 KK15 **153.13** Attentional modulation of speaker-phonetic features in primary and non-primary human auditory cortices. J. A. O'SULLIVAN*; S. A. SHETH; G. M. MCKHANN; A. D. MEHTA; N. MESGARANI. *Columbia Univ., The Neurolog. Inst., Feinstein Inst. for Med. Res.*

9:00 KK16 **153.14** Coordination of vocal interactions by marmoset monkeys in naturalistic social environments. J. TSUNADA*; B. BALLINTYN; S. J. ELIADES. *Univ. of Pennsylvania Sch. of Med.*

10:00 KK17 **153.15** Ensemble neural recordings from awake behaving songbirds via microdrive-coupled tungsten microarrays. W. E. WOOD*; F. THEUNISSEN. *Univ. of California, Berkeley.*

POSTER

154. Auditory Processing: Adaption and Learning

Theme D: Sensory Systems

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 KK18 **154.01** High intensity sound stimulation changes electrical properties of hippocampal CA1 pyramidal neurons. A. O. CUNHA*; R. M. X. LEÃO. *Univ. of Sao Paulo, Univ. of Sao Paulo.*

9:00 LL1 **154.02** Discrimination of synthetic vowel sounds consisting of multiple formants: A potential rat model for discrimination of speech sounds. G. OGAWA*; M. KUDOH. *Teikyo Univ. Sch. of Med.*

10:00 LL2 **154.03** Calretinin- and vasoactive intestinal polypeptide- positive interneuron responses in auditory cortex following fear conditioning. E. M. MEYER*; P. ZMARZ; G. B. KELLER; A. LÜTHI. *Friedrich Miescher Inst. For Biomed. Resear.*

11:00 LL3 **154.04** Associative plasticity in the auditory cortex induced by fear conditioning. O. ZELENKA*; O. NOVAK; J. SYKA. *Inst. of Exptl. Medicine, Acad. of Sci. of the Czech Republic.*

8:00 LL4 **154.05** Regularity-dependent changes in neuronal adaptation in the awake rat auditory cortex. B. H. GAESE*. *Goethe Univ. Frankfurt.*

9:00 LL5 **154.06** Neural circuit mechanisms for recognizing and predicting self-generated sounds. D. M. SCHNEIDER*; R. MOONEY. *Duke Univ.*

10:00 LL6 **154.07** Echoic memory for very short meaningless stimuli: Barely heard but robustly encoded. J. VISWANATHAN*; F. RÉMY; S. J. THORPE. *CerCo, CNRS UMR 5549, Univ. of Toulouse III - Paul Sabatier.*

11:00 LL7 **154.08** Cortical mechanisms of perceptual learning. M. L. CARAS*; D. WANG; D. H. SANES. *New York Univ., New York Univ.*

8:00 LL8 **154.09** True deviance sensitivity in awake freely moving rats. A. POLTEROVICH; M. M. JANKOWSKI*; I. NELKEN. *The Hebrew Univ. of Jerusalem.*

9:00 MM1 **154.10** Auditory detection learning alters the cortical population response via muscarinic receptors. D. T. BLAKE*; E. CARPENTER-HYLAND; J. GRIFFETH; A. V. TERRY, Jr; A. VAZDARJANOVA. *Med. Coll Georgia/Augusta Univ., Morehouse Sch. of Med., Augusta Univ., Augusta Univ., Augusta Universtiy and Charles Norwood VAMC.*

10:00 MM2 **154.11** Cross-frequency coupling increases during adaptation of high-γ responses in human auditory cortex. U. MALINOWSKA*; P. FRANASZCZUK; N. E. CRONE; D. BOATMAN-REICH. *Johns Hopkins Sch. of Med., Human Res. and Engin. Directorate, Johns Hopkins Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 MM3 **154.12** Rapid adaptation to changing signal conditions in human auditory cortex. H. BAI*; L. K. LONG; T. NAGAMINE; A. D. MEHTA; N. MESGARANI. *Columbia Univ., Columbia Univ., Feinstein Inst. for Med. Res.*

8:00 MM4 **154.13** Hierarchical mismatch responses to auditory sequences in the human brain. P. LEUNG*; R. E. ROSCH; K. J. FRISTON; T. BALDEWEG. *Univ. Col. London, Univ. Col. London, Univ. Col. London.*

9:00 MM5 **154.14** Contrast gain control in auditory thalamus. M. LOHSE*; B. D. B. WILLMORE; V. M. BAJO; A. J. KING. *Univ. of Oxford.*

10:00 MM6 **154.15** Does long lasting exposure to non-traumatic industrial noise affect differentially the auditory cortex in adult vs. immature rats? F. OCCELLI; B. GOURÉVITCH; J. EDELINE*. *Paris Saclay Inst. Of Neurosci. Neuropsi.*

11:00 MM7 **154.16** Rapid adaptation to the timbre of natural sounds. E. A. PIAZZA*; F. E. THEUNISSEN; D. WESSEL; D. WHITNEY. *Princeton Univ., Univ. of California, Berkeley, Univ. of California, Berkeley.*

8:00 MM8 **154.17** Auditory Categorization in the Rhesus Macaque. A. GARCIA*; M. MISHKIN; R. C. SAUNDERS. *Natl. Inst. of Mental Hlth.*

9:00 MM9 **154.18** Origin of spontaneous activity in the auditory system following noise induced hearing loss. C. H. PARSONS*; N. D. SOBARUN; J. W. MORLEY. *Western Sydney Univ.*

10:00 MM10 **154.19** Mechanisms of movement-related changes in auditory thresholds. J. SUNDARARAJAN*; R. MOONEY. *Duke Univ.*

11:00 MM11 **154.20** Inhibition of LTP in the hippocampal Schaffer-CA1 pathway by one minute of high-intensity noise. J. D. LARA; A. O. S. CUNHA; R. M. LEAO*. *Univ. of São Paulo, Univerisity of São Paulo, Univerisity of São Paulo.*

8:00 MM12 **154.21** Evolutionary origins of non-adjacent rule processing in primate brain potentials. A. E. MILNE*; J. L. MUELLER; C. MÄNNEL; A. ATTAHERI; A. FRIEDERICI; C. I. PEKTOV. *Newcastle Univ., Univ. of Osnabrück, Max Planck Inst. for Human Cognitive and Brain Sci.*

9:00 NN1 **154.22** Unsupervised learning and recognition of vowel sequences in the auditory cortex. S. TEKI*; B. D. WILLMORE; A. J. KING. *Univ. of Oxford.*

10:00 NN2 **154.23** Neural correlates of incidental learning in the mouse inferior colliculus. H. CRUCES SOLIS; O. BABAEV; Z. JING; N. STRENZKE; L. DE HOZ*. *Max Planck Inst. of Exptl. Med., Intl. Max Planck Res. Sch. for Neurosciences, Max Planck Inst. of Exptl. Med., Univ. Med. Ctr.*

11:00 NN3 **154.24** Effect of fear conditioning on stimulus specific adaptation to complex sounds in freely moving animals. A. YARON*; M. JANKOWSKI; R. BADRIEH; I. NELKEN. *Neurobio., Hebrew university, Hebrew university.*

8:00 NN4 **154.25** Developing an objective test for tinnitus in humans. C. A. WILSON*; M. SEREDA; J. I. BERGER; A. R. PALMER; D. A. HALL; J. DE BOER; M. N. WALLACE. *MRC Inst. of Hearing Res., Univ. of Nottingham, Natl. Inst. for Hlth. Res. (NIHR) Nottingham Hearing Biomed. research Unit, MRC Inst. of Hearing Res.*

POSTER

155. Interlimb and Bimanual Control

Theme E: Motor Systems

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 NN5 **155.01** Accuracy of arm position sense in sighted and visually-impaired people. K. OH*; B. I. PRILUTSKY. *Georgia Inst. of Technol., Georgia Inst. of Technol.*

9:00 NN6 **155.02** Encoding of contralateral and ipsilateral hand movements by high-γ and θ bands of local field potentials in the globus pallidus of monkeys. O. YOKOYAMA*; Y. NAKAYAMA; E. HOSHI. *Tokyo Metropolitan Inst. of Med. Sci., AMED-CREST, AMED.*

10:00 NN7 **155.03** Lower limb support preference when initiating reach to grasp movements during locomotion. G. C. BELLINGER*; K. A. PICKETT; A. H. MASON. *Univ. of Wisconsin - Madison, Univ. of Wisconsin - Madison.*

11:00 NN8 **155.04** Neurons in the globus pallidus, supplementary motor area, and caudal cingulate motor area are differentially involved in contralateral and ipsilateral hand movements in monkeys. Y. NAKAYAMA*; O. YOKOYAMA; E. HOSHI. *Tokyo Metropolitan Inst. of Med. Sci., AMED-CREST, AMED.*

8:00 NN9 **155.05** Modulation of corticospinal output associated with convergence of multiple effectors. R. J. IBEY*; D. ANDREW; W. R. STAINES. *Univ. of Waterloo.*

9:00 NN10 **155.06** ● Effects of applying differential fore-aft resistance on propulsive force generation during walking. A. NAIDU*; C. P. HURT; D. A. BROWN. *Univ. of Alabama At Birmingham, Univ. of Alabama At Birmingham.*

10:00 NN11 **155.07** The influence of transcranial random noise stimulation on motor skill acquisition and learning in a golf putting task. L. LIMA DE ALBUQUERQUE*; K. M. FISCHER; A. L. PAULS; M. A. GUADAGNOLI; Z. A. RILEY; B. POSTON. *Univ. of Nevada, Las Vegas, Indiana Univ. – Purdue Univ. Indianapolis.*

11:00 NN12 **155.08** Characterization of involuntary arm movements elicited by lower extremity efforts in pediatric hemiplegia. R. L. HAWE*; J. P. A. DEWALD. *Northwestern Univ., Northwestern Univ.*

8:00 NN13 **155.09** Electrophysiological correlates of interference during discrete bimanual coordination. P. C. DESROCHERS*; A. T. BRUNFELDT; F. A. KAGERER. *Michigan State Univ., Michigan State Univ.*

9:00 NN14 **155.10** Gating sensory inputs in the ipsilateral somatosensory cortex during unimanual force generation. Y. LEI*; M. A. PEREZ. *Univ. of Miami.*

10:00 OO1 **155.11** Impact of transcranial direct current stimulation over M1 leg area on dynamic balance task performance. E. KAMINSKI*; M. HOFF; V. RJOSK; C. J. STEELE; C. GUNDLACH; B. SEHM; A. VILLRINGER; P. RAGERT. *MPI For Human Cognitive and Brain Sci., Cerebral Imaging Centre, Douglas Mental Hlth. Inst., Univ. of Leipzig, Charité and Humboldt Univ., Univ. of Leipzig.*

11:00 OO2 **155.12** Influence of sex on asymmetries in pain sensitivity, proprioception, and strength. J. H. KING*; A. R. KARDUNA. *Univ. of Oregon.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 OO3 **155.13** Predicting the behavior of each individual: Kinematic parameters during sensorimotor adaptation determine the magnitude of interlimb transfer and after-effects in right- and left-handers. A. G. RENAULT*; H. Z. LEFUMAT; L. BRINGOUX; C. BOURDIN; J. VERCHER; F. R. SARLEGNA. *Inst. Des Sci. Du Mouvement Etienne-Jules M.*

9:00 OO4 **155.14** Lateralized motor control processes determine asymmetry of interlimb transfer. R. L. SAINBURG*; S. Y. SCHAEFER; V. YADAV. *Penn State Univ., Penn State Col. of Med., Arizona State Univ., Stonybrook Univ.*

10:00 OO5 **155.15** Sensorimotor postmovement and foreperiod β-band modulations by unilateral kinematic-errors in two bimanual coordination tasks. J. ALAYRANGUES*; F. TORRECILLOS; A. JAHANI; N. MALFAIT. *AMU & CNRS Inst. De Neurosciences De La Timone.*

11:00 OO6 **155.16** Practice-induced changes in EEG during asymmetric bimanual skill learning. S. PARK*; H. TAM; D. STERNAD. *Northeastern Univ.*

POSTER

156. Cortical Planning, Execution, and Modeling

Theme E: Motor Systems

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 OO7 **156.01** Increased visual load impairs motor control during a reactive driving task. C. KIM*; E. A. CHRISTOU. *Univ. of Florida.*

9:00 OO8 **156.02** Aging and working memory on manual asymmetry during visuospatial motor tasks. T. S. FLINK*. *Gannon Univ.*

10:00 OO9 **156.03** Prior expectation facilitates corticospinal excitability before sensory evidence accumulation. I. C. WEINBERG*; J. DUPONT-HADWEN; S. BESTMANN. *Univ. Col. London.*

11:00 OO10 **156.04** Voluntary reduction of force variability via modulation of low-frequency oscillations. S. PARK*; A. CASAMENTO-MORAN; B. YACOUBI; E. A. CHRISTOU. *Univ. of Florida.*

8:00 OO11 **156.05** Planning and execution of movements revealed by *in vivo* calcium imaging in mice. J. E. DAHLEN*; E. HWANG; M. MUKUNDAN; T. KOMIYAMA. *Univ. of California San Diego, Univ. of California San Diego.*

9:00 OO12 **156.06** Performance monitoring of action policies in mice. R. F. OLIVEIRA*; R. M. COSTA. *Champalimaud Ctr. for the Unknown.*

10:00 OO13 **156.07** EEG oscillatory modulations (10-12 Hz) discriminate for voluntary motor control and limb movement. E. R. SYMEONIDOU*; M. OLIVARI; J. VENROOIJ; H. H. BÜLTHOFF; L. L. CHUANG. *Max Planck Inst. for Biol. Cybernetics, IMPRS for Cognitive and Systems Neurosci.*

11:00 OO14 **156.08** ● Temporal and kinematic consistency predict sequence awareness. J. W. MINK*; M. JAYNES; M. SCHIEBER. *Univ. Rochester Med. Ctr.*

8:00 PP1 **156.09** ● Reduced sequence awareness in dystonia despite normal performance. M. JAYNES*; J. W. MINK. *Univ. of Rochester Med. Ctr.*

9:00 PP2 **156.10** Contributions of peripheral versus central mechanisms to motor slowing. M. T. BÄCHINGER*; F. THOMAS; N. WENDEROTH. *ETH Zürich, Neural Control of Movement Lab., Univ. Konstanz.*

10:00 PP3 **156.11** Testing the proactive inhibition account: A tms study. L. BATTELLI*; S. C. FICARELLA. *Italian Inst. of Technol., Aix-Marseille Univ.*

11:00 PP4 **156.12** Cortical influence on movement is associated with distinct neuronal activity dynamics. J. A. MIRI*; C. L. WARRINER; T. M. JESSELL. *Columbia Univ.*

8:00 PP5 **156.13** Computational model of sensorimotor cortex. T. D. SANGER*. *USC.*

9:00 PP6 **156.14** Model-free optimal feedback mechanisms of human sensorimotor control. Z. JIANG*; T. BIAN; D. M. WOLPERT. *New York Univ., Univ. of Cambridge.*

10:00 PP7 **156.15** An action selection model based on sensorimotor associations and rewards for recoverable biased potentials. T. NISHIZAWA*; T. URAKAWA; O. ARAKI. *Tokyo Univ. of Sci.*

11:00 PP8 **156.16** Post-Movement activity in M1 contributes to retention when movements become repetitive. R. HAMEL*; P. BERNIER; M. TREMPE. *Univ. De Sherbrooke, Bishop's Univ.*

8:00 PP9 **156.17** The neural substrates of error processing in face of a visuomotor rotation. G. AVRAHAM*; A. SHKEDY-RABANI; O. GROWEISS; I. NISKY; L. SHMUELOF. *Ben-Gurion Univ. of the Negev, Ben-Gurion Univ. of the Negev, Ben-Gurion Univ. of the Negev, Ben-Gurion Univ. of the Negev.*

9:00 PP10 **156.18** Good brain-state for high performance of the visuomotor tracking task - A Simultaneous EEG and fMRI study. H. SHITARA*; S. HOROVITZ; T. HANAKAWA; L. LI; N. THIRUGNANASAMBANDAM; H. CHO; D. MUESSGENS; S. KORKMAZ; M. HALLETT. *Human Motor Control Section, NINDS, NIH, Gunma Univ. Grad. Sch. of Med., Integrative Brain Imaging Center, Natl. Ctr. of Neurol. and Psychiatry.*

10:00 PP11 **156.19** Role of dopamine in motor adaptation with reward and punishment. G. QUATTROCCHI*; J. MONACO; A. HO; F. IRMEN; W. STRUBE; D. RUGE; S. BESTMANN; J. M. GALEA. *UCL Inst. of Neurol., Univ. of Birmingham, Sch. of Psychology.*

11:00 PP12 **156.20** Low-frequency oscillations in force slow reaction time. A. CASAMENTO MORAN*; S. PARK; B. YACOUBI; E. A. CHRISTOU. *Univ. of Florida.*

8:00 PP13 **156.21** ● Identification of EEG biomarkers in essential tremor drug discovery: A preclinical study. V. DUVEAU*; B. MANDÉ-NIEDERGANG; R. MAURY; C. DUMONT; B. POUYATOS; C. ROUCARD; Y. ROCHE. *SynapCell.*

9:00 PP14 **156.22** Visual perception of communicative hand actions in the parietal cortex. B. A. URGEN*; G. A. ORBAN. *Univ. of Parma.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

157. Neuroprosthetics: Non-Invasive Control

Theme E: Motor Systems

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 PP15 **157.01** A brain-computer interface for motor rehabilitation with multi-modal feedback in a chronic stroke patient. G. EDLINGER*; C. GUGER. *Guger Technologies OG, g.tec medical engineering GmbH, g.tec medical engineering GmbH, g.tec neurotechnology USA, Inc.*

9:00 PP16 **157.02** Sensorimotor cortical plasticity induced by the brain-machine interface reduces phantom limb pain. T. YANAGISAWA*; R. FUKUMA; B. SEYMOUR; K. HOSOMI; H. KISHIMA; T. SHIMIZU; H. YOKOI; M. HIRATA; T. YOSHIMINE; Y. KAMITANI; Y. SAITOH. *Osaka Univ., ATR, Osaka Univ., Univ. of Cambridge, Osaka Univ. Grad. Sch. of Med., The Univ. of Electro-Communications, Osaka Univ., Kyoto Univ., ATR.*

10:00 QQ1 **157.03** ● An application of P300-based BMI in patients with Duchenne muscular dystrophy. K. UTSUMI*; Y. OKAHARA; K. TAKANO; T. KOMORI; M. NISHIZAWA; K. KANSAKU. *Res. Inst. of NRCD, Brain Res. Institute, Niigata Univ., Chiba Univ. Grad. Sch. of Med., Natl. Hakone Hosp., The Univ. of Electro-Communications.*

11:00 QQ2 **157.04** Decoding of multi-joint movements using high-density EMG signals and a 7-DoF exoskeleton. A. SARASOLA-SANZ*; N. IRASTORZA-LANDA; E. LOPEZ-LARRAZ; G. ROSSI; N. BIRBAUMER; A. RAMOS-MURGUIALDAY. *Univ. of Tubingen, IMPRS for Cognitive and Systems Neuroscience, Max Planck Inst. Biol Cybenetics, Univ. of Padova, Italy, TECNALIA.*

8:00 QQ3 **157.05** ● Wireless earpiece to control robotic arm in functional tasks. A. PROCHAZKA*; M. J. GAUTHIER; M. BLOUIN. *Univ. of Alberta, Kinova Inc.*

9:00 QQ4 **157.06** EEG-BCI and control of extraskeletons. F. SHIMAN*; N. IRASTORZA-LANDA; A. SARASOLA-SANZ; E. LOPEZ-LARRAZ; M. SPÜLER; N. BIRBAUMER; A. RAMOS-MURGUIALDAY. *Univ. of Tübingen, Inst. of Med. Psychology and Behavioral Neurobiology, Univ. of Tübingen, Intl. Max Planck Res. Sch. (IMPRS) for Cognitive and Systems Neurosci., Computer Sci. Department, Wilhelm-Schickard-Institute, Univ. of Tübingen, Wyss center for Bio- and Neuroengineering, TECNALIA.*

10:00 QQ5 **157.07** A new brain-robot interface system based on SVM-PSO classifier. V. AZIMIRAD*; M. HAJIBABZADEH; P. SHAHABI. *Univ. of Tabriz, Tabriz Univ. of Med. Sci.*

11:00 QQ6 **157.08** Chinmotion: Preserved sensorimotor pathways rapidly enable 3d computer interaction after tetraplegia. F. GALAN*; S. N. BAKER; M. A. PEREZ. *Newcastle Univ., Univ. of Miami.*

8:00 QQ7 **157.09** Multi-model wearable biosensing system. S. SIDDHARTH*; T. JUNG; T. SEJNOWSKI. *UCSD, Univ. of California San Diego.*

9:00 QQ8 **157.10** BCI-based sensorimotor rhythm training can affect individuated finger movements. D. J. MCFARLAND*; S. L. NORMAN; W. S. SARNACKI; E. T. WOLBRECHT; D. J. REINKENSMEYER; J. R. WOLPAW. *Wadsworth Ctr., University of California Irvine, Wadsworth Ctr., Univ. of Idaho, Univ. of California Irvine.*

10:00 QQ9 **157.11** Comparison of four control methods for a five-choice assistive technology. S. HALDER*; K. TAKANO; K. KANSAKU. *Univ. of Würzburg, Res. Inst. of Natl. Rehabil. Ctr. for Persons with Disabilities, The Univ. of Electro-Communications.*

11:00 QQ10 **157.12** Learning arm movements instructed by a robotic system during motor imagery. A. TAKAI; T. NODA; G. LISI; T. TERAMAE; H. IMAMIZU*; J. MORIMOTO. *Advanced Telecommunications Res. Inst. International(ATR), The Univ. of Tokyo.*

8:00 QQ11 **157.13** A bootstrapping method for improving the classifier performance in the P300 speller. J. H. CRISTANCHO*; J. F. DELGADO SAA. *Univ. Del Norte.*

9:00 QQ12 **157.14** Brain-machine interface for functional recovery of elevation of the shoulder girdle in a stroke survivor : A single case A-B-A-B design. K. TAKASAKI*; F. LIU; M. HIRAMOTO; T. NODA; S. KASUGA; K. MIZUNO; M. LIU; J. USHIBA. *Grad. Sch. of Sci. and Technology, Keio Univ., Dept. of Rehabil. Medicine, Keio Univ. Sch. of Med., Dept. of Brain Robot Interface, Advanced Telecommunications Res. Inst. Intl.*

10:00 QQ13 **157.15** Characterization of motor imagery-related cortical activity: MEG and ECoG findings. M. KOROSTENSKAJA*; K. H. LEE; T. KLEINESCHAY; P. CHEN; M. WESTERVELD; A. J. HOROWITZ; J. SEO; H. SKINNER; J. BAUMGARTNER; E. M. CASTILLO. *Florida Hosp. For Children, Florida Hosp. For Children, Florida Hosp. For Children.*

11:00 QQ14 **157.16** Characterization of the key properties of electroencephalographic signal for noninvasive brain machine/computer interface applications. Y. MISHCHENKO*; M. KAYA; H. YANAR; E. OZBAY. *Toros Univ., Mersin Univ.*

8:00 QQ15 **157.17** Development of an eyes-closed SSVEP-based BCI for people with impaired vision. B. ZOLTAN; P. BRUNNER; D. M. ZEITLIN; R. ADAMOVICH-ZEITLIN; N. RUIZ; A. CANNELLA; R. PARADISO; D. J. MCFARLAND; W. JIAN; C. S. CARMACK; J. R. WOLPAW; T. M. VAUGHAN*. *Helen Hayes Hosp., Wadsworth Ctr, NYS Dept Hlth., Wadsworth Ctr, NYS Dept Hlth. & SUNY.*

9:00 QQ16 **157.18** Altered modulation of sensorimotor rhythms with chronic tetraplegia. S. T. FOLDES*; D. ROYSTON; D. WEBER; J. L. COLLINGER. *VA Pittsburgh Healthcare Syst., Univ. of Pittsburgh, Carnegie Mellon Univ., Barrow Neurolog. Inst. at Phoenix Children's Hosp., Univ. of Pittsburgh.*

10:00 QQ17 **157.19** ▲ Eliminating BCI-illiteracy: Individualized training protocols enhance control of mu-based BCI device. A. BATTISON*; A. GORESHNIK; T. FULLER; M. SCHLUSSEL; Y. YU; L. A. GABEL. *Lafayette Col., Lafayette Col., Lafayette Col.*

11:00 QQ18 **157.20** The role of intact cognition and ocular function on three P300-based brain-computer interface spellers. A. GERONIMO*; Z. SIMMONS. *Pennsylvania State Univ. Dept. of Neurosurg., Pennsylvania State Univ.*

8:00 QQ19 **157.21** Intermuscular coherence to control neural prostheses. J. A. NORTON*; K. WINGERT. *Univ. of Saskatchewan, Univ. of Saskatchewan.*

9:00 QQ20 **157.22** Muscle activity reconstruction of ankle flexors and extensors using non-invasive brain activity recording methods. A. MEJIA TOBAR*; R. HYOUDO; K. KITA; T. NAKAMURA; H. KAMBARA; T. HANAKAWA; Y. KOIKE; N. YOSHIMURA. *Tokyo Inst. of Technol., Natl. Ctr. of Neurol. and Psychyatry, Chiba Univ.*

10:00 RR1 **157.23** Viewing lateralized mu-band power to help train motor imagery in EEG-based BCI. M. MOUSAVI*; V. R. DE SA. *UC San Diego, UC San Diego.*

11:00 RR2 **157.24** Querying letter candidates in parallel with common letter segments in an eye-movement independent speller. J. M. STIVERS*; V. R. DE SA. *UCSD.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 RR3 **157.25** Changes of brain activity in Brain-Computer interface learning. Y. MIZUNO*; N. KIM; T. HANAKAWA. *Natl. Ctr. of Neurol. and Psychiatry, Dept. of Neurosurgery, Osaka Univ. Grad. Sch. of Med.*

9:00 RR4 **157.26** Physical mechanisms of ultrasonic neurostimulation in the *in vitro* retina. M. D. MENZ*; P. YE; P. KHURI-YAKUB; S. BACCUS. *Stanford Univ.*

10:00 RR5 **157.27** A practical neurogaming design based on the SSVEP-based brain computer interface. L. KO*; B. YANG; S. KALYAN; J. KING; C. LIN; T. JUNG. *Natl. Chiao Tung Univ., Univ. of California San Diego.*

11:00 RR6 **157.28** A novel method for fast detection of ssvep from eeg recordings. C. Y. OLIVARES CARRILLO*; J. DELGADO SAA. *Univ. Del Norte, Univ. Del Norte.*

8:00 RR7 **157.29** Inter- and intra-session variability in brain machine interface control of an exoskeleton for upper extremity stroke rehabilitation. N. A. BHAGAT*; R. PARANJAPE; C. LOSEY; N. YOZBATIRAN; J. SULLIVAN; R. G. GROSSMAN; G. E. FRANCISCO; M. K. O'MALLEY; J. L. CONTRERAS-VIDAL. *Non-Invasive BMI Systems Lab, Univ. of Houston, Human-Machine Interfaces Lab, NeuroRecovery Res. Center, TIRR Mem. Hermann, NeuroRecovery Res. Ctr. at TIRR Mem. Hermann and Univ. of Texas Hlth. Sci. Ctr., Mechatronics and Haptics Interfaces Laboratory, Dept. of Mechanical Engg, Rice Univ., Houston Methodist Res. Inst.*

POSTER

158. Spinal Cord Injury and Plasticity

Theme E: Motor Systems

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 RR8 **158.01** The effect of operant conditioning of the tibialis anterior motor evoked potential to transcranial magnetic stimulation on corticospinal excitation and inhibition. R. COTE*; A. THOMPSON. *Med. Univ. of South Carolina, Dept. of Hlth. Sci. and Research, Med. Univ. of South Carolina.*

9:00 RR9 **158.02** Soleus stretch reflex modulation during walking in people with chronic incomplete spinal cord injury. A. K. THOMPSON*; N. MRACHACZ-KERSTING; T. SINKJAER; J. ANDERSEN. *Med. Univ. of South Carolina, Aalborg Univ., Villum Fonden.*

10:00 RR10 **158.03** Operant down-conditioning of the soleus H-reflex during the swing phase of walking in ambulatory individuals with chronic incomplete spinal cord injury. C. R. THOMPSON*; S. PUDLIK; J. WOLPAW; A. THOMPSON. *Med. Univ. of South Carolina, Med. Univ. of South Carolina, Wadsworth Ctr.*

11:00 RR11 **158.04** Hopping high on two feet: Lower leg kinematics and EMG during maximal height hopping. W. HAUG*; A. THOMPSON. *Med. Univ. of South Carolina.*

8:00 RR12 **158.05** Lower limb electrical stimulation alters trunk stability in individuals with spinal cord injury. K. MOMENI*; S. CANTON; A. RAMANUJAM; E. GARBARINI; G. F. FORREST. *Kessler Fndn.*

9:00 RR13 **158.06** ● Parameters of multi muscle neuromuscular stimulation: Effect on Muscle Volume. G. F. FORREST*; E. REJC; E. GARBARIN; A. RAMANUJAM; J. AUGUSTINE; S. J. HARKEMA. *Kessler Fndn. Res. Ctr., Univ. of Lousiville, Kessler Fndn.*

10:00 RR14 **158.07** Understanding the contralateral effects of neuromuscular electrical stimulation through surface electromyograms. R. PILKAR*; A. RAMANUJAM; S. CANTON; G. FORREST. *Kessler Fndn.*

11:00 RR15 **158.08** ● Respiratory motor deficit in children with spinal cord injury. G. SINGH*; S. TRIMBLE; S. ASLAN; S. BICKEL; A. BEHRMAN; A. OVECHKIN. *Univ. of Louisville, Frazier Rehabil. Inst.*

8:00 RR16 **158.09** ● Task-dependent recruitment of spinal motor pools after pediatric spinal cord injury. A. L. BEHRMAN*; S. A. TRIMBLE; L. ALVARADO; D. ATKINSON. *Univ. of Louisville, Frazier Rehabil. Inst., Univ. of Louisville.*

9:00 RR17 **158.10** ● Unexpected stepping gains in a young child with a functionally isolated lumbosacral spinal cord. S. A. TRIMBLE*; D. A. ATKINSON; A. L. BEHRMAN. *Frazier Rehab Inst., Univ. of Louisville.*

10:00 RR18 **158.11** Improvements in bladder, bowel and sexual outcomes following task specific training in human spinal cord injury. A. N. HERRITY*; C. HUBSCHER; L. MONTGOMERY; A. WILLHITE; C. ANGELI; S. HARKEMA. *Frazier Rehab Neurosci. Collaborative Ctr., Univ. of Louisville.*

11:00 RR19 **158.12** Structural and functional changes in lower limb skeletal muscle after chronic complete spinal cord injury. L. HE*; A. WILLHITE; S. HARKEMA; E. REJC. *Kentucky Spinal Cord Injury Res. Ctr., Univ. of Louisville, Frazier Rehab Inst.*

8:00 RR20 **158.13** Selective late I-wave stimulation enhances voluntary motor output after spinal cord injury. J. LONG; P. FEDERICO; S. LEHMANN*; M. A. PEREZ. *Univ. of Miami.*

9:00 RR21 **158.14** Absent grip-dependent modulation of motor cortical maps after spinal cord injury. T. TAZOE*; M. A. PEREZ. *Univ. of Miami.*

10:00 RR22 **158.15** Evidence for a contribution of the reticulospinal tract to hand control after human spinal cord injury. B. N. STUART; M. A. PEREZ*. *Newcastle Univ., Univ. of Miami Dept. of Neurolog. Surgery.*

11:00 SS1 **158.16** H-reflex up-conditioning may improve motorneuron axon initial segment recovery after sciatic nerve regeneration in rats. Y. WANG*; Y. CHEN; L. CHEN; J. R. WOLPAW; X. Y. CHEN. *Wadsworth Ctr. NYS Dept Hlth. & SUNY, Natl. Ctr. for Adaptive Neurotechnologies, Wadsworth Ctr. NYS Dept Hlth., Natl. Ctr. for Adaptive Neurotechnologis, Stratton VA Med. Ctr.*

8:00 SS2 **158.17** Impact of soleus H-reflex up-conditioning on recovery of the soleus H-reflex and locomotion after sciatic nerve regeneration has occurred in rats. Y. CHEN*; L. CHEN; X. YANG; Y. WANG; J. R. WOLPAW; X. Y. CHEN. *Wadsworth Ctr, NYS Dept Hlth., Natl. Ctr. for Adaptive Neurotechnologies, Wadsworth Ctr, NYS Dept Hlth. & SUNY, Stratton VA Med. Ctr.*

9:00 SS3 **158.18** Operant conditioning of spinal reflexes: Development of a user-friendly clinical system. A. EFTEKHAR; L. M. MCCANE*; S. M. HECKMAN; G. SCHALK; A. K. THOMPSON; J. WOLPAW. *Wadsworth Center, NYS Dep. Hlth., Med. Univ. of South Carolina.*

10:00 SS4 **158.19** Activation of extracellular signal-regulated kinases (ERKs) may be involved in sensorimotor cortex stimulation-induced spinal cord motoneuron GABAergic terminal plasticity in rats. X. Y. CHEN*; Y. WANG; Y. CHEN; J. R. WOLPAW. *Wadsworth Ctr, NYS Dept Hlth. & SUNY, Natl. Ctr. for Adaptive Neurotechnologies, Wadsworth Ctr, NYS Dept Hlth., Stratton VA Med. Ctr.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 SS5 **158.20** Impact of soleus H-reflex up-conditioning on recovery of the soleus H-reflex and locomotion during sciatic nerve regeneration in rats. L. CHEN*; Y. CHEN; X. YANG; Y. WANG; J. R. WOLPAW; X. Y. CHEN. *Wadsworth Ctr, NYS Dept Hlth. & SUNY, Natl. Ctr. for Adaptive Neurotechnologies, Wadsworth Ctr, NYS Dept Hlth., Natl. Ctr. for Adaptive Neurotechnologiues.*

8:00 SS6 **158.21** Noradrenergic pathways and epidural electrical stimulation synergistically modulate proprioceptive feedback circuits in order to restore locomotion after spinal cord injury. K. BARTHOLDI*; Q. BARRAUD; E. FORMENTO; A. ROWALD; P. MUSIENKO; M. CAPOGROSSO; G. COURTINE. *EPFL, Pavlov Inst. of Physiol.*

9:00 SS7 **158.22** Rerouting cortical drive through residual spinal tissue mediates motor function recovery after severe spinal cord injuries. L. ASBOTH*; Q. BARRAUD; L. FRIEDLI; J. BEAUPARLANT; C. MARTINEZ-GONZALEZ; S. ANIL; G. PIDPRUZHNYKOVA; E. REY; L. BAUD; J. KREIDER; M. ANDERSON; J. VON ZITZEWITZ; G. COURTINE. *Swiss Federal Inst. of Technol.*

10:00 SS8 **158.23** Gait rehabilitation enabled by epidural electrical stimulation of lumbar segments in a person with a chronic incomplete spinal cord injury. C. G. LE GOFF*; J. MIGNARDOT; R. VAN DEN BRAND; M. CAPOGROSSO; I. FODOR; G. EBERLE; B. SCHURCH; S. CARDA; J. VON ZITZEWITZ; J. BLOCH; G. COURTINE. *Ecole Polytechnique Federale De Lausanne, Univ. Hosp. of Vaud (CHUV), Ecole Polytechnique Federale De Lausanne, Univ. Hosp. of Vaud (CHUV), Univ. Hosp. of Vaud (CHUV), Univ. Hosp. of Vaud (CHUV).*

11:00 SS9 **158.24** Robotic platform maximizing gravity-dependent gait interactions to train standing and walking after neurological disorders. J. MIGNARDOT*; C. G. LE GOFF; R. VAN DEN BRAND; N. FUMEAUX; S. CARDA; J. VON ZITZEWITZ; J. BLOCH; G. COURTINE. *EPFL, Univ. Hosp. of Vaud, Neurorehabilitation, Univ. Hosp. of Vaud, Univ. Hosp. of Vaud.*

8:00 SS10 **158.25** The Impact of combination biologics on treadmill quadrupedal locomotion after spinal cord hemi-contusion in non-human primates. R. DE NEGRI*; A. J. SANTAMARIA; F. D. BENAVIDES; A. Y. FLORES; N. JAMES; Y. NUNEZ; J. P. SOLANO; J. VERHAAGEN; E. J. BRADBURY; J. D. GUEST. *Univ. of Miami, Miller Sch. of Med., King's Col. London, Univ. of Miami, Miller Sch. of Med., Vrije Univ. Amsterdam, Ctr. for Neurogenomics and Cognition research, Netherlands Inst. for Neurosci., Univ. of Miami, Miller Sch. of Med.*

9:00 SS11 **158.26** Assessment of the combined effects of chondroitinase and autologous Schwann cells on hand function after cervical SCI in primates. A. Y. FLORES*; A. J. SANTAMARIA; R. DE NEGRI; F. D. BENAVIDES; N. D. JAMES; Y. NUNEZ-GOMEZ; J. P. SOLANO; J. VERHAAGEN; E. J. BRADBURY; J. D. GUEST. *Univ. of Miami, Miller Sch. of Med., King's Col., Univ. of Miami, Miller Sch. of Med., Netherlands Inst. for Neurosci., Vrije Univ. Amsterdam, Univ. of Miami, Miller Sch. of Med.*

10:00 SS12 **158.27** Robot-driven epidural stimulation prevents collapse in function found after brain-derived neurotrophic factor (BDNF) treatment of adult spinal cord injury. J. LEE*; S. F. GISZTER. *Drexel Univ., Drexel Univ. Col. of Med.*

11:00 SS13 **158.28** Ankle-based robotics, BDNF and epidural stimulation for locomotion rehabilitation after complete SCI. D. LOGAN*; J. K. LEE; A. R. HIMES; T. KIEMEL; S. F. GISZTER. *Drexel Univ. Col. of Med., Drexel Univ., Univ. of Maryland.*

8:00 SS14 **158.29** ▲ Buspirone effect on h-reflex in acute spinal decerebrated mice. Y. DEVELLE*; H. LEBLOND. *UQTR, Univ. du Quebec à Trois-Rivieres.*

9:00 SS15 **158.30** ▲ Electroacupuncture reduces the alterations provoked on the H reflex & gait locomotion by a spinal compression injury in the rat. S. QUIROZ-GONZÁLEZ*; S. TORRES-CASTILLO; R. LÓPEZ-GÓMEZ; Y. GARCÍA-PICENO; B. SEGURA-ALEGRÍA; I. JIMÉNEZ-ESTRADA. *Univ. Estatal Del Valle De Ecatepec, Facultad de Estudios Superiores Fez-Iztacala UNAM, Ctr. de Investigación y de Estudios Avanzados del IPN.*

POSTER

159. ALS: Motor Neuron Disease

Theme E: Motor Systems

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 SS16 **159.01** A selective non-competitive AMPA receptor antagonist as a potential drug for sporadic amyotrophic lateral sclerosis (ALS) -rescue of motor dysfunctions and loss of motor neurons with TDP-43 pathology in ALS model mice. M. AKAMATSU*; T. YAMASHITA; T. HOSAKA; N. HIROSE; S. TERAMOTO; S. KWAK. *The Univ. of Tokyo, Intl. Univ. of Hearth and Welfare.*

9:00 SS17 **159.02** Investigation of mitophagy and related stress pathways in ALS and motor neuron dysfunction. E. CLARK*; J. R. BOSTROM; B. A. LINK. *Froedtert and Med. Col. of Wisconsin.*

10:00 SS18 **159.03** TACE promotes TNF-α secretion and massive gliosis in a mouse model of amyotrophic lateral sclerosis. J. LEE*; B. KIM; J. SHIN. *Korea Univ., Neuracle Sciecne, P&K Skin Res. Ctr.*

11:00 SS19 **159.04** Locomotor compensation in severe motor neuron loss during ALS disease progression. L. M. LANDONI; T. AKAY*. *Dalhousie Univ.*

8:00 SS20 **159.05** Parkin ablation modulates mitophagy and attenuates mutant SOD1 toxicity *in vivo*. G. M. PALOMO; A. ARREGUIN; D. ZHAO; C. KONRAD; J. MAGRANE; H. KAWAMATA; G. MANFREDI*. *The Feil Family Brain and Mind Res. Institute, Weill Cornell Med., Weill Med. Col. Cornell Univ.*

9:00 SS21 **159.06** Exacerbation of ALS phenotype in SOD1 rats following repeat traumatic brain injury. A. MA*; A. KO; M. HARADA; P. AVALOS; N. DHILLON; P. HARO; O. SHELEST; C. N. SVENDSEN; E. J. LEY; G. M. THOMSEN. *Cedars-Sinai Med. Ctr.*

10:00 SS22 **159.07** Stathmin 1/2-triggered microtubule loss mediates Golgi fragmentation in mutant SOD1 motor neurons. S. BELLOUZE*; G. BAILLAT; D. BUTTIGIEG; P. DE LA GRANGE; C. RABOUILLE; G. HAASE. *Inst. Des Neurosciences De La Timone CNRS & Aix-Marseille Univ., Genosplice, Hubrecht Inst.*

11:00 SS23 **159.08** ▲ An examination of noninflammatory astrocyte secretions of glutamate in the SOD1 G93A ALS mouse model. K. JORDAN*; J. MURPHY; A. SINGH; G. COAN; C. S. MITCHELL. *Georgia Inst. of Technol.*

8:00 SS24 **159.09** ▲ A dynamic meta-analysis of apoptosis, bioenergetics, and oxidative stress molecular mechanisms in the G93A SOD1 transgenic ALS mouse model. D. VITHARANA; T. BACH; K. Y. ZHANG*; G. COAN; C. S. MITCHELL. *Georgia Inst. of Technol.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 SS25 **159.10** Zinc and 4-hydroxy-2-nonenal(HNE) released from G93A SOD-1 expressing astrocytes contribute to selective motoneuronal death. T. KIM*; J. KIM; J. KOH. *Univ. Ulsan Col., Asan Med. Ctr.*

10:00 SS26 **159.11** Non-cell-autonomous effect of membralin-deficiency triggered motor neuron death. L. JIANG*; B. ZHU; D. ZHANG. *Sanford Burnham Prebys Med. Discovery Inst.*

11:00 TT1 **159.12** Two superoxide dismutase prion strains transmitting amyotrophic lateral sclerosis. T. BRANNSTROM*; E. EKHTIARI BIDHENDI; J. BERGH; P. ZETTERSTRÖM; P. M. ANDERSEN; S. L. MARKLUND. *Umea University/Department of Med. Biosci., Umeå Univ., Umeå Univ.*

8:00 TT2 **159.13** A comprehensive approach for efficient monitoring of motor function in als. M. DANCY*; M. MILLER; T. GARRETT; S. ELBASIOUNY. *Wright State Univ., Wright State Univ.*

9:00 TT3 **159.14** ALS-linked mutant PFN1 affects cellular protein trafficking in motor neurons. C. FALLINI*; A. W. GIAMPETRUZZI; E. W. DANIELSON; J. E. LANDERS. *Univ. of Massachusetts Med. Sch. Dept. of Neurol.*

10:00 TT4 **159.15** Cacophony, the type II voltage gated calcium channel, rescues motor defects in a *Drosophila* TDP-43 loss of function ALS model. K. M. LEMBKE*; C. SCUDDER; D. B. MORTON. *Oregon Hlth. and Sci. Univ., Oregon Hlth. & Sci. Univ.*

POSTER

160. Neuroethology of Sensory and Motor Systems: Arthropods

Theme F: Integrative Physiology and Behavior

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 TT5 **160.01** ▲ The role of octopamine in syllable-period selective phonotaxis in female cricket *Acheta domesticus*. D. MAGNO*; B. A. NAVIA, 49104. *Andrews Univ.*

9:00 TT6 **160.02** ▲ Chelerythrine chloride and its effects on behavioral and physiological responses in female cricket Acheta domesticus. B. A. NAVIA*; H. SHIN; A. LYNCH; J. STOUT. *Andrews Univ.*

10:00 TT7 **160.03** Diversity of GABAergic inhibitory impacts on dendritic integration for directional tuning in insect mechanosensory projection neurons. H. OGAWA*; R. MITANI. *Hokkaido Univ., Hokkaido Univ.*

11:00 TT8 **160.04** Acoustic stimulus impacts on directional variability of wind-elicited walking behavior in the cricket. M. FUKUTOMI*; H. OGAWA. *Hokkaido Univ., Hokkaido Univ.*

8:00 TT9 **160.05** ● Identification of neural activity in the silkworm moth brain contribute to the odor source search behavior. S. SHIGAKI*; D. KURABAYASHI. *Tokyo Inst. of Technol., Tokyo Inst. of Technol.*

9:00 TT10 **160.06** Spatiotemporal calcium waves generated in the excitatory dendrite of an identified visual interneuron in response to looming stimuli. Y. ZHU*; F. GABBIANI. *Baylor Col. of Med.*

10:00 TT11 **160.07** Parallel encoding of spatial memory and self-motion during navigational decision-making in *Drosophila*. H. M. SHIOZAKI*; H. KAZAMA. *RIKEN Brain Sci. Inst. - Wako.*

11:00 TT12 **160.08** Increased adult size due to larval royal jelly exposure does not affect climbing or circadian locomotor activity in adult D. melanogaster. J. A. SEGGIO*; J. A. HICKS; N. F. NASCIMENTO; A. HATZIDIS; N. L. ARRUDA; R. R. GELINEAU; I. DE PINA MONTEIRO. *Bridgewater State Univ.*

8:00 TT13 **160.09** The dynamics and control of body saccades during object fixation in *Drosophila*. J. MONGEAU*; F. KHAN; A. SALOMON; M. A. FRYE. *UCLA, UCLA.*

9:00 TT14 **160.10** Multi-timescale analysis of sequential behavior decisions in fly grooming. P. RAVBAR; K. BRANSON; J. H. SIMPSON*. *Univ. of California Santa Barbara, HHMI Janelia Res. Campus.*

10:00 UU1 **160.11** Do flies in groups make individual choices? E. A. GOROSTIZA*; I. STEYMANS; B. BREMBS. *Univ. Regensburg.*

11:00 UU2 **160.12** ▲ A comparison of speed, grooming and seeking behavior in north and south american cockroaches. B. D. ORTIZ; G. F. TRUJILLO; J. F. GOMEZ-MOLINA; M. CORREDOR; U. M. RICOY*. *Northern New Mexico Col., Intl. Group of Neurosci. IGN · Intl. Group of Neurosci., Univ. of Antioquia.*

8:00 UU3 **160.13** Active dendritic conductances generate dynamic neural computation underlying locust predator avoidance. R. B. DEWELL*; F. GABBIANI. *Baylor Col. of Med., Rice Univ.*

9:00 UU4 **160.14** Investigating a circuit connecting visceral sensory neurons to hormone-producing output neurons in *Drosophila* larvae. C. QIAN*; M. KAPLOW; J. LEE; W. B. GRUEBER. *Columbia Univ., New York Univ.*

10:00 UU5 **160.15** Investigating the influence and regulation of catecholamines on circadian rhythmicity of anti-predator behavior in the orb-weaving spiders. R. J. WILSON*; J. B. PRICE; T. C. JONES. *East Tennessee State Univ.*

11:00 UU6 **160.16** Movement feedback signal processing in a curve walking stick insect is task and segment specific. J. SCHMITZ*; M. GRUHN; A. BÜSCHGES. *Univ. of Cologne.*

8:00 UU7 **160.17** Analysis of perceptual mechanisms related to control of travel direction in navigating ants. D. D. LENT*. *CSU Fresno.*

9:00 UU8 **160.18** Behavioral state modulates the inputs to the directionally selective neurons in *Drosophila*. S. WU*; J. STROTHER; A. NERN; A. WONG; E. ROGERS; M. B. REISER. *Hhmi/Janelia Res. Campus.*

10:00 UU9 **160.19** ▲ The behavioral effects of taurine of male crayfish, procambarus clarkii. B. N. THOMAS*; C. M. MECCA; R. F. WALDECK. *The Univ. of Scranton, The Univ. of Scranton.*

11:00 UU10 **160.20** Influence of hormonal state on primary chemosensory neurons mediating pheromone reception. M. R. MEISELMAN*; M. E. ADAMS. *Univ. of California-Riverside, Univ. of California-Riverside.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

161. Social Behavior

Theme F: Integrative Physiology and Behavior

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 UU11 **161.01** Temporary depletion of microglia early in development has enduring consequences for social and cognitive behaviors. J. W. VANRYZIN*; S. J. YU; M. M. MCCARTHY. *Univ. of Maryland, Baltimore, Univ. of Maryland, Baltimore.*

9:00 UU12 **161.02** Ghrelin receptor mutation leads to deficits in social behavior & food-seeking behavior in a stressful environment. S. PARK*; A. WILSON; M. ELLIS; B. WOODSIDE; A. ABIZAID. *Carleton Univ., Carleton Univ., Univ. of Ottawa, Concordia Univ., Carleton Univ.*

10:00 UU13 **161.03** VNO mediated pheromone signals are required for social hierarchy formation in male mice. Y. PEN*; A. SHAPIRO; T. KIMCHI. *Weizmann Inst. of Sci.*

11:00 UU14 **161.04** Embryonic patterning of the medial amygdala predicts sexually dimorphic neuronal responsiveness to innate behavioral cues. J. LISCHINSKY*; K. SOKOLOWSKI; P. LI; S. ESUMI; Y. KAMAL; L. OBOTI; M. GOODRICH; T. HAMMOND; D. FELDMAN; M. HUNTSMAN; J. LIU; J. G. CORBIN. *Children's Natl. Med. Ctr., The George Washington Univ., Kumamoto Univ., Univ. of Colorado.*

8:00 VV1 **161.05** Whole genome sequencing reveals genetic variants underlying molecular differences in neuroreceptors among free-ranging rhesus macaques. M. J. MONTAGUE*; N. SNYDER-MACKLER; S. MADLON-KAY; J. E. HORVATH; L. J. N. BRENT; K. K. WATSON; J. H. SKENE; M. L. PLATT. *Univ. of Pennsylvania, Duke Univ., North Carolina Central Univ., Univ. of Exeter, Univ. of Colorado at Boulder, Duke Univ.*

9:00 VV2 **161.06** Social modulation of defense behaviors in *Drosophila melanogaster*. C. H. FERREIRA*; R. ZACARIAS; M. MOITA. *Champalimaud Ctr. For the Unknown.*

10:00 VV3 **161.07** Dominance rank causally affects personality and glucocorticoid regulation in adult female rhesus macaques. J. KOHN*; N. SNYDER-MACKLER; L. B. BARREIRO; Z. P. JOHNSON; J. TUNG; M. E. WILSON. *Yerkes Natl. Primate Res. Ctr., Duke Univ., Duke Univ., Sainte-Justine Hosp. Res. Ctr., Emory Univ. Sch. of Med., Duke Univ., Inst. of Primate Res., Duke Univ., Emory Univ. Sch. of Med.*

11:00 VV4 **161.08** Heterogeneity of serotonergic neuron excitability. B. D. ROOD*; B. W. OKATY; S. M. DYMECKI. *Harvard Med. Sch., Harvard Med. Sch.*

8:00 VV5 **161.09** A mutation in the vasopressin gene impacts locomotor and affective behaviors of adolescent rats. K. SCHATZ*; R. F. KYNE; M. J. PAUL. *Univ. At Buffalo.*

9:00 VV6 **161.10** Neural and hormonal mechanisms of cooperative defense in a cichlid fish. H. A. HOFMANN*; C. A. WEITEKAMP. *Univ. of Texas at Austin, Univ. of Texas at Austin.*

10:00 VV7 **161.11** Role of the nonapeptides, arginine vasotocin and isotocin, in social behaviour of male Pelvicachromis pulcher. J. HOANG*; C. SEAVER; P. HURD. *Univ. of Alberta.*

11:00 VV8 **161.12** Modulation of PMV activity during social interactions in female mice. A. J. DIAS*; S. Q. LIMA. *Champalimaud Fndn.*

8:00 VV9 **161.13** Sex differences in the endocannabinoid system direct development of the amygdala and impact juvenile social play behavior in the rat. K. J. ARGUE*; M. M. MCCARTHY. *Univ. of Maryland Sch. of Med.*

9:00 VV10 **161.14** The insular cortex is necessary for social affective behavior in rat. M. M. ROGERS*; K. B. GRIBBONS; M. T. MCGOEY; J. A. VARELA; J. P. CHRISTIANSON. *Boston Col.*

10:00 VV11 **161.15** ● Social exposure robustly enhances the modulation of oxytocin-sensitive reward pathways by a melanocortin agonist. K. A. KITTELBERGER*; H. WALUM; L. J. YOUNG. *Emory Univ., Silvio O. Conte Ctr. for Oxytocin and Social Cognition, Yerkes Natl. Primate Ctr.*

11:00 VV12 **161.16** Anxiety-like behavior and neurochemical expression in male and female prairie voles: The effects of stress and social buffering. M. L. DONOVAN*; Y. LIU; Z. WANG. *Florida State Univ.*

8:00 VV13 **161.17** Restricted high fat diet can improve social avoidance induced by social-defeat stress as same as ad libitum high fat feeding. A. OTSUKA*; T. SHIUCHI; S. CHIKAHISA; H. SEI. *Tokushima Univ., Tokushima Univ.*

9:00 VV14 **161.18** Sex-dependent effects of arginine vasopressin on Richardson's ground squirrel social behavior and communication. A. FREEMAN*; J. F. HARE; W. G. ANDERSON; H. K. CALDWELL. *Kent State Univ. Dept. of Biol. Sci., Univ. of Manitoba, Kent State Univ.*

10:00 VV15 **161.19** A prolonged inflammatory response in the cerebellum of rats treated with lipopolysaccharides at 2 weeks of age. C. L. WRIGHT*; M. M. MCCARTHY. *Univ. of Maryland, Univ. of Maryland Sch. of Med.*

11:00 VV16 **161.20** Increased glucocorticoid receptor activity in the medial prefrontal cortex prevents the expression of empathy in mice. L. J. MARTIN*; S. SIVASELVAACHANDRAN; S. ABDALLAH; C. CHO; A. CHANDIRAMOHAN; S. TOHYAMA; F. SETAK. *Univ. of Toronto, Univ. of Toronto Mississauga.*

8:00 VV17 **161.21** Neuromolecular mechanisms of learning in a social dominance hierarchy. M. RODRIGUEZ SANTIAGO*; L. A. JORDAN; H. A. HOFMANN. *Univ. of Texas At Austin, Max Plack Inst. for Ornithology, Univ. of Texas at Austin.*

9:00 VV18 **161.22** The impact of aging on sexual dimorphism in social and odor preference behavior in mice. H. TSAI*; C. CHAO; M. E. REYES; B. HUYNH; C. NWEKE; Z. AFZAL. *California State University, Long Beach.*

10:00 VV19 **161.23** A naturalistic paradigm to study social learning among rhesus macaques in the laboratory. K. M. SHARIKA*; M. PLATT. *Univ. of Pennsylvania.*

POSTER

162. Steroids and Plasticity

Theme F: Integrative Physiology and Behavior

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 VV20 **162.01** Voluntary exercise ameliorates the expression of neurofilament and myelin basic protein due to androgen receptor antagonist in the mouse brain. Y. MOMOTA*. *Dept. of Hlth. Sci.*

9:00 VV21 **162.02** Acute estrogen receptor β activation in the hippocampus affects anxiety differentially in male and female rats. S. M. SATO*; J. ZHANG; E. G. ZBLEWSKI; K. M. MCFADDEN; C. S. WOOLLEY. *Northwestern Univ.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 VV22 **162.03** A behavioral and molecular analysis of membrane-initiated estrogen receptor signaling in the hypothalamus. M. BUTLER*; L. NIKONOVA; R. HILDEBRANDT; L. ECKEL. *Florida State Univ.*

11:00 VV23 **162.04** The ERα splice variant, ERαΔ4, interacts with mGluR2 and caveolin-3 in female rodent ARH. A. M. WONG*; P. E. MICEVYCH. *UCLA.*

8:00 VV24 **162.05** Hippocampus-synthesized estrogen and androgen modulate dendritic spines and LTP in non-genomic manner. S. KAWATO*; G. MURAKAMI; Y. HOJO. *Univ. of Tokyo.*

9:00 VV25 **162.06** Sex-differences in rapid, 17β-estradiol-induced potentiation of glutamate uncaging-evoked dendritic calcium transients in the hippocampus. J. G. OBERLANDER*; C. S. WOOLLEY. *Northwestern Univ.*

10:00 VV26 **162.07** Molecular interactions that may underlie sex-specific estrogen receptor α-dependent modulation of hippocampal synapses. N. TABATADZE*; R. M. MAY; C. S. WOOLLEY. *Northwestern Univ., Northwestern Univ.*

11:00 WW1 **162.08** Characterization of estrogen-producing and estrogen-responsive neurons in the songbird forebrain. A. A. KRENTZEL*; M. Z. IKEDA; T. J. OLIVER; G. B. SCARPA; L. REMAGE-HEALEY. *Univ. of Massachusetts Amherst, Univ. of Massachusetts Amherst, Univ. of Massachusetts Amherst, Univ. of Massachusetts Amherst.*

8:00 WW2 **162.09** ▲ Effects of estrogen receptor manipulations on the neonatal expression of tyrosine hydroxylase and vasopressin in the highly prosocial prairie vole. J. M. LANDEROS; A. N. PERRY; P. ZUSHIN; A. T. FRITZ; B. S. CUSHING*. *Univ. of Texas At El Paso, Univ. of Akron.*

9:00 WW3 **162.10** Rapid effects of estradiol on the surface movement of AMPA receptor molecules in living neurons. J. PALHALMI*; M. PENZES; P. AVAR; K. BARABAS; I. ABRAHAM. *MTA NAP-B Mol. Neuroendocrinology Res. Gr, MTA NAP-B Mol. Neuroendocrinology Res. Group, Ctr. for Neuroscience, Szentagothai Res. Center, Med. School, Univ. of Pecs.*

10:00 WW4 **162.11** Wild-caught meadow voles show seasonal changes in cell proliferation, neurogenesis, and cell death within the hippocampus. M. D. SPRITZER*; E. C. B. JAEGER; A. E. CASLER; S. M. ENGELMAN; J. E. GEORGAKAS; L. R. NELSON; A. PANNING; W. T. PRINCE; E. A. ROY; B. A. WAGNER. *Middlebury Col.*

11:00 WW5 **162.12** Progestin receptors complex with synaptic proteins from female mouse hypothalamus in a ligand-dependent and isoform-specific manner. K. D. ACHARYA*; S. A. NETTLES; C. F. LICHTI; M. HARLING; C. PATTANAYAK; L. DENNER; M. J. TETEL. *Wellesley Col., Univ. of Texas Med. Br., Wellesley Col.*

8:00 WW6 **162.13** Caveolin-1 is palmitoylated by the same DHHC enzymes as steroid hormone receptors. K. R. TONN*; P. G. MERMELSTEIN. *Univ. of Minnesota.*

9:00 WW7 **162.14** An investigation of steroidogenic acute regulatory protein (StAR) gene expression in the green anole lizard brain and gonad. C. E. KLECKER*; R. E. COHEN. *Minnesota State University, Mankato.*

10:00 WW8 **162.15** Androgen Receptor Splice Variant expression in neuronal cells. J. G. CONTRERAS; P. DUONG; L. DOWNS; R. L. CUNNINGHAM*. *Univ. of North Texas Hlth. Sci. Ctr., Univ. North Texas Hlth. Sci. Ctr.*

POSTER

163. Sexual Differentiation

Theme F: Integrative Physiology and Behavior

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 WW9 **163.01** Altered brain networks in congenital adrenal hyperplasia revealed using multimodal MRI. R. TANAKA*; R. HORIKAWA; T. OGATA; Y. YOTSUMOTO. *The Univ. of Tokyo, Natl. Ctr. for Child Hlth. and Develop., Hamamatsu Univ. Sch. of Med.*

9:00 WW10 **163.02** Neuroanatomical distribution and characterization of Dek oncogene in male and female rodent brain. V. GHISAYS*; N. A. PEASE; M. FITZGERALD; C. ESTRADA; E. T. NGUYEN; L. PRIVETTE VINNEDGE; M. B. SOLOMON. *Univ. of Cincinnati, Univ. of Cincinnati, Cincinnati Children's Hosp. Med. Ctr., Univ. of Cincinnati, Univ. of Cincinnati.*

10:00 WW11 **163.03** The role of microglia and mast cells in sculpting the sexually dimorphic nucleus (SDN) of the POA. L. A. PICKETT*; K. M. LENZ; M. M. MCCARTHY. *Univ. of Maryland Sch. of Med., The Ohio State Univ., Univ. of Maryland Sch. of Med.*

11:00 WW12 **163.04** Identification of genes regulated by progesterone receptor in the neonatal medial preoptic nucleus using RNAseq. D. LALITSASIVIMOL*; D. M. WALKER; R. M. RICCIARDELLI; E. J. NESTLER; C. K. WAGNER. *Univ. At Albany, Icahn Sch. of Med. at Mount Sinai.*

8:00 WW13 **163.05** Neonatal masculinization blocks increased excitatory synaptic input in female rat nucleus accumbens core. J. CAO; D. M. DORRIS; J. MEITZEN*. *North Carolina State Univ.*

9:00 WW14 **163.06** Regulation of sexually dimorphic activity-dependent neuroprotective protein (Adnp) mRNA expression in the developing mouse cerebellum is independent of sex steroids. T. MOTA*; H. TSAI. *California State University, Long Beach.*

10:00 WW15 **163.07** Inactivation of AdipoR1 in the dentate gyrus induces sex-specific behavioral phenotypes. X. FANG*; J. LIU; X. Y. LU. *Univ. of Texas Hlth. Sci. Ctr. at San Antonio, Binzhou Med. Univ. Hosp. / IMND.*

11:00 WW16 **163.08** Sex differences in endocannabinoid signaling at hypothalamic ventromedial/arcuate proopiomelanocortin synapses. C. FABELO*. *Western Univ. of Hlth. Sci.*

8:00 WW17 **163.09** Role of sex chromosome complement in the regulation of aromatase expression in developing mice brain. C. D. CISTERNAS*; M. A. AREVALO; L. M. GARCIA-SEGURA; M. J. CAMBIASSO. *Inst. de Investigación Médica Mercedes y Martín Ferreyra. INIMEC-CONICET, Inst. Cajal, CSIC.*

9:00 WW18 **163.10** Involvement of androgen, but not estrogen, receptors in the masculinization of the oxytocin receptor in the bed nucleus of the stria terminalis. N. B. WORLEY*; K. M. DUMAIS; J. C. YUAN; L. E. NEWMAN; A. G. ALONSO; A. H. VEENEMA. *Boston Col.*

10:00 WW19 **163.11** DNA methylation promotes hippocampal cell genesis in neonatal male rats while histone deacetylation suppresses it in female rats. S. L. STOCKMAN*; M. M. MCCARTHY. *Univ. of Maryland Sch. of Med.*

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* Indicates abstract's submitting author

11:00 WW20 **163.12** Micro RNAs are differentially expressed in the androgen responsive bulbocavernosus and levator ani skeletal muscles. M. ALTEMUS; J. MOORE; J. A. JOHANSEN*. *Central Michigan Univ., Central Michigan Univ.*

8:00 WW21 **163.13** Developmental expression of ER_{beta} in the dorsal raphe and frontal cortex of male and female mice. M. A. HOLSCHBACH*; R. J. HANDA. *Colorado State Univ.*

9:00 WW22 **163.14** Sexually dimorphic effects of early postnatal genistein administration on kisspeptin system. M. MARRAUDINO*; G. PONTI; A. FARINETTI; E. MACCHI; S. GOTTI; M. KELLER; G. PANZICA. *Dept. of Neurosci., Neurosci. Inst. Cavalieri Ottolenghi (NICO), Dept. of Vet. Sci., INRA, UMR 85 Physiologie de la Reproduction et des Comportements, Ctr. de recherche Val-de-Loire.*

10:00 XX1 **163.15** Sex differences in neural activation following different routes of oxytocin administration in awake adult rats. K. M. DUMAIS*; P. KULKARNI; C. F. FERRIS; A. H. VEENEMA. *Boston Col., Northeastern Univ.*

POSTER

164. Stress: Hypothalamic Mechanisms

Theme F: Integrative Physiology and Behavior

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 XX2 **164.01** Localization and characterization of the brain stress system in the toothed whales. S. SACCHINI*; C. BOMBARDI; M. ARBELO; A. FERNÁNDEZ; Y. BERNALDO DE QUIRÓS; J. DÍAZ-DELGADO; E. SIERRA; P. HERRÁEZ. *Univ. of Las Palmas De Gran Canaria, Univ. of Bologna, Texas A&M Univ.*

9:00 XX3 **164.02** Acute glycemic stressors differentially alter glutamatergic and GABAergic inputs to the neuroendocrine paraventricular nucleus of the hypothalamus in an intensity dependent manner. C. S. JOHNSON*; J. S. BAINS; A. G. WATTS. *USC, Univ. of Calgary.*

10:00 XX4 **164.03** A conserved role for Lef1-mediated Wnt signaling in hypothalamic neurogenesis and anxiety. Y. XIE*; D. KAUFMANN; S. PANAHI; J. A. GAYNES; D. ZHOU; H. XUE; C. M. FUNG; E. M. LEVINE; K. BRENNAN; R. I. DORSKY. *Univ. of Utah, Peking Univ., Univ. of Iowa, Vanderbilt Univ.*

11:00 XX5 **164.04** The hypothalamic-pituitary-gonadal transcriptome of the rock dove and its response to capture-handling stress. R. M. CALISI*; S. H. AUSTIN; A. LANG; M. D. MACMANES. *Univ. of California - Davis, Univ. of New Hampshire.*

8:00 XX6 **164.05** Activation of $5HT_{1A}$ receptors in the dorsomedial hypothalamus inhibits stress induced activation of the hypothalamic pituitary adrenal axis. C. STAMPER*; J. E. HASSELL, Jr.; A. J. KAPITZ; K. J. RENNER; M. ORCHINIK; C. A. LOWRY. *Univ. of Colorado Boulder, Univ. of South Dakota, Arizona State Univ.*

9:00 XX7 **164.06** Hypothalamic CRH neurons orchestrate complex behaviors after stress. T. FUZESI*; N. DAVIU; J. I. WAMSTEEKER CUSULIN; K. SIMONE; D. ROSENEGGER; K. MURARI; J. S. BAINS. *Hotchkiss Brain Inst., Univ. of Calgary.*

10:00 XX8 **164.07** Non-cannonical endocannabinoid-dependent ltd at hypothalamic gaba synapses. P. L. COLMERS*; J. S. BAINS. *Univ. of Calgary, Univ. of Calgary.*

11:00 XX9 **164.08** Homeostatic synaptic scaling as a response to HPA dysfunction. N. RASIAH*; N. DAVIU; J. S. BAINS. *Hotchkiss Brain Inst. - Univ. of Calgary.*

8:00 XX10 **164.09** Alternative mechanisms forHPA axis regulation following selective paraventricular nucleus (PVN) deletionof estrogen receptor β 3rd exon. M. G. OYOLA*; A. ACEVEDO-RODRIGUEZ; A. M. MALYSZ; D. CARBONE; S. K. MANI; R. J. HANDA. *Colorado State Univ., Baylor Col. of Med., Univ. of Arizona, Colorado State Univ.*

9:00 XX11 **164.10** Molecular characterization of oxytocin neurons in the paraventricular nucleus and supraoptic nucleus of the hypothalamus. J. GUO*; A. MENIGOZ; D. G. RAINNIE. *Emory Univ., Emory Univ., Emory Univ.*

10:00 XX12 **164.11** Glucagon-like peptide 1 receptor (GLP1R) signaling promotes excitation of limbic forebrain neurons innervating the hypothalamic paraventricular nucleus (PVN). N. V. POVYSHEVA; H. ZHENG; L. M. RINAMAN*. *Univ. of Pittsburgh, Univ. of Pittsburgh Dept. of Neurosci.*

11:00 XX13 **164.12** Sexual diergism in rat hypothalamic-pituitary-adrenal axis responses to the selective muscarinic antagonists pirenzepine and methoctramine prior to cholinergic stimulation by physostigmine. M. E. RHODES*; M. A. SMAIL; C. A. WYLIE; J. L. SOLES; R. K. CZAMBEL; R. T. RUBIN. *St. Vincent Col., Allegheny Gen. Hosp., VA Greater Los Angeles Healthcare Syst.*

8:00 XX14 **164.13** Channelrhodopsin-assisted circuit mapping of medial amygdala connectivity to the paraventricular hypothalamus. C. D. ADAMS*; J. YEOH; E. J. CAMPBELL; J. S. BAINS; B. A. GRAHAM; C. V. DAYAS. *Univ. of Newcastle, Univ. of Calgary.*

9:00 XX15 **164.14** Dominance relationships in Syrian hamsters modulate neuroendocrine responses to stress. B. N. DULKA*; R. KOUL-TIWARI; J. A. GRIZZELL; A. V. CAMPBELL; S. DATTA; M. A. COOPER. *Univ. of Tennessee.*

POSTER

165. Stress and Cognition

Theme F: Integrative Physiology and Behavior

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 XX16 **165.01** Blunted cortisol response to acute pre-learning stress prevents misinformation effect in a forced confabulation paradigm. P. R. ZOLADZ*; A. M. DAILEY; H. E. NAGLE; B. E. MOSLEY; T. J. DUFFY; C. E. CADLE; D. M. PETERS; M. K. FIELY; C. M. BROWN; A. R. SCHARF; M. B. EARLEY; B. R. RORABAUGH; K. E. PAYMENT. *Ohio Northern Univ., Ohio Northern Univ.*

9:00 XX17 **165.02** ● Optogenetic induction of plasticity in the medial prefrontal cortex to study mechanisms of stress-related cognitive dysfunction in rats. S. E. BULIN*; D. J. LODGE; D. A. MORILAK. *UT Hlth. Sci. Ctr. at San Antonio.*

10:00 XX18 **165.03** Psychosocial stress induces oscillatory activity changes during an attentional task reflecting different cognitive strategies. I. PALACIOS*; M. VILLENA; G. CAMPOS; C. ARTIGAS; J. SILVA; E. RODRIGUEZ. *Pontificia Univ. Catolica De Chile, Univ. del Desarrollo.*

11:00 XX19 **165.04** Enhanced neuronal activity in monkey amygdala during goal-directed behavior in stressful environments. K. MAEDA*; O. HIKOSAKA. *Lab. Sensorimotor Res., Natl. Eye Inst., Intramural Res. Program, Natl. Inst. on Drug Abuse.*

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▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 XX20 **165.05** Corticotropin releasing factor regulation of forebrain cholinergic nuclei impairs attention and learning in rats. K. WIERSIELIS*; B. WICKS; S. COHEN; M. SALVATORE; J. BERGMANN; N. DUNCAN; H. LEFEBO; D. BANGASSER. *Temple Univ.*

9:00 XX21 **165.06** Decreased expression of SGK1 in medial prefrontal cortex increases vulnerability to uncontrollable stress, resulting in cognitive impairments. J. PARK*; D. CHOI; J. HAN. *Konkuk Univ.*

10:00 XX22 **165.07** Effects of the JAK-STAT3 activator CNTF on cognitive flexibility and markers of plasticity in the orbitofrontal cortex. M. GIROTTI*; D. A. MORILAK. *Univ. of Texas Hlth. Sci. Ctr. at San Antonio.*

11:00 YY1 **165.08** ● The cognitive neurobiology of caregiver stress: Impact of psychological interventions on impaired memory and attention. G. CLARKE*; A. P. ALLEN; A. NÍ CHORCORÁIN; J. WALL; P. KEARNEY; J. F. CRYAN; T. G. DINAN; D. W. MOLLOY. *Univ. Col. Cork, Univ. Col. Cork.*

8:00 YY2 **165.09** An exploration of behavioral and anatomical effects of a traumatic stress model. I. GONZALEZ RIVERA*; K. VALENCIA-FLORES; O. GALICIA-CASTILLO; D. VELÁZQUEZ-MARTÍNEZ; D. PAZ-TREJO; H. SÁNCHEZ-CASTILLO. *Univ. Nacional Autonoma De Mexico, Univ. Nacional Autonoma de Mexico, Univ. Iberoamericana, Univ. Nacional Autónoma de México, Univ. Nacional Autonoma de México.*

9:00 YY3 **165.10** Trauma history and recent life stress predict functional connectivity between the amygdala and the anterior cingulate at rest and in response to affective scenes. O. KLESHCHOVA*; M. R. WEIERICH. *City Univ. of New York, The Grad. Ctr., City Univ. of New York, Hunter Col.*

10:00 YY4 **165.11** Hippocampal gene expression and fear memory in stress-vulnerable and stress-resilient rat strains. J. K. MECKES*; P. LIM; S. L. WERT; E. TUNC-OZCAN; W. D. PASTARD; E. E. REDEI. *Northwestern Univ.*

11:00 YY5 **165.12** Interval timing and its sensitivity to stress show age-related alterations in the BACHD rat model for Huntington's disease. N. EL MASSIOUI*; C. LAMIRAULT; D. GARCES; A. BONILLA; O. RIESS; H. NGUYEN; B. L. BROWN; V. DOYÈRE. *CNRS, Queens Col., Tuebingen Univ.*

POSTER

166. Fear and Aversive Learning and Memory: Modulation

Theme G: Motivation and Emotion

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 YY6 **166.01** ● Neural substrates underlying alterations in fear conditioning following acute stress. A. M. GOODMAN*; N. G. HARNETT; M. D. WHEELOCK; T. R. OREM; S. MRUG; D. A. GRANGER; D. C. KNIGHT. *Univ. of Alabama Birmingham, Arizona State Univ.*

9:00 YY7 **166.02** Lasting memories: Facilitating context fear in infant rats through behavioural tagging. S. BAE*; R. RICHARDSON. *Unsw, UNSW.*

10:00 YY8 **166.03** Neuronal encoding of imminent threat in rats performing a risky foraging task. E. KIM*; M. KONG; S. PARK; M. PARK; S. MIZUMORI; J. CHO; J. J. KIM. *Univ. of Washington, Korea Inst. of Sci. and Technol., Korea Univ. of Sci. & Technol., Univ. of Washington.*

11:00 YY9 **166.04** A causal role for the ventrolateral periaqueductal grey in aversive prediction error signaling. R. A. ZACHARIAS*; M. A. MCDANNALD. *Boston Col.*

8:00 YY10 **166.05** The effects of the estrous cycle on the development of anticipatory nausea in female rats. D. ZEVY*; M. KAVALIERS; K. OSSENKOPP. *Western Univ.*

9:00 YY11 **166.06** Inhibition of intracellular signaling cascades in the basolateral amygdala impairs consolidation of first-order conditioned fear but does not impair consolidation of second-order conditioned fear. B. P. LAY*; N. M. HOLMES; D. L. GLANZMAN; R. F. WESTBROOK. *Univ. of New South Wales, UCLA.*

8:00 DP06 **166.07** (Dynamic Poster) Deconstructing expectancy in human aversive learning: Evidence from visuocortical, physiological and behavioural dynamics. L. F. GRUSS*; A. KEIL. *Univ. of Florida.*

11:00 YY12 **166.08** Lateral hypothalamic outputs control innate defensive responses. M. WIGESTRAND*; I. AASEBØ; A. TULLY; M. LEPPERØD; T. HAFTING; M. FYHN. *Univ. of Oslo.*

8:00 YY13 **166.09** Dopamine-dependent synaptic plasticity in an amygdala inhibitory circuit for expression of fear memory. H. JO*; O. KWON; J. LEE; H. KIM; S. LEE; S. LEE; M. JEONG; S. KIM; B. KO; K. SUNG; J. KIM. *POSTECH, New Drug Develop. Ctr., Seoul Natl. Univ.*

9:00 YY14 **166.10** Investigating the influence of priors in human fear generalization using a Bayesian model. L. KAMPERMANN; C. BÜCHEL; S. ONAT*. *Dept. of Systems Neuroscience, Univ. Med. Ctr. Hamburg-Eppendorf.*

10:00 ZZ1 **166.11** Motivational state determines paraventricular thalamic contributions to fear memory retrieval. E. CHOI*; G. MCNALLY. *Univ. of New South Wales - Kensington Campus, Univ. of New South Wales.*

11:00 ZZ2 **166.12** ▲ Stress enhancement of fear learning: A time of day assessment. A. PEGUERO*; M. R. HERBST; J. J. QUINN. *Miami Unviersity, Marquette Univ.*

8:00 ZZ3 **166.13** 2-Arachidonylglycerol mobilization in the ventral tegmentum is required for assumable dopamine release to cause avoidance behavior. J. M. WENZEL*; W. N. GOVE; V. C. CHIOMA; E. B. OLESON; J. F. CHEER. *Univ. of Maryland Sch. of Med., Univ. of Colorado Denver, Univ. of Maryland Sch. of Med.*

9:00 ZZ4 **166.14** Cortico-striatal connections bias choice when reward conflicts with pain avoidance. N. SCHWARTZ*; H. L. FIELDS. *UCSF.*

10:00 ZZ5 **166.15** Effects of sex and estrous phase on foraging behavior of rats living in a semi-naturalistic environment. B. PELLMAN; M. TELLAKAT; J. CHAN; K. FUKUOKA; J. J. KIM*. *Univ. of Washington, Univ. of Washington.*

11:00 ZZ6 **166.16** Serotonin depletion impairs both expression and acquisition of context-conditioned fear. S. M. HAGSÄTER*; R. PETTERSSON; E. JOHANSSON; E. ERIKSSON. *Inst. of Neurosci.*

8:00 ZZ7 **166.17** Visual attention modulates socially induced threat in observational threat conditioning. E. HONG*; J. KIM; J. CHOI. *Dept. of Psychology, Korea Univ.*

9:00 ZZ8 **166.18** Effects of nicotine and nicotine withdrawal on fear conditioning in male rats. E. RIDENER; C. ADAM; K. STOLL; C. WEBBER; E. G. MELONI; S. B. CAINE; W. A. CARLEZON*, Jr. *Harvard Med. Sch./Mclean Hosp.*

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* Indicates abstract's submitting author

POSTER

167. Dopamine in Reward: Molecular and Cellular Mechanisms

Theme G: Motivation and Emotion

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 ZZ9 **167.01** Role of nucleus accumbens cholinergic interneuron D2 receptors in motivated behavior. E. F. GALLO*; M. BAILEY; E. CHUN; T. ADAMS; J. JAVITCH; P. BALSAM; C. KELLENDONK. *Columbia University/NYSPI, Columbia Univ., Barnard Col.*

9:00 ZZ10 **167.02** ● A cannabinoid receptor antagonist attenuates ghrelin-induced activation of the mesolimbic dopamine system in mice. A. KALAFATELI*; D. VALLÖF; M. HEILIG; J. ENGEL; E. JERLHAG. *Univ. of Gothenburg, Sahlgrenska Acad., Ctr. for Social and Affective Neuroscience, Div. of Neuro and Inflammation Sciences, Linköping Univ.*

10:00 ZZ11 **167.03** Exposure to intrauterine growth restriction (IUGR) modifies the accumbal dopamine response to palatable food intake and its modulation by insulin in adulthood in rats. D. PEREIRA LAUREANO*; M. B. ALVES; P. M. MIGUEL; T. D. MACHADO; A. R. REIS; A. B. MUCELLINI; F. D. CUNHA; R. DALLE MOLLE; M. G. ROSS; M. DESAI; P. P. SILVEIRA. *Univ. Federal Do Rio Grande Do Sul, Univ. Federal do Rio Grande do Sul, Univ. Federal do Rio Grande do Sul, Univ. Federal do Rio Grande do Sul, McGill Univ., Los Angeles Biomed. Res. Inst. at Harbor-UCLA Med. Ctr., Univ. Federal do Rio Grande do Sul, McGill Univ.*

11:00 ZZ12 **167.04** A new way to measure the motivational after-effect of rewarding brain stimulation. P. SHIZGAL*; C. EVANGELISTA; J. PINHEIRO CARVALHO; E. EWUSI-BOISVERT; W. BRAKE. *Concordia Univ.*

8:00 ZZ13 **167.05** Removal of disulfide-dependent activation of PKG1α increases food-seeking behaviour and sucrose preference in mice. C. DURAFFOURD*; O. BROCK; I. BRAREN; A. DELOGU; C. FERNANDES; P. EATON. *King's Col. London, King's Col. London, Maurice Wohl Clin. Neurosci. Institute, Inst. of Psychiatry, Univ. Med. Ctr. Hamburg-Eppendorf, King's Col. London, MRC Social Genet. and Developmental Psychiatry Centre, Inst. of Psychiatry.*

9:00 ZZ14 **167.06** VTA neurons in rat sagittal slices are predominantly excited by electrical stimulation of the fasciculus retroflexus regardless of projection target or developmental stage. P. L. BROWN*; P. D. SHEPARD. *Univ. of Maryland Baltimore.*

10:00 AAA1 **167.07** Inhibition of Wnt signalling dose-dependently impairs the acquisition and expression of amphetamine-induced conditioned place preference. F. ISLAM*; K. XU; R. J. BENINGER. *Queen's Univ., Queen's Univ.*

11:00 AAA2 **167.08** Persistence of the motivational after-effect of food reward following dopamine receptor antagonism. C. EVANGELISTA*; A. HANTSON; W. M. SHAMS; A. ALMEY; Y. ALQADRI; B. V. GONZALEZ CAUTELA; F. XIANG ZHOU; J. DUCHEMIN; A. HABRICH; V. LORENC; C. GAGNE; K. EL OUAFI; P. SHIZGAL; W. G. BRAKE. *Concordia Univ.*

8:00 AAA3 **167.09** Why do mice overeat palatable diets? A comparison of hedonic and homeostatic mechanisms. K. P. NGUYEN*; J. A. LICHOLAI; A. V. KRAVITZ. *NIH.*

9:00 AAA4 **167.10** Role of dopaminergic receptors within the CA1 and dentate gyrus regions of hippocampus in drug-primed reinstatement of morphine conditioned place preference in rats. A. HAGHPARAST*. *Neurosci. Res. Center, Shahid Beheshti Univ. of Med. Sci.*

10:00 AAA5 **167.11** VTA κ opioid receptors mediate aversion learning by decreasing dopamine. M. A. ROBBLE*; M. BOZSIK; D. S. WHEELER; R. A. WHEELER. *Marquette Univ.*

11:00 AAA6 **167.12** A neural circuit computational model to investigate distributed rewarding and aversive signaling in the dorsal raphe nucleus and ventral tegmental area. K. WONG-LIN; D. WANG*. *Intelligent Systems Res. Centre, Ulster Univ., Sch. of Systems Science,Beijing Normal Universit.*

8:00 AAA7 **167.13** Binge eating behavior for sucrose is time-of-day dependent: Effects on reward brian areas. R. I. OSNAYA*; M. PALMA; C. ESCOBAR BRIONES. *UNAM.*

9:00 AAA8 **167.14** Mechanisms of dopamine D2 receptor-mediated modulation of excitability in type A pyramidal cells in prefrontal cortex. S. E. ROBINSON*; V. S. SOHAL. *Univ. of California - San Francisco, Univ. of California - San Francisco.*

10:00 AAA9 **167.15** Dopaminergic contribution to declining value learning in old age. M. GUITART MASIP*; L. DE BOER; J. E. AXELSSON; K. ÅHLSTRÖM RIKLUND; L. NYBERG; L. BÄCKMAN. *Aging Res. Center/Karolinska Inst., Umea Univ. Hosp., Umea Univ.*

11:00 AAA10 **167.16** KChIP4: A biophysical amplifier of inhibition in mesolimbic dopamine neurons. K. M. COSTA*; A. KASHIOTIS; G. SCHNEIDER; M. SUBRAMANIAM; J. ROEPER. *Goethe Univ., Goethe Univ.*

8:00 AAA11 **167.17** Dual presynaptic and postsynaptic mechanisms in the nucleus accumbens core may contribute to the enhancement of cocaine-induced locomotion by D_3R antagonism. A. K. PETKO*; D. F. MANVICH; R. A. CLIBURN; K. A. STOUT; A. H. NEWMAN; G. W. MILLER; J. A. GOMEZ; D. WEINSHENKER; C. A. PALADINI. *Univ. of Texas at San Antonio, Emory Univ., Emory Univ., Natl. Inst. on Drug Abuse, Univ. of Texas at San Antonio.*

9:00 AAA12 **167.18** Mesolimbic opioid-dopamine interaction is disrupted in obesity but recovered by weight loss following bariatric surgery. H. K. KARLSSON*; L. TUOMINEN; P. SALMINEN; P. NUUTILA; L. NUMMENMAA. *Turku PET Ctr., Massachusetts Gen. Hosp., Harvard Med. Sch., Turku Univ. Hosp., Turku Univ. Hosp., Aalto Univ., Univ. of Turku.*

10:00 AAA13 **167.19** Astrocytic control of dopaminergic neurons. J. A. GOMEZ*; C. A. PALADINI. *The Univ. of Texas At San Antonio, The Univ. of Texas at San Antonio.*

11:00 AAA14 **167.20** Endocannabinoid synthesis by dopamine neurons controls cue directed reinforcement. D. P. COVEY*; H. M. DANTRASSY; J. F. CHEER. *Univ. of Maryland.*

POSTER

168. Neural Substrates of Fear: Human Studies

Theme G: Motivation and Emotion

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 AAA15 **168.01** Does children behave the way adults do when it comes to stress? H. BUDDE*; F. KOUTSANDRÉOU; M. WEGNER. *Med. Sch. Hamburg, Med. Sch. Hamburg, Inst. of Sport Science, Univ. of Bern.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 AAA16 **168.02** ▲ Hearing impairment, physical stress, and the risk of cardiovascular diseases - An attempt to quantify potential stress markers in hearing impaired workers. J. LUKAJEWSKI; R. HUONKER; P. JAUER; E. EMMERICH; A. LEHMENKUHLER*; F. RICHTER. *Jena Univ. Hosp., Jena Univ. Hosp., Pain Inst.*

10:00 AAA17 **168.03** Effects of genetics and stress on amygdalar activation and associated functional connectivity using fmri. N. NAIR*; J. HEGARTY; K. LANE; B. FERGUSON; P. HECHT; S. CHRIST; M. TILLEY; S. KANNE; D. BEVERSDORF. *Univ. of Missouri, Stanford Autism Ctr., Univ. of Missouri, USC, Central Methodist Univ.*

11:00 AAA18 **168.04** The neurobiology of fear and anxiety: Circuits engaged by certain and uncertain threat. C. M. KAPLAN*; M. E. BRINKMAN; L. PESSOA; J. F. SMITH; A. J. SHACKMAN. *Univ. of Maryland.*

8:00 AAA19 **168.05** Neural correlates of dental fear and trait anxiety in the cerebral response to dental sounds. H. KARIBE*; M. KOEDA; A. TATENO; Y. KATO; Y. OKUBO. *Nippon Dent. Univ., Nippon Med. Sch.*

9:00 AAA20 **168.06** Anatomical and functional dissection of the thalamo-amygdala circuitry underlying associative learning. F. MATYAS*; K. KOCSIS; B. BARSY; A. BABICZKY. *Res. Ctr. For Natural Sci., Pázmány Péter Catholic Univ.*

10:00 AAA21 **168.07** Neural mechanisms of human temporal fear conditioning. N. G. HARNETT*; J. R. SHUMEN; P. A. WAGLE; K. H. WOOD; M. D. WHEELOCK; J. H. BANOS; D. C. KNIGHT. *Univ. of Alabama At Birmingham, Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham.*

11:00 AAA22 **168.08** Impact of a stress stimulus and images with restorative potential in the amygdala's resting state functional connectivity. D. VÁZQUEZ CARRILLO*; J. MARTÍNEZ-SOTO; F. A. BARRIOS; L. GONZALEZ-SANTOS; E. PASAYE; S. ALCAUTER. *Univ. Nacional Autónoma De México (UNAM), Univ. de Guanajuato.*

8:00 AAA23 **168.09** Mesio-temporal θ oscillations in a human anxiety task. A. TZOVARA*; T. FEDELE; T. GRUNWALD; P. HILFIKER; N. KRAYENBÜHL; J. SARNTHEIN; D. R. BACH. *Univ. of Zurich, Neurosci. Ctr. Zurich, Univ. of Zurich, Wellcome Trust Ctr. for Neuroimaging, Univ. Col. London, Neurosurg. Department, Univ. Hosp. Zurich, Swiss Epilepsy Ctr.*

9:00 AAA24 **168.10** Striatal β-band oscillations associated with long-lasting pessimistic mood induced by intrastriatal microstimulation. K. AMEMORI*; S. AMEMORI; D. J. GIBSON; A. M. GRAYBIEL. *MIT.*

POSTER

169. Novel Endpoints and Models of Stress

Theme G: Motivation and Emotion

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 AAA25 **169.01** Unconditioned fear: Continued evaluation of the k-turn in C57 and Balbc mice. K. J. KUJAWA*; A. M. BABCOCK. *Montana State Univ.*

9:00 AAA26 **169.02** The acetylcholinesterase inhibitor pyridostigmine bromide interacts with stress to alter fear conditioning in a model of Gulf War Illness. V. A. MACHT*; J. L. WOODRUFF; C. A. GRILLO; M. A. WILSON; L. P. REAGAN. *Univ. of South Carolina.*

10:00 BBB1 **169.03** Multiple stress response under novel chasing stress using a predator-like robot. J. LEE*; A. CHOI; S. KIM; J. CHOI. *Korea Univ.*

11:00 BBB2 **169.04** ▲ Effects of different exposure times to predator scent in rats. M. MIGLIARO*; N. SANDOVAL-FLORES; F. BENITEZ-SERRATOS; K. B. VALENCIA-FLORES; C. ORIZABA-HUERTA; M. SANCHEZ-MACIAS; M. GARCIA-VALENCIA; D. N. VELAZQUEZ MARTINEZ; O. GALICIA; D. B. PAZ-TREJO; P. ZARATE-GONZALEZ; H. SANCHEZ-CASTILLO. *Univ. Nacional Autónoma de México, Tecnologico de Monterrey, Facultad de Psicologia, UNAM, Univ. Iberoamericana, Sociedad Iberoamericana de Neurociencia Aplicada, A.C.*

8:00 BBB3 **169.05** ▲ Long term effects of chronic unpredictable stress. P. TORRES-CARRILLO*; C. E. MENDOZA-ROSALES; D. B. PAZ-TREJO; O. GALICIA; D. N. VELAZQUEZ MARTINEZ; H. SANCHEZ-CASTILLO. *Univ. Nacional Autónoma De México, Univ. Iberoamericana, Facultad de Psicologia. UNAM.*

9:00 BBB4 **169.06** A modification of the platform-mediated avoidance task to study food-avoidance conflict. H. BRAVO-RIVERA*; P. A. RUBIO-ARZOLA; G. J. QUIRK. *Univ. of Puerto Rico Lab. of Fear Learning, Univ. of Puerto Rico Sch. of Med.*

10:00 BBB5 **169.07** Effects of chronic social defeat stress on mice that lack zinc transporter 3 (ZnT3) and synaptically-releasable zinc. B. B. MCALLISTER*; R. H. DYCK. *Univ. of Calgary.*

11:00 BBB6 **169.08** ▲ Functional mapping of brain circuits supporting social modulation of pain in mice. H. N. TURNER*; S. SIVASELVACHANDRAN; S. ABDALLAH; L. J. MARTIN; N. M. FOURNIER. *Trent Univ., Univ. of Toronto Mississauga.*

8:00 BBB7 **169.09** Fear expression and safety signals correlate with characteristic patterns of network activity in the limbic system. T. E. MADSEN*; C. HSU; D. G. RAINNIE. *Yerkes Natl. Primate Res. Ctr., Emory Univ., Emory Univ.*

9:00 BBB8 **169.10** Blockage of basolateral amygdala afferent input by *in vitro* 130 Hz stimulation shows frequency- and pathway- specificity. B. O'FLAHERTY*; D. G. RAINNIE. *Emory Univ., Emory Univ.*

10:00 BBB9 **169.11** Development of fear learning in rats prenatally exposed to valproic acid. C. E. BARRETT*; K. GORDON; T. HENNESSEY; K. RESSLER; D. RAINNIE. *Dept. of Psych. and Beh. Disorders, Emory Univ., Dept. of Beh. Neurosci. and Psych. Disorders, Yerkes Natl. Primate Res. Ctr., Harvard Univ.*

11:00 BBB10 **169.12** Postnatal development of membrane potential oscillations in the basolateral amygdala. S. J. RYAN*; D. G. RAINNIE. *Emory Univ., Emory Univ.*

8:00 BBB11 **169.13** ▲ Reciprocal effect between like-anxiety behaviors and epileptogenesis in an experimental model. A. E. HIDALGO-BALBUENA*; P. DOMÍNGUEZ-ZUÑIGA; A. VALDÉS-CRUZ; B. A. GARAY-CORTES; M. G. MARTÍNEZ-MONTALVO; S. ALMAZÁN-ALVARADO; R. FERNÁNDEZ-MAS. *Inst. Nacional De Psiquiatria Ramon De La Fuen, Inst. Nacional De Psiquiatria Ramon De La Fuen.*

9:00 BBB12 **169.14** Work related stress assessment in health care workers: Objective and subjective indicators. S. ZAFFINA*, JR; M. VINCI; V. CAMISA; G. DALMASSO; A. ANTICO; A. SANTORO. *Children's Hosp. bambino Gesù.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

170. Animal Models of Depression

Theme G: Motivation and Emotion

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 BBB13 **170.01** ▲ The effect of handling conditions on depressive-like behaviors in laboratory mice. C. LANE; J. TORRES; C. NEELY; J. M. FLINN*. *George Mason Univ.*

9:00 BBB14 **170.02** Reducing DAT function results in hypersensitivity to seasonal photoperiod-induced changes in affect. Z. A. COPE*; D. DULCIS; J. W. YOUNG. *Univ. of California San Diego.*

10:00 BBB15 **170.03** Affective and addictive consequences of adolescent stress in rats selectively bred for differences in emotional reactivity. C. AYDIN*; K. S. FROHMADER; P. BLANDINO, Jr; H. AKIL. *Universty of Michigan.*

11:00 BBB16 **170.04** Mechanisms linking depression associated with obesity through serotonergic modulation in experimental mice. Y. KURHE*; R. MAHESH; T. DEVADOSS. *Birla Inst. of Technol. & Science, Pilani, Intl. Med. Univ. (IMU).*

8:00 BBB17 **170.05** Withdrawn.

9:00 BBB18 **170.06** Carbetocin stimulates release of TRH and TRH-like peptides throughout the male rat brain and peripheral tissues. A. E. PEKARY*; A. SATTIN. *VA Greater Los Angeles Hlthcare Syst.*

10:00 BBB19 **170.07** Neuronal functions of trace amine-associated receptor 5 (TAAR5). S. ESPINOZA*; I. SUKHANOV; P. ILLIANO; A. GERASIMOV; T. D. SOTNIKOVA; I. FERRER; D. LEO; R. R. GAINETDINOV. *Inst. Italiano Di Tecnologia, Inst. of Translational Biomedicine, Inst. of neurophatology.*

11:00 BBB20 **170.08** ● Dental noise exposed mice display depressive-like phenotypes. Y. ZHOU*; W. LI; Y. DONG; X. CHU. *Bio-X Institutes,Shanghai Jiao Tong Univ., Shanghai Key Lab. of Psychotic Disorders, and Brain Sci. and Technol. Res. Ctr.*

8:00 BBB21 **170.09** Investigating a critical period needed for perinatal photoperiod effects on the serotonergic system. J. K. SIEMANN*; N. GREEN; H. IWAMOTO; D. G. MCMAHON. *Vanderbilt Univ., Vanderbilt Univ.*

9:00 BBB22 **170.10** Photoperiod-induced neurotransmitter plasticity relevant to bipolar disorder. B. ROMOLI*; E. SCHRURS; Z. COPE; J. W. YOUNG; D. DULCIS. *UC San Diego.*

10:00 BBB23 **170.11** Learning and memory impairment associated with learned helplessness depression-like behavior. M. PARDO*; E. BEUREL; R. JOPE. *Univ. of Miami.*

11:00 BBB24 **170.12** ▲ A double hit stress rodent model of major depressive disorder. L. J. HERNANDEZ*; K. C. BURGESS; J. D. WHERRY; A. SZEBENI; K. SZEBENI; G. A. ORDWAY; R. W. BROWN. *East Tennessee State Univ., East Tennessee State Univ.*

8:00 BBB25 **170.13** The effects of intermittent swim stress on morphine conditioned place preference. R. C. DRUGAN*; J. WATTS; N. P. STAFFORD. *Univ. of New Hampshire.*

9:00 BBB26 **170.14** Establishment of repeated social defeat stress model in female mice. S. J. RUSSO*; A. TAKAHASHI; H. ZHANG; S. ZHANG; Y. GROSSMAN; H. ALEYASIN; M. E. FLANIGAN; C. PENA; M. L. PFAU; G. E. HODES; C. MENARD; E. J. NESTLER; M. HAN. *Icahn Sch. of Med. at Mount Sinai, Univ. of Tsukuba.*

10:00 CCC1 **170.15** Comparison of behavioral despair following controllable vs. uncontrollable intermittent swim stress. N. P. STAFFORD*; K. M. SPENCER; N. J. PAGLUICA; C. A. LOWRY; D. H. TOWNSON; R. C. DRUGAN. *Univ. of New Hampshire, Univ. of Colorado at Boulder, Univ. of New Hampshire.*

11:00 CCC2 **170.16** ▲ The effects of paw lateralization and time of testing on behavioral despair in wistar rats. D. G. YILMAZ*; G. DEDEOGLU; N. ATESYAKAR; D. ALASHAN; C. BUYUKYABAT; E. ADIBELLI; S. TIRYAKI; R. CANBEYLI. *Bogazici Univ., Bogazici Univ., Dogus Univ.*

8:00 CCC3 **170.17** Use of physical or psychological stressors to induce anhedonia in the unpredictable chronic mild stress model of depression. K. S. HOMEM*; A. T. RAMOS; C. M. DOMINGUEZ; M. M. SOARES; C. SCAVONE; L. R. P. TRONCONE. *Univ. of São Paulo - IPUSP, Univ. of São Paulo, Inst. Butantan.*

9:00 CCC4 **170.18** ▲ Analysis of the 5-ht1a receptor in major depressive disorder in rat. L. O. HERNANDEZ*; E. N. LÓPEZ-MORÁN; E. M. BRAMBILA; I. HERRERA-CAMACHO; J. C. MORALES-MEDINA; H. A. RUBIO-ZAPATA; S. TREVIÑO; A. DÍAZ; G. FLORES; P. AGUILAR-ALONSO. *Inst. De Microbiología; ICUAP; BUAP, Posgrado en Ciencias Químicas; BUAP, Ctr. de Quimica, BUAP, Ctr. de Investigación en Reproducción Animal. CINVESTAV-IPN. UAT, Fac. de Med.; UADY, Laboratorio de Investigaciones Quimico Clin.; Facultad de Ciencias Químicas; BUAP, Dep. de Farmacia, Fac. de Ciencias Químicas; BUAP, Inst. de Fisiología; BUAP.*

10:00 CCC5 **170.19** Multi-dimensional characterization of pre-clinical models of neuropsychiatric disorders: Exploring new therapeutical approaches in depression and schizophrenia. A. MATEUS-PINHEIRO; P. PATRICIO; J. BESSA; N. SOUSA; L. PINTO*. *Life and Hlth. Sci. Res. Inst. - Sch. of Hlth. Sci. - UM, BnML - Behavioral and Mol. Lab.*

11:00 CCC6 **170.20** Emotional instability and behavioral transition in serotonin depleted mice. G. MADDALONI*; S. MIGLIARINI; F. NAPOLITANO; A. GIORGI; D. BIASCI; F. LESSI; M. GRITTI; S. FRANCESCHI; P. ARETINI; C. MAZZANTI; R. TONINI; A. USIELLO; M. PASQUALETTI. *Univ. of Pisa, Ceinge Biotecnologie Avanzate, Ctr. for Neurosci. and Cognitive System, Inst. Italiano di Tecnologia, Darwin Col., The Pisa Sci. Fndn., Neurosci. and Brain Technologies Department, Inst. Italiano di Tecnologia.*

8:00 CCC7 **170.21** ▲ Exposure to homocysteic acid early in postnatal development leads to a mixed depressive/manic behavioral phenotype. S. SIMKO; J. JOHNSON; G. FLORES; A. KLEPPINGER; C. C. BARNEY; L. A. CHASE*. *Hope Col.*

9:00 CCC8 **170.22** Long-term and transgenerational depression-like behavior is associated with hippocampal Akt-mTOR signaling deficiency in the offspring of postpartum depression-like mice. G. CHEN*; R. WU. *Nanjing Univ. of Chinese Med., Nanjing Univ. of Chinese Med.*

10:00 CCC9 **170.23** Role of leukocyte derived microRNAs in stress induced inflammation and depression. M. L. PFAU*; G. E. HODES; V. KANA; C. MENARD; H. ALEYASIN; Y. LAVIN; P. OGRODOWSKI; A. VENTURA; M. MERAD; S. RUSSO. *Icahn Sch. of Med. At Mount Sinai, Mem. Sloan-Kettering Cancer Ctr.*

11:00 CCC10 **170.24** Cellular adaptations in the lateral habenula in a model of early-life stress. A. TCHENIO*; S. LECCA; M. MAMELI, 75005. *INSERM UMR S 839.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

171. Effects of Ketamine in Animal Models of Depression

Theme G: Motivation and Emotion

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 CCC11 **171.01** Subanesthetic ketamine and cortical regional functional connectivity in a mouse model of depression resolved with depolarization and glutamatergic sensors. A. MCGIRR*; J. LEDUE; A. W. CHAN; Y. XIE; T. MURPHY. *Univ. of British Columbia, Univ. of British Columbia.*

9:00 CCC12 **171.02** ● Sex-dependent effects of forced swim and chronic mild stress on immobility behavior and VTA DA neuron activity: Impact of ketamine. M. RINCÓN CORTÉS*; A. A. GRACE. *Univ. of Pittsburgh Dept. of Neurosci.*

10:00 CCC13 **171.03** The dissociative drugs ketamine and DOI attenuate both positive and negative affective biases in rats. S. A. STUART*; E. S. J. ROBINSON. *Univ. of Bristol.*

11:00 CCC14 **171.04** Selective deletion of mTOR in DA neurons causes a depressive phenotype that can be rescued by ketamine. M. GUO*; D. ZHAO; F. J. SUN; M. WANG; X. Y. LU. *Binzhou Med. Univ. Hosp. / IMND, The Univ. of Texas Hlth. Sci. Ctr. at San Antonio.*

8:00 CCC15 **171.05** Interactions between Ghrelin and Ketamine in the Forced Swimming Test: Implications for novel antidepressant treatments. J. A. LANDRIGAN*; S. HAYLEY; A. ABIZAID. *Carleton Univ.*

9:00 CCC16 **171.06** Effects of ketamine on psychostimulant withdrawal and stress induced anhedonia in rats. A. DER-AVAKIAN*; A. MARKOU. *Univ. of California San Diego Dept. of Psychiatry.*

10:00 CCC17 **171.07** Role of the medial prefrontal cortex–dorsal raphe circuit in the antidepressant actions of ketamine. A. M. THOMAS*; B. HARE; E. S. WOHLEB; R. LIU; G. K. AGHAJANIAN; R. S. DUMAN. *Yale Univ. Sch. of Med.*

11:00 CCC18 **171.08** RAGE null mice show resilience to depressive-like behaviors after chronic unpredictable stress. T. C. FRANKLIN*; Y. ZHANG; E. S. WOHLEB; R. S. DUMAN. *Yale Univ. Sch. of Med.*

8:00 CCC19 **171.09** ● Interplay between BDNF and VEGF signaling in the medial prefrontal cortex is required for sustained antidepressant effects of ketamine. S. DEYAMA*; E. BANG; T. KATO; X. LI; R. S. DUMAN. *Yale Univ. Sch. of Med., Sumitomo Dainippon Pharma Co., Ltd.*

9:00 CCC20 **171.10** ● Role of mTORC1 and BDNF signaling in the rapid antidepressant actions of GLYX-13. T. KATO*; S. DEYAMA; X. LI; R. DUMAN. *Yale Univ. Sch. of Med., Sumitomo Dainippon Pharma Co., Ltd.*

10:00 CCC21 **171.11** Brain-derived neurotrophic factor is necessary for the antidepressant actions of scopolamine. S. GHOSAL*; M. GIRGENTI; B. HARE; X. LI; R. S. DUMAN. *Yale Univ.*

11:00 CCC22 **171.12** Distinct effects of ketamine and GLYX-13 on attentional performance. B. D. HARE*; S. M. GROMAN; C. A. GIANESSI; J. R. TAYLOR; R. S. DUMAN. *Yale Sch. of Med.*

8:00 CCC23 **171.13** ● Dynamic role of prefrontal cortex GABA interneurons in the effects of rapid-acting antidepressants and stress-induced depressive behaviors. E. S. WOHLEB*; M. J. GIRGENTI; D. M. GERHARD; R. S. DUMAN. *Yale Univ.*

9:00 CCC24 **171.14** A role for NR2B-containing NMDA receptors on prefrontal cortex interneurons in the rapid antidepressant effects of ketamine. D. M. GERHARD*; E. S. WOHLEB; R. S. DUMAN. *Yale Univ., Yale Univ.*

10:00 CCC25 **171.15** NMDA antagonist ketamine accelerates fear extinction via mTORC1 signaling. M. J. GIRGENTI*; S. GHOSAL; D. LOPRESTO; J. R. TAYLOR; R. S. DUMAN. *Yale Univ. Sch. of Med.*

11:00 CCC26 **171.16** Role of mitogen-activated protein kinase phosphatase-1 (MKP-1) in rapid antidepressant responses. J. KAPUSCINSKI; R. DRISCOLL; L. SEMKE; L. YUAN*; V. DURIC. *Des Moines Univ.*

8:00 DDD1 **171.17** Role of MKP-1-mediated inhibition of hippocampal JNK in the development of depressive-like behaviors. B. J. LAMB*, JR; C. LANGRECK; L. SEMKE; E. WAUSON; L. YUAN; D. VANJA. *Des Moines Univ.*

9:00 DDD2 **171.18** Hippocampal mechanisms linking chronic pain and development of depressive-like behaviors. M. CARDER; C. LANGRECK; M. LEONG; B. LAMB; L. SEMKE; M. SPOCTER; L. YUAN; V. DURIC*. *Des Moines Univ.*

10:00 DDD3 **171.19** Ketamine diffusion in brain tissue: Implications for *in vitro* studies of drug mechanisms. Z. S. GEIGER*; B. VANVELLER; J. S. CHEN; A. K. HARRATA; L. SEMKE; S. SAICHELLAPPA; L. YUAN. *Des Moines Univ., Iowa State Univ.*

11:00 DDD4 **171.20** α5 subunit-selective negative allosteric modulators of GABA-A receptors exert a rapid antidepressant action with low potential for addiction. S. M. THOMPSON*; M. NELSON; P. ZANOS; S. KRIMMEL; H. PRIBUT; C. KOSTELNIK; H. STARNES; A. BAILEY; T. GOULD. *Univ. of Maryland Baltimore, St. Mary's Col. of Maryland.*

8:00 DDD5 **171.21** The role of erk in synaptic plasticity: Novel insights from serotonin signaling in the hippocampus. A. M. VAN DYKE*; A. J. KALLARACKAL; X. CAI; S. M. THOMPSON. *Univ. of Maryland, Baltimore.*

9:00 DDD6 **171.22** ● Ketamine exerts NMDAR inhibition-independent antidepressant actions via a hydroxynorketamine. P. ZANOS*; R. MOADDEL; P. J. MORRIS; P. GEORGIOU; J. FISCHELL; G. I. ELMER; M. ALKONDON; P. YUAN; H. J. PRIBUT; N. S. SINGH; K. S. DOSSOU; Y. FANG; X. HUANG; C. L. MAYO; I. W. WAINER; E. X. ALBUQUERQUE; S. M. THOMPSON; C. J. THOMAS; C. A. ZARATE, Jr.; T. D. GOULD. *Univ. of Maryland, Biomed. Res. Center, Natl. Inst. on Aging, Natl. Inst. of Hlth., Div. of Preclinical Innovation, Natl. Ctr. for Advancing Translational Sciences, Natl. Inst. of Hlth., Exptl. Therapeut. and Pathophysiology Branch, Intramural Res. Program, Natl. Inst. of Mental Health, Natl. Inst. of Hlth., NIMH Psychoactive Drug Screening Program, Dept. of Pharmacol. and Div. of Chem. Biol. and Medicinal Chemistry, Univ. of North Carolina Chapel Hill Med. Sch., Mitchell Woods Pharmaceuticals.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

172. Opioids and the Brain

Theme G: Motivation and Emotion

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 DDD7 **172.01** Drebrin in the nucleus accumbent mediates behavioral and structural plasticity following opiate exposure. J. A. MARTIN*; Z. WANG; M. S. HUMBY; A. CACCAMISE; L. E. MUELLER; J. N. SIEMIAN; C. T. WERNER; R. L. NEVE; J. LI; A. M. GANCARZ; D. M. DIETZ. *State Univ. of New York At Buffalo, MIT.*

9:00 DDD8 **172.02** The role of Cornichon homolog-3 (CNIH3) in opioid-induced plasticity and conditioned behavior. H. E. FRYE*; C. TROUSDALE; E. C. NELSON; J. DOUGHERTY; J. A. MORON. *Washington Univ. Sch. of Med., Washington Univ. Sch. of Med., Washington Univ. Sch. of Med.*

10:00 DDD9 **172.03** κ opioid system in nucleus accumbens mediates pain-induced decrease in motivated behavior. T. MARKOVIC*; N. MASSALY; A. POE; R. AL-HASANI; D. BHATTI; M. BRUCHAS; J. MORON. *Washington Univ. Sch. of Med., Washington Univ. in St. Louis.*

11:00 DDD10 **172.04** Heroin, oxycodone and fentanyl induce hyperglycemia in the rat nucleus accumbens. E. SOLIS*, JR; E. A. KIYATKIN. *NIH/NIDA IRP, NIH/NIDA-IRP.*

8:00 DDD11 **172.05** GABRA2 variations affect the disrupted connectivity of impulsivity-control system in heroin abusers. Y. SUN*; R. JIN; Y. FAN; L. LU; J. SHI. *Peking Univ., Brainnetome Center, Inst. of Automation, Chinese Acad. of Sci., Dept. of Radiology, Sch. of Medicine, Univ. of Pennsylvania.*

9:00 DDD12 **172.06** Determination of morphological and molecular adaptations in ventral tegmental area dopamine neurons by chronic morphine. S. E. COOPER*; M. MAZEI-ROBISON. *Michigan State Univ., Michigan State Univ.*

10:00 DDD13 **172.07** Effects of remifentanil on c-fos expression in the reward circuit of environmentally enriched and isolated rats. R. S. HOFFORD*; U. Z. HAMID; M. T. BARDO. *Univ. of Kentucky.*

11:00 DDD14 **172.08** Comparison of (+) and (-)-naloxone on the acute psychomotor stimulating effects of heroin, 6-acetylmorphine, and morphine in mice. J. MORLAND*; G. S. ERIKSEN; J. M. ANDERSEN; F. BOIX; M. S. S. BERGH; V. VINDENES; K. C. RICE; M. HUESTIS. *Norwegian Inst. Publ. Hlth., NIDA and NIAAA, Univ. of Maryland Sch. of Med.*

8:00 EEE1 **172.09** Brain and body temperature effects of heroin: State dependency and environmental modulation. E. A. KIYATKIN*; R. A. BOLA. *NIDA-IRP, NIH, DHHS.*

9:00 EEE2 **172.10** ▲ Intermittent versus sustained morphine treatment regimens on molecular and behavioral markers of withdrawal. K. LEE*; S. BRIDGES; C. CAHILL; C. EVANS; A. TAYLOR. *UCLA, UC Irvine.*

10:00 EEE3 **172.11** Sex differences in spontaneous somatic morphine withdrawal and associated CREB activation in the tail of the ventral tegmental area. S. A. MORRIS BOBZEAN; M. M. WHITE; L. I. PERROTTI*. *UT Arlington.*

11:00 EEE4 **172.12** The influence of social housing conditions on morphine-induced gene expression. M. BATES*; M. A. EMERY; P. J. WELLMAN; S. EITAN. *Texas A&M Univ.*

8:00 EEE5 **172.13** μ opioid receptor ligand bias on GPCR signaling pathways. X. ZHANG*; S. HUTCHINS; R. GILMORE; E. VALLENDER. *Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr.*

9:00 EEE6 **172.14** Local μ-opioid receptor antagonism blocks evoked phasic dopamine release in the nucleus accumbens in rats. T. SHNITKO*; A. GÓMEZ-A; H. BAREFOOT; E. BRIGHTBILL; L. SOMBERS; S. NICOLA; D. ROBINSON. *Univ. of North Carolina At Chapel Hill, North Carolina State Univ., Albert Einstein Col. of Med.*

10:00 EEE7 **172.15** ▲ Further characterization of the discriminative stimulus effects of naltrexone in rats with limited access to sucrose. J. L. HERRMANN*; K. F. JAMES; D. M. PAUKNER; S. M. MOE; E. M. DE ROACH; M. A. MAREK; L. R. ALTENDORF; A. S. LEVINE; D. C. JEWETT. *Univ. of Wisconsin - Eau Claire, Univ. of Minnesota.*

11:00 EEE8 **172.16** The effect of coerulear orexin and dynorphin receptor antagonism on morphine withdrawal induced conditioned place aversion. A. MOHAMMADKHANI*; H. AZIZI; S. SEMNANIAN. *Inst. For Res. In Fundamental Sci. (IPM), Tarbiat Modares Univ.*

8:00 EEE9 **172.17** Tegmental circuits controlling morphine locomotion: Feedback between rostromedial tegmental GABA and dorsal tegmental cholinergic neurons. D. I. WASSERMAN*; J. M. J. TAN; J. KIM; J. S. YEOMANS. *Univ. of Guelph, Univ. of Toronto.*

9:00 EEE10 **172.18** HSV-mediated transfer of MnSOD into the PAG attenuates morphine physical withdrawal response in rats. T. IIDA; S. LIU; H. YI; Q. LIU; D. IKEGAMI*; W. F. GOINS; J. C. GLORIOSO; D. A. LUBARSKY; S. HAO. *Univ. of Miami Miller Sch. of Med., The Univ. of Pittsburgh Sch. of Med.*

POSTER

173. Decision Making: Non-Orbitofrontal Cortex

Theme H: Cognition

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 EEE11 **173.01** ▲ Probabilistic reversal learning in rodents: Technical issues and open-source software and hardware. M. J. PRESTON; T. K. SWANSON; L. M. AMARANTE; B. B. AVERBECK; M. LAUBACH*. *American Univ., NIH.*

9:00 EEE12 **173.02** Predictive neural activity of others' behavior in the macaque medial frontal cortex. R. CIRILLO*; R. FALCONE; A. GENOVESIO. *la Sapienza Univ. of Rome.*

10:00 EEE13 **173.03** Representation of movement by thalamic and prefrontal cortical neurons in rats during DNMTP. E. K. BRASLEY; R. L. A. MILLER; C. J. THERIAULT; M. J. FRANCOEUR; H. D. ROBERTSON; H. J. GUSTIN; J. C. MCKEE; A. G. DRAKE; B. M. GIBSON; R. G. MAIR*. *Univ. of New Hampshire.*

11:00 EEE14 **173.04** Rat prefrontal cortical neurons reflect manipulations of stimulus properties signaling reinforcement. M. J. FRANCOEUR*; E. BRASLEY; A. C. AASEN; C. L. HOLLER; A. L. MARINO; B. C. DOWNEY; B. M. GIBSON; R. G. MAIR. *Univ. of New Hampshire.*

8:00 FFF1 **173.05** Single trial β and γ burst dynamics during cognitive control. C. R. WILSON*; E. PROCYK. *INSERM U1208, Stem Cell & Brain Res. Inst., Univ. Lyon, Univ.*

9:00 FFF2 **173.06** Dopamine neurons in the VTA enhances information coding in the prefrontal cortex. C. J. MININNI; C. F. CAIAFA; S. ZANUTTO; K. Y. TSENG; S. E. LEW*. *Inst. de Biología y Medicina Exptl. (CONICET), Inst. Argentino de Radioastronomía, Inst. de Ingeniería Biomédica (UBA), Rosalind Franklin Univ. of Med. and Sci., Univ. de Buenos Aires.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 FFF3 **173.07** C-FOS expression in the mPFC associated with reproductive state and maternal nest building behavior in female rabbits (Oryctolagus Cuniculus). H. CANO*; K. HOFFMAN. *Univ. Autonoma De Tlaxcala - CINVESTAV, Univ. Autonoma De Tlaxcala - CINVESTAV.*

11:00 FFF4 **173.08** Primate frontal eye field and multi-factorial decision making during perceptual judgment. H. SEO*; D. LEE. *Yale Univ. Sch. of Med.*

8:00 FFF5 **173.09** Galanin improves the performance of rats during the auditory discrimination tasks. L. DANYI*; Z. ZHANG; X. CHEN; J. HE. *Dept. of Biomed. Sciences, City Univ., Lab. of Applied Neuroscience, Dept. of Rehabil. Sciences, The Hong Kong Polytechnic University.*

9:00 FFF6 **173.10** Prospective memory-like behavior predicts impulsivity in wistar and sprague dawley rats but not alcohol preferring 'p' rats: Exploring the role of the prefrontal cortex in prospection during delay discounting. D. N. LINSENBARDT*; M. S. SMOKER; S. S. JANETSIAN; D. STEMPKY; C. C. LAPISH. *Indiana Univ. - Purdue Univ. Indianapolis.*

10:00 FFF7 **173.11** Diverse inhibitory synaptic properties in primate anterior cingulate versus lateral prefrontal cortices. M. MEDALLA*; J. P. GILMAN; J. WANG; J. I. LUEBKE. *Boston Univ. Sch. of Med.*

11:00 FFF8 **173.12** Heterogeneity of frontal and visual cortical areas in mice and monkeys. J. I. LUEBKE*; J. GILMAN; A. HSU; M. MEDALLA. *Boston Univ. Sch. of Med.*

8:00 FFF9 **173.13** Modulation of value information coded in the lateral prefrontal cortex by the decoded neurofeedback with the electrocorticographic (ECoG) signals. S. TANAKA*; K. KAWASAKI; I. HASEGAWA; T. SUZUKI; M. SAKAGAMI. *Tamagawa Univ. Brain Sci. Inst., Niigata Univ. Sch. of Med., Natl. Inst. of Information and Communications Technol.*

9:00 FFF10 **173.14** Reward-based training of recurrent neural networks for diverse cognitive and value-based tasks. F. SONG*; X. WANG. *New York Univ.*

10:00 FFF11 **173.15** Expectation dynamics in an auditory discrimination task. A. HERMOSO MENDIZABAL*; A. HYAFIL; P. RUEDA OROZCO; S. JARAMILLO; D. ROBBE; J. DE LA ROCHA. *IDIBAPS, Ctr. for Brain and Cognition, Univ. Nacional Autónoma de México, Univ. of Oregon, Inst. de Neurobiologie de la Méditerranée.*

11:00 FFF12 **173.16** Role of mouse premotor cortex in action generalization and goal-directed behavior. D. C. SCHREINER*; C. M. GREMEL. *Univ. of California San Diego.*

8:00 FFF13 **173.17** Dissociation of deterministic and stochastic components in the timing of voluntary actions in rodent frontal cortex. M. MURAKAMI*; H. SHTEINGART; Y. LOEWENSTEIN; Z. F. MAINEN. *Champalimaud Ctr. for the Unkown, The Hebrew Univ. of Jerusalem.*

9:00 FFF14 **173.18** Adolescent cannabinoid exposure impairs risky decision-making and alters mPFC firing patterns in adult rats. E. JACOBS-BRICHFORD*; L. R. HORN-AMODEO; M. S. MCMURRAY; J. D. ROITMAN. *Univ. of Illinois At Chicago, Scripps Res. Inst., Miami Univ.*

10:00 FFF15 **173.19** Single-unit and population activity in rat medial prefrontal cortex during headfixed decision making. R. DE HAAN*; S. A. VAN DER BURG; A. W. PIENEMAN; V. NIGADE; H. D. MANSVELDER; C. P. J. DE KOCK. *VU Univ.*

11:00 FFF16 **173.20** Prelimbic/Infralimbic contribution to contextual memory recall during varying frequency of retrieval demand. P. MARTIN*. *Icahn Sch. of Med. At Mount Sinai.*

8:00 FFF17 **173.21** Dysfunctional Learning: A comparison of activity in the motor cortex and dentate nucleus reflecting correct and incorrect motor responses to an acoustic discriminative stimulus (DS). C. D. WOODY*. *Ronald Reagan UCLA Med. Ctr.*

POSTER

174. Sex, Hormones, and Cognition

Theme H: Cognition

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 FFF18 **174.01** The effects of estrogenic components of licorice root on cognition. P. KUNDU*; D. L. KOROL; S. BANDARA; S. MONAIKUL; W. G. HELFERICH; S. L. SCHANTZ. *Univ. of Illinois at Urbana-Champaign, Syracuse Univ., Univ. of California, Davis, Univ. of Illinois at Urbana-Champaign.*

9:00 FFF19 **174.02** Elevated prenatal testosterone may selectively impair female mice in object recognition memory. C. S. WASSON*; C. HOWES; A. TIESSEN; E. MARTIN; A. J. GIUGA; H. KATZMAN; N. J. MACLUSKY; E. CHOLERIS. *Univ. of Guelph, Univ. of Guelph.*

10:00 FFF20 **174.03** Circulating progesterone contributes to state-dependent contextual fear in cycling female rats. G. M. ACCA*; B. TSAO; A. S. MATHEW; A. PHAN; S. MAREN; N. NAGAYA. *Texas A&M Univ., Texas A&M Univ.*

11:00 FFF21 **174.04** Contrasting effects of individual versus combined estrogen and progestogen regimens on cognitive function: One plus one does not equal two. A. V. PRAKAPENKA*; A. M. QUIHUIS; R. HIROI; C. G. CARSON; S. PATEL; C. CROFT; C. BERNS-LEONE; C. FOX; R. W. SIRIANNI; H. A. BIMONTE-NELSON. *Arizona State Univ., Arizona Alzheimer's Consortium, Barrow Neurolog. Inst., Arizona State Univ., Arizona State Univ.*

8:00 FFF22 **174.05** Menopause and the aging brain: Relationships among ovarian hormone levels, memory, and choline acetyltransferase-containing neurons in the basal forebrain. S. V. KOEBELE*; S. E. MENNENGA; S. PATEL; R. HIROI; L. T. HEWITT; A. M. QUIHUIS; L. P. MAYER; C. A. DYER; L. M. DEMERS; H. A. BIMONTE-NELSON. *Arizona State Univ., Arizona Alzheimer's Consortium, SenesTech Inc., The Pennsylvania State University College of Med.*

9:00 FFF23 **174.06** ▲ Long-term tonic estradiol improves, and cyclic estradiol impairs, spatial working memory in ovariectomized middle-aged female rats. K. NISHIMURA*; S. V. KOEBELE; S. KEMMOU; J. B. ORTIZ; J. M. JUDD; H. BIMONTE-NELSON; C. D. CONRAD. *Arizona State Univ., Arizona Alzheimer's Consortium.*

10:00 FFF24 **174.07** 17β-estradiol versus conjugated equine estrogens: Differential interaction of androstenedione with two commonly used hormone therapy estrogens for spatial memory in mice. R. HIROI*; S. GRANGER; M. POISSON; C. BERNS-LEONE; D. KIRBY; S. PATEL; B. HADDER; V. CIARAMITARO; H. A. BIMONTE-NELSON. *Arizona State Univ., Arizona Alzheimer's Consortium.*

11:00 FFF25 **174.08** The interaction of dietary isoflavones and estradiol replacement on depressive-like behaviors, brain-derived neurotrophic factor and cytokine response in the ovariectomized rat. A. L. RUSSELL*; J. MORAN GRIMES; D. O. LARCO; D. F. CRUTHIRDS; J. WESTERFIELD; L. WOOTEN; M. KEIL; M. J. WEISER; M. R. LANDAUER; R. J. HANDA; T. J. WU. *Uniformed Services Univ., Colorado State Univ., Armed Forces Radiobiology Reserach Inst.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 FFF26 **174.09** Human chorionic gonadotropin increases ERK phosphorylation, neurite outgrowth and rescues ovariectomy associated deficits in spatial memory. J. A. BLAIR*; H. MCGEE; S. BHATTA; G. CASADESUS. *Kent State Univ., Kent State Univ.*

9:00 GGG1 **174.10** The brain-derived neurotrophic factor Val66Met variant modulates the effects of estradiol add-back. G. H. PETTY*; J. MARROCCO; K. H. HAJDAROVIC; E. M. WATERS; B. S. MCEWEN. *The Rockefeller Univ.*

10:00 GGG2 **174.11** Sexual dimorphism in dominance hierarchy and learning in the zebrafish, Danio rerio. J. M. SUNDVIK*; H. PUTTONEN; P. PANULA. *Dept. of Anatomy, Biomedicum Helsinki.*

11:00 GGG3 **174.12** ● Nootropic potential of cholinesterase inhibitor donepezil is ovarian hormone dependent in female Wistar rats. R. V. GRANDHI; R. MEDAPATI; J. TADIPARTHY; N. GANUGA; R. ABRAHAM; P. JAYARAJAN*; R. NIROGI. *Suven Life Sci. Ltd.*

8:00 GGG4 **174.13** Aromatase inhibition impairs cognition and thermoregulation in male and female gonadectomized middle-aged marmosets. N. J. GERVAIS; K. P. WORKMAN; M. LACLAIR; J. A. MONG; L. REMAGE-HEALEY; A. LACREUSE*. *Univ. of Massachusetts Amherst, Univ. of Massachusetts Amherst, Univ. of Maryland Sch. Med.*

9:00 GGG5 **174.14** Interactive effect of menstrual cycle and dopamine baseline levels on cognitive performance in tasks requiring executive control. E. HIDALGO-LOPEZ*; B. PLETZER. *Univ. of Salzburg, Ctr. for Cognitive Neuroscience, Univ. of Salzburg.*

10:00 GGG6 **174.15** Sex differences and menstrual cycle dependent changes in cognitive strategies during spatial navigation and verbal fluency. A. SCHEURINGER*; B. A. PLETZER. *Univ. of Salzburg.*

11:00 GGG7 **174.16** Effects of ethinyl estradiol and levonorgestrel on responses to novel objects in adolescence rats. I. A. PASTOR; C. M. LEW; Z. T. GOODMAN; D. M. CYRENNE*. *California State University, Sacramento.*

8:00 GGG8 **174.17** ▲ The influence of parity on hormone replacement efficacy in a rat model of menopause. M. MEY; A. STAVNEZER*; R. BRANDON; M. PAVESKOVIC. *Col. of Wooster, Col. of Wooster.*

9:00 GGG9 **174.18** Women with premenstrual dysphoric disorder (PMDD) differ in baseline and steroid hormone response expression profiles of the ESC/E(Z) pathway compared with asymptomatic controls. J. F. HOFFMAN*; N. DUBEY; K. SCHUEBEL; C. MARIETTA; Q. YUAN; P. MARTINEZ; L. NIEMAN; D. RUBINOW; P. SCHMIDT; D. GOLDMAN. *Natl. Inst. of Mental Hlth., Natl. Inst. on Alcohol Abuse and Alcoholism, Natl. Inst. of Mental Hlth., The Eunice Kennedy Shriver NICHD, Univ. of North Carolina at Chapel Hill.*

10:00 GGG10 **174.19** The influence of biological sex and early-life stress on the long non-coding RNA, Gomafu, within the developing neonatal and juvenile brain. A. CUARENTA*; S. L. KIGAR; N. S. ZAHIR; L. CHANG; V. P. BAKSHI; A. P. AUGER. *Univ. of Wisconsin, Univ. of Wisconsin, Univ. of Wisconsin.*

11:00 GGG11 **174.20** Sex dependent programming of dopamine receptor expression within the developing brain by early life stress. L. CHANG*; S. L. KIGAR; A. CUARENTA; J. H. HO; V. P. BAKSHI; A. P. AUGER. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

8:00 GGG12 **174.21** Post-menopause animal model presents distinct features of anxiety. L. C. CASTRO*; A. PEREIRA-CAIXETA; L. O. GUARNIERI; C. P. BASTOS, 30310200; G. S. PEREIRA. *Federal Univ. of Minas Gerais.*

9:00 GGG13 **174.22** Sex differences in neuronal activity and expression of small conductance calcium-activated potassium channels in the rat basolateral amygdala. J. E. VANTREASE*; S. R. BLUME; J. H. URBAN; J. A. ROSENKRANZ. *The Chicago Med. School/RFUMS, Children's Hosp. of Philadelphia Res. Inst., The Chicago Med. School/RFUMS.*

10:00 GGG14 **174.23** A unique subdivision of serotonergic neurons in the dorsal raphe nucleus projects to the basolateral amygdala complex to enhance fear-conditioned behaviors. C. S. BERNABE*; I. F. CALIMAN; A. R. R. ABREU; A. SHEKHAR; P. L. JOHNSON. *Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., Federal Univ. of Espirito Santo, Federal Univ. of Ouro Preto, Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med.*

11:00 GGG15 **174.24** ▲ Estrogen replacement during pre-exposure enables latent inhibition of fear conditioning in the rat. M. E. LONG*; W. P. JORDAN. *St. Mary's Col. of Maryland, St. Mary's Col. of Maryland.*

8:00 GGG16 **174.25** Effects of female gonadal hormones on fear associated learning using the SPS rat model of PTSD. C. V. CHEN*; I. LIBERZON. *Univ. of Michigan.*

9:00 GGG17 **174.26** The effects of sex and gonadal hormones on anxiety behaviour in mice. C. HOWES*; C. WASSON; E. MARTIN; A. GIUGA; H. KATZMAN; A. TIESSEN; E. CHOLERIS; N. MACLUSKY. *Univ. of Guelph, Univ. of Guelph, Univ. of Guelph.*

10:00 GGG18 **174.27** Long-term administration of nandrolone decanoate induces hyperarousal and anxiety-like behavior in adult male rats. I. F. CALIMAN*; A. R. R. DE ABREU; C. S. BERNABE; A. DIETRICH; W. A. TRUITT; P. L. JOHNSON; A. SHEKHAR; A. I. MOLOSH. *Federal Univ. of Espirito Santo, Indiana Univ. Sch. of Med., Federal Univ. of Ouro Preto, Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med.*

11:00 GGG19 **174.28** Withdrawn.

POSTER

175. Decision Making: Corticolimbic Circuits

Theme H: Cognition

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 GGG20 **175.01** Serotonin stimulation modulates waiting through direct effects and associative learning. M. S. FONSECA*; M. MURAKAMI; E. LOTTEM; Z. F. MAINEN. *Champalimaud Ctr. for the Unknown.*

9:00 GGG21 **175.02** Posterior piriform cortex in an odor-guided spatial navigation task. C. POO*; N. BONACCHI; A. CRUZ; Z. F. MAINEN. *Champalimaud Ctr. for the Unknown.*

10:00 GGG22 **175.03** Orbitofrontal cortex and the representation of outcome locations. N. BONACCHI*; C. POO; A. CRUZ; Z. F. MAINEN. *Champalimaud Ctr. for the Unknown.*

11:00 GGG23 **175.04** A computational account of foraging in probabilistic environments and its modulation by dorsal raphe serotonergic neurons. P. VERTECHI*; E. LOTTEM; M. OUDE LOHUIS; D. BANERJEE; D. SARRA; Z. F. MAINEN. *Champalimaud Ctr. for the Unknown.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 GGG24 **175.05** Serotonergic modulation of decision making in a foraging task. D. SARRA*; E. LOTTEM; P. VERTECHI; D. BANERJEE; M. OUDE LOHUIS; Z. F. MAINEN. *Champalimaud Ctr. for the Unknown.*

9:00 GGG25 **175.06** Differential regulation of reward-seeking under conflict by distinct nucleus accumbens subregions. P. T. PIANTADOSI*; D. C. M. YEATES; M. WILKINS; S. B. FLORESCO. *Univ. of British Columbia.*

10:00 GGG26 **175.07** Prefrontal GABA regulation of sustained attention and performance of conditional discriminations. M. AUGER*; J. MECCIA; S. B. FLORESCO. *Univ. of British Columbia.*

11:00 HHH1 **175.08** Stimulation of dopamine D_1, D_2 or D3 receptors stimulation in the nucleus accumbens differentially alters effort-related decision-making. C. A. BRYCE*; S. B. FLORESCO. *Univ. of British Columbia, Univ. of British Columbia.*

8:00 HHH2 **175.09** Complimentary roles for the medial prefrontal and orbitofrontal cortex in mediating risk/reward decision making guided by external cues. M. VAN HOLSTEIN*; M. T. L. TSE; S. B. FLORESCO. *Univ. of British Columbia.*

9:00 HHH3 **175.10** Medial prefrontal cortex and dorsal striatum neural correlates relate to multiple aspects of delay discounting. P. M. BAKER*; S. J. Y. MIZUMORI. *Univ. of Washington.*

10:00 HHH4 **175.11** Hippocampal place fields respond to the expected cost of rewards. J. DAVIS*; E. C. SUTLIEF; S. J. MIZUMORI. *Univ. of Washington, Seattle.*

11:00 HHH5 **175.12** Effects of stimulus size and associated reward in primate LIP and amygdala. M. L. LEATHERS*; C. OLSON. *Natl. Inst. of Mental Hlth., Ctr. for the Neural Basis of Cognition.*

8:00 DP07 **175.13** (Dynamic Poster) Risky reward seeking disrupts coordination of prefrontal cortex and VTA neuronal activity. J. PARK*; A. DEL ARCO; B. YU; B. MOGHADDAM. *Univ. of Pittsburgh, Carnegie Mellon Univ.*

9:00 HHH6 **175.14** Basolateral amygdala supports the value representation and effortful choice of a preferred option. E. E. HART*; M. GARCIA; Y. ZOKEN; A. IZQUIERDO. *Univ. of California Los Angeles, UCLA.*

10:00 HHH7 **175.15** Neural correlates of positive affect in subcallosal anterior cingulate cortex and amygdala. S. TAMANG; C. MOSHER; P. H. RUDEBECK*. *Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai.*

11:00 HHH8 **175.16** ▲ Effects of ventral striatum lesions on stimulus vs. action based reinforcement learning. K. ROTHENHOEFER*; R. VICARIO-FELICIANO; R. BARTOLO; V. D. COSTA; E. A. MURRAY; B. B. AVERBECK. *NIH.*

8:00 HHH9 **175.17** Inhibition of drug seeking behavior by activation of somatosensory input transmitted via the dorsal column pathway to the mesolimbic reward system. S. CHANG; Y. RYU; Y. GWAK; N. KIM; D. KIM; H. KIM; J. LEE; M. KO; B. LEE; J. KOO; S. C. STEFFENSEN; E. JANG; C. YANG*; H. KIM. *Daegu Haany Univ., Acupuncture, Moxibustion & Meridian Res. Center, Div. of Standard Research, Korea Inst. of Oriental Med., Dept. of Bioresource Science, Andong Natl. Univ., Dept. of Psychology and Neurosci. (1050 SWKT), Brigham Young Univ.*

9:00 HHH10 **175.18** Social context shapes decision signals in primate superior temporal sulcus. A. UTEVSKY*; M. L. PLATT. *Duke Univ., Univ. of Pennsylvania.*

10:00 HHH11 **175.19** Stimulation in primate caudate nucleus mediates decision-making behavior in free-choice task. S. R. SANTACRUZ*; E. L. RICH; J. D. WALLIS; J. M. CARMENA. *Univ. of California, Berkeley, Univ. of California, Berkeley, Univ. of California, Berkeley.*

11:00 HHH12 **175.20** Chemogenetic inactivation of corticostriatal projections differentially disrupts impulsive choice in rats selected for high or low trait impulsivity. N. E. ZLEBNIK*; J. M. WENZEL; M. H. PATTON; J. R. SMETHELLS; B. N. MATHUR; J. F. CHEER. *Univ. of Maryland Sch. of Med., Univ. of Minnesota.*

8:00 HHH13 **175.21** Visual tactile integration in rats and underlying neuronal mechanisms. N. NIKBAKHT*; D. ZOCCOLAN; M. DIAMOND. *SISSA, SISSA.*

9:00 HHH14 **175.22** Optimizing of Medial forebrain bundle stimulation parameters. C. KONG*; J. SHIN; C. KO; J. CHO; Y. LEE; Y. CHO; S. KIM; H. JUNG; S. JUN; J. CHANG. *Yonsei Univ. Col. of Med., Brain Korea 21 PLUS Project for Med. Sci. and Brain Res. Institute, Yonsei Univ. Col. of Med., Dept. of electronics Engineering, Col. of Engineering, Ewha Womans Universty, Dept. of Brain and Cognitive Sciences, Ewha Womans Universty.*

10:00 HHH15 **175.23** Neuronal synchrony between the anterior cingulate cortex and the amygdala reflects prosocial decision outcomes. O. DAL MONTE*; N. FAGAN; A. NAIR; S. W. CHANG. *Yale Univ.*

11:00 HHH16 **175.24** Pathway-specific recordings of glutamatergic input to the nucleus accumbens during a reward seeking task. S. J. REED*; C. LAFFERTY; T. DAVIDSON; L. GROSENICK; K. DEISSEROTH; J. P. BRITT. *Mcgill Univ., McGill Univ., UCSF, Columbia Univ., Stanford Univ.*

8:00 HHH17 **175.25** Electrophysiological tools for the study of interoception during prosocial behaviors. M. AGUILAR-RIVERA*; T. JOHNSON; A. MILLER; Y. KIM; E. GONZALES-LEON; L. SCHUSTER; N. BUTLER; J. TANTIONGLOC; T. COLEMAN; L. QUINN; A. CHIBA. *UCSD, UCSD, UCSD.*

POSTER

176. Executive Function: Inhibitory Control

Theme H: Cognition

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 HHH18 **176.01** The highly selective 5-HT_{2C} receptor agonist WAY163909 reduces compulsive behavior and food intake in female rhesus monkeys. M. PEREZ DIAZ*; L. L. HOWELL; M. WILSON. *Yerkes Natl. Primate Res. Ctr., Emory Univ.*

9:00 HHH19 **176.02** Serotonin control of self-control: 5-HT1B receptor modulation of impulsivity. K. M. NAUTIYAL*; V. M. MAGALONG; M. M. WALL; P. D. BALSAM; C. BLANCO; R. HEN. *Columbia Univ., NYSPI, Columbia Univ. and NYSPI, Barnard College, Columbia Univ. and NYSPI.*

10:00 HHH20 **176.03** Local disinhibition modulates brain functions by mediating global network state. W. CHOI*; H. LEE; Y. PARK; S. PAIK. *KAIST, KAIST.*

11:00 HHH21 **176.04** Region-dependent differences of dopamine receptors, DAT and BDNF associated to individual differences of impulsive action and vulnerability to drug reward. R. LIAO*; C. CHUANG; Y. CHANG; Y. CHEN; S. CHEN; P. CHU. *Natl. Cheng-Chi Univ., Inst. of Neuroscience, Natl. Cheng-Chi Univ., Dept. of Psychology, Natl. Cheng-Chi Univ.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 HHH22 **176.05** Elucidating the function of the prefronto-striatal circuit of the macaque brain using the double virus vector infection. M. OGUCHI*; T. SHINGO; X. PAN; T. KIKUSUI; S. KATO; K. KOBAYASHI; M. SAKAGAMI. *Tamagawa Univ., East China Univ. of Sci. and Technol., Azabu Univ., Fukushima Med. Univ.*

9:00 HHH23 **176.06** Monkeys become impatient after pharmacological or chemogenetic (DREADD) inactivation of ventral striatum. M. A. ELDRIDGE*; S. H. OPPLER, Jr.; W. LERCHNER; B. J. RICHMOND. *NIMH.*

10:00 HHH24 **176.07** Investigating the effect of orexin on $GABA_A$ receptor current in locus coeruleus neurons during withdrawal syndrome of morphine dependent rats. M. DAVOUDI*; S. SEMNANIAN; H. AZIZI; J. MIRNAJAFI-ZADEH. *Sch. of Med. Sci.*

11:00 HHH25 **176.08** Effect of methylphenidate on response inhibition of rats. D. ZHANG*; X. ZHANG. *Inst. Of Neurobio. Fudan Univ.*

8:00 HHH26 **176.09** ● Glutamatergic neurons in the basolateral amygdala and infralimbic cortex regulate impulsivity via connections to the ventral tegmental area. B. JUPP*; R. BARLOW; N. ARIAS; Y. BAI; S. WIJAYA; N. COLLINS; B. VAN DER VEEN; C. MCKENZIE; J. ALSIO; J. APERGIS-SCHOUTE; J. NICHOLSON; A. PEKCEC; T. W. ROBBINS; J. W. DALLEY. *Dept. of Psychology, The Univ. of Cambridge, Boehringer Ingelheim Pharma GmbH & Co. KG CNS Dis., Inst. of Psychology, The Univ. of Cambridge, The Univ. of Cambridge.*

9:00 HHH27 **176.10** Dysregulated NMDA co-agonist signaling in the infralimbic cortex contributes to increased impulsivity during protracted alcohol abstinence. C. IRIMIA*; M. W. BUCZYNSKI; S. A. LAREDO; L. A. NATIVIDAD; N. AVALOS; L. H. PARSONS. *The Scripps Res. Inst.*

10:00 HHH28 **176.11** Neural correlates of negative occasion setting in the orbitofrontal cortex. J. L. SHOBE*; L. D. CLAAR; K. BAKHURIN; S. MASMANIDIS. *UCLA.*

11:00 HHH29 **176.12** Joint modeling of perceptual decision making and response inhibition. P. MIDDLEBROOKS*; B. B. ZANDBELT; T. J. PALMERI; G. D. LOGAN; J. D. SCHALL. *Vanderbilt Univ., Donders Inst., Vanderbilt Univ.*

8:00 HHH30 **176.13** Medial prefrontal cortex event-related cue signalling is necessary for inhibitory control. K. MANSON*; S. EBNER; B. JAMAL; J. ROITMAN. *Univ. of Illinois At Chicago.*

POSTER

177. Hippocampal Learning and Memory Disruption: Genetic and Viral Approaches

Theme H: Cognition

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 HHH31 **177.01** Altered hippocampal coding from misassembly of full-length Disrupted-in-Schizophrenia 1 protein. K. KAEFER*; H. MALAGON VINA; D. DICKERSON; J. O'NEILL; S. V. TROSSBACH; C. KORTH; J. CSICSVARI. *Inst. of Sci. and Technol. Austria, Heinrich Heine Univ.*

9:00 HHH32 **177.02** Chronic calcineurin inhibition impairs visuospatial learning after isoflurane anesthesia. I. A. SPEIGEL*; J. A. FIDLER; C. M. MA; S. HESSE; E. K. BICHLER; J. L. GOOCH; P. S. GARCIA. *Emory Univ., Emory Univ., Emory Univ., Atlanta VA Med. Ctr.*

10:00 HHH33 **177.03** The long-term estrogen-induced facilitation of NMDA receptor synaptic function is mediated through altered redox state. A. KUMAR*; L. BEAN; A. RANI; T. C. FOSTER. *Univ. of Florida, Rush Univ. Med. Ctr., Univ. of Florida.*

11:00 HHH34 **177.04** Expression of G-protein estrogen receptor 1 (GPER1) in the hippocampus and prefrontal cortex over the oestrous cycle: Influence of ovariectomy and aging. A. RANI*; S. KERIC; L. BEAN; J. BARTER; T. C. FOSTER; A. KUMAR. *Univ. of Florida Med. Col., Rush Univ. Med. Ctr.*

8:00 HHH35 **177.05** Systemic inflammation contributes to the onset of cognitive impairment associated with senescence. J. D. BARTER*; A. KUMAR; A. RANI; T. C. FOSTER. *Univ. of Florida, Univ. of Florida.*

9:00 HHH36 **177.06** Up regulation of GluN2B type NMDA receptor in CA1 region of hippocampus and its influence on cognitive and synaptic function. C. KYRITSOPOULOS*; A. KUMAR; T. C. FOSTER. *Univ. of Florida.*

10:00 HHH37 **177.07** Circuitry of adult- and developmentally-born neurons in the mouse dentate gyrus. E. C. JANKE*; C. VIVAR; H. VAN PRAAG. *Natl. Inst. On Aging, Ctr. for Res. and Advanced Studies of the Natl. Polytechnic Inst.*

11:00 HHH38 **177.08** Attenuated late-phase Arc transcription in the dentate gyrus of mice lacking Egr3. A. L. GALLITANO*; A. M. MAPLE; R. LACKIE; D. I. ELIZALDE; S. L. GRELLA; D. F. MARRONE. *Univ. of Arizona, Wilfrid Laurier Univ.*

8:00 HHH39 **177.09** Episodic-like memory and Arc expression in Goto-Kakizaki rats. D. F. MARRONE*; B. RENDA. *Wilfrid Laurier Univ.*

9:00 HHH40 **177.10** Role of CCR5 in learning and memory and in HIV V3 peptide induced cognitive deficits. M. ZHOU*; S. GREENHILL; S. HUANG; T. SILVA; Y. SANO; S. WU; Y. CAI; Y. NAGAOKA; M. SEHGAL; D. CAI; Y. LEE; K. FOX; A. J. SILVA. *Univ. of California Los Angeles, Cardiff Univ.*

10:00 III1 **177.11** Linking memories across time. D. J. CAI*; D. AHARONI; T. SHUMAN; J. SHOBE; J. BIANE; W. SONG; B. WEI; M. VESHKINI; M. LA-VU; J. LOU; S. FLORES; I. KIM; Y. SANO; M. ZHOU; K. BAUMGAERTEL; A. LAVI; M. KAMATA; M. TUSZYNSKI; M. MAYFORD; P. GOLSHANI; A. J. SILVA. *UCLA, UCLA, UCLA, UCLA, UCSD, TSRI, UCLA, Veterans Affairs Med. Ctr., West Los Angeles VA Med. Ctr.*

11:00 III2 **177.12** ▲ Effects of isoproterenol in the dentate gyrus on spatial memory retrieval and reversal learning. B. RENDA*; S. L. GRELLA; S. M. GOMES; D. F. MARRONE. *Wilfrid Laurier Univ., McKnight Brain Inst. (Univ. of Arizona).*

8:00 III3 **177.13** Memory enhancement increases dendritic spine turnover and clustering in retrosplenial cortex. S. HUANG*; A. FRANK; M. ZHOU; X. WEN; T. SILVA; J. TRACHTENBERG; A. SILVA. *UCLA, UCLA, UCLA, UCLA.*

9:00 III4 **177.14** Context-dependent Egr1 expression in the hippocampus of the Japanese Quail. N. MILLER*; E. GUNNING; D. F. MARRONE. *Wilfrid Laurier Univ., Univ. of Arizona.*

10:00 III5 **177.15** The temporal window of contextual memory linking. M. LA-VU*; D. CAI; E. LU; B. WEI; M. VESHKINI; S. FLORES; D. AHARONI; P. GOLSHANI; A. J. SILVA. *UCLA, UCLA.*

11:00 III6 **177.16** Norepinephrine as a memory reset signal: Phasic activation of the locus coeruleus drives global remapping in the hippocampus. S. L. GRELLA*; J. NEIL; V. D. STRONG; I. V. ODINTSOVA; G. MARTIN; C. W. HARLEY; D. F. MARRONE. *Wilfrid Laurier Univ., Mem. Univ. of Newfoundland, McKnight Brain Inst. (Univ. of Arizona).*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 III7 **177.17** An analysis of nrf2 expression and its effects on aging hippocampal neural stem cell function. M. J. CORENBLUM*; S. RAY; D. D. ZHANG; C. A. BARNES; L. MADHAVAN. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

9:00 III8 **177.18** The role of medial entorhinal cortex activity in hippocampal feature selectivity and memory function. N. T. ROBINSON*; J. B. PRIESTLEY; J. W. RUECKEMANN; A. D. GARCIA; V. A. SMEGLIN; F. A. MARINO; H. B. EICHENBAUM. *Boston Univ.*

10:00 III9 **177.19** Long-term stability of hippocampal ensemble sequences. W. MAU*; D. W. SULLIVAN; N. R. KINSKY; P. BIDSHAHRI; H. EICHENBAUM. *Boston Univ.*

11:00 III10 **177.20** Investigating intrinsic hippocampal circuitry during temporal encoding in spatial working memory. R. J. PLACE*; J. RUECKEMANN; H. EICHENBAUM. *Boston Univ., Boston Univ.*

8:00 III11 **177.21** Lateral entorhinal neurons contribute object and temporal information towards episodic memory. J. H. BLADON*; C. LIU; J. O'KEEFE; H. EICHENBAUM. *Boston Univ.*

9:00 III12 **177.22** The role of eEF2K /eEF2 pathway in the hippocampal circuit. E. TAHA*; C. HEISE; L. MURRU; M. PASSAFARO; C. SALA; K. ROSENBLUM. *Haifa Univ., Haifa Univ., CNR Neurosci. Inst., Univ. degli Studi di Milano.*

10:00 III13 **177.23** Subnetwork connectivity of genetically-defined mouse hippocampus. M. S. BIENKOWSKI*; M. Y. SONG; I. BOWMAN; L. GOU; N. N. FOSTER; M. BAY; S. YAMASHITA; M. ZHU; H. HINTIRYAN; H. DONG. *USC, USC.*

11:00 III14 **177.24** A novel circuit gating hippocampal excitability. R. BOEHRINGER*; D. POLYGALOV; A. J. Y. HUANG; S. J. MIDDLETON; V. ROBERT; R. A. PISKOROWSKI; V. CHEVALEYRE; T. J. MCHUGH. *Riken Brain Sci. Inst., Univ. Paris Decartes, Univ. of Tokyo.*

8:00 III15 **177.25** Learning-induced mTORC1-dependent synaptic plasticity in somatostatin interneurons regulates hippocampal network plasticity and memory. J. ARTINIAN*; A. JORDAN; A. LA FONTAINE; M. MAURER; I. LAPLANTE; J. LACAILLE. *Dept of Neurosciences, Univ. of Montreal, GRSNC.*

9:00 III16 **177.26** Cued and spatial memory acquisition, retention, and reversal following hippocampal damage and chemogenetic inactivation in rats. J. Q. LEE*; R. J. MCDONALD; R. J. SUTHERLAND. *Univ. of Lethbridge.*

10:00 III17 **177.27** ▲ Optogenetic dissection of selective information routing by a hypothalamo-hippocampal circuit. Y. TAO*; S. CHEN; A. J. HUANG; M. E. WINTZER; D. POLYGALOV; R. BOEHRINGER; J. CHEN; T. J. MCHUGH. *RIKEN Brain Sci. Institute, BSI, Waseda Univ.*

POSTER

178. Learning and Memory: Prefrontal and Anterior Cingulate Cortex

Theme H: Cognition

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 III18 **178.01** Nicotine disengages orbitofrontal cortex during Pavlovian Conditioning. N. W. SIMON*; B. MOGHADDAM. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

9:00 III19 **178.02** Differential effects of discrete subarea-specific inactivation of the rat medial prefrontal cortex on short and long-term memory of low and high aversive training. M. E. TORRES GARCÍA*; A. C. MEDINA; G. L. QUIRARTE; R. A. PRADO-ALCALÁ. *Inst. de Neurobiología, UNAM.*

10:00 III20 **178.03** Neuronal ensemble reactivation in the orbitofrontal cortex during sleep. S. I. RUSU*; J. J. BOS; J. V. LANKELMA; L. J. GENTET; M. JOËLS; C. M. A. PENNARTZ. *Swammerdam Inst. For Life Sci., Lyon Neurosci. Res. Ctr., Brain Ctr. Rudolf Magnus.*

11:00 III21 **178.04** Response strategy determines representation of outcome information in infralimbic cortex. J. M. BARKER*; W. B. GLEN; D. N. LINSENBARDT; C. C. LAPISH; L. J. CHANDLER. *Med. Univ. of South Carolina, Med. Univ. of South Carolina, IUPUI.*

8:00 III22 **178.05** Medial prefrontal cortex to nucleus reuniens of thalamus connections are essential for the formation of long-term associative recognition memory. G. R. BARKER*; L. F. WONG; J. B. UNEY; E. C. WARBURTON. *Univ. of Bristol, Univ. of Bristol.*

9:00 III23 **178.06** ● The differential contribution of primate orbitofrontal cortex and perigenual anterior cingulate cortex to contingency learning. N. HORIGUCHI; S. A. W. JACKSON; N. K. HORST; R. N. CARDINAL; T. W. ROBBINS; A. C. ROBERTS*. *Univ. of Cambridge, Univ. of Cambridge, Univ. of Cambridge, Univ. of Cambridge.*

10:00 III24 **178.07** Sleep spindles and single-cell reactivation in the rodent medial prefrontal cortex during context-dependent memory reconsolidation. B. HARPER*; A. SAMPSON; T. J. SEJNOWSKI; J. FELLOUS. *Univ. of Arizona, Howard Hughes Med. Institute, Computat. Neurobio. Laboratory, Salk Inst. for Biol. Studies, UCSD.*

11:00 III25 **178.08** Activity-dependent projection labeling reveals distinct anatomical profiling. W. DANG*; I. WINCHESTER; J. VU; M. MAYFORD. *The Scripps Res. Inst., Univ. of California - San Diego.*

8:00 III26 **178.09** Circuit dissection of input required for the cortical encoding of a trace fear memory. R. C. TWINING*; M. R. GILMARTIN. *Marquette Univ.*

9:00 III27 **178.10** ▲ Whole-brain atlas of direct input to GABAergic neurons of medial prefrontal cortex. Q. SUN*; X. LI; M. REN; P. LUO; B. LONG; A. LI; J. YUAN; Q. LUO; H. GONG. *Wuhan Natl. Lab. For Optoelectronics.*

10:00 III28 **178.11** The medial prefrontal cortex (mPFC) is required for the acquisition and retention of the context preexposure facilitation effect (CPFE) in adolescent rats. N. A. HEROUX*; P. A. ROBINSON-DRUMMER; H. R. SANDERS; J. B. ROSEN; M. E. STANTON. *Univ. of Delaware (UD).*

11:00 III29 **178.12** Age and experience-dependent changes in Egr-1 expression during the ontogeny of the context preexposure facilitation effect (CPFE). P. A. ROBINSON-DRUMMER*; T. CHAKRABORTY; N. A. HEROUX; J. B. ROSEN; M. E. STANTON. *Univ. of Delaware.*

8:00 III30 **178.13** ▲ Using the Rescorla-Wagner equation to model choice behavior. R. M. FRANCIS*; A. A. ORTIZ; L. A. ENDER; K. E. GREEN; R. A. WIRT; J. M. HYMAN. *UNLV, Univ. of Nevada Las Vegas.*

9:00 III31 **178.14** Increases in cross-hemispheric anterior cingulate cortex LFP synchrony for remote memories. R. A. WIRT*; A. A. ORTIZ; J. M. HYMAN. *Univ. of Nevada Las Vegas, Univ. of Nevada Las Vegas.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
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* Indicates abstract's submitting author

10:00 III32 **178.15** What's gonna happen next? Tracking dynamic outcome likelihoods in ACC networks. J. M. HYMAN*; J. K. SEAMANS. *Univ. of Nevada Las Vegas, Univ. of British Columbia.*

11:00 III33 **178.16** ▲ A computational model of ACC neuron outcome prediction responses. E. H. BEDOY*; J. M. HYMAN. *Univ. of Nevada, Las Vegas, Univ. of Nevada, Las Vegas.*

8:00 III34 **178.17** Neuronal Selectivity in higher cortical areas: What does it mean? N. J. POWELL*; J. SEAMANS. *Univ. of British Columbia, Univ. of British Columbia.*

9:00 III35 **178.18** Arousal-related modulation of coordinated neural activity in the locus coeruleus, inferior colliculus and anterior cingulate cortex. S. JOSHI*; J. I. GOLD. *Univ. of Pennsylvania.*

10:00 III36 **178.19** Muscimol inactivations of rat anterior cingulate cortex reveal its role in spatial processes in dynamic environments. J. SVOBODA*; V. LOBELLOVA; A. POPELIKOVA; N. AHUJA; A. BENYSKOVA; A. STUCHLIK. *Inst. of Physiol. CAS, NIMH.*

POSTER

179. Hormones and Cognition: Hippocampal Mechanisms

Theme H: Cognition

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 III37 **179.01** Sex differences in the dentate gyrus and overall shape of the hippocampus in DBA mice. W. E. GRISHAM*; C. TSAI; K. INOUYE. *UCLA.*

9:00 III38 **179.02** Estradiol regulates bioenergetics in hippocampus and striatum of young adult female rats. W. WANG*; E. C. D'AMICO; D. L. KOROL. *Syracuse Univ.*

10:00 III39 **179.03** ▲ Testing the effects of testosterone and age on spatial memory in male rats using an object location memory task. L. E. MILLER*; V. C. BRADDICK; C. U. CHYR; E. C. GOINS; M. D. SPRITZER. *Middlebury Col.*

11:00 III40 **179.04** ▲ Acute corticosterone treatment differentially affects spatial memory behavior and vesicular glutamate transporter 2 mRNA in the hippocampus of adult male and female zebra finches. Y. V. MAKEYEVA*; D. A. GARDNER; B. A. RUPP; D. J. BAILEY. *St. Norbert Col.*

8:00 III41 **179.05** The effects of dorsal hippocampus MEK/ERK inhibition on rapid 17β-estradiol facilitated social recognition in female mice. P. A. SHEPPARD*; K. J. SELLERS; I. A. WATSON; D. P. SRIVASTAVA; E. CHOLERIS. *Univ. of Guelph, King's Col. London, King's Col. London.*

9:00 III42 **179.06** Memory-enhancing effects of 17β-estradiol in male and female mice. W. A. KOSS*; K. M. FRICK. *Univ. of Wisconsin-Milwaukee.*

10:00 III43 **179.07** Estradiol mediates Wnt/β-catenin signaling in the dorsal hippocampus of female mice. L. TAXIER*; M. M. KIEFER; A. M. FORTRESS; K. FRICK. *Univ. of Wisconsin-Milwaukee.*

11:00 III44 **179.08** The role of the dorsal hippocampus and medial prefrontal cortex in estradiol-mediated enhancement of object memory consolidation in female mice. J. J. TUSCHER*; A. M. FORTRESS; K. M. FRICK. *UW-Milwaukee.*

8:00 III45 **179.09** Chronic administration of estradiol benzoate with a spatial pattern separation task reduces adult neurogenesis in the dentate gyrus in a dose dependent manner. S. YAGI*; C. CHOW; S. E. LIEBLICH; L. A. M. GALEA. *Univ. of British Columbia, Univ. of British Columbia, Univ. of British Columbia.*

9:00 III46 **179.10** The role of membrane-bound estrogen receptors in the rapid estrogenic enhancements of learning and memory within the hippocampus. T. KUUN*; E. CHOLERIS. *Univ. of Guelph.*

10:00 III47 **179.11** Effects of agonism and silencing of G-protein-Coupled Estrogen Receptor (GPER) on hippocampal memory and underlying cell-signaling mechanisms in female mice. J. KIM*; J. S. SZINTE; M. I. BOULWARE; K. M. FRICK. *Univ. of Wisconsin-Milwaukee, Med. Col. of Wisconsin.*

11:00 III48 **179.12** Male and female BDNF Val66Met mice feature a "pre-stress" transcriptional signature in CA3 neurons. J. MARROCCO*; G. H. PETTY; M. B. RÍOS; J. D. GRAY; J. F. KOGAN; E. M. WATERS; E. F. SCHMIDT; N. HEINTZ; B. S. MCEWEN. *The Rockefeller Univ.*

8:00 III49 **179.13** Effects of fluoxetine & clozapine on learning and memory, depressive behavior, and androgen levels of male rats. M. E. RHODES*; C. SLEDZIK. *McDaniel Col., McDaniel Col.*

9:00 III50 **179.14** Previous midlife estradiol treatment results in increased nuclear ERα expression in the hippocampus of aging ovariectomized rats. K. L. BLACK*; R. C. SPRINGER; N. E. BUMGARTNER; J. A. GELLER; J. M. DANIEL. *Tulane Univ., Tulane Univ.*

10:00 III51 **179.15** Sex differences in levels of myelin basic protein in the orbitofrontal cortex of adult rats results from action of ovarian hormones during puberty. J. DARLING*; A. H. NGUYEN; S. A. RIOS; J. M. DANIEL. *Tulane Univ., Tulane Univ.*

11:00 III52 **179.16** Previous exposure to estradiol in ovariectomized female mice results in lasting increased expression of estrogen receptor α and maintenance of estrogen receptor-dependent gene transcription in the hippocampus. K. J. POLLARD*; H. WARTMAN; J. M. DANIEL. *Tulane Univ., Tulane Univ.*

8:00 JJJ1 **179.17** Rapid effects of 17β-estradiol in the paraventricular nucleus on social recognition in female mice. P. PALETTA*; K. ALI; E. CHOLERIS. *Univ. of Guelph.*

POSTER

180. Genes, Learning, and Memory

Theme H: Cognition

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 JJJ2 **180.01** Destructive circuit remodeling mediates neurogenesis-induced forgetting. A. GUSKJOLEN*; J. EPP; L. RESTIVO; S. JOSSELYN; P. FRANKLAND. *Sick Kids Hosp.*

9:00 JJJ3 **180.02** The development of a novel murine model for schizophrenia associated with Toxoplasma Gondii infection. J. R. EPP*; Y. GU; B. WALTERS; A. POPOVIC; J. G. HOWLAND; S. A. JOSSELYN; J. PARKINSON; P. FRANKLAND. *Hosp. For Sick Children, Hosp. for Sick Children, Hosp. for Sick Children, Univ. of Saskatchewan.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 JJJ4 **180.03** Learning regulates the mRNA demethylase FTO and mRNA methylation. B. J. WALTERS*; V. MERCALDO; C. J. GILLON; M. YIP; R. NEVE; P. W. FRANKLAND; S. A. JOSSELYN. *Hosp. For Sick Children, Hosp. for Sick Children, Univ. of Toronto, MIT.*

11:00 JJJ5 **180.04** Identification of an inhibitory hippocampal-thalamic pathway that mediates remote memory retrieval. G. VETERE*; F. XIA; S. A. JOSSELYN; P. W. FRANKLAND. *Hosp. For Sick Children.*

8:00 JJJ6 **180.05** Establishment of a contextual fear learning paradigm in zebrafish. J. W. KENNEY*; I. C. SCOTT; S. A. JOSSELYN; P. W. FRANKLAND. *The Hosp. for Sick Children, The Hosp. for Sick Children.*

9:00 JJJ7 **180.06** Neuronal allocation to a hippocampal engram. S. PARK*; E. E. KRAMER; V. MERCALDO; A. J. RASHID; N. INSEL; P. W. FRANKLAND; S. A. JOSSELYN. *Sickkids Hosp., SickKids Hosp., sickKids Hosp., sickKids Hosp.*

10:00 JJJ8 **180.07** Energy drink consumption during pregnancy affects hipocampal synaptophysin expression, spatial learning but not memory in the offspring of Wistar rats. N. A. MOY LÓPEZ*; M. F. PINTO-GONZÁLEZ; J. A. AGUILAR-MORENO; K. A. MOKAY-RAMÍREZ; E. O. QUINTERO-MARTÍNEZ; M. CANDELARIO-GONZÁLEZ; O. GONZÁLEZ-PÉREZ; J. L. COLLÁS-AGUILAR; J. GUZMÁN-MUÑIZ. *Univ. of Colima, Univ. of Colima.*

11:00 JJJ9 **180.08** Brevican regulates learning by gating parvalbumin interneurons in an activity-dependent manner. E. FAVUZZI; R. DEOGRACIAS; A. MARQUES-SMITH; C. WINTERFLOOD; C. FERNANDES; B. RICO*. *King's Col. London.*

8:00 JJJ10 **180.09** Development- and experience-dependent plasticity in the dorsomedial habenula. P. KOPPENSTEINER*; C. GALVIN; I. NINAN. *New York Univ. Langone Med. Ctr.*

9:00 JJJ11 **180.10** Maternal folic acid supplementation affects structure and function during early and postnatal development of the nervous system. K. A. MOKAY-RAMÍREZ*; E. O. QUINTERO-MARTÍNEZ; M. F. PINTO-GONZÁLEZ; J. A. AGUILAR-MORENO; J. GUZMÁN-MUÑIZ; O. GONZALEZ-PEREZ; N. A. MOY-LÓPEZ. *Univ. of Colima.*

10:00 JJJ12 **180.11** The role of mossy cells on hippocampal-dependent learning and memory. K. KOLARIC*; S. WOODS; C. JUNG; R. MCINNES; C. HOUGHTON; R. SZALAI; Z. BASHIR; D. ATAN. *Univ. of Bristol, Univ. of Toronto, McGill Univ., Univ. of Bristol, Univ. of Bristol.*

POSTER

181. Cognition and Behavior: Thalamic and Brainstem Circuits

Theme H: Cognition

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 JJJ13 **181.01** Burst-like stimulation of the locus coeruleus leads to thalamo-cortical activation and hippocampal suppression: Implication for competing networks. O. ESCHENKO*; R. M. NEVES; M. YANG; N. LOGOTHETIS. *Max Planck Inst. for Biol. Cybernetics, Ctr. for Imaging Sciences, Biomed. Imaging Institute, Univ. of Manchester.*

9:00 JJJ14 **181.02** Interaction between parasympathetic and sympathetic pathways on prediction of noradrenergic activity by pupil size. V. BRETON-PROVENCHER*; M. SUR. *MIT.*

10:00 JJJ15 **181.03** Monitoring large populations of locus coeruleus single units reveals the heterogeneous and non global nature of the norepinephrine neuromodulatory system. N. K. TOTAH*; R. M. NEVES; S. PANZERI; N. K. LOGOTHETIS; O. ESCHENKO. *Max Planck Inst. for Biol. Cybernetics, Inst. Italiano di Tecnologia, Univ. of Manchester.*

11:00 JJJ16 **181.04** Tonic locus coeruleus activity regulates foraging behavior. G. KANE*; E. M. VAZEY; R. C. WILSON; A. SHENHAV; M. H. JAMES; N. D. DAW; G. ASTON-JONES; J. D. COHEN. *Princeton Univ., Univ. of Massachusetts, Univ. of Arizona, Princeton Univ., Rutgers Univ.*

8:00 JJJ17 **181.05** Direct comparison of hippocampal and rhomboid/reuniens inputs to medial prefrontal cortex. P. J. BANKS*; Z. I. BASHIR. *Univ. of Bristol.*

9:00 JJJ18 **181.06** Performance of a touchscreen-based visual discrimination task is restored with electrical stimulation of the ventral tegmental area (VTA) in rats sedated with isoflurane. J. D. KENNY; N. E. TAYLOR; J. YANG; K. Y. VLASOV; J. T. LEE; J. A. GUIDERA; J. PEI; E. N. BROWN; K. SOLT*. *Massachusetts Gen. Hosp., Caltech.*

10:00 JJJ19 **181.07** Functional role of inhibitory superior colliculus neurons in target selection. J. ESSIG*; A. B. WOLF; G. FELSEN. *Univ. of Colorado Sch. of Med., Univ. of Colorado Sch. of Med., Univ. of Colorado Sch. of Med.*

11:00 JJJ20 **181.08** Nucleus Reuniens infusions of muscimol, but not procaine, produce impairments on choice accuracy & perseverative behavior using a T-maze paradigm. T. D. VIENA*; S. B. LINLEY; R. P. VERTES. *Florida Atlantic Univ.*

8:00 JJJ21 **181.09** The mediodorsal thalamus regulates prefrontal function and E/I balance through modulation of PV interneuron activity. B. R. FERGUSON*; W. GAO. *Drexel Univ. Col. of Med., Drexel Univ. Col. of Med.*

9:00 JJJ22 **181.10** Sensory coding in the vestibular thalamus discriminates passive from active self-motion. A. DALE*; K. E. CULLEN. *McGill Univ.*

10:00 JJJ23 **181.11** A novel type of cortical input to the thalamic reticular nucleus. N. HADINGER*; M. M. HALASSA; L. ACSADY. *Inst. of Exptl. Medicine- Hungarian Acad, New York Univ.*

11:00 JJJ24 **181.12** Thalamic gating of fronto-parietal interactions: A computational model. J. JARAMILLO*; X. WANG. *New York Univ. Ctr. for Neural Sci., NYU Shanghai.*

POSTER

182. Learning and Memory: Aging - Hippocampus

Theme H: Cognition

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 JJJ25 **182.01** CREB over expression in dorsal CA1 ameliorates memory deficits in aged rats. X. YU*; D. M. CURLIK, II; M. M. OH; J. C. P. YIN; J. F. DISTERHOFT. *Northwestern Univ., York Col. of Pennsylvania, Univ. of Wisconsin-Madison.*

9:00 JJJ26 **182.02** Severity of age-related memory impairment correlates with pilocarpine-induced c-fos expression across cortical structures. M. KOH*; R. P. HABERMAN; M. GALLAGHER. *Johns Hopkins Univ.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 JJJ27 **182.03** Three-dimensional analysis of newborn neuron network integration. A. E. BRANCH*; N. SAH; C. VIVAR; H. VAN PRAAG; M. GALLAGHER. *Johns Hopkins Univ., NIH, Ctr. for Res. and Advanced Studies of the Natl. Polytechnic Inst.*

11:00 JJJ28 **182.04** Epigenetic regulation of medial prefrontal cortex transcription associated with aging and impaired executive function. T. C. FOSTER*; L. IANOV; A. RIVA. *Evelyn F. and William L. McKnight Brain Inst. Univ. Florida, Univ. of Florida.*

8:00 JJJ29 **182.05** Transcriptomic profile for determining regional vulnerability to age and cognitive impairment. L. IANOV*; M. D. DE BOTH; M. K. CHAWLA; A. RANI; A. J. KENNEDY; I. PIRAS; J. J. DAY; A. L. SINIARD; A. KUMAR; J. D. SWEATT; C. A. BARNES; M. J. HUENTELMAN; T. C. FOSTER. *Univ. of Florida, Univ. of Arizona, Univ. of Alabama, Birmingham.*

9:00 JJJ30 **182.06** Transcriptional differences among hippocampal subregions. M. DE BOTH*; L. IANOV; M. K. CHAWLA; A. RANI; A. J. KENNEDY; I. PIRAS; J. J. DAY; A. L. SINIARD; A. KUMAR; J. D. SWEATT; T. C. FOSTER; C. A. BARNES; M. J. HUENTELMAN. *Univ. of Arizona, Univ. of Florida, Univ. of Alabama, Birmingham.*

10:00 JJJ31 **182.07** Activity regulated transcript identification in the hippocampus and the genetic association with AD risk. C. BLEUL*; M. K. CHAWLA; N. J. CAREY; A. L. SINIARD; M. D. DE BOTH; C. A. BARNES; M. J. HUENTELMAN. *Translational Genomics Res. Inst., Arizona Alzheimer's Consortium, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

11:00 JJJ32 **182.08** Arc mRNA induction thresholds following electro-convulsive shock treatment may be regulated by dendritic Ca++ plateau potentials. M. K. CHAWLA*; C. NGUYEN; G. S. SADACHAR; D. T. GRAY; M. J. HUENTELMAN; C. A. BARNES. *Univ. of Arizona, Univ. of Arizona, Translational Genomics Res. Inst., Univ. of Arizona.*

8:00 JJJ33 **182.09** ▲ Activation of neuronal populations in young and aged rat Lateral Entorhinal Cortex during track-running behavior with odors. A. COMRIE*; J. P. LISTER; M. K. CHAWLA; C. A. BARNES. *Univ. of Arizona, Univ. of Arizona, UCLA, Univ. of Arizona.*

9:00 JJJ34 **182.10** Aged rats failed to integrate conflicting spatial reference frames. A. W. LESTER*; A. J. KAPELLUSCH; R. T. SCREEN; C. A. BARNES. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

10:00 JJJ35 **182.11** Age-related reduction in signal-to-noise ratio of sharp-wave ripple oscillations following behavior in aged rats. D. T. GRAY*; J. WIEGAND; L. A. SCHIMANSKI; S. L. COWEN; C. A. BARNES. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

11:00 JJJ36 **182.12** Expectation of large reward elicits bursts of β-band oscillations in the aged rat amygdala. R. D. SAMSON*; L. DUARTE; C. A. BARNES. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

8:00 JJJ37 **182.13** Uncinate fasciculus integrity assessed in young and aged bonnet macaques. L. UMAPATHY; D. T. GRAY; S. N. BURKE; T. P. TROUARD; C. A. BARNES*. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Florida, Univ. of Arizona, Univ. of Arizona.*

9:00 JJJ38 **182.14** ▲ Age-related attentional control and set shifting impairments arise independently in macaque monkeys. K. M. ANDERSH*; D. T. GRAY; A. C. SMITH; S. N. BURKE; A. GAZZALEY; C. A. BARNES. *Univ. of Arizona, Univ. of Arizona, Univ. of Florida, Univ. of California, San Francisco, Univ. of Arizona.*

10:00 JJJ39 **182.15** Cell counts of midbrain dopamine neurons in memory-impaired aged non-human primates. W. PYON*; D. T. GRAY; K. M. ANDERSH; M. R. PERMENTER; J. A. VOGT; C. A. BARNES. *Univ. of Arizona, Univ. of Arizona, Univ. of California, Davis, Univ. of Arizona.*

11:00 JJJ40 **182.16** Histology informed probabilistic hippocampal atlases of young and old rhesus macaques. C. KYLE*; J. L. BENNETT; J. D. STOKES; M. R. PERMENTER; J. A. VOGT; A. D. EKSTROM; C. A. BARNES. *Univ. of Arizona, Univ. of Arizona, Univ. of California, Davis, Univ. of California, Davis, Univ. of California, Davis, Univ. of California, Davis, Univ. of Arizona.*

8:00 JJJ41 **182.17** Spatial reorientation in aged mice. K. LAKHANI*; R. K. YUAN; I. A. MUZZIO. *The Univ. of Texas At San Antonio, Univ. of Pennsylvania, Univ. of Texas at San Antonio.*

9:00 JJJ42 **182.18** Effects of sleep deprivation on place cell activity in young and aged adult mice performing the object-place recognition task. R. K. YUAN*; I. A. MUZZIO. *Univ. of Pennsylvania, Univ. of Texas at San Antonio.*

10:00 JJJ43 **182.19** ▲ Age-related impairments in memory in rats are accompanied by decreased lactate production by astrocytes in the hippocampus and are rescued by intrahippocampal lactate infusions. B. HAMLING*; L. A. NEWMAN; D. L. KOROL; P. E. GOLD. *Syracuse Univ.*

11:00 JJJ44 **182.20** Aged rats that are unimpaired in spatial learning successfully engage a behavioral response and CA3 gene expression when cues in a familiar environment are changed. R. P. HABERMAN*; D. MOORE; A. LOURENCO; G. RAO; J. J. KNIERIM; M. GALLAGHER. *Johns Hopkins Univ., Johns Hopkins Univ.*

8:00 JJJ45 **182.21** ▲ Verifying the Octodon degus as a non-transgenic model of Alzheimer's disease. P. A. ANGELI*; A. M. SPIEGEL; R. P. HABERMAN; A. G. PALACIOS; P. R. RAPP; M. GALLAGHER. *Johns Hopkins Univ., Natl. Inst. on Aging, Univ. de Valparaíso.*

9:00 JJJ46 **182.22** A multiple memory systems approach to age-related changes in cognition: Differential modulation of BDNF in hippocampus and striatum in rats. R. S. GARDNER*; L. A. NEWMAN; P. E. GOLD; D. L. KOROL. *Syracuse Univ.*

10:00 JJJ47 **182.23** ● Light treatment enhances memory and adult neurogenesis in circadian disrupted and aged rats. R. J. SUTHERLAND*; M. FIDA; C. BYE; M. WANG; J. M. SUTHERLAND; R. J. MCDONALD. *Univ. Lethbridge, Univ. of Lethbridge, NeuroInvestigations, Inc.*

11:00 JJJ48 **182.24** Age-related spatial long-term memory deficits can be overcome with spaced training. S. MCQUOWN*; D. ELOW; G. ANDERSON; R. JOHNSON; K. BAUMGAERTEL; M. PETERS. *Dart Neurosci.*

8:00 JJJ49 **182.25** Enhanced learning and memory from chronic dietary supplementation with quercetin and PS-DHA is associated with increased IL-10 expression and reduced mtDNA in the hippocampus of aged C57BL/6J mice. S. D. PEREZ*; K. DU; S. RUBAKHIN; L. WANG; Q. WU; J. H. BAXTER; J. RHODES. *Univ. of Illinois, Beckman Inst., Beckman Inst. - Univ. of Illinois, Univ. of Illinois, Beckman Inst., Beckman Inst. - Univ. of Illinois, Univ. of Illinois, Beckman Inst., Beckman Inst. - Univ. of Illinois, Abbott, Univ. of Illinois, Beckman Inst. - Univ. of Illinois.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 JJJ50 **182.26** Synaptic distribution along the basal dendrites of CA1 pyramidal cells in the behaviorally characterized, aged rat. T. F. MUSIAL*; S. A. MULLEN; G. AYALA; N. J. CORBETT; M. D. ANTION; C. WEISS; J. F. DISTERHOFT; D. A. NICHOLSON. *Rush Univ. Med. Ctr., Feinberg Sch. of Medicine, Northwestern Univ.*

10:00 JJJ51 **182.27** Age-dependent decrease in spontaneous alternation behaviors: Potential hippocampal substrates. R. M. WILHELM; N. R. TANDON; L. T. THOMPSON*. *Univ. of Texas At Dallas, Univ. of Texas at Dallas.*

11:00 JJJ52 **182.28** Estradiol normalizes CA1 GluN receptors surface distribution and declarative memory in aged mice. S. AL ABED*; A. SELLAMI; P. TRIFFILIEF; L. BRAYDA-BRUNO; V. LAMOTHE; M. POTIER; C. BENNETAU-PELISSERO; A. MARIGHETTO. *Neurocentre Magendie INSERM U1215, NutriNeuro INRA 1286.*

8:00 JJJ53 **182.29** ● Cholinergic induction of hippocampal Arc expression in a rat model of normal cognitive aging. C. MYRUM*; S. L. ROSSI; E. PEREZ; A. M. MORROW; K. H. SCHULZE; J. M. LONG; P. R. RAPP. *NIH.*

9:00 JJJ54 **182.30** The role of adult neurogenesis in the structure and function of the septohippocampal circuit. G. KIRSHENBAUM*; V. K. ROBSON; R. M. SHANSKY; L. M. SAVAGE; E. D. LEONARDO; A. DRANOVSKY. *Columbia Univ. Press, Columbia Univ., Northeastern Univ., Binghamton Univ.*

POSTER

183. Grid Cells and Hippocampal Interactions

Theme H: Cognition

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 JJJ55 **183.01** Can observational learning stabilize a hippocampal representation of a space that is not directly experienced? T. DOUBLET*; M. NOSRATI; C. KENTROS. *NTNU, Kavli Inst. for Systems Neurosci. and Ctr. for Neural Computation.*

9:00 JJJ56 **183.02** Enhanced transgenics: A novel means to generate neuroanatomically-specific genetic tools. S. BLANKVOORT*; M. P. WITTER; J. NOONAN; J. COTNEY; C. KENTROS. *Kavli Inst. For Systems Neurosci., Norwegian Univ. of Sci. and Technol., Dept. of Genetics, Yale Univ. Sch. of Med., Dept. of Genet. and Genome Sciences, Univ. of Connecticut Hlth. Ctr., Inst. of neuroscience, Univ. of Oregon.*

10:00 JJJ57 **183.03** Spatial and task-related activity in the subiculum. D. LEDERGERBER*; R. GARDNER; V. NORMAND; H. T. ITO; M. P. WITTER; E. I. MOSER; M. MOSER. *Kavli Inst. For Systems Neuroscience, NTNU, Kavli Inst. For Systems Neurosci., MPI for Brain Res., Kavli Inst. for Systems Neuroscience, NTNU.*

11:00 JJJ58 **183.04** Supramammillary nucleus modulates spike-time coordination in the prefrontal-thalamo-hippocampal circuit. H. T. ITO*; E. I. MOSER; M. MOSER. *Max Planck Inst. for Brain Res., Kavli Inst. for Systems Neurosci. and Ctr. for Neural Computation.*

8:00 JJJ59 **183.05** Phase relationships between grid cells are preserved during sleep. R. GARDNER*; M. MOSER; E. I. MOSER. *Kavli Inst. For Systems Neurosci.*

9:00 JJJ60 **183.06** Spatial dynamics of grid cells during novelty. M. HAGGLUND*; E. I. MOSER; M. MOSER. *Kavli Inst. for Systems Neuroscience,CNC,NTNU.*

10:00 JJJ61 **183.07** Spatial periodicity of grid cells depends on inhibition from parvalbumin- but not somatostatin-expressing interneurons. Q. CAO*; C. MIAO; M. MOSER; E. I. MOSER. *Kavli Inst. For Systems Neuroscience, CNC, NTNU, Norwegian Univ. of Sci. and Technol.*

11:00 KKK1 **183.08** Disrupted spatial representation following knock-out of NMDA receptors in the medial entorhinal cortex. N. DAGSLOTT*; F. DONATO; Ø. A. HØYDAL; T. WAAGA; M. MOSER; E. I. MOSER. *Norwegian Univ. of Sci. and Technol.*

8:00 KKK2 **183.09** Stellate cells drive layer II microcircuit development in the medial entorhinal cortex. F. DONATO*; R. I. JACOBSEN; M. MOSER; E. I. MOSER. *Kavli Inst. For Systems Neurosci.*

9:00 KKK3 **183.10** A circuit for neuronal coding of locomotion speed: From the pedunculopontine tegmental nucleus to the medial entorhinal cortex. M. M. CARVALHO*; N. TANKE; E. KROPFF; M. P. WITTER; M. MOSER; E. I. MOSER. *Norwegian Univ. of Sci. and Technol., Leloir Institute, IIBBA - CONICET.*

10:00 KKK4 **183.11** Speed coding in fast-spiking interneurons of the medial entorhinal cortex. J. YE*; A. NAGELHUS; S. ZHANG; E. KROPFF; M. MOSER; E. MOSER. *Kavli Inst. For Systems Neuroscience, NTNU, SZU-CUHKSZ Joint Res. Ctr. for Artificial Intelligence and Brain Engineering, Shenzhen Univ., Leloir Institute, IIBBA - CONICET.*

11:00 KKK5 **183.12** Development of grid cells requires only minimal experience with geometric boundaries. I. U. KRUGE*; T. WAAGA; T. WERNLE; E. I. MOSER; M. MOSER. *NTNU, Kavli Inst. For Systems Neurosci.*

8:00 KKK6 **183.13** Grid spacing is related to total distance traveled on non-planar surfaces. A. H. BAHLE*; E. I. MOSER; M. MOSER. *Kavli institute for Systems Neurosci.*

9:00 KKK7 **183.14** Grid phase and grid-field firing rates are not uniformly distributed across the environment. Y. ROUDI*; D. WENNBERG; Z. HUANG; B. DUNN; Ø. A. HOYDAL; M. MOSER; E. MOSER. *Kavli Inst. For Systems Neurosci., Norwegian Univ. of Sci. and Technol.*

10:00 KKK8 **183.15** Integration of independently anchored grid maps in merged environments. T. WERNLE*; M. MORREAUNET; A. TREVES; E. I. MOSER; M. MOSER. *Kavli Inst. For Systems Neuroscience/Cnc, Janelia Res. Campus, SISSA-Cognitive Neurosci.*

11:00 KKK9 **183.16** Postsynaptic targets of inputs to the lateral entorhinal cortex. T. P. DOAN*; E. S. NILSEN; M. P. WITTER. *Norwegian Univ. of Sci. and Technol.*

8:00 KKK10 **183.17** Medial entorhinal cortex layer III pyramidal cells form dendritic bundles in a grid-like hexagonal pattern and receive specific inputs from the presubiculum. N. HENN-MIKE; M. KECSKÉS; Z. KRABÓTH; H. SEBESTYÉN; C. VARGA*. *Szentagothai Res. Ctr., Univ. of Pecs.*

9:00 KKK11 **183.18** Structural development and dorsoventral maturation of the medial entorhinal cortex. S. RAY*; M. BRECHT. *Bernstein Ctr. For Computat. Neurosci.*

10:00 KKK12 **183.19** Interaction of self-motion and vision in the entorhinal cortex. M. G. CAMPBELL*; C. S. MALLORY; L. M. GIOCOMO. *Stanford Univ.*

11:00 KKK13 **183.20** Understanding principles of encoding navigationally-relevant variables in medial entorhinal cortex. K. HARDCASTLE*; N. MAHESWARANATHAN; S. GANGULI; L. M. GIOCOMO. *Stanford Univ., Stanford Univ.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
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* Indicates abstract's submitting author

8:00 KKK14 **183.21** Entorhinal HCN1 sets the scale of spatial maps and enables rapid place learning. C. S. MALLORY*; J. BANT; K. HARDCASTLE; L. GIOCOMO. *Stanford Univ.*

9:00 KKK15 **183.22** Entorhinal border cells can convey environmental deformations to grid and place fields. A. T. KEINATH*; R. A. EPSTEIN; V. BALASUBRAMANIAN. *Univ. of Pennsylvania, Univ. of Pennsylvania.*

10:00 KKK16 **183.23** Local transformations of entorhinal grid maps. J. KRUPIC*; M. BAUZA; S. BURTON; J. O'KEEFE. *Univ. Col. London.*

11:00 KKK17 **183.24** Visual landmarks sharpen grid cell metric and confer context specificity to neurons of the medial entorhinal cortex. J. A. PÉREZ-ESCOBAR*; O. KORNIENKO; P. LATUSKE; L. KOHLER; K. ALLEN. *Med. Fac. of Heidelberg Univ. and DKFZ.*

8:00 KKK18 **183.25** Mixed mode oscillations determine the periodicity of networks in the medial entorhinal cortex. A. NERU; C. G. ASSISI*. *Indian Inst. of Sci. Educ. and Res. Pune.*

9:00 KKK19 **183.26** A hybrid code from grid and place cells. D. SCHWARTZ*; O. O. KOYLUOGLU. *Univ. of Arizona.*

10:00 KKK20 **183.27** Investigating roles of medial entorhinal cortex stellate cells in path integration. S. TENNANT*; L. FISCHER; D. L. F. GARDEN; C. J. MCCLURE; G. SURMELI; I. DUGUID; M. NOLAN; E. R. WOOD. *Univ. of Edinburgh.*

11:00 KKK21 **183.28** On the role of input-specific perturbations of medial septal projections to the grid cell network. M. E. LEPPERØD; M. B. WIGESTRAND; M. M. FREY; K. K. LENSJØ; G. T. EINEVOLL*; T. SOLSTAD; M. FYHN; T. HAFTING. *Inst. of Basic Med. Sci., Ctr. for Integrative Neuroplasticity, Norwegian Univ. Life Sci., Fac. of Teacher and Interpreter Educ.*

8:00 KKK22 **183.29** The role of extracellular matrix molecules for spatial representations in medial entorhinal cortex. T. HAFTING-FYHN*; C. CHRISTENSEN; M. E. LEPPERØD; K. K. LENSJØ; M. FYHN. *Univ. of Oslo, Univ. of Oslo.*

9:00 KKK23 **183.30** Sequential synaptic innervation of interneurons and principal cells along axons in medial entorhinal cortex. H. SCHMIDT*; K. BOERGENS; Y. HUA; J. STRAEHLE; M. BRECHT; M. HELMSTAEDTER. *BCCN, Humboldt Univ. Berlin, Max Planck Inst. for Brain Res.*

POSTER

184. Human Cognition and Memory I

Theme H: Cognition

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 KKK24 **184.01** What modulates memory for emotional stimuli? Considering the effects of the hypothalamic-pituitary-adrenal (HPA) axis and the sympathetic nervous system. K. R. MICKLEY STEINMETZ*; K. S. ARJUNE. *Wofford Col.*

9:00 KKK25 **184.02** Endogenous Brain Stimulation through EMG: Investigation using intracranial EEG and volume conductor modeling. L. D. J. FIEDERER*; J. LAHR; J. VORWERK; F. LUCKA; C. H. WOLTERS; A. SCHULZE-BONHAGE; T. BALL. *Univ. Med. Ctr., Inst. for Biomagnetism and Biosignalanalysis, Univ. of Münster, Ctr. for Med. Image Computing, Univ. Col. London.*

10:00 KKK26 **184.03** Objective assessment of mental demand in expert pilots during varying degrees of task difficulty. K. JAQUESS*; L. LO; H. OH; Y. TAN; J. C. RIETSCHEL; M. W. MILLER; R. J. GENTILI; B. D. HATFIELD. *Univ. of Maryland, Col. Park, Veteran's Admin., Auburn Univ.*

11:00 KKK27 **184.04** Behavioral oscillations during working memory maintenance. J. LIU*; T. LIU; S. RAVIZZA. *Michigan State Univ.*

8:00 KKK28 **184.05** Affective content and episodic memory recall: Repetition suppression for aversive stimuli, but repetition enhancement for appetitive stimuli. Z. YAKER; K. RAMASESHAN; P. SOLOFF; V. A. DIWADKAR*. *Wayne State Univ. SOM, Univ. of Pittsburgh.*

9:00 KKK29 **184.06** Activation in mesolimbic reward circuitries facilitates implicit memory consolidation in musical listening. K. KATO*; S. TSUCHIMOTO; D. NISHIDA; H. EBATA; J. USHIBA. *Dept. of Rehabil. Medicine, Keio Univer, Dept. of Biosci. and Informatics, Fac. of Sci. and Technology, Keio University., Saiseikai Kanagawa Prefecture Hosp., Dept. of Rehabil. Medicine, Keio Univ. Sch. of Med.*

10:00 KKK30 **184.07** Visual working memory benefits from luminance inputs - evidence from psychophysics and EEG. M. KOSILO*; J. MARTINOVIC; C. HAENSCHEL. *City Univ. London, Univ. of Aberdeen.*

11:00 KKK31 **184.08** Selective maintenance mechanisms of seen and unseen sensory features in the human brain. J. KING*. *New York Univ.*

8:00 KKK32 **184.09** Competition and forgetting during context-based episodic memory retrieval. M. HOLLENBECK; J. A. LEWIS-PEACOCK*. *Univ. of Texas at Austin, Univ. of Texas at Austin, Univ. of Texas at Austin.*

9:00 KKK33 **184.10** Complex waves in the human cortex during memory encoding and retrieval. V. SREEKUMAR*; A. JANG; J. WITTIG, Jr; S. INATI; K. ZAGHLOUL. *NINDS/NIH, NINDS/NIH, NINDS/NIH.*

10:00 KKK34 **184.11** Neural oscillations during conditional associative learning. A. CLARKE*; B. M. ROBERTS; C. RANGANATH. *Univ. of California Davis.*

11:00 KKK35 **184.12** Posterior parietal cortex contributions to mnemonic decisions are independent of action intention. S. A. GAGNON*; A. M. GORDON; A. D. WAGNER. *Stanford Univ., Stanford Univ.*

8:00 KKK36 **184.13** Emergence of item-based contextual significance representations revealed by Bayesian model-based fMRI. M. C. INHOFF*; L. A. LIBBY; T. NOGUCHI; B. C. LOVE; C. RANGANATH. *UC Davis, UC Davis, Univ. Col. London.*

9:00 KKK37 **184.14** Effects of emotional anticipation on neural oscillations involved in context-guided prediction. M. RITCHEY*; M. J. GRUBER; A. S. DHILLON; G. M. O'DAY; C. RANGANATH. *UC Davis, Boston Col.*

10:00 KKK38 **184.15** Dissociating the content of a stimulus from the rule that allow us to remember this content. R. QUENTIN*; J. KING; E. SALLARD; E. BUCH; N. FISHMAN; R. THOMPSON; L. G. COHEN. *NIH, New York Univ.*

11:00 KKK39 **184.16** Oscillatory patterns associated with sequence learning. J. CRIVELLI-DECKER*; L. HSIEH; A. CLARKE; C. RANGANATH. *UC Davis.*

8:00 KKK40 **184.17** Functional connectivity in human intracranial eeg during cued recall. R. YAFFE*; J. CHAPETON; S. INATI; K. ZAGHLOUL. *NINDS.*

9:00 KKK41 **184.18** Forgetting emotional material in working memory. E. MIZRAK*; I. OZTEKIN. *Koc Univ.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
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* Indicates abstract's submitting author

10:00 KKK42 **184.19** Single-unit activity from the human middle temporal gyrus reflects successful associative memory encoding. A. I. JANG*; J. H. WITTIG, Jr.; K. A. ZAGHLOUL. *NIH.*

11:00 KKK43 **184.20** Effects of transcranial direct current stimulation (tDCS) on neural oscillations during episodic memory encoding and retrieval. B. M. ROBERTS*; S. WANG; M. MONTCHAL; A. WADE; N. BOUFFARD; J. D. RAGLAND; C. CARTER; C. RANGANATH. *Univ. of California Davis Ctr. for Neurosci., Stanford Univ., Univ. of California, Irvine.*

8:00 KKK44 **184.21** How are temporal and cognitive contexts represented by hippocampal subfields? H. ZUCKER*; M. E. MONTCHAL; S. WANG; L. A. LIBBY; C. RANGANATH. *UC Davis Ctr. for Neurosci., Univ. of California, Irvine, Stanford.*

9:00 KKK45 **184.22** Context-dependent decision-making: Hippocampal-cortical interactions. L. A. LIBBY*; N. R. BOUFFARD; C. RANGANATH. *UC Davis.*

10:00 KKK46 **184.23** Human temporal pole mediates attention-based enhancement of memory: A lesion, intracranial EEG, and single-unit study. J. H. WITTIG*, JR; A. JANG; J. COCJIN; S. INATI; K. ZAGHLOUL. *NINDS.*

11:00 KKK47 **184.24** Neural correlates of reality filtering in psychosis. R. THÉZÉ*; A. L. MANUEL; F. CHANTRAINE; L. NAHUM; L. CURTIS; A. G. GUGGISBERG; A. SCHNIDER. *Univ. Hosp. of Geneva (HUG), Univ. Hosp. of Geneva (HUG).*

8:00 KKK48 **184.25** Neural representation of value space. N. DE HAAS*; S. THEVES; A. NITSCH; B. EPPINGER; N. W. SCHUCK; C. F. DOELLER. *Donders Institute, Radboud Univ., Tech. Univ., Princeton Univ.*

9:00 KKK49 **184.26** False memory for spatial location activates contralateral visual regions within 400 to 800 milliseconds. J. M. KARANIAN*; S. D. SLOTNICK. *Boston Col., Boston Col.*

10:00 KKK50 **184.27** Human genomic signatures of brain oscillations during memory encoding. S. BERTO*; G. WANG; J. W. GERMI; B. LEGA; G. KONOPKA. *UT Southwestern Med. Ctr., UT Southwestern Med. Ctr.*

11:00 KKK51 **184.28** Stimulus-specific memory representations in lateral parietal cortex. S. E. FAVILA*; N. M. LONG; B. A. KUHL. *New York Univ., Univ. of Oregon.*

8:00 KKK52 **184.29** Sign language activates different neurocognitive systems during verbal learning between deaf and hearing signers. Y. KANAZAWA*; H. YAMAZAKI; T. ISHII; T. ASO; K. OMORI; K. NAKAMURA. *Kyoto Grad. Sch. of Med., Kyoto Grad. Sch. of Med.*

9:00 KKK53 **184.30** Brain-electrical differences in encoding and delay phases of processing during maintenance and manipulation of information in working memory. T. V. ROMÁN-LÓPEZ*; J. A. FRANCO-RODRÍGUEZ; S. A. CISNEROS-LUNA; M. MÉNDEZ-DÍAZ; O. PROSPÉRO-GARCÍA; A. E. RUIZ-CONTRERAS. *Lab. Neurogenomica Cognitiva, Fac. Psicologia, UNAM, Lab. de Canabinoides, Depto. Fisiología, Fac. Medicina, UNAM.*

POSTER

185. Super-Resolution and Expansion Microscopy

Theme I: Techniques

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 KKK54 **185.01** ● Barcoding neurons for expansion microscopy (ExM) readout of neural projections. S. G. RODRIQUES*; N. JAKIMO; D. ESTANDIAN; J. JACOBSON; A. MARBLESTONE; E. BOYDEN. *MIT.*

9:00 KKK55 **185.02** ● 20-nm resolution imaging of brain circuitry by next-generation expansion microscopy. J. CHANG*; F. CHEN; Y. YOON; E. JUNG; H. BABCOCK; J. KANG; S. ASANO; H. SUK; N. PAK; P. TILLBERG; A. WASSIE; X. ZHUANG; E. S. BOYDEN. *MIT, Harvard.*

10:00 KKK56 **185.03** ● 100-fold linear expansion of biological samples for nanoscale imaging. D. SARKAR*; A. T. WASSIE; A. PAYNE; K. D. PIATKEVICH; D. ORAN; J. CHANG; E. S. BOYDEN. *MIT.*

11:00 KKK57 **185.04** Nanoscale imaging over large volumes via combined expansion microscopy and lattice light sheet microscopy. R. GAO*; S. ASANO; T. LIU; G. HUYNH; E. BETZIG; E. S. BOYDEN. *MIT, HHMI, MIT.*

8:00 KKK58 **185.05** ● ExFISH: Nanoscale imaging of RNA with expansion microscopy. A. WASSIE*; F. CHEN; A. COTE; A. SINHA; S. ALON; S. ASANO; E. DAUGHARTHY; J. CHANG; A. MARBLESTONE; G. CHURCH; A. RAJ; E. S. BOYDEN. *MIT, Univ. of Pennsylvania, Harvard Med. Sch.*

9:00 KKK59 **185.06** ● Next-generation expansion microscopy with lipid labels for morphological analysis of neurons. J. KANG*; E. D. KARAGIANNIS; J. CHANG; G. HUYNH; A. MARBLESTONE; E. S. BOYDEN. *MIT, Harvard Univ.*

10:00 KKK60 **185.07** Super-resolution imaging of the extracellular space in live brain tissue. J. TONNESEN; K. INAVALLI; V. U. NÄGERL*. *Univ. of Bordeaux, CNRS UMR 5297, Univ. of Bordeaux - CNRS.*

11:00 KKK61 **185.08** Evaluation of refractive index matching agents for super-resolution imaging in thick brain tissue. J. ANGIBAUD*; P. MASCALCHI; C. POUJOL; V. NÄGERL. *Univ. of Bordeaux, CNRS UMR 5297, UMS 3420 CNRS, US4 INSERM.*

8:00 KKK62 **185.09** Quantifying transfection artefacts by PALM/STORM imaging and CRISPR/Cas9 gene editing. H. B. BRISMAR*; K. BERNHEM; H. BLOM. *KTH, Royal Inst. of Technol.*

9:00 KKK63 **185.10** CUBIC-X: Whole-organ cell analysis of mammalian brain with expansion chemical cocktails. T. MURAKAMI*; T. MANO; S. SAIKAWA; D. SHIGETA; A. KUNO; E. A. SUSAKI; K. TAINAKA; H. R. UEDA. *The Univ. of Tokyo, Princeton Univ., Univ. of Tsukuba.*

POSTER

186. Advanced Imaging Techniques: Electron Microscopy

Theme I: Techniques

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 KKK64 **186.01** Random access, parallel FIB-SEM imaging of the *Drosophila* brain. K. J. HAYWORTH*; C. XU; H. HESS. *Howard Hughes Med. Inst., HHMI.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 KKK65 **186.02** Advanced tissue preparation techniques for combined physiology and high throughput 3D transmission electron microscopy. J. BUCHANAN*; A. BLECKERT; M. M. TAKENO; N. M. DA COSTA. *Allen Inst. For Brain Sci., Allen Inst. For Brain Sci.*

10:00 KKK66 **186.03** ● Continued development of an automated TEM specimen loader and precision positioning system. J. H. PRICE*; C. GOODWIN; B. GUNDERMAN; O. TORRENS. *Hudson Price Designs, LLC, Coleman Technologies, Inc.*

11:00 KKK67 **186.04** Linking functional and anatomical circuit connectivity using fast parallelized TEM imaging. A. A. BLECKERT*; D. BRITTAIN; J. BORSETH; D. BUMBARGER; J. PERKINS; D. WILLIAMS; M. TAKENO; D. REID; D. CASTELLI; D. SULLIVAN; T. KEENAN; C. REID; N. DA COSTA. *Allen Inst. For Brain Sci.*

8:00 KKK68 **186.05** Neural Reconstruction Integrity - a novel connectomics metric sensitive to brain graph connectivity rather than fine image segmentation. M. J. ROOS*; E. P. REILLY; J. S. GARRETSON; W. R. GRAY RONCAL; D. M. KLEISSAS; M. A. CHEVILLET; B. A. WESTER. *John Hopkins Univ. Applied Physics Lab.*

9:00 KKK69 **186.06** Reconstruction of a larval zebrafish myelin projectome from whole-brain serial-section electron microscopy. D. G. C. HILDEBRAND*; R. M. TORRES; W. CHOI; T. M. QUAN; A. W. WETZEL; S. SAALFELD; W. JEONG; J. W. LICHTMAN; F. A. ENGERT. *Harvard Univ., Ulsan Natl. Inst. of Sci. and Technol. (UNIST), Carnegie Mellon Univ., Howard Hughes Med. Inst.*

10:00 KKK70 **186.07** Dendritic arbors of gap-junction-coupled spinal neurons. E. ROSA-MOLINAR*; C. SANTIAGO-ROBLES; J. L. SERRANO-VELEZ; M. RODRIGUEZ-ALVARADO; N. MARTINEZ-RIVERA; I. I. TORRES-VAZQUEZ; V. JOSHI; R. D. POWELL. *Univ. of Kansas, Univ. of Puerto Rico-Medical Sci., Marine Biol. Lab., Univ. of Kansas, Univ. of Puerto Rico-Rio Piedras, Nikon Instruments Inc., Rutgers University-Newark, Nanoprobes Inc.*

11:00 LLL1 **186.08** Automated dense collection of ultrathin sections directly onto silicon wafers. T. TEMPLIER*; R. H. R. HAHNLOSER. *Univ. of Zurich and ETH Zurich, Neurosci. Ctr. Zurich.*

8:00 LLL2 **186.09** Correlative light and electron microscopy for ultrastructural studies of synapses in cultured hippocampal neurons. R. SUN*; C. YIN; X. CHEN; C. TAO; Y. LIU; B. ZHANG; J. ZHANG; P. LAU; H. HAN; Z. ZHOU; G. BI. *Univ. of Sci. and Technol. of China, Inst. of Automation, Chinese Acad. of Sci., Univ. of California, Los Angeles (UCLA).*

9:00 LLL3 **186.10** ● Aldehyde-stabilized cryopreservation. R. L. MCINTYRE*. *Nectome.*

10:00 LLL4 **186.11** The effect of axon shape and myelination on diffusion MRI signals in a realistic Monte Carlo simulation environment. M. KLEINNIJENHUIS*; J. MOLLINK; E. E. JOHNSON; V. L. GALINSKY; L. R. FRANK; S. JBABDI; K. L. MILLER. *Univ. of Oxford, Radboud university medical center, Radboud Univ., Univ. of Oxford, Univ. of California San Diego.*

11:00 LLL5 **186.12** A genetically encoded marker for light- and electron-microscopic analysis of neuronal cell types. M. L. LEYRER*; D. J. BERG; K. L. BRIGGMAN; D. M. BERSON. *Brown Univ., Brown Univ., NIH.*

8:00 LLL6 **186.13** The genetically encoded peroxidase APEX2 enables cell-type specific labeling for large-scale electron microscopy of mouse cortex. M. M. TAKENO*; T. L. DAIGLE; A. L. BODOR; A. H. CETIN; H. ZENG; N. M. DA COSTA. *Allen Inst. For Brain Sci., Allen Inst. For Brain Sci.*

9:00 LLL7 **186.14** Mammalian whole-brain preparation for high-throughput electron microscopic connectomics. S. MIKULA*; W. DENK. *Max-Planck Inst. For Neurobio., Max Planck Inst. for Neurobio.*

POSTER

187. Drug and Biomarker Discovery in Mood Disorders and Schizophrenia

Theme I: Techniques

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 LLL8 **187.01** Serum brain-type fatty acid-binding protein level is elevated in response to mental stress. M. KOGA*; S. NAKAGAWA; Y. WAKATSUKI; K. KITAGAWA; A. KATO; I. KUSUMI. *Hokkaido Univ. Grad. Sch. of Med.*

9:00 LLL9 **187.02** ● Long-term plasticity underlies antidepressant effects of repetitive transcranial magnetic stimulation. C. KELLER*; W. WU; R. WRIGHT; N. ICHIKAWA; J. HUEMER; M. WONG; A. YEE; K. SARHADI; N. ANICETTI; L. MCTEAGUE; A. ETKIN. *Stanford Univ., Stanford Univ., Hiroshima Univ., Med. Univ. of Vienna, Med. Univ. of South Carolina.*

10:00 LLL10 **187.03** ● Investigating psychiatric cross-disorder overlap based on functional connectivity magnetic resonance imaging. G. LISI; J. MORIMOTO; N. YAHATA; R. HASHIMOTO; T. YAMADA; N. KATO; H. TAKAHASHI; Y. YOSHIHARA; N. ICHIKAWA; Y. OKAMOTO; K. KASAI; Y. SAKAI; S. C. TANAKA; M. KAWATO*. *ATR Brain Information Communication Res. Lab. Group, ATR Brain Information Communication Res. Lab. Group, Grad. Sch. of Medicine, The Univ. of Tokyo, Mol. Imaging Center, Natl. Inst. of Radiological Sci., Showa Univ. Karasuyama Hosp., Tokyo Metropolitan Univ., Kyoto Univ. Grad. Sch. of Med., Grad. Sch. of Biomed. Sciences, Hiroshima Univ., Grad. Sch. of Medicine, The Univ. of Tokyo, ATR Brain Information Communication Res. Lab. Group, Grad. Sch. of Med. Science, Kyoto Prefectural Univ. of Med., ATR BICR.*

11:00 LLL11 **187.04** ● Classification of DSM- and Biotype-derived categories of psychosis from regional gray matter density: A machine learning approach. J. D. KOEN*; L. J. LEWIS; E. I. IVLEVA; B. A. CLEMENTZ; H. LU; J. A. SWEENEY; G. D. PEARLSON; M. S. KESHAVAN; M. D. RUGG; C. A. TAMMINGA. *Univ. of Texas at Dallas, Univ. of Texas Southwestern Med. Ctr., Univ. of Georgia, Johns Hopkins Univ., Yale Sch. of Med., Hartford Hosp., Harvard Med. Sch.*

8:00 LLL12 **187.05** ^{14}C-2-deoxyglucose autoradiography screen for mouse brain activity: Relating known therapeutics and novel compounds for schizophrenia, depression, and bipolar disorder to brain circuitry. A. GIOVANNI*; S. ENGEL; C. BOWEN; R. TERRY-LORENZO; P. G. JONES; L. HARDY; T. LARGE; T. HANANIA; E. V. SABATH; V. ALEXANDROV; M. QUTAISH; M. SEAMAN; P. CZARNECKI; M. SILVA; J. SULLIVAN. *Sunovion Pharmaceuticals Inc, PsychoGenics Inc., InviCRO LLC.*

9:00 LLL13 **187.06** Drug discovery for mental disorders: Preclinical studies of Peruvian botanicals. C. GALLO*; G. POLETTI; A. VAISBERG. *Univ. Peruana Cayetano Heredia.*

10:00 LLL14 **187.07** Development of a functional HTS assay for the orphan receptor GPR88. A. M. DECKER; E. A. GAY; K. M. MATHEWS; R. MAITRA; C. JIN*. *Res. Triangle Inst.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 LLL15 **187.08** Effect of substitution on the aniline moiety of the GPR88 agonist 2-PCCA: Synthesis and structure-activity relationship study. C. JIN; A. M. DECKER*; D. L. HARRIS; B. E. BLOUGH. *RTI Intl.*

8:00 LLL16 **187.09** Discovery of highly selective dopamine D3 receptor ligands in a novel series of piperazinylbutyl ureas. S. ANANTHAN*; S. K. SAINI; J. V. HOBRATH; I. PADMALAYAM; L. ZHAI; T. ANTONIO; M. E. A. REITH; M. TAYLOR; R. R. LUEDTKE. *Southern Res. Inst., New York Univ. Sch. of Med., Univ. of North Texas Hlth. Sci. Ctr.*

9:00 LLL17 **187.10** ● Identification of biomarkers in blood in elder patients with early-onset major depressive disorder. H. YAMAGATA*; S. UCHIDA; K. HARADA; F. HIGUCHI; K. MATSUO; S. MIYATA; M. FUKUDA; M. MIKUNI; Y. WATANABE. *Yamaguchi Univ. Sch. of Med., Yamaguchi Univ. Grad. Sch. of Med., Departments of Psychiatry and Neuroscience, Gunma Univ. Grad. Sch. of Med., Hokkaido Univ. Grad. Sch. of Med.*

10:00 LLL18 **187.11** ● Neural targets of tolcapone enhanced cognitive control in healthy adults. S. G. BHAKTA*; G. A. LIGHT; J. A. TALLEDO; A. ALVAREZ; E. HUGHES; B. BALVANEDA; B. K. RANA; J. W. YOUNG; N. R. SWERDLOW. *Univ. of California San Diego.*

11:00 LLL19 **187.12** ● The preclinical use of Auditory Steady State Responses for drug discovery in schizophrenia. B. POUYATOS*; C. TOULLER; R. MAURY; C. DUMONT; C. ROUCARD; Y. ROCHE; V. DUVEAU. *Synapcell.*

8:00 LLL20 **187.13** ● Electrophysiological profiling of escitalopram in rodents and healthy human subjects. P. DANJOU; G. VIARDOT; P. L'HOSTIS; N. FAUCHOUX; E. CAYRE; C. MACSWEENEY*; S. C. LEISER; L. BREUNING SLUTH; S. RAHN CHRISTENSEN. *Biotrial, Biotrial, Biotrial Intl. Ltd, Lundbeck Res. US, Lundbeck A/S.*

9:00 LLL21 **187.14** Inhibition of serine racemase as a novel approach to modulating NMDA receptor function. C. R. KOULOURIS*; S. WALKER; M. ROE; J. ATACK. *Univ. of Sussex.*

10:00 LLL22 **187.15** Pharmacological MRI platform for pre-clinical CNS drug discovery. A. SHATILLO*; K. LEHTIMÄKI; A. NURMI; O. KONTKANEN; P. J. SWEENEY. *Charles River Discovery.*

11:00 LLL23 **187.16** Comparison of protocols for quantitative analyses of membrane protein clustering in lymphocytes in relation to its use as a putative biomarker of depression. R. ROMAY-TALLON*; T. RIVERA-BALTANAS; M. A. MITCHELL; L. E. KALYNCHUK; J. OLIVARES; H. J. CARUNCHO. *Univ. of Saskatchewan, Alvaro Cunqueiro Hosp., Univ. of Saskatchewan, Univ. of Saskatchewan, Univ. of Saskatchewan.*

8:00 LLL24 **187.17** Gender differences in N100 and P200 evoked potentials and sensory gating in schizophrenia and bipolar disorder. S. T. SIDDIQI*; B. HO; J. V. PATTERSON; W. E. BUNNEY, Jr. *Univ. of California Irvine Sch. of Med., Univ. of California, Irvine, Univ. of California, Irvine Med. Ctr., Univ. of California, Irvine.*

9:00 LLL25 **187.18** Identification and development of novel Trace Amine-Associated Receptors ligands for experimental and pharmacological applications. R. R. GAINETDINOV*; A. GERASIMOV; A. LUKIN; O. KORENKOVA; E. EFIMOVA; S. ESPINOZA; M. Y. KRASAVIN. *Inst. Italiano Di Tecnologia, Inst. of Translational Biomedicine, Skolkovo Inst. of Sci. and Technol., Lomonosov Inst. of Fine Chem. Technol.*

10:00 LLL26 **187.19** Another view of the inhibitory-excitatory abnormality in schizophrenia: The role of white matter microstructure. X. DU*; A. SUMMERFELT; J. CHIAPPELLI; P. KOCHUNOV; L. E. HONG. *Maryland Psychiatric Res. Ctr.*

11:00 LLL27 **187.20** Mutagenesis study of human GPR139 to identify mutant receptors with a gain and loss of function. D. NEPOMUCENO*; G. LEE; P. BONAVENTURE; C. LIU. *Janssen Pharmaceut. Res. & Develop., Janssen Pharmaceut. Res. and Develop.*

POSTER

188. Data Analysis and Statistics: Human Data I

Theme I: Techniques

Sun. 8:00 AM – *San Diego Convention Center*, Halls B-H

8:00 LLL28 **188.01** ●▲Alzheimer's disease and aging effects in cortical folding. F. HANSEN PACHECO DE MORAES*; B. MOTA; M. CARNEIRO MONTEIRO; P. MATTOS; F. TOVAR-MOLL. *Federal Univ. of Rio De Janeiro, D'Or Inst. for Res. & Educ. (IDOR), Federal Univ. of Rio de Janeiro.*

9:00 LLL29 **188.02** Characterizing quantitative MRI changes due to formalin fixation: A longitudinally *ex vivo* human brain imaging study. A. SHATIL*; K. M. MATSUDA; C. R. FIGLEY. *Univ. of Manitoba, Univ. of Manitoba, Univ. of Manitoba.*

10:00 LLL30 **188.03** Co-registration of high-resolution structural MRI images for investigating brain functions at submillimeter level. Y. CHEN*; A. CARDENAS-BLANCO; D. BERRON; D. KUMARAN; E. DUEZEL. *Otto-von-guericke-University Magdeburg, German Ctr. for Neurodegenerative Dis. (DZNE), Otto-von-guericke-University Magdeburg, Google DeepMind, Univ. Col. London.*

11:00 LLL31 **188.04** Diffusion kurtosis imaging for the human connectome project. A. S. ROKEM*; E. HUBER; P. MEHTA; R. NETO HENRIQUES; M. BALAZINSKA; J. D. YEATMAN. *The Univ. of Washington, The Univ. of Washington, The Univ. of Washington, Univ. of Cambridge.*

8:00 LLL32 **188.05** Frequency distribution of information transfer is task dependent. S. E. ROBINSON*; A. J. MANDELL; R. COPPOLA. *NIH/NIMH, Univ. of California San Diego.*

9:00 LLL33 **188.06** Statistically extracting cell-type specific information from human brain transcriptomic datasets captures the effects of age, manner of death, dissection, and psychiatric diagnosis. M. H. HAGENAUER*; J. Z. LI; F. M. MENG; D. WALSH; W. E. BUNNEY; R. M. MYERS; J. D. BARCHAS; A. F. SCHATZBERG; S. J. WATSON; H. AKIL. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of California, HudsonAlpha Inst. of Biotech., Weill Cornell Med. Col., Stanford Med.*

10:00 LLL34 **188.07** ● Mapping of cortex areas from historic and recent studies to the "Atlas of the Human Brain" in standard (MNI-) space. J. K. MAI*; M. MAJTANIK. *H-Heine-Univ Dusseldorf, Mr-X-Brain GmbH, Duesseldorf.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 LLL35 **188.08** Diffusion tensor distribution function FA boosts power to detect Alzheimer's disease deficits in low resolution data. T. M. NIR*; J. VILLALON-REINA; A. ZAVALIANGOS-PETROPULU; N. JAHANSHAD; L. ZHAN; A. D. LEOW; M. A. BERNSTEIN; C. R. JACK; M. W. WEINER; P. M. THOMPSON. *USC Imaging Genet. Ctr., Imaging Genet. Center, Univ. of Southern California, Computer Engin. Program, Univ. of Wisconsin-Stout, Dept. of Psychiatry and Bioengineering, Univ. of Illinois, Dept. of Radiology, Mayo Clin. and Fndn., Dept. of Radiology, UCSF Sch. of Med.*

8:00 LLL36 **188.09** Excluding motion-corrupted resting state fMRI data: Is censoring enough. R. J. LEPPING*; H. YEH; B. C. MCPHERSON; R. T. KARCHER; M. G. BRUCKS; V. B. PAPA; A. T. FOX; W. M. BROOKS; L. E. MARTIN. *Univ. of Kansas Med. Ctr., Univ. of Kansas Med. Ctr., Indiana Univ. Bloomington, Univ. of Kansas Med. Ctr., Univ. of Kansas Med. Ctr.*

9:00 LLL37 **188.10** Deep learning approach to resting-state networks analysis using fMRI data. J. LEE*; H. JANG. *Dept of Brain and Cognitive Eng, Korea Univ.*

10:00 LLL38 **188.11** Detection of peripheral nerve fractions from diffusion weighted image series using two multivariate analyses. A. SUDA*; M. TERUMITSU; H. MATSUZAWA; K. SUZUKI; K. SEO. *Grad. School, Niigata Univ., Ctr. for Integrated Human Brain Science, Univ. of Niigata.*

11:00 LLL39 **188.12** Modeling EEG source dynamics associated with emotional responses in a music-listening experiment. S. HSU*; Y. LIN; T. JUNG. *Univ. of California San Diego, Univ. of California San Diego, Natl. Sun Yat-sen Univ.*

8:00 LLL40 **188.13** Decoupling hemispheres: Comparison of hemispheric specializations using ICA of fMRI statistical maps from Neurovault. A. TSUCHIDA*; B. MILNER; G. W. COTTRELL; B. CIPOLLINI. *McGill Univ., Univ. of California San Diego.*

9:00 LLL41 **188.14** Spectral organization of human brain activity. J. S. WYSONG*; A. C. EVANS; J. LINA. *Montreal Neurolog. Inst., Montreal Neurolog. Inst., Univ. de Montréal, École de technologie supérieure.*

10:00 LLL42 **188.15** Differential Correlation: A new method to estimate functional connectivity in fMRI. W. LIN*; G. P. KRISHNAN; M. BAZHENOV; T. J. SEJNOWSKI. *Salk Inst., UC San Diego, Howard Hughes Med. Inst.*

11:00 LLL43 **188.16** Inadequate bias correction contributes to discrepancies in structural MRI measures between 8- and 32-channel head coils. C. FENNEMA-NOTESTINE*; R. THEILMANN; R. NOTESTINE; E. M. MOORE; L. A. WETHERELL; L. L. STURMAN; R. A. CARPER; I. FISHMAN; R. MÜLLER; A. C. GAMST. *Univ. of California, San Diego, Univ. of California, San Diego, Univ. of California, San Diego, San Diego State Univ., Univ. of California, San Diego.*

8:00 LLL44 **188.17** Voodoo classification? Biases due to spatial selection and temporal aggregation may hinder the interpretability of MVPA classification accuracy. T. GOLAN*. *The Hebrew Univ. of Jerusalem.*

9:00 LLL45 **188.18** Classifying valence of autobiographical memories from functional magnetic resonance imaging data. N. E. NAWA*; A. FRID; L. MANEVITZ; H. ANDO. *NICT Ctr. for Information and Neural Networks (CiNet), Grad. Sch. of Frontier Biosciences, Osaka Univ., Univ. of Haifa.*

10:00 LLL46 **188.19** Replicability of MEG and fMRI responses to movie stimuli. K. LANKINEN*; J. SAARI; Y. HLUSHCHUK; P. TIKKA; L. PARKKONEN; R. HARI; M. KOSKINEN. *Aalto Univ., Aalto Univ., Aalto NeuroImaging, Aalto Univ., Helsinki Univ. Central Hosp. (HUCH), Univ. of Helsinki, Aalto Univ., Univ. of Helsinki.*

11:00 LLL47 **188.20** Super resolution reconstruction based on orthogonal fusion and sub-pixel shifting techniques for diffusion weighted images. H. PENG*; S. E. CHRIST. *Univ. of Missouri Columbia, Univ. of Missouri.*

8:00 LLL48 **188.21** Scan duration and test-retest reliability of functional connectivity. S. M. NOBLE*; D. SCHEINOST; M. N. SPANN; F. TOKOGLU; R. T. CONSTABLE. *Yale Univ., Yale Univ., Columbia Univ., Yale Univ.*

9:00 LLL49 **188.22** Metal-induced susceptibility artifact correction for DBS-fMRI using the PSF mapping method combined with reversed gradient approach. M. IN*; H. MIN; Y. SHU; M. A. BERNSTEIN; H. J. JO; K. H. LEE. *Mayo Clin., Mayo Clin., Mayo Clin.*

8:00 DP08 **188.23** (Dynamic Poster) Individual brain charting: A neuroimaging database featuring the first functional atlas of the human brain. A. L. PINHO*; B. THIRION. *INRIA Saclay, Neurospin, CEA, Paris-Saclay Univ.*

11:00 LLL50 **188.24** ● Stable representation of hubs in functional networks. R. MADHAVAN*; B. R. SUNDAR; S. E. JOEL. *GE Global Res.*

8:00 LLL51 **188.25** Your brain on art: Examining the neural substrate of creativity in the arts using mobile brain-body imaging (MoBI). J. G. CRUZ-GARZA*; A. E. KOPTEVA; A. Y. PAEK; J. L. CONTRERAS-VIDAL. *Univ. of Houston.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

LECTURE *San Diego Convention Center*

189. Circuits for Movement — CME

Sun. 1:00 PM - 2:10 PM — Ballroom 20

Speaker: S. ARBER, *Biozentrum, Univ. of Basel and Friedrich Miescher Inst.*

Movement is the behavioral output of the nervous system. Animals carry out an enormous repertoire of distinct actions, spanning from seemingly simple repetitive tasks like walking, to more complex movements such as forelimb manipulation tasks. This lecture will focus on recent work elucidating the organization and function of neuronal circuits at the core of regulating distinct motor behaviors. It will show that dedicated circuit modules within different brainstem nuclei and their interactions in the motor system play key roles in action diversification.

SYMPOSIUM *San Diego Convention Center*

190. Physical Activity Impacting Neuroplasticity in Aging and Disease — CME

Sun. 1:30 PM - 4:00 PM — 6A

Chair: G. PETZINGER
Co-Chair: S. MCEWEN

This symposium will present translational research investigating physical activity-induced structural and functional alterations in brain circuits and synaptic function, and potential mechanisms underlying activity-dependent plasticity in aging and disease. Effects of exercise on structure and functional connectivity of the brain and alterations in gene and protein expression important for neuroplasticity will be discussed in the context of aging, neurodegenerative disorders, and schizophrenia.

1:30 **190.01** Introduction.

1:35 **190.02** Aging, exercise and brain plasticity. K. ERICKSON. *Univ. of Pittsburgh.*

2:10 **190.03** Functional and structural alterations in cognitive circuitry induced by physical activity in first-episode Schizophrenia patients. S. MCEWEN. *UCLA.*

2:45 **190.04** ● Mechanisms signaling exercise induced neuroplasticity in Parkinson's disease. G. PETZINGER. *USC.*

3:20 **190.05** Physical activity regulates transcriptional patterns in the rodent and human hippocampus. N. BERCHTOLD. *Univ. of California Irvine.*

3:55 **190.06** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

191. Building the Cerebral Cortex: Mechanisms That Mediate Migration, Specification, and Axonal Outgrowth — CME

Sun. 1:30 PM - 4:00 PM — 29D

Chair: J. M. WEIMER
Co-Chair: J. NEWBERN

Over the past decade, we have learned that the movement and differentiation of newly born neurons in the developing cerebral cortex are orchestrated through a close interplay between cell intrinsic signaling events and nonautonomous cues from the environment. Recent studies have uncovered novel aspects of this cellular interplay in regulating both migration and the initial stages of differentiation. In this minisymposium, we will discuss several emerging key players in this process and how perturbation in these specific signaling hubs can contribute to a number of neural pediatric disorders.

1:30 **191.01** Introduction.

1:35 **191.02** Cellular environment: Implications for brain development and maldevelopment. L. CANCEDDA. *Inst. Italiano di Tecnologia.*

1:55 **191.03** Intracellular signals directing cortical interneuron migration. E. S. TUCKER. *West Virginia Univ.*

2:15 **191.04** CRMP2 and CLN6 mediate a novel mechanism for distal axonal transport in developing neurons. J. M. WEIMER. *Sanford Res.*

2:35 **191.05** Traffic signals: Intracellular signaling and brain morphogenesis. A. P. BARNES. *Oregon Hlth. and Sci. Univ.*

2:55 **191.06** Epigenetic regulation of cortical development. K. KWAN. *Univ. of Michigan.*

3:15 **191.07** Distinct functions of ERK/MAPK signaling during cortical excitatory and inhibitory neuron development. J. NEWBERN. *Arizona State Univ.*

3:35 **191.08** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

192. Astrocytes as Active Participants in Neural Circuits: From Cells to Systems — CME

Sun. 1:30 PM - 4:00 PM — 6B

Chair: K. POSKANZER
Co-Chair: A. V. MOLOFSKY

Astrocyte-neuron interactions are essential to neural circuit assembly and function. This minisymposium will present research at the forefront of circuit neurobiology from *in vivo* and *in situ* systems. The session will explore multiple levels at which astrocytes exert highly specific control of neural circuits and discuss their relevance to brain function and disease. The session aims to describe the dynamic interplay of these two cell types and address issues that are critical to all neuroscientists.

1:30 **192.01** Introduction.

1:35 **192.02** Control of synaptic connectivity by astrocytes. C. EROGLU. *Duke Univ. Med. Ctr.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:55 **192.03** Astrocyte-encoded cues in developmental synapse refinement. A. V. MOLOFSKY. *Univ. of California, San Francisco.*

2:15 **192.04** Circuit-specific synaptic regulation by astrocytes. A. ARAQUE. *Univ. of Minnesota.*

2:35 **192.05** Astrocytic regulation of cortical state switching. K. POSKANZER. *Univ. of California, San Francisco.*

2:55 **192.06** Subcellular calcium responses in visual cortical astrocytes. J. SCHUMMERS. *Max Planck Florida Inst.*

3:15 **192.07** Diverseastrocyte populations selectively contribute to synaptogenesis and glioma pathophysiology. B. DENEEN. *Baylor Col. of Med.*

3:35 **192.08** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

193. Dysregulation of mRNA Localization and Translation in Genetic Disease — CME

Sun. 1:30 PM - 4:00 PM — 28A

Chair: G. J. BASSELL
Co-Chair: E. WANG

This minisymposium will highlight recent discoveries on molecular mechanisms of mRNA localization and translation, the dysregulation of mRNA in genetic diseases, and therapeutic strategies. The session integrates diverse topics and mechanisms, including the roles of several mRNA binding proteins in axonal growth, synapse development, synaptic function, learning, and memory. Mechanisms of neurodevelopmental, neuropsychiatric, and neurodegenerative diseases will be discussed. Diverse approaches include use of genome-wide transcriptomics, super-resolution microscopy, animal models, human patient cells, and postmortem tissue.

1:30 **193.01** Introduction.

1:35 **193.02** ● Global approaches for studying RNA dysregulation in myotonic dystrophy. E. WANG. *Univ. of Florida.*

1:55 **193.03** Distal alternative last exons localize mRNAs in neurons and impairments in myotonic dystrophy and fragile x syndrome. M. TALIAFERRO. *MIT.*

2:15 **193.04** Regulation of synaptic and autism-related genes by Rbfox1 in the cytoplasm of neurons. J. LEE. *UCLA.*

2:35 **193.05** Role of FMRP and Ataxin-2 in RNA granules, synapse function and behavior. I. SUDHAKARAN. *Natl. Ctr. for Biol. Sci.*

2:55 **193.06** Ribonucleoprotein assembly, mRNA localization, and local translation in spinal muscular atrophy. W. ROSSOLL. *Emory Univ. Sch. of Med.*

3:15 **193.07** PI3K subunit expression in fragile x syndrome and other autism spectrum disorders. C. GROSS. *Cincinnati Children's Hosp. Med. Ctr.*

3:35 **193.08** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

194. Neural Mechanisms of Economic Choice — CME

Sun. 1:30 PM - 4:00 PM — 6F

Chair: B. Y. HAYDEN
Co-Chair: E. L. RICH

Despite their central importance in psychology, economics, and ecology, the neural mechanisms of economic choice have long been mysterious. This timely minisymposium will highlight recent empirical and theoretical advances towards understanding the neural execution of economic choice. The speakers will focus on the role of the frontal lobe across species, particularly the orbitofrontal and ventromedial prefrontal cortex, in the mediation of economic-based decision-making processes.

1:30 **194.01** Introduction.

1:35 **194.02** Orbitofrontal cortex gating of choice control. C. GREMEL. *university of California San Diego.*

1:55 **194.03** Distributed mechanisms of evaluation and comparison. B. Y. HAYDEN. *Univ. of Rochester.*

2:15 **194.04** Reward-guided information search and choice in prefrontal cortex. L. T. HUNT. *Univ. Col. London.*

2:35 **194.05** Computational and neural mechanisms for attentional modulation of value. C. HUTCHERSON. *Univ. of Toronto Scarborough.*

2:55 **194.06** Orbitofrontal value signals during a free-viewing decision-making task. V. B. MCGINTY. *Stanford Univ.*

3:15 **194.07** Dynamic encoding of choice in the orbitofrontal cortex. E. L. RICH. *Univ. of California Berkeley.*

3:35 **194.08** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

195. Using Miniature Microscopes to Probe the Neural Ensemble Correlates of Innate and Learned Behaviors in Freely Moving Mice — CME

Sun. 1:30 PM - 4:00 PM — 6E

Chair: B. F. GREWE
Co-Chair: J. G. PARKER

Advances in freely moving Ca^{2+} imaging techniques have empowered a detailed understanding of how defined neuronal populations encode diverse animal behaviors. However, the successful implementation of mobile calcium imaging poses challenges for many researchers, ranging from technical to analytical. Focusing on the use of miniaturized microscopes, this minisymposium will present the most recent progress in imaging neural ensembles in widely used behavioral assays and preclinical disease models.

1:30 **195.01** Introduction.

1:35 **195.02** ● Distinct striatal pathway changes in spontaneous and movement-related activity define the Parkinsonian state. J. G. PARKER. *Stanford Univ.*

1:55 **195.03** A deep brain search for unique network dynamics. J. H. JENNINGS. *Stanford Univ.*

2:15 **195.04** Social representation by large neuronal ensembles in the medial amygdala of behaving mice. Y. LI. *Harvard University, HHMI.*

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2:35 **195.05** Multiplexing information about where and when in hippocampal neural codes for long term memory. Y. ZIV. *Weizmann Inst. of Sci.*

2:55 **195.06** Deconstructing ventral hippocampal control of anxiety-related behavior and learned fear. M. KHEIRBEK. *Univ. of California, San Francisco.*

3:15 **195.07** A role for the hypothalamus in social learning. R. REMEDIOS. *Caltech.*

3:35 **195.08** Closing Remarks.

LECTURE *San Diego Convention Center*

196. PETER AND PATRICIA GRUBER LECTURE - Random Walk in Neurobiology

Sun. 2:30 PM - 3:40 PM — Ballroom 20

Speaker: M. POO, *Univ. of California-Berkeley and Inst. of Neuroscience, Chinese Acad. of Sci.*

Support contributed by: The Gruber Foundation

Beginning as a biophysicist studying diffusion of membrane proteins, I stumbled upon many interesting problems in cellular neurobiology, including neuronal polarization, axon guidance, synaptogenesis, and synaptic plasticity. An underlying theme in all these processes is random diffusion of proteins confined or even directed by localization mechanisms, leading to cellular topography critical for neuronal functions. As it turned out, my own career path resembled random walk, influenced and sometimes directed by interactions with my students, postdocs, and colleagues.

LECTURE *San Diego Convention Center*

197. PRESIDENTIAL SPECIAL LECTURE - Limitations on Visual Development: Neurons and Behavior — CME

Sun. 5:15 PM - 6:25 PM — Ballroom 20

Speaker: L. KIORPES, *New York Univ.*

Vision develops over many months in primate infants. The neural mechanisms that limit visual function are not fully understood. During development, neurons in visual cortex are more sensitive than would be expected based on visual behavior. Abnormal early experience creates a specific disorder – amblyopia – which permanently disrupts vision. Here also, the sensitivity of neurons in visual cortex exceeds behavior. This talk will describe neural limits on normal and abnormal postnatal visual development based on studies of brain and behavior in human and nonhuman primates.

NANOSYMPOSIUM

198. Adult Neurogenesis During Aging of the Neural Stem Cell Niche

Theme A: Development

Sun. 1:00 PM – *San Diego Convention Center*, 25A

1:00 **198.01** A role for nuclear envelope proteins in mammalian neural stem cell aging. D. L. MOORE*; G. A. PILZ; M. K. BIN IMTIAZ; Y. BARRAL; S. JESSBERGER. *Univ. of Zurich, Brain Res. Inst., ETH Zurich.*

1:15 **198.02** ● Peaks and valleys in cell behavior and gene expression during aging of the neural stem cell niche. M. APOSTOLOPOULOU*; T. KIEHL; M. WINTER; E. CARDENAS; S. GODERIE; Y. WANG; A. COHEN; S. TEMPLE. *Neural Stem Cell Inst., Drexel Univ.*

1:30 **198.03** Modulating competition dynamics in the dentate gyrus to rejuvenate memory circuits in adulthood and aging. K. M. MCAVOY*; K. N. SCOBIE; S. BERGER; C. RUSSO; P. DECHARATANACHART; N. GUO; H. VEGA-RAMIREZ; S. MIAKE-LYE; M. WHALEN; M. NELSON; M. BERGAMI; R. HEN; D. BARTSCH; B. BERNINGER; A. SAHAY. *Massachusetts Gen. Hosp., Harvard Univ., Harvard Med. Sch., Columbia University, NY, USA, Heidelberg Univ., Massachusetts Gen. Hosp., Echelon Biosci., Univ. Hosp. of Cologne, Johannes Gutenberg Univ.*

1:45 **198.04** The role of the choroid plexus in neurogenesis in the aging subventricular zone. C. S. BJORNSSON*; K. O'KEEFE; M. APOSTOLOPOULOU; Y. WANG; T. R. KIEHL; S. TEMPLE. *Neural Stem Cell Inst., SUNY Albany.*

2:00 **198.05** Origins of adult neurogenesis decline. M. A. BONAGUIDI*; A. IBRAYEVA; E. PU; T. KRIEGER; R. STADEL; D. BERG; G. MING; B. SIMONS; H. SONG. *USC, Cambridge Univ., Johns Hopkins Univ.*

2:15 **198.06** Neural stem cell proliferation is suppressed by aberrant niche fatty acid metabolism in an animal model of Alzheimer's disease. K. J. FERNANDES*; L. K. HAMILTON; M. DUFRESNE; S. E. JOPPÉ; S. PETRYSZYN, G1V 4G2; A. AUMONT; F. CALON; F. BARNABÉ-HEIDER; A. FURTOS; M. PARENT; P. CHAURAND. *Univ. of Montreal, Univ. of Montreal, Univ. of Montreal, Univ. Laval, Karolinska.*

2:30 **198.07** Targeting the Nrf2 pathway to improve neural stem cell function with age. L. MADHAVAN*; M. J. CORENBLUM; S. RAY; M. LONG; B. HARDER; D. D. ZHANG; C. A. BARNES. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

2:45 **198.08** Niche microglia contribute to neural stem cell aging. E. KOKOVAY*; R. SOLANO-FONSEA; J. O'CONNOR; A. CARDONA; S. MAHESULA. *UT Hlth. Sci. Ctr. At San Antonio, UT Hlth. Sci. Ctr. at San Antonio, UT Hlth. Sci. Ctr. at San Antonio, Univ. of Texas at San Antonio.*

3:00 **198.09** Elucidation of transcriptional networks that preserve adult neural stem cells. A. WEBB*; S. Y. KIM; S. DHAKAL. *Brown Univ.*

3:15 **198.10** Kisspeptin-10 treatment generated specific GnRH neuronal expression from the rhesus monkey derived Lyon NSCs. T. ANWAR*; W. ZHENGBO. *The Univ. of Lahore, Kunming Inst. of Zoology.*

NANOSYMPOSIUM

199. Tau: Biochemistry

Theme C: Neurodegenerative Disorders and Injury

Sun. 1:00 PM – *San Diego Convention Center*, 33C

1:00 **199.01** Loss of endothelial nitric oxide synthase promotes p25 generation and τ phosphorylation in a murine model of Alzheimer's disease. S. A. AUSTIN*; Z. S. KATUSIC. *Mayo Clin., Mayo Clin.*

1:15 **199.02** AMPK activation decreases APP protein level and τ phosphorylation through PI3-K and JNK mediated pathways. B. KIM*; C. BACKUS; E. L. FELDMAN. *Univ. of Michigan.*

1:30 **199.03** Sorting and missorting of endogenous τ in neurons studied in microfluidic devices. V. BALAJI*. *DZNE.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
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* Indicates abstract's submitting author

1:45 **199.04** Sustained activation of CaMKII caused by depletion of mitochondria from the axon enhances τ toxicity. K. ANDO*; A. MARUKO-OTAKE; M. HAYASHISHITA; M. OKA; Y. OHTAKE; M. SEKIYA; T. SAITO; S. HISANAGA; K. M. IIJIMA. *Tokyo Metropolitan Univ., Thomas Jefferson Univ., Natl. Ctr. for Geriatrics and Gerontology.*

2:00 **199.05** *In vivo* monitoring of pathogenic τ aggregation and spreading. S. DEVOS*; Z. FAN; R. E. BENNETT; S. TAKEDA; B. T. HYMAN. *Massachusetts Gen. Hosp.*

2:15 **199.06** MSUT2 is a determinant of neuronal vulnerability to pathological τ. B. C. KRAEMER*; J. WHEELER; P. MCMILLAN; T. STROVAS. *Veterans Affairs Puget Sound Hlth. Care Syst., Univ. of Washington, Univ. of Pennsylvania.*

2:30 **199.07** Loss of bas-1 suppresses τ-induced toxicity in τ transgenic *Caenorhabditis elegans*. R. L. KOW*; J. M. WHEELER; B. KRAEMER. *Veterans Affairs Puget Sound Hlth. Care Syst., Univ. of Washington, Seattle Inst. of Biomed. and Clin. Res., Univ. of Washington.*

2:45 **199.08** A τ-dependent polyamine stress response elicits cognitive impairment and exacerbates neuropathology. L. A. SANDUSKY*; M. D. WATLER; D. I. ROEHRS; H. SHAIR; A. M. BARAKAT; D. S. PLACIDES; W. J. D. FRASER; J. B. HUNT, Jr; S. N. FONTAINE; C. A. DICKEY; M. B. SELENICA; K. R. NASH; M. N. GORDON; D. MORGAN; D. C. LEE. *USF Hlth. Byrd Alzheimer's Inst., USF Hlth. Byrd Alzheimer's Inst., USF Hlth. Byrd Alzheimer's Inst.*

3:00 **199.09** ● τ antibody derivatives as diagnostic imaging ligands for tauopathies. S. KRISHNASWAMY*; Q. WU; Y. LIN; W. RAJAMOHAMEDSAIT; H. RAJAMOHAMEDSAIT; E. SIGURDSSON. *New York Univ. Sch. of Med.*

3:15 **199.10** ● Dynamics of intracellular interaction of a τ antibody and human pathological τ in a human neuron-like model. D. B. SHAMIR*; Y. DENG; E. M. SIGURDSSON. *New York Univ. Sch. of Med., New York Univ. Sch. of Med., New York Univ. Sch. of Med.*

3:30 **199.11** Mutant human τ (ΔK280) causes an axonopathy which can be treated with adenosine A_1 antagonist Rolofylline. F. J. A. DENNISSEN; M. ANGLADA-HUGUET; A. SYDOW; E. MANDELKOW; E. MANDELKOW*. *German Ctr. For Neurodegenerative Dis. (DZNE), CAESAR Res. Ctr., Max-Planck-Institute for Metabolism Res.*

3:45 **199.12** Extracellular τ oligomers induced redistribution and aggregation of endogenous neuronal τ coupled to axonal transport dysfunction. E. SWANSON*; L. MCMAHON; L. BRECKENRIDGE; S. SOM; I. MCCONNELL; G. BLOOM. *Univ. of Virginia.*

4:00 **199.13** Metabolic changes over the course of aging in a mouse model of τ deposition. A. JOLY AMADO*; K. SERRANEAU; M. L. BROWNLOW; M. N. GORDON; D. MORGAN. *USF Hlth. Byrd Alzheimer's Inst., Byrd Alzheimer's Inst. Univ. of South Florida, Byrd Alzheimer's Inst. Univ. of South Florida.*

4:15 **199.14** ▲ Immunohistochemical characterisation of novel τ antibodies in transgenic animals. A. BOTTELBERGS*; K. VAN KOLEN; C. WINTMOLDERS; X. LANGLOIS; M. MERCKEN. *Janssen Pharmaceuticals.*

NANOSYMPOSIUM

200. Alzheimer's Synaptic Dysfunction

Theme C: Neurodegenerative Disorders and Injury

Sun. 1:00 PM – *San Diego Convention Center*, 30B

1:00 **200.01** The synaptic adhesion molecules APP/APLPs and the APP/APLPs-interacting FE65 proteins share common synaptic functions. S. KINS*; P. STRECKER; S. SCHILLING; S. LUDEWIG; A. MEHR; M. KORTE; J. STEPHAN; M. RUST; S. GUÉNETTE; U. MÜLLER; S. EGGERT. *Univ. of Kaiserslautern, TU Braunschweig, Inst. for Pharm. and Mol. Biotechnology, Univ. of Heidelberg, Inst. of Physiological Chemistry, Univ. of Marburg, MassGeneral Inst. for Neurodegenerative Disease, Massachusetts Gen. Hospital, Harvard Med. Sch.*

1:15 **200.02** APP maintains dendritic spine plasticity in the adult brain via extracellular D-serine levels. J. W. HERMS*; S. CRUX; S. MARINESCO; E. MONTAGNA; Y. SHI; S. SHI; K. ZHU; M. M. DOROSTKAR; U. C. MÜLLER; C. ZOU. *Ludwig-Maximilians-University Munich, German Ctr. for Neurodegenerative Dis., Inserm U1028, CNRS UMR5292, Dept. of Bioinformatics and Functional Genomics, Inst. of Pharm. and Mol. Biotech.*

1:30 **200.03** APPsα rescues impaired spine density and synaptic dysfunction in aged Alzheimer model mice and conditional APP/APLP2 double knockout mice. U. MULLER*; R. FOL; M. RICHTER; S. LUDEWIG; T. ABEL; J. BRAUDAU; S. WEYER; M. HICK; D. WOLFER; C. BUCHHOLZ; M. KORTE; N. CARTIER. *Heidelberg Univ., Univ. Paris-Sud, TU Braunschweig, Paul-Ehrlich-Institut, Zurich Univ.*

1:45 **200.04** Amyloid-β42 interacting peptide protects synaptic structure and function. S. HOSSAIN; P. CHANG; R. MCKINNEY; G. MULTHAUP*. *McGill Univ., McGill Univ.*

2:00 **200.05** Recurrent Herpes Simplex type-1 (HSV-1) infections alter synaptic functions in adult mice via amyloid-β protein (Aβ) production and accumulation. R. PIACENTINI*; D. D. LI PUMA; A. MASTRODONATO; S. COCCO; G. DE CHIARA; A. PALAMARA; C. GRASSI. *Univ. Cattolica, Med. Sch., Natl. Res. Council, Sapienza Univ. of Rome, San Raffaele Pisana Scientific Inst. for Research, Hospitalization, and Hlth. Care.*

2:15 **200.06** Amyloid-β peptide is required for the cGMP-induced long-term potentiation and memory. D. PUZZO*; R. RICCIARELLI; W. GULISANO; M. TROPEA; C. REBOSIO; O. ARANCIO; E. FEDELE; A. PALMERI. *Univ. of Catania, Univ. of Genova, Columbia Univ.*

2:30 **200.07** ● Assessing the effects of $A\beta_{1-42}$ on neuronal excitability and synaptic function using a novel high-throughput assay. J. K. VIRDEE*; Y. SINHA; A. FOUILLET; S. EVERSDEN; M. O'NEILL; J. WOLAK; D. URSU. *Eli Lilly and Co.*

2:45 **200.08** ● Differential effects of $A\beta_{1-42}$ and control oligomers on synaptic toxicity, τ mislocalisation and microglial activation. E. L. MEAD*; Y. SINHA; S. EVERSDEN; J. VIRDEE; D. URSU; M. O'NEILL; M. HUTTON; J. WOLAK. *Eli Lilly & Co, Eli LIlly and Co.*

3:00 **200.09** Neurexin and its trans-synaptic partner, neuroligin 1, bind soluble aβ oligomers andmediate oligomer-induced neuronal damage, synapse loss and cognitive impairment in mice. M. M. OLIVEIRA*; J. BRITO-MOREIRA; M. V. LOURENCO; J. FONTES; M. MAGDESIAN; F. C. RIBEIRO; J. H. LEDO; H. M. MELO; L. DINIZ; F. A. C. GOMES; J. CLARKE; C. P. FIGUEIREDO; F. G. DE FELICE; S. T. FERREIRA. *Federal Univ. of Rio De Janeiro.*

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* Indicates abstract's submitting author

3:15 **200.10** Microtubule disruption, BACE1 elevation, and increased Aβ generation in presynaptic dystrophic neurites that surround amyloid plaques in Alzheimer's disease. K. R. SADLEIR*; P. C. KANDALEPAS; V. BUGGIA-PRÉVOT; D. A. NICHOLSON; G. THINAKARAN; R. VASSAR. *Northwestern Univ., Univ. of Chicago, Rush Univ.*

3:30 **200.11** Increased neuronal PreP expression improves mitochondrial and synaptic function in old Alzheimer's disease mouse model. S. YAN*. *Univ. of Kansas.*

3:45 **200.12** The release and trans-synaptic transmission of τ via exosomes derived from cell cultures and CSF. Y. WANG*; V. BALAJI; S. KANIYAPPAN; L. KRUEGER; S. IRSEN; K. TEPPER; A. SCHNEIDER; E. MANDELKOW; E. MANDELKOW. *German Ctr. For Neurodegenerative Dis. (DZNE, CAESAR research center, MPI for Metabolism Research, Hamburg Outstation, c/o DESY, German center for neurodegenerative diseases (DZNE), Göttingen, and Dept. of Psychiatry and Psychotherapy; Univ. Med. Ctr.*

4:00 **200.13** ● τ dependant impairments in hippocampal-cortical network synchrony precede deficits in spatial navigation in the rTg4510 Alzheimer's mouse model. A. BLOCKEEL*; M. ALBASSER; G. FERRATI; A. FISHER; S. MEFTAH; T. MURRAY; K. PHILLIPS. *Eli Lilly.*

4:15 **200.14** Voltage-gated L-type Ca^{2+} currents play a role in the Aβ-mediated dyshomeostasis of intracellular Ca^{2+} in hypothalamic arcuate (Arc) NPY neurons. G. WANG*; M. ISHII; M. J. MCGUIRE; C. IADECOLA. *Weill Cornell Med. Col.*

NANOSYMPOSIUM

201. ALS Mechanisms

Theme C: Neurodegenerative Disorders and Injury

Sun. 1:00 PM – *San Diego Convention Center*, 32B

1:00 **201.01** Development of a novel cell-based model for oligomerization and intercellular transmission of FUS. T. HASHIMOTO*; T. MATSUMOTO; K. MATSUKAWA; N. WATANABE; T. WAKABAYASHI; T. IWATSUBO. *The Univ. of Tokyo.*

1:15 **201.02** The connection between microRNAs, RNA-binding proteins and intermediate filament dysregulation in amyotrophic lateral sclerosis (ALS). Z. HAWLEY; D. CAMPOS-MELO; K. VOLKENING; M. J. STRONG*. *Western Univ., London Hlth. Sci. Ctr. - UH.*

1:30 **201.03** Synapse loss: An underlying correlate of cognitive decline in amyotrophic lateral sclerosis? C. HENSTRIDGE*; E. CARROLL; S. ROTARIU; D. SIDERIS; J. NEWTON; C. SMITH; T. GILLINGWATER; S. ABRAHAMS; T. SPIRES-JONES. *Univ. of Edinburgh, Univ. of Edinburgh, Univ. of Edinburgh, Univ. of Edinburgh.*

1:45 **201.04** Stem cell modeling of ALS identifies mTOR and mitochondria dysregulation associated to VAPB mutation. H. C. MIRANDA*; J. MORESCO; J. M. WARD; M. MITNE, Neto; J. OKUBO; S. MOORE; M. ZATZ; J. YATES, III; A. R. LA SPADA; A. R. MUOTRI. *UCSD, The Scripps Res. Inst., Grupo Fleury, Univ. of Sao Paulo.*

2:00 **201.05** ● Loss of dual leucine zipper kinase signaling is protective in the SOD1 mouse model of ALS. C. LE PICHON*; W. J. MEILANDT; S. DOMINGUEZ; H. SOLANOY; H. LIN; H. NGU; A. SENGUPTA GHOSH; B. WANG; Z. JIANG; S. LEE; M. SIU; X. LIU; Y. RUDHARD; M. BACA; A. GUSTAFSON; E. J. HUANG; O. FOREMAN; K. SCEARCE-LEVIE; J. W. LEWCOCK. *NIH/NINDS, Genentech, UCSF, Evotec.*

2:15 **201.06** The role of TDP-43 and FUS in dendritic RNA transport and regulation. H. BOWDEN*; D. DORMANN. *Ludwig-Maximilians Univ.*

2:30 **201.07** Implication of TDP 43 in the stress response in neurodegenerative disease. Y. KHALFALLAH*; C. PELLETIER; C. VANDE VELDE. *CRCHUM- Univ. of Montreal, CRCHUM- Univ. of Montreal.*

2:45 **201.08** Calcineurin protects against pathological phosphorylated TDP-43 by direct dephosphorylation. N. LIACHKO*; A. D. SAXTON; P. J. MCMILLAN; T. J. STROVAS; J. M. WHEELER; A. L. OBLAK; B. GHETTI; T. J. MONTINE; C. D. KEENE; M. A. RASKIND; T. D. BIRD; B. C. KRAEMER. *VA Puget Sound Hlth. Care Syst., Univ. of Washington, VA Puget Sound Hlth. Care Syst., Univ. of Washington, Indiana Univ. Sch. of Med., Univ. of Washington, Univ. of Washington.*

3:00 **201.09** Endogenous MIF reduces the accumulation and toxicity of misfolded SOD1 in a mouse model of ALS. A. ISRAELSON*; M. LEYTON; C. BENAIM; S. ABU-HAMAD. *Ben-Gurion Univ. of the Negev.*

3:15 **201.10** *Drosophila* FUS mutant phenotypes are mediated by increased Xrp1 expression leading to gene expression dysregulation. E. STORKEBAUM*; M. MALLIK; M. CATINOZZI; C. B. HUG; M. WAGNER; L. ZHANG; S. MERSMANN; M. FRICKENHAUS; O. SENDSCHEID; J. M. VAQUERIZAS. *Max Planck Inst. For Mol. Biomedicine, Max Planck Inst. For Mol. Biomedicine.*

3:30 **201.11** ● iPSC disease modeling of the excitability phenotype of ALS patient derived motor neurons. K. C. ROET*; O. WISKOW; S. LEE; X. HUANG; J. SANDOE; A. GRANTHAM; D. BAKER; L. BARRETT; K. EGGAN; C. J. WOOLF. *Boston Children's Hosp., Harvard Univ.*

3:45 **201.12** The nuclear pore complex is compromised in ALS. J. C. GRIMA*; K. ZHANG; J. DAIGLE; J. T. PHAM; J. C. GLATZER; A. D. MATLOCK; V. J. DARDOV; Y. ZHANG; J. CHEW; M. J. ELRICK; Y. HUO; J. RICHARD; L. OSTROW; N. J. MARAGAKIS; C. J. DONNELLY; J. VAN EYK; L. PETRUCELLI; T. E. LLOYD; J. D. ROTHSTEIN. *Johns Hopkins Neurosci., Univ. of Rochester, Cedars-Sinai, Mayo Clin., Univ. of Pittsburgh.*

4:00 **201.13** Ataxin-2 is a common mediator of nucleocytoplasmic transport defects in ALS and dementia. K. ZHANG*; J. GRIMA; G. DAIGLE; K. CUNNINGHAM; T. LLOYD; J. 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.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

NANOSYMPOSIUM

202. Stroke and Injury: Optogenetic and Chemogenetic Approaches

Theme C: Neurodegenerative Disorders and Injury

Sun. 1:00 PM – *San Diego Convention Center*, 24A

1:00 **202.01** Microinfarcts produce widespread functional deficits in perilesional tissues. A. Y. SHIH*; P. M. SUMMERS; D. A. HARTMANN; R. L. DEARDORFF; X. NIE; J. A. HELPERN; E. S. HUI; J. H. JENSEN. *Med. Univ. of South Carolina, Med. Univ. of South Carolina, The Univ. of Hong Kong.*

1:15 **202.02** Optogenetic activation of DBH-neurons in the Locus Coeruleus impact cortical neurovascular coupling responses. C. LECRUX*; Z. YAO; E. MITCHELL; A. LIM; L. GALLET; A. ADAMANTIDIS; A. SHMUEL; E. HAMEL. *McGill Univ., McGill University, McConnell Brain Imaging Centre, Montreal Neurolog. Inst., McGill Univ., McGill Univ., Univ. of Bern, Univ. of Bern.*

1:30 **202.03** Assessing the cortical contribution to recovery after focal ischemia in awake, behaving mice using optogenetic indicators and actuators. G. SILASI*; M. VANNI; R. KATREDDI; Y. SEKINO; F. BOLANOS; J. BOYD; S. SCOTT; T. MURPHY. *Univ. of British Columbia, Univ. of British Columbia, Queens Univ.*

1:45 **202.04** Optogenetic stimulation for cell-specific activation of sensory-parietal cortex in chronic subcortical capsular infarct model. R. KIM*; J. PARK; H. SONG; J. REE; J. CHO; M. LEE; P. ROSA-NETO; H. KIM. *Gwangju Inst. of Sci. and Technol., Gwangju Inst. of Sci. and Technol., Chonnam Natl. Univ. Med. Sch., Douglas Mental Hlth. Univ. Inst.*

2:00 **202.05** Cerebellar dentate nucleus is a promising brain stimulation target for enhancing post-stroke recovery. M. Y. CHENG*; A. M. SHAH; S. ISHIZAKA; E. H. WANG; A. R. BAUTISTA; S. LEVY; D. SMERIN; G. SUN; G. STEINBERG. *Stanford Univ.*

2:15 **202.06** Optogenetic neuronal stimulation reduces expression of neuronal nitric oxide synthase in the contralesional motor cortex after stroke. D. L. SMERIN*; M. CHENG; L. GONZALES; S. LEVY; E. WANG; S. WANG; S. SHUNSUKE ISHIZAKA; G. SUN; G. STEINBERG. *Stanford Univ.*

2:30 **202.07** Astrocytes regulate the spatiotemporal pattern of glutamate released after brain injury. S. A. LEVINSON*; J. CICHON; M. SANTELLO; W. GAN. *New York Univ., Univ. of Zurich.*

2:45 **202.08** Endothelial NMDA receptors mediate astrocyte-induced cortical vasodilation. A. D. HOGAN-CANN*; L. LU; A. K. GLOBA; S. X. BAMJI; C. M. ANDERSON. *Kleysen Inst. For Advanced Med., Univ. of Manitoba, Univ. of British Columbia.*

NANOSYMPOSIUM

203. Molecules and Circuits of Somatosensation

Theme D: Sensory Systems

Sun. 1:00 PM – *San Diego Convention Center*, 23A

1:00 **203.01** Inactivation tunes response of Piezo1 ion channels to cellular membrane tension. A. H. LEWIS*; J. GRANDL. *Duke Univ.*

1:15 **203.02** Mechanosensation mediated by Piezo ion channels. K. NONOMURA*; S. WOO; R. B. CHANG; A. GILLICH; Z. QIU; A. G. FRANCISCO; S. S. RANADE; S. D. LIBERLES; A. PATAPOUTIAN. *The Scripps Res. Inst., Harvard Med. Sch., Stanford Univ.*

1:30 **203.03** ● Identification and characterization of native Piezo2 interactors. P. NARAYANAN*; J. SONDERMANN; T. ROUWETTE; H. URLAUB; D. GOMEZ-VARELA; M. SCHMIDT. *Max Planck Inst. For Exptl. Med., Max Planck Inst. of Biophysical Chem.*

1:45 **203.04** Piezo2 channels are essential for mechanotransduction in mouse proprioceptive sensory neurons. D. M. FLOREZ PAZ*; K. KUMAR BALI; R. KUNER; A. GOMIS. *Inst. De Neurociencias De Alicante, Heidelbelrg Univ.*

2:00 **203.05** ● Somatosensory contributions to food oral processing. Y. MOAYEDI*; L. DUENAS-BIANCHI; C. TONG; S. MICHLIG; J. LE COUTRE; B. LE RÉVÉREND; E. A. LUMPKIN. *Columbia Univ., Columbia Univ. Med. Ctr., Columbia Univ. Med. Ctr., Nestlé Res. Ctr.*

2:15 **203.06** Neutrophils play a key role in CXCL1-induced acute itch and atopic dermatitis. J. K. SCHWENDINGER-SCHRECK*; J. DEGUINE; C. M. WALSH; E. C. BROCK; G. M. BARTON; D. M. BAUTISTA. *Univ. of California Berkeley.*

2:30 **203.07** Neural circuit for inhibition of itch by scratching. J. HACHISUKA*; L. M. SNYDER; Y. OMORI; X. CAI; H. R. KOERBER; S. E. ROSS. *Univ. of Pittsburgh.*

2:45 **203.08** Traditional and atypical presynaptic inhibition in the spinal cord dorsal horn. A. L. ZIMMERMAN*; V. E. ABRAIRA; D. GINTY. *Harvard Med. Sch., Howard Hughes Med. Inst.*

3:00 **203.09** Modulation of multiple modalities of somatosensory information by peripheral κ opioid receptors. L. SNYDER*; H. HUANG; X. CAI; J. HACHISUKA; P. ADELMAN; Z. HU; Y. OMORI; S. FULTON; M. GOLD; H. R. KOERBER; S. ROSS. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

3:15 **203.10** A genetic and functional analysis of nociceptive somatotopy. A. KANIA*; H. U. ZEILHOFER; R. V. DA SILVA. *(IRCM) Inst. de recherches cliniques de Montreal, Univ. of Zurich.*

3:30 **203.11** Identification of early RET+ deep dorsal spinal cord interneurons in gating pain. L. CUI*; X. MIAO; L. LIANG; I. ABDUS-SABOOR; W. OLSON; M. S. FLEMING; M. MA; Y. TAO; W. LUO. *Univ. of Pennsylvania, Rutgers, the State Univ. of New Jersey.*

NANOSYMPOSIUM

204. Higher-Order Processing of Taste and Olfactory Stimuli

Theme D: Sensory Systems

Sun. 1:00 PM – *San Diego Convention Center*, 1B

1:00 **204.01** Short time-scale basolateral amygdala activity and its role in modulating taste learning. E. ARIELI; D. UDI; I. HARPAZ; A. MORAN*. *Tel Aviv Univ., Tel Aviv Univ., Tel Aviv Univ.*

1:15 **204.02** Sweet and bitter taste in the brain of awake behaving animals. Y. PENG*; S. GILLIS-SMITH; N. J. P. RYBA; C. S. ZUKER. *Columbia Univ., NIH.*

1:30 **204.03** Coding high dimensional stimuli with distributed maps. S. SRINIVASAN*; T. SCHIKORSKI; C. F. STEVENS. *Kavli Inst. For Brain and Mind, UCSD, Salk Inst., Univ. of Del Caribe.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:45 **204.04** Functional circuitry of the medial amygdala: A mechanism for discrimination of social and heterospecific chemosignals? L. M. BIGGS; M. MEREDITH*. *Florida State Univ., Florida State Univ.*

2:00 **204.05** Novelty and familiarity in a mushroom body compartment. D. HATTORI*; Y. ASO; G. RUBIN; L. ABBOTT; R. AXEL. *Columbia Univ., Janelia Farm Res. Campus.*

2:15 **204.06** Show me what I will smell: Early sensory activations in primary olfactory cortex triggered by emotional facial expressions before olfactory stimulation - an fMRI study. P. SCHULZE*; A. BESTGEN; R. K. LECH; L. KUCHINKE; B. SUCHAN. *Inst. of Cognitive Neurosience, Ruhr Universi, Exptl. Psychology and Methods, Ruhr-Univers, Inst. of Cognitive Neuroscience, Ruhr-Univers, Intl. Psychoanalytic Univ.*

2:30 **204.07** Top-down modulation of olfactory-guided behaviours by the anterior olfactory nucleus pars medialis and ventral hippocampus. A. AQRABAWI*; C. BROWNE; J. KIM. *Univ. of Toronto, Univ. of Toronto.*

2:45 **204.08** Fast and stable discrimination in accentuated divergent-convergent synaptic connectivities. T. MOSQUEIRO*; M. F. STRUBE-BLOSS; B. SMITH; R. HUERTA. *Univ. of California San Diego, Biocenter Univ. of Würzburg, Arizona State Univ., Univ. of California San Diego.*

3:00 **204.09** GABAB receptors tune cortical feedback to the olfactory bulb. C. MAZO*; G. LEPOUSEZ; A. NISSANT; M. T. VALLEY; P. LLEDO. *Insitut Pasteur.*

NANOSYMPOSIUM

205. Circadian Rhythms: Timely Topics

Theme F: Integrative Physiology and Behavior

Sun. 1:00 PM – *San Diego Convention Center*, 2

1:00 **205.01** Network dynamics mediate circadian clock plasticity. S. BROWN*; A. AZZI; J. A. EVANS; T. LEISE; J. MYUNG; T. TAKUMI; A. J. DAVIDSON. *Univ. of Zürich, Univ. of Zürich, Marquette Univ., Amherst Col., RIKEN Brain Sci. Inst., Morehouse Sch. of Med.*

1:15 **205.02** Electrophysiological characterisation of the vasoactive intestinal polypeptide microcircuit (VIP-VPAC2) in the suprachiasmatic nucleus. A. P. PATTON*; J. E. CHESHAM; M. H. HASTINGS. *MRC Lab. of Mol. Biol.*

1:30 **205.03** The vasoactive intestinal polypeptide microcircuit (VIP-VPAC2) dictates period and rhythm stability in the mammalian suprachiasmatic nucleus. R. HAMNETT*; J. E. CHESHAM; M. H. HASTINGS. *MRC Lab. of Mol. Biol.*

1:45 **205.04** Optogenetic investigation of SCN communication and photoperiodicity. M. TACKENBERG*; D. G. MCMAHON. *Vanderbilt Univ., Vanderbilt Univ.*

2:00 **205.05** Circadian regulation in and by SCN astrocytes. C. TSO*; M. MIEDA; T. SIMON; T. PURI; A. GREENLAW; E. HERZOG. *Washington Univ. in St. Louis Dept. of Biol., Kanazawa Univ.*

2:15 **205.06** The role of hdac1 in modulating circadian rhythmicity and Alzheimer's disease. T. X. PHAN*; F. GAO; A. NOTT; S. GOEL; P. PAO; S. J. BARKER; R. VASSAR; L. TSAI. *Northwestern Univ., MIT.*

2:30 **205.07** Forebrain Bmal1 deletion abrogates time-of-day dependent learning and memory. K. SNIDER*; S. ATEN; J. LOESER; F. E. NORONA; K. HOYT; K. OBRIETAN. *Ohio State Univ., Ohio State Univ.*

2:45 **205.08** Circadian rhythm disruption induces long lasting hippocampal dysfunction in rats. S. H. DEIBEL*; N. S. HONG; R. J. MCDONALD. *Univ. of Lethbridge.*

3:00 **205.09** Mechanisms of fast resetting of clocks following rhythm bifurcation. T. NOGUCHI*; E. M. HARRISON; J. SUN; D. MAY; D. K. WELSH; M. R. GORMAN. *UCSD, Ctr. for Circadian Biol., Naval Hlth. Res. Ctr., UCSD, Veterans Affairs San Diego Healthcare Syst.*

3:15 **205.10** A ChIP-seq analysis reveals reciprocal regulation between the circadian clock and hypoxia signaling at the genome level in mammals. E. ZHANG*. *Natl. Inst. of Biol. Sci.*

3:30 **205.11** A role for CrebA in regulation of *Drosophila* circadian locomotor behavior. Y. ZHANG*; Z. LIU; R. KWOK; Y. XIA; P. EMERY. *Univ. of Nevada Reno Dept. of Biol., Univ. of Nevada Reno, Univ. of California Davis, Univ. of Massachusetts Med. Sch.*

NANOSYMPOSIUM

206. Stress and Cognition

Theme H: Cognition

Sun. 1:00 PM – *San Diego Convention Center*, 5B

1:00 **206.01** ● Targeting arousal systems to enhance memory and neural plasticity. C. K. MCINTYRE*. *Univ. Texas at Dallas.*

1:15 **206.02** An examination of beneficial effects of acute post-learning stress on memory, and the moderating factors of those effects. A. M. MCCULLOUGH*; M. RITCHEY; G. SHIELDS; M. SAZMA; C. RANGANATH; A. YONELINAS. *Univ. of California, Davis, Univ. of California, Davis.*

1:30 **206.03** Emotional memories are more accurately remembered over time. E. ATUCHA; V. VUKOJEVIC; R. V. FORNARI; G. RONZONI; P. ATSAK; M. COOLEN; A. PAPASSOTIROPOULOS; D. J. F. DE QUERVAIN; B. ROOZENDAAL*. *Radboud Univ. Nijmegen, Univ. of Basel, Federal do ABC, Radboud Univ. Nijmegen, Radboud Univ. Nijmegen.*

1:45 **206.04** Error monitoring moderates the relation between externalizing but not internalizing behaviors amongst children with a history of institutionalization: Implications for risk and resilience. S. TROLLER-RENFREE*; C. A. NELSON; C. ZEANAH; N. A. FOX. *Univ. of Maryland, Harvard Med. Sch., Boston Children's Hosp., Harvard Grad. Sch. of Educ., Harvard Ctr. on the Developing Child, Tulane Med. Sch.*

2:00 **206.05** Cortisol response to acute stress predicts more optimal persistence behavior. K. M. LEMPERT*; J. T. MCGUIRE; D. B. HAZELTINE; J. W. KABLE; E. A. PHELPS. *New York Univ., Boston Univ., New York Univ., Univ. of Pennsylvania.*

2:15 **206.06** Lifetime stress exposure modulates multiple memory systems. E. V. GOLDFARB*; G. S. SHIELDS; N. D. DAW; G. M. SLAVICH; E. A. PHELPS. *New York Univ., Univ. of California, Davis, Princeton Univ., UCLA.*

2:30 **206.07** Neuroendocrine signatures of social discounting. T. KALENSCHER*; Z. MARGITTAI; L. SCHWABE; M. JOELS; M. VAN WINGERDEN. *Univ. of Duesseldorf, Hamburg Univ., Rudolf-Magnus Inst. for Neurosci.*

2:45 **206.08** Affect contagion: Physiological covariation among strangers and close others. W. MENDES*; E. SIEGEL. *UC San Francisco, UC San Francisco.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 **206.09** Activity in human V1 reflects changes in spatial frequency perception during freezing. M. LOJOWSKA*; K. ROELOFS; E. J. HERMANS. *Donders Inst. For Brain,Cognition and Behaviou, Donders Inst. for Brain, Cognition and Behaviour, Behavioural Sci. Inst., Donders Inst. for Brain, Cognition and Behaviour, Radboud university medical center.*

3:15 **206.10** Prior chronic life stress exposure predicts better decision-making competence. G. S. SHIELDS*; G. M. SLAVICH. *Univ. of California, Davis, UCLA.*

3:30 **206.11** Neural activity under Psychosocial stress detected by Magnetoencephalography. H. WANG.*; I. LEE; P. ENCK; C. BRAUN. *Univ. Hosp. Tuebingen MEG Ctr., Dept. of Psychosomatic Med. and Psychotherapy, Univ. of Tuebingen, Grad. Training Ctr. of Neuroscience, IMPRS for Cognitive and Systems Neurosci., Ctr. for Mind/Brain Sciences, Univ. of Trento.*

NANOSYMPOSIUM

207. Transcranial Stimulation and MRI Techniques

Theme I: Techniques

Sun. 1:00 PM – *San Diego Convention Center*, 7B

1:00 **207.01** Activation mechanisms of recently reported magnetogenetic proteins. G. DURET*; S. POLALI; J. T. ROBINSON. *Rice Univ.*

1:15 **207.02** Neuronal Resonance-MRI (NR-MRI): A new method to detect weak oscillating magnetic field. K. KIM*; H. HEO; S. PARK. *KAIST.*

1:30 **207.03** Investigating effects of multiple refocusing radiofrequency pulses for direct detection of neuronal currents using MRI. H. HEO*; K. KIM; S. PARK. *KAIST.*

1:45 **207.04** Modulation of brain networks with brain-oscilliation synchronized brain-stimulation: Real-time EEG triggered TMS with sub-millisecond precision. C. ZRENNER*; P. BELARDINELLI; D. DESIDERI; U. ZIEMANN. *Univ. Hosp. Tübingen.*

2:00 **207.05** Brain network alterations induced by high-frequency rTMS. X. LIU; P. WEI; D. LI; J. XIE; J. ZHANG; Q. GE; Z. WANG*. *Hangzhou Normal Univ.*

2:15 **207.06** Taking control: Polarity dependent modulation of the cognitive control network using transcranial direct current stimulation. L. M. LI*; I. R. VIOLANTE; E. ROSS; R. LEECH; A. LEECH; D. CARMICHAEL; D. J. SHARP. *Computational, Cognitive and Clin. Neuroimaging, UCL Inst. of Child Hlth.*

2:30 **207.07** Predicting TMS-induced activation in human neocortex derived from concurrent TMS/PET and finite element analysis. D. MOGUL*; G. ARABKHERADMAND; T. D. KRIEG; F. S. SALINAS; P. T. FOX. *Illinois Inst. of Technol., Univ. of Texas Hlth. Sci. Ctr.*

POSTER

208. Regulation of Neurogenesis

Theme A: Development

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 A1 **208.01** Post-translational modification of FOXP1 in the developing brain. N. USUI*; D. J. ARAUJO; M. CO; M. HARPER; G. KONOPKA. *Univ. of Texas Southwestern Med. Ctr.*

2:00 A2 **208.02** ▲ Counterbalanced neurogenesis after cortical devascularization. a functional interpretation of local circuits. L. V. VARGAS-SATURNO, Jr; C. A. AYALA-GROSSO*. *IVIC, Unidad de Terapia Celular.*

3:00 A3 **208.03** SNX27 deletion causes hydrocephalus through impaired ependymal cell differentiation and ciliogenesis. X. WANG*; Y. ZHOU; I. TSENG; T. HUANG; Y. ZHAO; H. LUO; X. ZHANG; G. BU; W. HONG; H. XU. *Xiamen Univ., Sanford Burnham Prebys Med. Discovery Inst., Inst. of Mol. and Cell Biol.*

4:00 A4 **208.04** Ulk4 regulates the size of neural stem cell pool. S. SHEN*; M. LIU; Z. GUAN; Q. SHEN; F. FLINTER; L. DOMÍNGUEZ; J. AHN; D. A. COLLIER; T. O'BRIEN. *Natl. Univ. of Ireland (NUI) Galway, Natl. Univ. of Ireland (NUI) Galway, Hebei Normal Univ., Tsinghua Univ., King's Col. London, Guy's Hosp., Eli Lilly.*

1:00 A5 **208.05** Species-specific mechanisms of cortical neural progenitor differentiation. M. B. JOHNSON*; K. M. GIRSKIS; P. P. WANG; J. FAN; P. V. KHARCHENKO; C. A. WALSH. *Boston Children's Hosp., Harvard Med. Sch.*

2:00 A6 **208.06** Integrin linked kinase (ILK) deletion disrupts oligodendrocyte development by altering cell cycle. R. HUSSAIN*; W. B. MACKLIN. *Univ. of Colorado Sch. of Med.*

3:00 A7 **208.07** Sustained genomic abnormalities in embryonic neural progenitor cells (NPCs) may underlie cellular pathologies of Lysophosphatidic Acid induced congenital hydrocephalus in mice. W. S. MCDONALD*; Y. YUNG; N. STODDARD; M. LEE; J. CHUN. *The Scripps Res. Inst.*

4:00 A8 **208.08** Novel subcortical heterotopia caused by loss of basal complex protein, Lgl1, through dysregulated cell proliferation and polarity. A. SIMMONS*; R. PARK; A. PELUZZO; S. CHO; V. VASIOUKHIN; S. KIM. *Temple Univ. Lewis Katz Sch. of Med., Fred Hutchinson Cancer Res. Ctr.*

1:00 A9 **208.09** Kruppel-like factor 5 maintains neural precursor cells undifferentiated in the developing brain. T. FUCHIGAMI*; Y. HAYASHI; A. KURODA; T. AZAMI; M. EMA; S. HITOSHI. *Shiga Univ. of Med. Sci., Shiga Univ. of Med. Sci., Shiga Univ. of Med. Sci.*

2:00 A10 **208.10** Aristaless related homeobox (Arx) interacts with β-catenin, Bcl9, and p300 to regulates canonical wnt signaling. I. CHO; Y. LIM; J. A. GOLDEN*; G. CHO. *Brigham and Women's Hosp.*

3:00 A11 **208.11** Essential role of KIF20A/MKLP2 in regulation of neural progenitors symmetric versus asymmetric division in the developing brain. A. GENG*; R. QIU; Q. LU. *Beckman Res. Inst. City of Hope, Beckman Res. Inst. City of Hope.*

4:00 A12 **208.12** The function of hominoid specific gene tbc1d3 on cortical folding. Q. HOU*; X. JU; Z. LUO. *Institude of Neurosci.*

1:00 A13 **208.13** Role of cdk inhibitor $p57^{kip2}$ in regulating the fate of embryonic neural progenitor cells. Y. HARADA*; S. FURUTACHI; D. KAWAGUCHI; Y. GOTOH. *Univ. of Tokyo.*

2:00 B1 **208.14** Characterization of function and regulation of Plzf in the P19 cell model of neurogenesis. H. LIN*; Y. LEE; P. PAO; W. CHANG; Y. LEE. *Taipei Med. Univ., Natl. Cheng Kung Univ., Taipei Med. Univ., Taipei Med. Univ.*

3:00 B2 **208.15** Feed Forward Cytokine signalling in glioblastoma pathogenesis. A. JAHANI-ASL*; M. RUDNICKI; A. BONNI. *McGill Univ., Ottawa Hosp. Res. Inst., Washington Univ. Sch. of Med.*

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▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 B3 **208.16** Sphingosine-1-phosphate receptor 1 expression in cerebellum regulates Sphingosine-1 Phosphate release and is a mediator of cerebellar granule cell progenitor proliferation and migration. C. DUMAN; J. ALFONSO*. *DKFZ.*

1:00 B4 **208.17** MSCs promote axonal outgrowth via neuronal tPA and synergistically with astrocytic tPA. J. QIAN*; M. CHOPP; X. SHANG; Z. LIU. *Henry Ford Hosp., Oakland Univ.*

2:00 B5 **208.18** Functional role of ribosome recycling during brain development. M. TERREY*; I. DOTU; J. H. CHUANG; S. L. ACKERMAN. *UCSD, Howard Hughes Med. Inst., Pompeu Fabra Univ., The Jackson Lab. for Genomic Med., UCSD, UCSD.*

3:00 B6 **208.19** ● Innate overexpression of BDNF improves taste dysfunction following chemotherapy. C. A. NOSRAT; L. PALACIOS; K. H. VU; S. A. KEZIAN; B. S. HENSON; I. VUKMANOVIC NOSRAT*. *Western Univ. of Hlth. Sci., Western Univ. of Hlth. Sci.*

4:00 B7 **208.20** Valproic acid inhibits cortical precursor HDACs and rapidly upregulates cyclin E1 mRNA in embryonic rat cerebral cortex development. R. J. CONNACHER*; X. ZHOU; E. DICICCO-BLOOM. *Rutgers Robert Wood Johnson Med. Sch.*

1:00 B8 **208.21** Common and unique roles of ASD candidate genes in cortical interneuron development: Increasing evidence for parvalbumin expressing interneurons. D. VOGT*; K. K. CHO; S. E. ROBINSON; V. SOHAL; J. L. R. RUBENSTEIN. *Univ. of California San Francisco, UCSF, UCSF.*

2:00 B9 **208.22** Transcriptome profiles of neuronal activity-induced proliferating neural progenitor cells and newly-differentiated immature neurons in optic tectum of xenopus laevis. L. HUANG*; K. VAN KEUREN-JENSEN; H. CLINE. *The Scripps Res. Inst., Translational Genomics Res. Inst.*

3:00 B10 **208.23** TGF-β signaling suppresses the formation of Muller glia derived progenitor cells in the avian retina. L. J. TODD*; N. MENDONCA; I. PALAZZO; N. SQUIRES; A. FISCHER. *The Ohio State Univ.*

4:00 B11 **208.24** Nutrient-restrictions causes reversible neuronal G2 arrest in the Xenopus visual system. C. R. MCKEOWN*; A. C. GAMBRILL; E. M. FITCHETT; C. K. THOMPSON; H. T. CLINE. *The Scripps Res. Inst.*

1:00 B12 **208.25** Neural stem cell responses to chronic stress are autonomously sustained and sexually dimorphic. M. NAVARRO-SOBRINO; A. BURGOS; A. GARCIA-GARCIA; E. LEONARDO; A. DRANOVSKY*. *Columbia Univ. / NYSPI, Columbia Univ.*

POSTER

209. Astrocytes Development and Metabolism

Theme A: Development

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 B13 **209.01** Astrocyte aldehyde dehydrogenase ALDH7A1 detoxifies the brain: Metabolic impairment can disrupt higher brain function in neuropsychiatric disorders. T. E. FAUST*; T. CASH-PADGETT; W. XIN; S. SAHA; S. DESHPANDE; D. WOOD; C. DAVIS; A. BONCI; H. JAARO-PELED; A. SAWA. *Johns Hopkins Univ. Dept. of Psychiatry and Behavioral Sci., Johns Hopkins University, Sch. of Med., Natl. Inst. on Drug Abuse (NIDA), Johns Hopkins Univ., Washington State University-Spokane.*

2:00 B14 **209.02** ● Genetic approaches for achieving astrocyte specific transgene expression. J. DUNPHY*; T. PAPOUIN; M. TOLMAN; K. FLICK; P. G. HAYDON. *Tufts Univ.*

3:00 B15 **209.03** ▲ Astrocyte-neuron involvement in oxytocinergic modifications of pain and anxiety. J. WAHIS; S. GOYON; M. ELIAVA; V. GRINEVICH; P. POISBEAU; A. CHARLET*. *CNRS, DKFZ, Univ. of Strasbourg.*

4:00 B16 **209.04** Neuronal extracellular vesicles modify astrocyte lysosome function, promote trophic factor production and inhibit secretion of pro-inflammatory factors. E. R. HUTCHISON*; E. EITAN; C. SUIRE; K. MAROSI; R. SPANGLER; Z. LIAO; K. W. WITWER; M. P. MATTSON. *NIA, Johns Hopkins Univ. Sch. of Med.*

1:00 B17 **209.05** Release of glutamate and ATP induced by optogenetic activation of astrocytes. W. SHEN; L. NIKOLIC; C. MEUNIER; E. AUDINAT*. *Inserm U1128, Univ. Paris Descartes.*

2:00 B18 **209.06** Loss of ς-1 receptor chaperone promotes astrocytosis and enhances Nrf2 antioxidant defense. S. A. TSAI*; T. WENG; J. CIESIELSKI; T. SU. *NIDA/NIH, Academia Sinica.*

3:00 B19 **209.07** Role of astrocytes in defining functional compartments in the chewing central pattern generator. D. RYCZKO*; D. VERDIER; A. KOLTA. *Univ. Montreal.*

4:00 B20 **209.08** ● Hepatic encephalopathy is associated with impaired hemichannel mediated release of lactate in the cerebral cortex. A. HADJIHAMBI*; P. S. HOSFORD; F. DE CHIARA; A. HABTESION; A. KARAGIANNIS; R. JALAN; A. V. GOURINE. *UCL, UCL.*

1:00 B21 **209.09** Astrocytes modulates hyperosmolality-induced behavior and hormonal release. F. M. VECHIATO*; R. COLETTI; J. B. M. DE LIMA; F. LUCIO-OLIVEIRA; S. G. RUGINSK; L. L. K. ELIAS; J. ANTUNES-RODRIGUES. *Univ. of São Paulo/ Sch. of Med. of Rib, Southern Minas Federal Inst., Alfenas Federal Univ.*

2:00 B22 **209.10** Impact of aquaporin-4 deletion on cortical spreading depression in awake mice. R. ENGER*; D. B. DUKEFOSS; W. TANG; K. H. PETTERSEN; D. M. BJØRNSTAD; P. J. HELM; V. JENSEN; R. SPRENGEL; K. VERVAEKE; O. P. OTTERSEN; E. A. NAGELHUS. *Univ. of Oslo, Max Planck Inst. for Med. Res.*

3:00 B23 **209.11** Neuronal exosomal mir-124 upregulates astrocytic GLT1 by suppressing GLT1 mrna-binding micrornas. J. M. YELICK*; S. SEO; E. BROWN; Y. YANG. *Tufts Univ.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 B24 **209.12** Ketamine promotes rapid morphological alteration of astrocytes and microvessels in the hippocampus of genetic animal model of depression. M. ARDALAN*; J. R. NYENGAARD; B. ELFVING; G. WEGENER. *Translational Neuropsychiatry Unit, Stereology and Electron Microscopy Lab., Ctr. for Stochastic Geometry and Advanced Bioimaging, Translational Neuropsychiatry Unit, Pharmaceut. Res. Ctr. of Excellence.*

1:00 B25 **209.13** Structure-activity relationship study of lactate derivatives and their ability to evoke norepinephrine release in locus coeruleus. V. MOSIENKO*; D. JANE; S. KASPAROV; A. G. TESCHEMACHER. *Univ. of Bristol.*

2:00 B26 **209.14** Human astrocyte complexity and function recapitulates in a novel three dimensional neuron coculture system. R. KRENCIK*; K. SEO; J. VAN ASPEREN; M. E. WARD; D. H. ROWITCH; E. M. ULLIAN. *Univ. of California - San Francisco, Natl. Inst. of Neurolog. Disorders and Stroke, Univ. of California - San Francisco.*

3:00 C1 **209.15** Characterization of glia calcium signaling in the regulation of neuronal excitability. Y. V. ZHANG*; J. T. LITTLETON. *MIT.*

4:00 C2 **209.16** Role of soluble adenylate cyclase in reactive astrocytes. E. G. CAMERON*; J. GALVAO; C. R. DOUGLAS; R. LODHAVIA; J. L. GOLDBERG. *Stanford Univ., UCSD.*

1:00 C3 **209.17** Endometriosis-like lesions on peripheral tissues in the mouse induces subtle changes in spinal cord glial reactivity. K. DODDS*; E. A. H. BECKETT; S. F. EVANS; M. R. HUTCHINSON. *Univ. of Adelaide, Univ. of Adelaide, Pelvic Pain SA, ARC Ctr. for Nanoscale Biophotonics.*

2:00 C4 **209.18** Measurement of H+ fluxes from culture rat and mouse astrocytes using self-referencing H+ selective microelectrodes. J. CHOI*; C. GOEKE; M. GUIZZETTI; R. P. MALCHOW. *Univ. of Illinois At Chicago, Oregon Hlth. & Sci. Univ., Univ. of Illinois at Chicago.*

3:00 C5 **209.19** Glial cell lineages in the olfactory bulb. A. BRIBIAN; R. SANCHEZ-GONZALEZ; M. FIGUERES-OÑATE; L. M. LOPEZ-MASCARAQUE*. *Inst. Cajal-CSIC, Inst. Cajal-CSIC.*

4:00 C6 **209.20** Calcium response of satellite glial cells to axonal injury. B. POLAT*; E. N. EKMEKCIOGLU; T. AKGUL CAGLAR; K. BAYAT; G. OZTURK. *Istanbul Medipol Univ., Marmara Univ.*

1:00 C7 **209.21** ●▲The effect of induced hyperglycemia on the dorsal root ganglia and sensory nerves in zebrafish. H. ENNERFELT*; J. CLARK. *Salisbury Univ.*

2:00 C8 **209.22** Glutamate dependent translational control in cultured bergman glia cells. R. TIBURCIO-FELIX; S. ZINKER-RUZAL; M. FLORES-MÉNDEZ; E. SUAREZ*; A. ORTEGA. *Cinvestav, Cinvestav, Cinvestav, Cinvestav.*

3:00 C9 **209.23** Breast milk induced microchimerism in the brain. M. S. AYDIN*; E. EKMEKCIOGLU; E. VATANDASLAR; G. OZTURK; E. ERDOGAN; T. MUDOK. *Bezmialem Vakif Univ., Istanbul Medipol Univ., Istanbul Medipol Univ., Selcuk Univ.*

POSTER

210. Injury-Induced Regeneration and Remyelination

Theme A: Development

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 C10 **210.01** Gene expression changes during brain regeneration in adult zebrafish. K. PALSAMY*; J. PARENT. *Neurology, Univ. of Michigan Med. Ctr.*

2:00 C11 **210.02** ● Hdac5 upregulation in retinal ganglion cells promotes optic nerve regeneration. D. W. PITATHOMAS*; Y. OH; V. CAVALLI. *Washington university, Washington university.*

3:00 C12 **210.03** Muscarinic M_3 receptor signaling inhibits differentiation and myelin repair by mouse and human oligodendrocyte progenitors. J. J. POLANCO*; R. R. WELLIVER; Z. M. KHAKU; M. A. O'BARA; F. J. SIM. *Univ. At Buffalo.*

4:00 C13 **210.04** Shh signaling mediates complete retina regeneration through the activation of stem/progenitor cells located in the ciliary margin. J. DI NAPOLI; C. OLMOS CARREÑO; L. FIORE; M. MEDORI; L. R. TERUEL; V. SANCHEZ; K. DEL RIO-TSONIS; G. E. SCICOLONE*. *Inst. of Cell Biol. and Neuroscience. Sch. of Medicine, UBA, Miami Univ.*

1:00 C14 **210.05** Combinatorial transcription factor treatments to promote axon outgrowth in CNS neurons. I. VENKATESH*; M. SIMPSON; B. CALLIF; Z. WANG; M. BLACKMORE. *Marquette Univ.*

2:00 C15 **210.06** Remyelination and the Gut Microbiome. C. MCMURRAN*; O. ZIDON; Y. DOMBROWSKI; D. C. FITZGERALD; R. J. M. FRANKLIN. *Wellcome Trust-MRC Cambridge Stem Cell Inst., Sch. of Medicine, Dent. and Biomed. Sci.*

3:00 C16 **210.07** Neural anatomical and synaptic changes observed following CNS injury that underlie functional plasticity displayed in a regenerating annelid model system. V. G. MARTINEZ ACOSTA*. *Univ. of the Incarnate Word.*

4:00 C17 **210.08** Semaphorins limit axon regeneration after spinal cord injury. Y. UENO*; M. UENO; J. NIEHAUS; Q. R. LU; Y. YOSHIDA. *Cincinnati Children's Hosp. Med. Ctr.*

1:00 C18 **210.09** Quantifying changes in protein synthesis and transport in optic neuropathies. S. H. SHAH*; L. M. SCHIAPPARELLI; S. SATURDAY; D. MCCLATCHY; Y. MA; J. YATES, III; H. CLINE; J. GOLDBERG. *UCSD, The Scripps Res. Inst., The Scripps Res. Inst., The Scripps Res. Inst., Stanford Univ.*

2:00 C19 **210.10** ▲ Influence of altered DNA methylation on axon growth capacity following preconditioning peripheral nerve injury. H. SHIN*; K. KIM; M. KWON; B. KIM. *Ajou University, Med. Sch., Samsung Advanced Inst. for Hlth. Sci. and Technol., Yale university.*

3:00 C20 **210.11** Rewiring of sympathetic circuitry and immune suppression after spinal cord injury. M. UENO*; Y. UENO-NAKAMURA; J. NIEHAUS; P. G. POPOVICH; Y. YOSHIDA. *Cincinnati Children's Hosp. Med. Ctr., Japan Sci. and Technol. Agency (JST), The Ohio State Univ. Med. Ctr.*

4:00 C21 **210.12** Regeneration after zebrafish traumatic brain injury is dependent upon microglia. J. Y. CHEN*; K. SKAGGS; Y. QADEER; D. GOLDMAN; J. M. PARENT. *Univ. of Michigan, Univ. of Michigan, Univ. of Findlay, Univ. of Michigan.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 C22 **210.13** Metabolic regenerative inhibitory signaling after nerve and spinal injury. G. KONG*; L. ZHOU; I. PALMISANO; E. MCLACHLAN; R. PUTTAGUNTA; S. DI GIOVANNI. *Hertie Inst. For Clin. Brain Res., Imperial Col. London.*

2:00 C23 **210.14** Epigenetic and miRNA-mediated silencing of Oct4 prevents Müller glia injury-induced dedifferentiation in mammals. B. ESTRADA LEYVA*; L. REYES-AGUIRRE; M. LAMAS. *Ctr. De Investigación Y De Estudios Avanzados De.*

3:00 C24 **210.15** Retinal Zn^{2+} elevation after optic nerve injury suppresses retinal ganglion cell survival and axon regeneration: Upstream mechanisms involve GLT-1 mediated glutamate efflux, NMDA receptor activation, and NO generation. Y. LI*; L. ANDEREGGEN; K. YUKI; P. A. ROSENBERG; L. I. BENOWITZ. *Boston Children's Hosp. and Harvard Med. Sch., State Key Lab. of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen Univ.*

4:00 C25 **210.16** HDAC3 signalling controls nerve regeneration. L. ZHOU*; A. HERVERA; I. PALMISANO; E. MCLACHLAN; G. KONG; T. HUTSON; M. DANZI; F. DE VIRGILIS; M. WOOD; R. PUTTAGUNTA; S. DI GIOVANNI. *Hertie Inst. For Clin. Brain Res., Imperial Col. London, Univ. of Miami, Univ. of California.*

1:00 C26 **210.17** *In vivo* study of the dopaminergic neuron regeneration in amphibian model of Parkinson's disease. J. ZAREBA-PASLAWSKA*; A. SIMON; M. KIRKHAM. *Karolinska Inst.*

2:00 C27 **210.18** Identification of regenerative processes in spinal cord injury using transcriptomic data in a developmental study. B. J. WHEATON*; P. UMALE; J. SENA; A. SUNDARARAJAN; F. SCHILKEY; R. D. MILLER. *Univ. of New Mexico, Natl. Ctr. for Genome Resources.*

3:00 C28 **210.19** Regulation of mammalian axon regeneration by Lin28/let-7 pathway. X. WANG*; P. A. HALL; C. D. KATCHIS; C. LIU; F. ZHOU. *Johns Hopkins Univ., Johns Hopkins Univ., Inst. of Zoology, Chinese Acad. of Sci.*

4:00 C29 **210.20** Examining astrocytes' roles and mechanisms in regulating retinal axon regeneration and pathfinding. M. RIBEIRO*; B. J. YUNGHER; E. R. BRAY; K. K. PARK. *Univ. of Miami Miller Sch. of Med.*

1:00 C30 **210.21** Transcriptional profiling to discern differential retinal axon growth capacity. E. BRAY*; B. YUNGHER; K. THAKOR; M. RANDOLPH; M. DANZI; J. BIXBY; V. LEMMON; K. PARK. *Univ. of Miami Miller Sch. of Med.*

2:00 C31 **210.22** Novel strategies for detection and identification of the axonal "transportome" and pre-synaptome" in the rodent visual system. L. M. SCHIAPPARELLI*; S. SHAH; D. MCCLATCHY; H. HE; J. LI; Y. MA; S. SATURDAY; J. GOLDBERG; J. YATES, III; H. CLINE. *The Scripps Res. Inst., UCSD, The Scripps Res. Inst., Stanford Univ.*

3:00 C32 **210.23** Neoblast specialization during regeneration of the planarian S. mediterranea nervous system. K. KRAVARIK*; P. REDDIEN. *Whitehead Inst. for Biomed. Research, MIT.*

4:00 C33 **210.24** Activating neuron-intrinsic growth pathways to promote dorsal root regeneration. M. MANIRE*; H. KIM; J. ZHAI; G. M. SMITH; J. ZHONG; Y. SON. *Lewis Katz Sch. of Med. at Temple Univ., Lewis Katz Sch. of Med. at Temple Univ., Weill Cornell Med. Col. of Cornell Univ., Weill Cornell Med. Col. of Cornell Univ.*

1:00 C34 **210.25** Activity-dependent molecular programs for optic nerve regeneration. Q. WANG*; E. NIE; S. T. CARMICHAEL. *UCLA, UCLA.*

2:00 D1 **210.26** The mechanosensitive ion channel piezo regulates axon regeneration. Y. SONG*; L. Y. JAN; Y. JAN. *Univ. of Pennsylvania and CHOP, Univ. of California San Francisco.*

3:00 D2 **210.27** ▲ The role of myelin and other factors involved in optic nerve regeneration in xenopus laevis. D. M. ROSENTHAL*; M. BRYSON; M. GERBO; B. MISHAGHI; A. WATSON; F. L. WATSON. *Washington and Lee Univ.*

4:00 D3 **210.28** The matrix metalloproteinase (Mmp9) functions in Muller glia stem cells and photoreceptor progenitors during injury-induced photoreceptor regeneration in the zebrafish. N. J. SILVA*; J. LI; D. HYDE; P. HITCHCOCK. *Univ. of Michigan, Univ. of Notre Dame, Univ. of Michigan.*

1:00 D4 **210.29** Imaging remyelination in the central nervous system. M. F. E. HILL*; J. R. GUY; K. M. BRINDLE; R. J. M. FRANKLIN. *Univ. of Cambridge, Univ. of Cambridge, Natl. Institue of Neurologic Disorders and Stroke, Univ. of Cambridge, Univ. of Cambridge.*

2:00 D5 **210.30** Adult leech CNS regeneration at the single cell level: Effects of electrical stimulation. S. COHEN*; O. SHEFI. *Bar Ilan Univ.*

POSTER

211. Astrocytes: Synaptogenesis, Synaptic Plasticity, and Neuron-Interaction

Theme A: Development

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 D6 **211.01** Ablation of astrocytic ephrin-B1 impairs synaptogenesis, synapse function, and animal behavior. A. Q. NGUYEN*; J. KOEPPEN; M. GARCIA; S. HANNA; A. OBENAUS; I. ETHELL. *Univ. of California, Riverside, Loma Linda Univ.*

2:00 D7 **211.02** Astrocytic ephrin-B1 and its role in injury-induced synapse remodeling in the adult hippocampus. J. KOEPPEN*; A. NGUYEN; M. GARCIA; S. HANNA; A. OBENAUS; I. ETHELL. *Univ. of California Riverside, Loma Linda Univ.*

3:00 D8 **211.03** Vesicular and non-vesicular gliotransmission: Synergy and role in synaptic plasticity in the neocortex. Y. PANKRATOV*. *Univ. of Warwick.*

4:00 D9 **211.04** Dopaminergic activity-dependent astrocytic glycogenolysis in exercising rat hippocampus. T. MATSUI*; I. TORRES-ALEMÁN; H. SOYA. *Univ. of Tsukuba, Cajal Institute, CSIC.*

1:00 D10 **211.05** Astrocytic PKC- and PKA-dependent regulation of astrocyte glutamate uptake and effects on neuronal excitability. I. M. HOLMAN*; Y. KIM; J. TRUONG; L. YOUNG; T. A. FIACCO. *UC Riverside, UC Riverside.*

2:00 D11 **211.06** Astrocytic modulation of neuronal signaling in Rett syndrome. B. RAKELA*; P. BREHM; G. MANDEL. *Vollum Institute/ Oregon Hlth. and Sci. Univer, Vollum Institute/ Oregon Hlth. and Sci. Univ., Vollum Institute/ Oregon Hlth. and Sci. Univ.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 D12 **211.07** Studying neuronal ATP dynamics *in vivo*. L. HOESLI*; A. S. SAAB; J. HIRRLINGER; B. WEBER. *Univ. Zürich, Neurosci. Ctr. Zurich, Univ. and ETH Zurich, Max-Planck Inst. for Exptl. Med., Carl-Ludwig-Institute for Physiology, Universtiy of Leipzig.*

4:00 D13 **211.08** Optical activation of hippocampal astrocytes boost synaptic transmission in CA1 pyramidal neurons. S. MEDEROS*; A. HERNANDEZ-VIVANCO; G. PEREA. *Inst. Cajal, CSIC.*

1:00 D14 **211.09** An imaging screen to identify astrocyte factors controlling neuronal maturation and synaptogenesis. J. MCGANN*; G. MANDEL. *Oregon Hlth. and Sci. Univ.*

2:00 D15 **211.10** Astrocyte-neuron interactions in long-term plasticity: A computational study. T. MANNINEN; A. SAUDARGIENE; R. HAVELA; M. LINNE*. *Tampere Univ. Technol., Vytautas Magnus Univ.*

3:00 D16 **211.11** Lrp4 in astrocytes modulates glutamatergic transmission. X. SUN*. *Augusta Univ.*

4:00 D17 **211.12** ● Cholinergic transmission tunes astrocyte-dependent gating of the NMDA receptor co-agonist binding site. T. PAPOUIN*; J. DUNPHY; K. T. DINELEY; P. G. HAYDON. *Tufts Univ., Univ. of Texas.*

1:00 D18 **211.13** Heterogeneity in the synaptogenic potential of cultured astrocytes from distinct brain regions. A. S. BUOSI*; I. C. P. MATIAS; A. B. ARAUJO; F. C. A. GOMES. *Univ. Federal Do Rio De Janeiro.*

2:00 D19 **211.14** The flavonoid hesperidin modulates synapse formation and the synaptogenic potential of astrocytes. I. MATIAS*; L. DINIZ; A. BUOSI; G. NEVES; J. STIPURSKY; F. C. A. GOMES. *Federal Univ. of Rio De Janeiro, Federal Univ. of Rio de Janeiro.*

3:00 D20 **211.15** Impairment of astroglia calcium activation by ethanol and consequences for local circuit activity. L. YE; M. ORYNBAYEV; M. PAUKERT*. *UT Hlth. Sci. Ctr. at San Antonio.*

4:00 D21 **211.16** Amyloid-β Oligomers directly target astrocytes and impair their neuroprotective actions on synapses: Prevention by astrocyte-derived tgf-β1. L. P. DINIZ*; V. TORETELLI; I. MATIAS; J. MORGADO; A. ARAÚJO; H. MELO; G. DA SILVA; S. FERREIRA; F. DE FELICE; F. C. A. GOMES. *Federal Univ. of Rio De Janeiro, Federal Univ. of Rio De Janeiro, Federal Univ. of Rio de Janeiro.*

1:00 D22 **211.17** ▲ Characterization of neurite growth using permissive and inhibitory astrocyte cell lines. S. CHRISTIAN; M. SMITH; A. NEWSOM; T. REGETZ; V. LUMBERT; L. KRAUSE; A. RENDON; D. R. COOK-SNYDER*. *Carthage Col.*

2:00 D23 **211.18** Live STED microscopy reveals diversity of astrocytic coverage and Ca^{2+} signaling at individual tripartite synapses. M. ARIZONO*; A. PANATIER; J. ANGIBAUD; J. STOBART; L. BELLOCCHIO; G. MARSICANO; K. MIKOSHIBA; S. H. R. OLIET; B. WEBER; V. NÄGERL. *Univ. of Bordeaux, CNRS UMR 5297, Brain Sci. Institute, RIKEN, Neurocentre Magendie, Inserm U1215, Univ. of Zurich Inst. of Pharmacol. & Toxicology.*

3:00 D24 **211.19** Astroglial-mediated remodeling of the interhemispheric midline is required for the formation of the corpus callosum. I. GOBIUS*; L. MORCOM; R. SUAREZ; J. BUNT; P. BUKSHPUN; W. REARDON; W. DOBYNS; J. L. R. RUBENSTEIN; J. BARKOVICH; E. SHERR; L. RICHARDS. *Queensland Brain Inst., Univ. of San Francisco, Our Lady's Hosp. for Sick Children, Seattle Children's Res. Inst., Univ. of San Francisco, Univ. of San Francisco.*

4:00 D25 **211.20** Astrocytes are necessary for synchronized bursting behavior of neuronal networks in culture. K. R. SANCHEZ; F. PERRY; M. A. HARRINGTON; M. TEMBURNI*. *Delaware State Univ., Delaware State Univ.*

1:00 D26 **211.21** Dual-color calcium imaging of astrocytes and neurons in the ferret visual cortex. V. KELLNER*; J. SCHUMMERS. *Max Planck Florida Inst.*

2:00 D27 **211.22** Astrocytes regulate dendritic inhibition of pyramidal cells by somatostatin interneurons. M. MATOS*; I. RIEBE; C. REYNELL; J. VALLÉE; I. LAPLANTE; A. PANATIER; J. LACAILLE; R. ROBITAILLE. *Univ. De Montréal, Neurocentre Magendie, Univ. de Bordeaux.*

3:00 D28 **211.23** Effects of GM1 on activation of signaling pathways in neurons and astrocytes, dependence of astrocyte-neuron interactions. H. FIUMELLI*; I. ALLAMAN; J. MARTIN; P. J. MAGISTRETTI. *King Abdullah Univ. of Sci. and Technol., Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne Univ. Hosp.*

4:00 D29 **211.24** Neuron-astroglia interactions following AAV1 transduction with Rheb(S16H) of hippocampal neurons: Construction of neuroprotective system in the hippocampus *in vivo*. M. JEON*; H. JANG; M. CHOI; U. JUNG; K. JEONG; B. JIN; R. E. BURKE; C. MCLEAN; S. LEE; S. KIM. *Kyungpook Natl. Univ., Kyungpook Natl. Univ., Kyung Hee Univ., Pukyong Natl. Univ., Kyung Hee Univ., Kyung Hee Univ., Columbia Univ., Columbia Univ., Alfred Hosp., Alfred Hosp., Kyungpook Natl. Univ., Kyungpook Natl. Univ.*

1:00 D30 **211.25** Endogenous lactate reserves may fuel synaptic transmission via oxidative phosphorylation in hippocampal primary neurons. C. SOBIESKI*; N. WARIKOO; S. MENNERICK. *Washington Univ. In St Louis.*

2:00 D31 **211.26** The mediating effect of Lycium Barbarum Polysaccharides on retinal glial cells in a mouse model of acute ocular hypertension. X. MI*. *The First Hosp.*

3:00 D32 **211.27** Metabolic axon-glia interaction assessed by real-time imaging of ATP. A. TREVISIOL*; A. S. SAAB; U. WINKLER; J. HIRRLINGER; K. A. NAVE. *Max Planck Inst. For Exptl. Med., Inst. of Pharmacol. & Toxicology, Univ. of Zurich, Carl-Ludwig-Institute for Physiology, Fac. of Medicine, Univ. of Leipzig.*

4:00 D33 **211.28** Active dendritic conductances regulate the impact of gliotransmission on rat hippocampal pyramidal neurons. S. ASHHAD*; R. NARAYANAN. *Indian Inst. of Sci.*

POSTER

212. Autism: Clinical Studies II

Theme A: Development

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 D34 **212.01** Specific Hypolipidemia caused by VLDL degradation in Children with ASD. H. MATSUZAKI*; K. IWATA; K. NAKAMURA; M. TSUJII; N. MORI. *Univ. of Fukui, Hirosaki Univ. Sch. of Med., Chukyo Univ., Osaka Univ.*

2:00 E1 **212.02** Attention and neural response to simulated social interactions in ASD. J. A. TRAPANI*; A. J. NAPLES; M. J. ROLISON; J. H. FOSS-FEIG; J. C. MCPARTLAND. *Yale Univ., Child Study Center, Yale Univ. Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 E2 **212.03** Developing a passive viewing phenotypic measure of autistic traits. O. E. PARSONS*; R. BETHLEHEM; J. FREYBERG; O. SLUIJTERS; B. STONIER; S. BARON-COHEN. *Univ. of Cambridge, Univ. of Cambridge.*

4:00 E3 **212.04** Cognitive and brain aging in autism spectrum disorder: Executive functioning and frontal and temporal lobe differences. B. B. BRADEN*; C. J. SMITH; A. THOMPSON; T. K. GLASPY; E. WOOD; D. VATSA; L. C. BAXTER. *Barrow Neurolog. Inst., Southwest Autism Res. & Resource Ctr.*

1:00 E4 **212.05** ▲ Cerebellar differences associated with fine motor dysfunction in aging autism cohort. B. R. DEATHERAGE*; B. BRADEN; C. J. SMITH; M. K. MCBEATH; T. K. GLASPY; L. C. BAXTER. *Barrow Neurolog. Inst., Southwest Autism Resource & Res. Ctr., Arizona State Univ.*

2:00 E5 **212.06** Electrophysiological response to sounds of different loudness in children on the autistic spectrum and typically developing children: An ERP study. R. DE MEO*; T. G. FISHER; Y. TAKARAE; S. M. RIVERA; C. D. SARON. *Univ. of California, Davis, Universtity of California Davis Med. Ctr., Univ. of California Davis, Univ. of California Davis, Univ. of Texas Southwestern, Univ. of California Davis Med. Ctr., Univ. of California Davis.*

3:00 E6 **212.07** ▲ Many (but not all) DTI findings for ASD disappear with stringent motion matching. S. K. SOLDERS*; R. A. CARPER; R. MÜLLER. *San Diego State Univ., Brain Develop. Imaging Laboratory, San Diego State Univ.*

4:00 E7 **212.08** ● The relationship of cortical GABA to corresponding γ-band activity in autism: Clinical and preclinical studies. R. G. PORT*; C. GAJEWSKI; S. J. SIEGEL; T. P. L. ROBERTS. *Univ. Of Pennsylvania, Univ. Of Pennsylvania, Univ. Of Pennsylvania, Lurie Family Foundations MEG Imaging Ctr.*

1:00 E8 **212.09** Alterations in resting state electroencephalogram in young children with autism spectrum disorder as a result of behavioral interventions. X. A. TRAN*; S. S. JESTE. *UCLA, UCLA.*

2:00 E9 **212.10** Resting electroencephalogram signal complexity identifies patterns of atypical brain development. J. FROHLICH*; S. S. JESTE. *Univ. of California Los Angeles.*

3:00 E10 **212.11** EEG measures of high frequency neural activity suggest variation in the balance of neural excitation and inhibition across autism spectrum disorder. A. DICKINSON*; I. M.REZAZADEH; C. DISTEFANO; S. SPURLING JESTE. *UCLA.*

4:00 E11 **212.12** Electrophysiological signatures of visual statistical learning in three-month old infants at risk for autism spectrum disorder. A. T. MARIN*; T. HUTMAN; M. DAPRETTO; C. PONTING; S. JOHNSON; S. JESTE. *UCLA, UCLA.*

1:00 E12 **212.13** Stability of β power in resting state EEG of children with Duplication 15q syndrome. S. HUBERTY*; J. FROHLICH; S. JESTE. *Univ. of California Los Angeles.*

2:00 E13 **212.14** ● Assessment of cortical plasticity with continuous θ-burst stimulation in adults with autism spectrum disorders and neurotypical controls. A. JANNATI*; G. BLOCK; L. M. OBERMAN; A. ROTENBERG; A. PASCUAL-LEONE. *BIDMC, Harvard Med. Sch., E.P. Bradley Hospital, Warren Alpert Med. School, Brown Univ., Boston Children's Hospital, Harvard Med. Sch.*

3:00 E14 **212.15** Interneuron dysfunction in syndromic autism. T. TAKANO*. *Shiga Univ. Med. Sci.*

4:00 E15 **212.16** Identifying novel biomarkers of social deficits in children with autism spectrum disorder. O. OZTAN*; L. P. JACKSON; R. A. LIBOVE; R. D. SUMIYOSHI; J. M. PHILLIPS; A. E. URBAN; J. P. GARNER; A. Y. HARDAN; K. J. PARKER. *Stanford Univ.*

1:00 E16 **212.17** Limited somatosensory functional connectivity differences in youth with autism spectrum disorder. B. CECHMANEK*; H. JOHNSTON; C. LEBEL; S. BRAY. *Univ. of Calgary, Werklund Sch. of Educ.*

2:00 E17 **212.18** Typical emotional processing of special interest stimuli in adolescents with autism spectrum disorder (ASD). K. B. RIVARD*; F. BURLES; M. SCHUETZE; I. CHO; S. VINETTE; F. CORTESE; A. PROTZNER; S. BRAY. *Univ. of Calgary, Univ. of Toronto Mississauga.*

3:00 E18 **212.19** Characterizing heterogeneity in autism spectrum disorders using a random forest algorithm. E. J. FECZKO*; N. BALBA; O. MIRANDA-DOMINGUEZ; M. CORDOVA; L. IRWIN; A. P. HILL; B. H. LANGHORST; J. GRIESER PAINTER; E. J. FOMBONNE; J. L. NIGG; D. A. FAIR. *Oregon Hlth. Sci. Univ., Oregon Hlth. Sci. Univ., Oregon Hlth. Sci. Univ., Oregon Hlth. Sci. Univ.*

4:00 E19 **212.20** Atypical laterality in visual sensory activation during simple sensorimotor tasks in Autism Spectrum Disorders. Y. TAKARAE*; F. VIEIRA; W. SONG; C. SARON. *Univ. of Texas Southwestern, Univ. of San Francisco, Univ. of California, Davis.*

1:00 E20 **212.21** Altered p50 neuromagnetic evoked responses and neural synchrony related to auditory attention in Autism Spectrum Disorder. A. FLORES; K. MCFARLANE; C. SWICK; T. ANDERSEN; K. RUSINIAK; I. KOVELMAN; S. BOWYER; R. LAJINESS-O'NEILL*. *Eastern Michigan Univ., Univ. of Michigan, Henry Ford Hosp.*

2:00 E21 **212.22** Atypical hippocampal functional organization with the neocortex and basal ganglia inchildren with autism. S. QIN*; R. REHERT; V. MENON. *Stanford Univ., Stanford Univ. Sch. of Med., Stanford Univ. Sch. of Med.*

POSTER

213. Molecular, Cellular, and Physiological Mechanisms of Down Syndrome

Theme A: Development

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 E22 **213.01** Cortical τ pathology in non-demented and demented individuals with down syndrome. S. E. PEREZ*; B. HE; M. N. SABBAGH; I. T. LOTT; E. DORAN; E. J. MUFSON. *Barrow Neurolog. Inst., Barrow Neurolog. Inst., Barrow Neurolog. Inst., UCI Sch. of Med.*

2:00 E23 **213.02** ● An anti-β amyloid (Aβ) liposomal vaccine shows efficacy in a Down Syndrome (DS) mouse model. M. VUKICEVIC; R. MADANI; P. V. BELICHENKO; L. REY-BELLET; M. PIHLGREN; A. BECKER; A. PLASSARD; S. VUILLERMOT; A. SILVA; V. GIRIENS; R. L. NOSHENY; A. M. KLESCHEVNIKOV; J. VALLETTA; S. K. S. BENGTSSON; G. R. LINKE; M. T. MALONEY; D. T. HICKMAN; P. REIS; A. GRANET; D. MLAKI; M. LOPEZ-DEBER; L. H. DO; N. SINGHAL; E. MASLIAH; M. L. PEARN; A. PFEIFER; W. C. MOBLEY; A. MUHS*. *AC Immune SA, Univ. of California, Stanford Med. Sch.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 E24 **213.03** Cerebral organoids and quantitative proteomics reveal molecular mechanisms in down syndrome. T. D. MCCLURE-BEGLEY*; C. C. EBMEIER; M. J. KLYMKOWSKY; K. E. BALL; W. M. OLD. *Univ. of Colorado, Univ. of Colorado, Boulder, Univ. of Colorado, Boulder.*

4:00 E25 **213.04** ▲ Linguistic prediction in Down syndrome. J. RAMOS-SÁNCHEZ; J. B. BARRÓN-MARTÍNEZ; A. Q. ANGULO-CHAVIRA; D. R. CORTÉS-MONTER; N. ARIAS-TREJO*. *UNAM.*

1:00 E26 **213.05** Isolation-induced ultrasonic vocalizations in the mouse model of Down syndrome Ts65Dn during pre-weaning postnatal development. B. ZAMPIERI*; M. W. JOHNSON; A. C. COSTA. *Case Western Reserve Univ.*

2:00 E27 **213.06** Neuronal exosome biomarkers of Alzheimer's dementia in Down syndrome. E. D. HAMLETT*; E. GOETZL; V. VASILEVKO; A. LEDREUX; H. BOGER; A. LAROSA; D. CLARK; S. CARROL; M. IRAGUI; E. MUFSON; M. SABBAGH; A. MOHAMMED; D. HARTLEY; J. FORTEA; E. DORAN; I. LOTT; A. BENTLEY. *MUSC, Geriatric Res. Ctr. of the Jewish Home of San Francisco, CA, USA, Sch. of Medicine, Univ. of California, Irvine, Orange, CA, USA, Hosp. de la Santa Creu i Sant Pau-Biomedical Res. Inst. Sant Pau, Barrow Neurolog. Institute, Phoenix, AZ, USA, Linnaeus University, Växjö, Sweden, Alzheimer's Association, Chicago, IL, USA, MUSC Ctr. on Aging.*

3:00 E28 **213.07** Tissue specific effects of EGCG on Dyrk1a activity and cognitive and skeletal phenotypes in a Down syndrome mouse model. M. STRINGER*; J. LACOMBE; R. J. ROPER; C. R. GOODLETT. *IUPUI, IUPUI, IUPUI.*

4:00 E29 **213.08** Infantile Spasms: Rescue of an animal model. K. JOSHI*; L. SHEN; A. MICHAELI; M. SALTER; J. H. EUBANKS; G. THIBAULT-MESSIER; S. HASHMI; M. A. CORTEZ; O. SNEAD, 3rd. *The Hosp. For Sick Children, Hosp. for Sick Children, Toronto Western Hosp.*

1:00 E30 **213.09** Noninvasive high-resolution *in vivo* imaging of retinal morphology and vasculature alterations in the mouse model of Down syndrome using optical coherence tomography and angiography. A. C. COSTA; D. B. VICTORINO*. *Case Western Reserve Univ., Case Western Reserve Univ.*

2:00 E31 **213.10** High-density EEG assessment of mismatch negativity and 7T MRI whole-brain morphometric analysis of healthy adolescents and young adults with Down syndrome. K. A. KOENIG*; M. W. JOHNSON; M. R. STASKO; S. OH; A. C. COSTA. *Cleveland Clin., Case Western Reserve Univ.*

3:00 E32 **213.11** Comparative study of brain development and perinatal behavior in three mouse models of Down syndrome. N. M. AZIZ*; J. L. OLMOS-SERRANO; F. GUEDJ; W. A. TYLER; J. W. GOODLIFFE; D. W. BIANCHI; T. F. HAYDAR. *Boston Univ. Sch. of Med., Tufts Med. Ctr.*

4:00 E33 **213.12** Pharmacologically probing three modalities of CA1 hippocampal long-term potentiation in the Ts65Dn mouse model of Down syndrome. J. J. SCOTT-MCKEAN*; A. L. ROQUE; K. SUREWICZ; W. K. SUREWICZ; A. C. COSTA. *Case Western Reserve Univ., Case Western Reserve Univ.*

1:00 E34 **213.13** ● Knockdown of overexpressed Down Syndrome Cell Adhesion Molecule results in the reversal of increased P21-Activated Kinase (PAK) activity in a neuronal model of Down Syndrome. Consequences on F/G actin ratio, cell process formation and extension. R. PÉREZ-NUÑEZ; N. BARRAZA; J. BARNIER; A. CÁRDENAS; P. A. CAVIEDES*. *ICBM Fac Medicine, Univ. of Chile, Neuro-PSI, CNRS, Univ. Paris-Sud, Univ. de Valparaíso.*

2:00 E35 **213.14** Age-related changes in cognitive abilities and related brain activity in Down syndrome. C. M. STARTIN*; S. HAMBURG; R. HITHERSAY; T. AL-JANABI; K. MOK; J. HARDY; M. DE HAAN; A. STRYDOM. *UCL.*

3:00 E36 **213.15** Oromotor characterization of the Ts65Dn mouse model of Down syndrome. T. J. GLASS*; N. P. CONNOR. *Univ. of Wisconsin, Univ. of Wisconsin Madison.*

4:00 E37 **213.16** ▲ Inhibitory GABA mode in the CA1 region of adult Ts65Dn mice, a genetic model of Down syndrome. J. YU; F. MADAMBA; A. TYRTYSHNAIA; A. M. KLESCHEVNIKOV*. *Univ. of California San Diego, Far Eastern Federal Univ.*

1:00 E38 **213.17** Increased GABA inhibition in the Dentate Gyrus in a mouse model of Down syndrome. S. HANNAN*; S. WATSON-SCALES; E. LANA-ELOLA; F. WISEMAN; E. M. C. FISHER; V. TYBULEWICZ; T. SMART. *Univ. Col. London, Francis Crick Inst., Univ. Col. London.*

2:00 F1 **213.18** EEG in adults with Down syndrome: How resting-state characteristics relate to cognitive ability. S. HAMBURG*; C. M. STARTIN; M. DE HAAN; A. STRYDOM. *Univ. Col. London, UCL Inst. of Child Hlth.*

3:00 F2 **213.19** Implications for chromosome 21-encoded miRNAs and MeCP2 in synaptic dysfunction in Down syndrome. V. R. MIRABELLA*; H. MCGOWAN; A. VILLEGAS; Z. PANG. *Child Hlth. Inst. of NJ, Rutgers-Rwjms.*

4:00 F3 **213.20** Microglial defects are present in the dp16 murine model of down syndrome. B. PINTO*; L. PERLINI; L. CANCEDDA. *IIT, Scuola Normale Superiore.*

1:00 F4 **213.21** Memantine rescues delayed development of visual acuity in the Down syndrome mouse model Ts65Dn. D. B. VICTORINO; M. R. STASKO; J. J. SCOTT-MCKEAN; B. L. ZAMPIERI; A. C. COSTA*. *Case Western Reserve Univ.*

POSTER

214. Animal Models of Neurodevelopmental Disorders: Mechanisms

Theme A: Development

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 F5 **214.01** Postnatal neuro-behavioral effects of prenatal ethanol exposure in a mouse model of FASD. O. O. KOZANIAN; K. J. HUFFMAN*. *Univ. of California, Riverside.*

2:00 F6 **214.02** Effect of aging and fetal alcohol syndrome on retinal function. V. HARRAR*; L. ELKRIEF; J. BOUSKILA; R. KUPERS; A. FINK-JENSEN; J. BOUCHARD; R. PALMOUR; M. PTITO. *Univ. of Montreal, Univ. of Copenhagen, Univ. of Copenhagen, McGill Univ., St-Kitts Behavioral Sci. Foundations.*

3:00 F7 **214.03** Alterations in cognitive function in male and female rats in MAM rodent model of schizophrenia. M. GHASEMZADEH*; C. BOLDIG; K. BOLDIG; V. SCHLOEGEL; R. DIDOMINICIS; C. ALBRECHT; B. PAHLAVAN. *Marquette Univ. Dept. of Biomed. Engin.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 F8 **214.04** Sevoflurane anesthesia causes apoptosis in the developing nonhuman primate brain. C. IKONOMIDOU*; K. CROSNO; V. ELAM; S. WOELFFER; H. SIMMONS; A. MEIJA; J. M. HAYES; S. FRENCH; K. BRUNNER; S. CAPUANO III; K. NOGUCHI; C. A. TURSKI. *Univ. of Wisconsin, Wisconsin Primate Res. Ctr., Washington Univ.*

1:00 F9 **214.05** Paternal aging-induced differential DNA methylation in sperm: Possible transgenerational effects on gene expression and behavior in offspring. R. KIMURA*; K. YOSHIZAKI; T. KOIKE; R. YAMASHITA; K. KOIKE; T. KIKKAWA; H. INADA; Y. MATSUI; T. KONO; N. OSUMI. *Tohoku Univ. Grad. Sch. of Med., Tokyo Univ. of Agr., Tohoku Med. Megabank Organization Tohoku Univ., Inst. of Development, Aging and Cancer, Tohoku Univ.*

2:00 F10 **214.06** Sex-specific neuroinflammatory and sociability alterations in a mouse model of autism. N. KAZLAUSKAS*; M. CAMPOLONGO; C. ZAPPALA; A. DEPINO. *Inst. For Physiology, Mol. Biol. and Ne, Inst. For Physiology, Mol. Biol. and Ne.*

3:00 F11 **214.07** The metabolic effects of creatine loss in adult creatine transporter conditional knockout mice. K. C. UDOBI*; M. R. SKELTON. *Cincinnati Children's Res. Fndn.*

4:00 F12 **214.08** ● The influence of the electrical stimulation of the raphe magnus on neuronal structure of the serotonergic system in rats. K. K. PTASZEK*; K. PLUCINSKA; G. JERZEMOWSKA; E. JURKOWLANIEC. *Univ. of Gdansk, Fac. of Biol.*

1:00 F13 **214.09** GABA receptor involvement in sensorimotor gating in the rat model: An autoradiography study. E. T. CHOW; M. FAZAL; C. R. CLANCY; J. SKEFOS; E. D. LEVIN; M. L. BAUMAN*. *Dept. of Anat. and Neurobio., Duke Univ. Med. Ctr.*

2:00 F14 **214.10** Inheritance of neocortical molecular layer heterotopia. A. R. TOIA*; J. CUOCO; A. JOSHI; J. AHSAN; G. TORRES; V. BOLIVAR; R. RAMOS. *New York Inst. of Technol., State Univ. of New York at Albany.*

3:00 F15 **214.11** Magnetic resonance and diffusion tensor imaging of basal ganglia circuitry in an animal model of repetitive behavior. B. J. WILKES; L. M. COLÓN-PÉREZ; A. M. MUEHLMANN; M. FEBO; M. H. LEWIS*. *Univ. of Florida, UF Col. of Med.*

4:00 F16 **214.12** Convulsive seizures from experimental focal cortical dysplasia occur independently of cell misplacement. L. S. HSIEH*; J. WEN; K. CLAYCOMB; Y. HUANG; F. HARRSCH; J. NAEGELE; F. HYDER; G. BUCHANAN; A. BORDEY. *Yale Sch. of Med., Yale Sch. of Med., Wesleyan Univ., Univ. of Iowa.*

1:00 F17 **214.13** Late adolescent shift from local to distributed monosynaptic inputs onto fronto-posterior cortical projection neurons. E. NABEL*; M. DEMARS; S. LOPEZ; G. TACCHERI; H. KOIKE; H. MORISHITA. *Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. at Mount Sinai.*

2:00 F18 **214.14** Chemogenetic targeting of prefrontal parvalbumin interneurons affects social behavior in mice. L. BICKS*; H. KOIKE; C. MILLER; M. PENG; S. AKBARIAN; H. MORISHITA. *Icahn Sch. of Med. at Mount Sinai, Marymount Manhattan Col., Icahn Sch. of Med. at Mount Sinai.*

3:00 F19 **214.15** Minor spliceosome inactivation in the mouse pallium causes progenitor cell death and microcephaly. A. OLTHOF*; M. BAUMGARTNER; C. LEMOINE; S. AL SEESI; K. HYATT; N. STURROCK; N. NGUYEN; K. DRAKE; R. GOZ; J. LOTURCO; R. KANADIA. *Univ. of Connecticut, Univ. of Connecticut.*

4:00 F20 **214.16** Missense polymorphisms in the brain-derived neurotrophic factor binding region of nTRK2 in randomly selected pools of human trace DNA. G. HEINRICH*; I. YAO; A. J. KING. *VA NCHCS, UC Davis, USC, Reed Col.*

1:00 F21 **214.17** PAK1(p21-activated kinase 1) regulates GABAergic synaptic transmission via endocannabinoid signaling in mouse hippocampus. S. XIA*; Z. ZHOU; C. LEUNG; Y. ZHU; X. PAN; J. QI; M. MORENA; M. HILL; W. XIE; Z. JIA. *Key Lab. of DGHD,MOE, Neurosciences & Mental Health, the Hosp. for Sick Children, Univ. of Toronto, Univ. of Calgary.*

2:00 F22 **214.18** ▲ Comparison of seric and cerebroventricular GLP-1 levels induced by ileal interposition in wistar male rats. M. S. SALGADO*; H. L. HERNÁNDEZ MONTIEL; J. C. SOLÍS SÁINZ; P. GARCÍA SOLÍS; N. G. HERNÁNDEZ CHAN; M. RAMOS GÓMEZ; M. C. ABURTO FERNÁNDEZ. *Fracc. Puerta Real, Autonomous Univ. of Queretaro, Autonomous Univ. of Queretaro, Autonomous Univ. of Queretaro.*

3:00 F23 **214.19** DEAF1 regulates expression of UBE2M. P. J. JENSIK; S. RAJAMANICKAM; L. A. ARBOGAST; G. M. ROSE*; M. W. COLLARD; J. I. HUGGENVIK; S. R. MCGEE. *Southern Illinois Univ. Sch. of Med., Southern Illinois Univ.*

4:00 F24 **214.20** Inositol hexakisphosphate kinase-1 physiologically associates with α actinin and regulates focal adhesion kinase activity. C. FU*; J. XU; A. M. SNOWMAN; S. H. SNYDER. *Johns Hopkins Univ. Dept. of Neurosci.*

1:00 F25 **214.21** Hyperphenylalaninemia causes alterations in BDNF signaling in brain of rats. P. F. SCHUCK*; F. MALGARIN; G. SCAINI; L. M. GOMES; M. CARVALHO-SILVA; L. W. KIST; S. O. MARQUES; T. F. LUCIANO; T. P. MACAN; R. S. MARTINS; C. T. SOUZA; R. C. C. KUBRUSLY; M. R. BOGO; G. C. FERREIRA; E. L. STRECK. *Univ. Do Extremo Sul Catarinense, Univ. do Extremo Sul Catarinense, Pontificia Unidade Catolica do Rio Grande do Sul, Univ. do Extremo Sul Catarinense, Univ. Federal Fluminense, Univ. Federal do Rio de Janeiro.*

2:00 F26 **214.22** Transcriptomic analysis of retinal pericytes exposed to high glucose and Notch signaling. A. I. MACHUCA PARRA*; J. D. LAM; L. A. KIM; J. F. ARBOLEDA-VELASQUEZ. *Schepens Eye Res. Inst.*

POSTER

215. Sensorimotor Development

Theme A: Development

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 F27 **215.01** Regulatory control of microglial phagocytosis in the developing rat cerebellum. M. PEREZ-POUCHOULEN*; S. J. YU; M. M. MCCARTHY. *Univ. of Maryland, SOM.*

2:00 F28 **215.02** Haploinsufficiency of the minor spliceosome-specific U11 snRNA in the mouse cortex results in enhanced motor performance. M. BAUMGARTNER*; P. PERRINO; R. H. FITCH; R. N. KANADIA. *Univ. of Connecticut, Univ. of Connecticut.*

3:00 F29 **215.03** Selective sensory-motor connections determined by dendritic and axonal positioning. N. BALASKAS*; T. M. JESSELL; D. NG. *Columbia Univ.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 F30 **215.04** Cortical activation and excitability in congenital hemiparesis. M. LIXANDRAO; C. PRUDENTE; B. MUELLER; T. RICH; M. CHEN; B. T. GILLICK*. *Federal Univ. of Sao Carlos, Univ. Minnesota.*

1:00 F31 **215.05** Developmental origins of inhibitory interneuron diversity in limb and thoracic motor circuits. L. B. SWEENEY*; J. B. BIKOFF; M. BAEK; M. I. GABITTO; S. BRENNER-MORTON; C. DIAZ; J. S. DASEN; T. M. JESSELL; C. R. KINTNER. *Salk Inst. For Biol. Studies, Howard Hughes Med. Institute, Kavli Inst. for Brain Sci, Columbia Univ., NYU Neurosci. Institute, NYU Sch. of Med.*

2:00 F32 **215.06** Spinal inhibitory interneuron diversity and position delineate variant motor microcircuits. J. B. BIKOFF*; M. I. GABITTO; A. PAKMAN; E. DROBAC; A. F. RIVARD; T. A. MACHADO; A. MIRI; S. BRENNER-MORTON; E. FAMOJURE; C. DIAZ; L. F. ABBOTT; F. J. ALVAREZ; G. Z. MENTIS; L. PANINSKI; T. M. JESSELL. *Depts. of Neurosci. and Biochem. and Mol. Biophys., Columbia Univ., Columbia Univ., Columbia Univ., Emory Univ., Columbia Univ.*

3:00 F33 **215.07** Developmental changes in the macaque distribution of corticospinal neurons in the contro- and ipsilateral hemisphere. A. R. RIBEIRO GOMES*; E. OLIVIER; H. KILLACKEY; M. GUENOT; P. GIROUD; M. BERLAND; K. KNOBLAUCH; C. DEHAY; H. KENNEDY. *Inserm U1208, Stem-Cell and Brain Res. Institu, Claude Bernard University, Univ. of Lyon, Inst. of Neuroscience, Sch. of Medicine, Catholic Univ. of Louvain, Univ. of California, Irvine, Pierre Wertheimer Hospital, Hospices Civils de Lyon, Inserm U1208, Stem-Cell and Brain Res. Institu.*

4:00 F34 **215.08** ▲ Labeling Dbx1 neurons and glia in the pre-Bötzinger complex based on the timing and dose of tamoxifen administration in inducible Dbx1 Cre–driver transgenic mice. C. A. MARTIN*; A. KOTTICK; C. A. DEL NEGRO. *The Col. of William & Mary.*

1:00 F35 **215.09** ▲ Expression of a genetically-encoded fluorescent voltage sensor, ASAP1, in neurons of the embryonic chick spinal cord. A. FRASSATO; L. DEROSSETT; S. FROMHERZ; P. R. PATRYLO; A. A. SHARP*. *John A. Logan Community Col., Saginaw Valley State Univ., Southern Illinois Univ. Sch. of Med., Southern Illinois Univ. Sch. of Med.*

2:00 F36 **215.10** ● Analyzing ensemble activity in the developing zebrafish spinal cord. Z. WEI*; Y. WAN; P. KELLER; S. DRUCKMANN. *Janelia Res. Campus.*

3:00 F37 **215.11** Information structure of proprioceptive feedback in infantile spontaneous movements. H. KANAZAWA*; Y. YAMADA; Y. KUNIYOSHI. *The Univ. of Tokyo, Res. Fellow of JSPS, IBM Res. - Tokyo.*

4:00 F38 **215.12** Alteration of dendrite morphology and electric responsibility in the sensorymotor cortex on the developmental white matter injury model rat. Y. UEDA*; Y. BANDO; S. MISUMI; S. OGAWA; H. HIDA. *Nagoya City Univ. Grad Sch. Med. Sci., Asahikawa Med. Univ.*

1:00 F39 **215.13** ▲ Novel efferent pathways from the mouse substantia nigra. E. SOTO*; J. A. MENDEZ. *Univ. Autonoma De San Luis Potosi.*

2:00 F40 **215.14** Where handedness starts: Gene expression asymmetries in human fetal spinal cord. J. SCHMITZ*; S. OCKLENBURG; O. GUNTURKUN. *Ruhr-University.*

3:00 F41 **215.15** ● Anatomic course and variation of femoral nerve in human fetuses. M. BUYUKMUMCU*; E. CIHAN; A. AYDIN KABAKCı; D. AKIN; S. GUNGORER. *Meram Med. Fac., DEHA Rehabil. Ctr., Meram Med. Sch., Educ. and Res. Hosp.*

4:00 F42 **215.16** Identification of the interactor of CLAC-P/Collagen type XXV in motor nerve innervation of skeletal muscles. H. MUNEZANE*; H. OIZUMI; T. YOSHIDA; T. WAKABAYASHI; T. IWATSUBO. *The Univ. of Tokyo, Univ. of Toyama.*

1:00 F43 **215.17** Development of visuo-motor processing required to hit the fast ball over 150 km/h in baseball batting. H. KOBAYASHI*; M. SHINYA; H. OBATA; K. HAGIO; M. KUWATA; K. NAKAZAWA. *The Univ. of Tokyo, Kyushu Inst. of Technol.*

2:00 F44 **215.18** Transcription factor profiling of vestibulospinal neurons in mouse and chicken embryos reveals developmental subdivisions. A. LUNDE*; B. OKATY; S. DYMECKI; J. C. GLOVER. *Univ. of Oslo, Harvard Med. Sch.*

3:00 F45 **215.19** Sim1 transcription factor regulates the distinct neurogenesis profiles of spinal V3 INs and their subsequent functional separation. D. A. DESKA-GAUTHIER*; J. CHOPEK; Y. ZHANG. *Dalhousie Univ.*

4:00 F46 **215.20** Conditional knockout of GluN2B in motoneurons <t the corticomotoneuronal synapse elimination during development in rodents. N. MURABE*; S. FUKUDA; T. OHNO; N. ISOO; T. MORI; H. MIZUKAMI; K. OZAWA; K. SAKIMURA; Y. YOSHIMURA; M. SAKURAI. *Teikyo Univ. Sch. of Med., Natl. Inst. for Physiological Sci., Jichi Med. Univ., Niigata Univ.*

1:00 DP01 **215.21** (Dynamic Poster) Emergence of patterned activity in the developing zebrafish spinal cord. Y. WAN*; Z. WEI; S. DRUCKMANN; P. KELLER. *HHMI Janelia Res. Campus.*

2:00 F47 **215.22** Sox14 is a definitive developmental marker for cerebellar nuclei neurons projecting to the inferior olive. H. PREKOP; C. FERNANDES; L. ZAGORAIOU; T. M. JESSELL; R. J. WINGATE*; A. DELOGU. *King's Col. London, BRFAA, Columbia Univ.*

3:00 F48 **215.23** An *in vitro* model to study the role of the extracellular matrix in neurodevelopmental abnormalities in schizophrenia. A. BOYER-BOITEAU*; H. PANTAZOPOULOS; W. JANG; E. H. HOLBROOK; C. HAHN; K. BORGMANN-WINTER; S. BUKHARI; S. BERRETTA. *McLean Hosp., Mclean Hosp., Harvard Med. Sch., Tufts Univ. Sch. of Med., Massachusetts Eye and Ear, Harvard Med. Sch., Perelman Sch. of Medicine, Univ. of Pennsylvania, Perelman Sch. of Medicine, Univ. of Pennsylvania, Harvard Med. Sch.*

POSTER

216. Adolescents: Human Imaging I

Theme A: Development

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 F49 **216.01** Resting state functional connectivity relates to response inhibition in adolescents. S. M. TASHJIAN*; D. GOLDENBERG; A. GALVAN. *UCLA.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 F50 **216.02** Perinatal lead exposure and white matter microstructure in children. M. HORTON*; P. CURTIN; C. GENNINGS; V. WANG; E. PROAL; L. SCHNAAS; M. TÉLLEZ ROJO; E. ROLDAN-VALADEZ; F. CASTELLANOS; C. TANG; R. WHITE; R. WRIGHT. *Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Natl. Inst. of Publ. Hlth. of Mexico (INSP), Natl. Inst. of Perinatology, Natl. Ctr. for Med. Instrumentation and Imaging Res. (Ci3M), New York Univ., Boston Univ.*

3:00 F51 **216.03** Heritability of the human connectome. O. MIRANDA DOMINGUEZ*; E. FECZKO; J. T. NIGG; D. A. FAIR. *Oregon Hlth. and Sci. Univ., Oregon Hlth. and Sci. Univ., Oregon Hlth. and Sci. Univ.*

4:00 F52 **216.04** High-resolution shape analysis reveals reciprocal patterns of subcortical alteration in 22q11.2 deletion and duplication carriers. C. R. CHING*; B. A. GUTMAN; D. SUN; R. K. JONAS; A. LIN; L. KUSHAN; P. M. THOMPSON; C. E. BEARDEN; T. ENIGMA 22Q11.2 WORKING GROUP. *UCLA, USC Imaging Genet. Ctr., Semel Inst. for Neurosci. and Human Behavior and Dept. of Psychiatry Univ. of California-Los Angeles, Departments of Neurology, Psychiatry, Radiology, Engineering, Pediatrics and Ophthalmology.*

1:00 F53 **216.05** Awareness of alcohol advertising and limbic-frontal activations during an emotional counting stroop task in adolescents. K. VIACAVA*; S. EL DAMATY; B. W. STEVENS; J. LEISER; E. J. ROSE; D. H. FISHBEIN; J. W. VANMETER. *Georgetown Univ., Georgetown Univ., The Pennsylvania State Univ.*

2:00 G1 **216.06** Modular evolution of structural brain networks in adolescence supports executive function and is impacted by socioeconomic status. G. BAUM*; R. CIRIC; D. R. ROALF; T. M. MOORE; A. E. KAHN; R. F. BETZEL; M. QUARMLEY; P. A. COOK; R. T. SHINOHARA; K. RUPAREL; R. C. GUR; R. E. GUR; D. S. BASSETT; T. D. SATTERTHWAITE. *Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania.*

3:00 G2 **216.07** Puberty associated with decreased striatal intrinsic functional connectivity in 14 yo adolescents. M. ERNST*; A. GORKA, 20892; B. BENSON; T. LAGO; H. LEMAITRE; E. ARTIGES; M. MARTINOT; J. MARTINOT. *NIMH-NIH, NIMH/NIH, Univ. Paris Sud - For the IMAGEN CONSORTIUM (www.imagen-europe.com) & INSERM Res. Unit 1000, Univ. Paris Sud - For the IMAGEN CONSORTIUM (www.imagen-europe.com) & INSERM Res. Unit 1000, Univ. Paris Sud, - For the IMAGEN CONSORTIUM (www.imagen-europe.com) & INSERM Res. Unit 1000, Univ. Paris Sud, - For the IMAGEN CONSORTIUM (www.imagen-europe.com) & INSERM Res. Unit 1000.*

4:00 G3 **216.08** Developmental emergence of frontostriatal connectivity mediates flexible upregulation of cognitive control under high stakes. C. INSEL*; E. K. KASTMAN; S. F. SASSE; M. C. GARRAD; L. H. SOMERVILLE. *Harvard Univ.*

1:00 G4 **216.09** Earlier alcohol use and lower neuropsychological performance in adolescents from public compared to private schools. A. R. WILLHELM*; K. R. VIACAVA; J. W. VANMETER; R. M. M. DE ALMEIDA. *Univ. Federal do Rio Grande do Sul, Georgetown Univ.*

2:00 G5 **216.10** ▲ The family environment predicts children's fMRI-measured responses to emotional stimuli. S. K. TOLIA*; M. NOBILE; M. RE; P. PANDHER; K. RAMASESHAN; V. A. DIWADKAR; P. BRAMBILLA. *Wayne State Univ., Scientific Institute, IRCCS Eugenio Medea, Univ. of Udine.*

3:00 G6 **216.11** Developing consistency in reaction time associated with stable individual differences in motor system microstructure - a longitudinal DTI study of children and adolescents. K. S. MADSEN*; T. L. JERNIGAN; C. REUTER; W. K. THOMPSON; W. F. C. BAARÉ. *Copenhagen Univ. Hosp., Metropolitan Univ. Col., Univ. of California San Diego, Inst. of Biol. Psychiatry, Mental Hlth. Ctr. Sct. Hans.*

4:00 G7 **216.12** Hippocampal shape analysis in typical development. K. M. LYNCH*; L. ZHAO; A. TOGA; K. CLARK. *USC.*

1:00 G8 **216.13** Adaptive adjustment in cognitive control over reward in adolescence. J. Y. DAVIDOW*; K. R. A. VAN DIJK; J. SNYDER; C. VIDAL; M. A. SHERIDAN; L. H. SOMERVILLE. *Harvard Univ., Massachusetts Gen. Hosp., Univ. of North Carolina.*

2:00 G9 **216.14** Association among sleep, neural circuitry, and pubertal hormones during adolescence: Implications for risky decision-making. D. GOLDENBERG*; S. M. TASHJIAN; A. GALVAN. *UCLA.*

3:00 G10 **216.15** I want it now! The role of pubertal testosterone in impatience of adolescent boys. C. LAUBE*; R. LORENZ; W. VAN DEN BOS. *Max Planck Inst. For Human Develop.*

4:00 G11 **216.16** The 'triple threat': Influence of peers, excitement, and reward on cognitive capacity in adolescents. K. S. BREINER*; A. LI; A. O. COHEN; L. STEINBERG; R. J. BONNIE; E. S. SCOTT; K. A. TAYLOR-THOMPSON; M. D. RUDOLPH; J. CHEIN; J. A. RICHESON; D. V. DELLARCO; D. A. FAIR; B. J. CASEY; A. GALVAN. *UCLA, Sackler Inst. for Developmental Psychology, Weill Cornell Med. Col., Temple Univ., Univ. of Virginia, Columbia Univ., New York Univ., Oregon Hlth. & Sci. Univ., Northwestern Univ., Yale Univ., UCLA, Brain Res. Institute, UCLA.*

1:00 G12 **216.17** Resting-state functional connectivity can differentiate children and adults: An EEG study. S. KANG; D. KIM; S. JIN*. *Seoul Natl. Univ. Col. of Nursing, Natl. Standard Reference Data Ctr. for Korean EEG, Seoul Natl. Univ. Col. of Med.*

2:00 G13 **216.18** Age associated differences in resting-state network topology predict differences in task-evoked activity. M. Y. CHAN*; F. ALHAZMI; N. K. SAVALIA; D. C. PARK; P. F. AGRES; G. S. WIG. *Univ. of Texas at Dallas, Univ. of Texas Southwestern Med. Ctr.*

POSTER

217. Amino Acid and Other Transporters

Theme B: Neural Excitability, Synapses, and Glia

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 G14 **217.01** SLC7A10 - a novel candidate for human hyperekplexia. C. VILLMANN*; S. ATAK; R. J. HARVEY; P. DREHMANN. *Univ. Wuerzburg, UCL Sch. of Pharm.*

2:00 G15 **217.02** Ferroptosis and the molecular regulation of SLC7A11 in glioma. R. A. UMANS*; J. MARTIN; E. THOMPSON; H. SONTHEIMER. *Virginia Tech. Carilion Res. Inst., Virginia Tech. Carilion Res. Inst.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 G16 **217.03** Functional characterization of the mitochondrial na^+-Ca^{2+} exchanger (nclx) in the peripheral nervous system using nclx knock-out mice. J. RYSTED*; Z. LIN; A. GNANASEKARAN; Y. USACHEV. *Univ. of Iowa.*

4:00 G17 **217.04** Identification of a novel osmoregulatory membrane transporter in D. Melanogaster. M. M. ERIKSSON*; E. PERLAND; E. LEKHOLM; M. WILLIAMS; R. FREDRIKSSON. *Uppsala Univ., Uppsala Univ.*

1:00 G18 **217.05** Characterization of solute carrier transporters in the brain. S. BAGCHI*; V. ARAPI; R. FREDRIKSSON. *Uppsala Univ.*

2:00 G19 **217.06** Hipoglucemic plant Ibervillea sonorae extracts affect the Glucose Transporters expression GLUT1 and GLUT3 in glial and granular cells. M. G. RAMÍREZ-SOTELO*; S. ROSALES-SOSA; M. OLIVER-SLAVADOR; I. Y. ARCINIEGA-CARREÓN; A. I. CABRERA-LLANOS; A. ORTEGA. *Inst. Politécnico Nacional-UPIBI, Inst. Politécnico Nacional-UPIBI, Inst. Politécnico Nacional-UPIBI, Inst. Politécnico Nacional-UPIBI, Ctr. de Investigación y de Estudios Avanzados del IPN.*

3:00 G20 **217.07** Functional characterization of an amino acid transporter situated in the Golgi apparatus. K. NORDENANKAR*; F. LINDBERG; R. FREDRIKSSON. *Uppsala Univeristet, Mol. Neuropharm.*

4:00 G21 **217.08** Potentiation of presynaptic glutamate release by pregnanolone sulfate: Mechanisms and implications for neuroprotection. T. SMEJKALOVA*; D. CHUDA; L. VYKLICKY. *Inst. of Physiology, CAS.*

1:00 G22 **217.09** Visualization of neurotransmitter released from cultured granule cells and the neuroshere cells using enzyme-linked photo-assay combined with ICA. H. MABUCHI; N. TAKAHASHI; K. SATO; Y. SEKINO; N. HOZUMI; S. YOSHIDA*. *Toyohashi Univ. Technol., Natl. Inst. of Hlth. Sci.*

2:00 G23 **217.10** The concentration of extracellular glutamate in the nucleus accumbens. D. CHIU*; C. E. JAHR. *Vollum Inst.*

3:00 G24 **217.11** ● Synapse specific physiology of somatostatin interneurons is driven by Elfn1 mediated presynaptic recruitment of mGluR7 and GluR6-containing kainate receptors. T. J. STACHNIAK*; E. L. SYLWESTRAK; B. J. HALL; A. GHOSH. *Roche Innovation Ctr. Basel, Stanford Univ., Univ. of Basel, E-Scape Bio.*

4:00 G25 **217.12** vGluT3+ cells in the mouse hippocampus exhibit diverse physiological properties. C. A. BURLESON*; A. BENZ; S. MENNERICK. *Washington Univ. in St. Louis.*

1:00 G26 **217.13** Ambient glutamate tonically excites cortical interneurons via NMDA receptor activation during early postnatal development: Implications for neonatal epileptogenesis. E. HANSON*; C. DULLA. *Tufts Univ.*

2:00 G27 **217.14** Understanding the interplay of proline and glutamate metabolism in neurons. J. PANDHARE*; S. DASH; M. BALASUBRAMANIAM; F. VILLALTA; C. DASH. *Meharry Med. Col., Meharry Med. Col., Meharry Med. Col., Meharry Med. Col.*

3:00 G28 **217.15** ● Stable isotope labeled L-kynurenine (KYN) metabolism investigated using *in vivo* microdialysis coupled with a novel high content LC/MS/MS method. D. P. BUDAC; D. SONG; M. CAJINA; A. LEE; B. M. CAMPBELL; G. LI; C. SÁNCHEZ; C. FORRAY*; V. S. PALAMARCHOUK; G. N. SMAGIN. *Lundbeck USA, PsychoGenics Inc.*

4:00 G29 **217.16** ● *In vivo* characterization of CNS penetrant KMO inhibitor using microdialysis coupled with a novel high content LC/MS/MS method. G. SMAGIN; D. P. BUDAC; M. CAJINA; A. LEE; B. CAMPBELL; G. LI; C. SANCHEZ*; C. FORRAY; V. S. PALAMARCHOUK; D. SONG. *Lundbeck Res., Lundbeck Rese USA, Inc., PsychoGenics Inc.*

1:00 G30 **217.17** Verification of the cross immunoreactivity of A60, a mouse monoclonal antibody against neuronal nuclear protein. M. SHANPING*; X. GUOXIANG. *Renmin Hosp. of Wuhan Univ., Dept. of Anesthesiol. and Critical Care Medicine, Children's Hosp. of Philadelphia.*

2:00 G31 **217.18** Inhibition of large neutral amino acid transporters suppresses kynurenic acid production via inhibition of kynurenine uptake in rodent brain. A. SEKINE; Y. KUROKI; T. URATA; N. MORI; T. FUKUWATARI*. *The Univ. of Shiga Prefecture.*

3:00 G32 **217.19** Synapse maturation and stabilization of axonal branches is promoted by D-serine in the developing visual system of the Xenopus tadpole. M. VAN HORN*; A. STRASSER; L. POLLEGIONI; E. RUTHAZER. *McGill Univ., Univ. Insubria.*

4:00 G33 **217.20** Investigating the effects of D-alanine on pituitary intracellular signalling: A comparison with D-serine. K. NAIDOO*; P. W. J. BURNET. *Univ. of Oxford.*

1:00 G34 **217.21** The ascending projections from the median raphe region are mainly glutamatergic in the mouse forebrain. A. SZONYI*; M. I. MAYER; C. CSEREP; V. T. TAKACS; M. WATANABE; T. F. FREUND; G. NYIRI. *Inst. of Exptl. Med. - HAS, Hokkaido Univ.*

2:00 G35 **217.22** Cellular architecture and transmitter phenotypes of neurons of the mouse median raphe region. K. E. SÓS*; M. I. MAYER; C. CSEREP; F. S. TAKACS; A. SZONYI; T. F. FREUND; G. NYIRI. *Inst. of Exptl. Medicine, HAS.*

3:00 G36 **217.23** Constitutive phosphomimetic KCC2 inhibition in developing mice causes GABA-dependent network excitability and autistic-like behavior. L. I. PISELLA*; I. KHALILOV; D. DIABIRA; J. ZHANG; J. DUAN; I. MEDINA; K. T. KAHLE; J. GAIARSA. *Inmed/Umr901, Univ. of Dundee, Harvard Univ., Yale Univ.*

4:00 G37 **217.24** ● $GABA_A$ receptor reversal potential as a reporter for cation-chloride co-transporter activity in Xenopus oocytes. F. KNOFLACH*; M. HERNANDEZ; M. SAXE; S. BERTRAND; D. BERTRAND. *F. Hoffmann-La Roche Ltd, HiQScreen Sàrl.*

POSTER

218. Monoamine Signaling

Theme B: Neural Excitability, Synapses, and Glia

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 G38 **218.01** Delineate the serotonin innervation in octopus arm by immunohistochemistry. J. BELLIER*; Y. XIE; S. M. FAROUK; Y. SAKAUE; I. TOOYAMA; H. KIMURA. *Shiga Univ. of Med. Sci., Beihua Univ., Suez Canal Univ., Shiga Univ. of Med. Sci.*

2:00 G39 **218.02** Serotonin modulates mitochondrial biogenesis and function in cortical neurons. S. E. FANIBUNDA*; A. SOOD; A. D. B. VAIDYA; U. SEETHARAM-KOLTHUR; V. A. VAIDYA. *Tata Inst. of Fundamental Res., Med. Res. Centre, Kasturba Hlth. Society.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 G40 **218.03** Transcriptomic and functional diversity of serotonin neuron subtypes. B. W. OKATY*; M. E. FRERET; B. D. ROOD; V. NIEDERKOFLER; T. E. ASHER; R. DOSUMU-JOHNSON; R. D. BRUST; S. M. DYMECKI. *Harvard Med. Sch.*

4:00 G41 **218.04** Histone serotonylation, a novel mechanism of neuroepigenetic plasticity. L. FARRELLY*; R. THOMPSON; S. ZHAO; A. LEPACK; Y. LU; H. ZEBROSKI III; O. BERTON; H. MOLINA; H. LI; T. MUIR; I. MAZE. *Mount Sinai, Princeton Univ., Tsinghua Univ., Rockefeller Univ.*

1:00 G42 **218.05** Potential roles for histone dopaminylation in cocaine induced transcriptional and behavioral plasticity. A. LEPACK*; L. FARRELLY; A. C. W. SMITH; Y. LU; R. THOMPSON; R. O'CONNOR; S. ZHAO; Z. WANG; H. LI; D. M. DIETZ; T. MUIR; P. J. KENNY; I. MAZE. *Icahn Sch. of Med. at Mount Sinai, Princeton Univ., Tsinghua Univ., Univ. at Buffalo, Univ. at Buffalo.*

2:00 G43 **218.06** GIRK-mediated inhibition of lateral orbitofrontal cortex neurons by monoamines is lost following chronic exposure to ethanol. S. NIMITVILAI*; M. F. LOPEZ; P. J. MULHOLLAND; J. J. WOODWARD. *Med. Univ. of South Carolina.*

3:00 G44 **218.07** Incomplete marking of cerebral cortical interneuron expression patterns in Drd1 receptor BAC transgenic mice. Y. JIN*; K. M. MONEY; V. G. FUENTES; L. R. ANDERSON; G. D. STANWOOD. *Florida State Univ. Col. of Med., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Florida State Univ. Col. of Med.*

4:00 G45 **218.08** Epigenetic regulation of phenyethanolamine N-methyltransferase: Implications for adrenaline biosynthesis. S. KHURANA*; S. THARMALINGAM; K. VENKATARAMAN; T. C. TAI. *Northern Ontario Sch. of Med., Huntington Univ., Laurentian Univ., Laurentian Univ., Laurentian Univ.*

1:00 G46 **218.09** Memory, a key component of dementias: Serotonergic markers. A. MENESES*. *Cinvestav - IPN.*

2:00 G47 **218.10** Proton magnetic resonance spectroscopy assessment of the neurochemical profile in mice genetically depleted of brain serotonin. F. GHODDOUSSI*; D. I. BRIGGS; D. M. KUHN; M. P. GALLOWAY. *Wayne State University, Sch. of Med., Wayne State University, Sch. of Med., John Dingell VA Med. Ctr., Wayne State University, Sch. of Med.*

3:00 G48 **218.11** Neurochemical profile of dorsal raphe projections to the rat medial prefrontal cortex. E. W. PROUTY*; B. D. WATERHOUSE. *Drexel Univ. Col. of Med., Rowan Univ. Sch. of Med.*

4:00 G49 **218.12** Imbalance of serotonin homeostasis during adulthood affects serotonergic neuronal circuitry. M. PRATELLI*; B. PELOSI; S. MIGLIARINI; M. PASQUALETTI. *Univ. of Pisa, Univ. catholique de Louvain, Inst. of Neurosci., Ctr. for Neurosci. and Cognitive Systems, Inst. Italiano di Tecnologia.*

1:00 G50 **218.13** p11 corticostriatal neurons have distinctive 5-HT responses sensitive to chronic social isolation stress and to antidepressant treatment. D. SARGIN*; K. PERIT; E. F. SCHMIDT; R. C. UTHAIAH; N. HEINTZ; P. GREENGARD; E. K. LAMBE. *Univ. of Toronto, The Rockefeller Univ., The Rockefeller Univ., The Rockefeller Univ.*

2:00 H1 **218.14** Serotonin and cortical disinhibition: Novel co-operation between 5-HT_{1A} and 5-HT_{2A} receptors in prefrontal cortex. M. K. TIAN*; E. K. LAMBE. *Univ. of Toronto.*

3:00 H2 **218.15** ▲ The role of serotonergic signaling in Daphnia magna swimming. O. BURT; M. L. BECKMAN*. *Augsburg Col.*

4:00 H3 **218.16** Adult brain serotonin deficiency causes hyperactivity, circadian disruption, and elimination of siestas. M. S. WHITNEY*; A. M. SHEMERY; A. M. YAW; L. J. DONOVAN; J. GLASS; E. S. DENERIS. *Case Western Reserve Univ., Kent State Univ.*

1:00 H4 **218.17** Noradrenaline innervation in the primate thalamus: First order sensory nuclei versus higher order nuclei. I. PÉREZ-SANTOS; C. CAVADA*. *Univ. Autonoma Madrid, Fac Medicina.*

2:00 H5 **218.18** Norepinephrine activates synchronized inhibitory synaptic inputs to BLA principal neurons. X. FU*; J. TASKER. *Tulane Univ.*

3:00 H6 **218.19** ▲ The brain serotonin matrix: Platelet and microglial elements. K. A. RIPARETTI; M. E. VICARI; E. J. SOPIRA; S. L. STARR; S. JANUSONIS*. *Univ. of California, Santa Barbara.*

4:00 H7 **218.20** The catecholamine receptors ADBR1 and ADBR2 exhibit differential coupling to the cyclic AMP sensor NCS-Rapgef2. L. E. EIDEN*; A. C. EMERY; C. WESTOVER; W. XU; M. V. EIDEN. *NIH, NIMH-IRP, NIH, NIMH-IRP.*

1:00 H8 **218.21** Locomotor activity in vesicular monoamine transporter 1 knockout mice. J. K. STEWART*; K. A. WEBSTER; J. J. WINDLE; K. FISCHER-STENGER; Y. GENG; E. C. GONYE; J. H. PORTER. *VA Commonwealth Univ., VA Commonwealth Univ., VA Commonwealth Univ., Univ. of Richmond.*

2:00 H9 **218.22** Mechanisms of vesicular monoamine transporter-2 degradation. E. K. STACHOWSKI*; D. O. SAMBO; H. KHOSHBOUEI; G. E. TORRES. *Univ. of Pittsburgh, Univ. of Florida, Univ. of Florida.*

3:00 H10 **218.23** Fluoxetine induced behavioral alterations in *Drosophila melanogaster*. N. ROSA; O. GROVER; M. ASTHA; P. G. MANDELA*. *Univ. of St. Joseph.*

POSTER

219. NMDA Receptors I

Theme B: Neural Excitability, Synapses, and Glia

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 H11 **219.01** The development of subtype-selective negative allosteric modulators of the NMDA receptor for the study of synaptic plasticity and associated diseases. E. BURNELL*; K. SAPKOTA; M. IRVINE; R. THATCHER; G. CULLEY; A. VOLIANSKIS; Z. BORTOLOTTO; G. L. COLLINGRIDGE; D. T. MONAGHAN; D. E. JANE. *Univ. of Bristol, Univ. of Nebraska Med. Ctr., Queen Mary Univ. of London, Univ. of Toronto, Mount Sinai Hosp.*

2:00 H12 **219.02** Activation of light sensitive adenylyl cyclase changes the time course of long-term potentiation at the Schaffer collateral - CA1 synapse in mouse hippocampal slices. A. S. AVILA*; J. GEORGIOU; K. OKAMOTO; G. L. COLLINGRIDGE. *Sinai Hlth. Syst., Univ. of Toronto, Univ. of Toronto.*

3:00 H13 **219.03** Distinct structural determinants within the GluN2C subunit regulate the surface delivery of NMDA receptors. M. KANIAKOVA*; K. LICHNEROVA; K. SKRENKOVA; L. VYKLICKY; M. HORAK. *Inst. of Physiol. CAS.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 H14 **219.04** The characterization of N-glycans on cerebellar and recombinant NMDA receptor subunits. M. HORAK*; K. LICHNEROVA; M. KANIAKOVA; K. SKRENKOVA. *Inst. of Physiol. AS CR.*

1:00 H15 **219.05** The role of N-glycosylation in trafficking of NMDA receptors. K. SKRENKOVA*; K. LICHNEROVA; M. KANIAKOVA; S. P. PARK; Y. WANG; R. S. PETRALIA; Y. H. SUH; M. HORAK. *Inst. of Physiol. CAS, Fac. of Science, Charles Univ. in Prague, Seoul Natl. Univ. Col. of Med., NIH.*

2:00 H16 **219.06** ● Structural basis for negative allosteric modulation of GluN2A-containing NMDA receptors. F. YI*; T. MOU; R. A. VOLKMANN; F. S. MENNITI; S. R. SPRANG; K. B. HANSEN. *Dept. of Biomed. and Pharmaceut. Sciences, Univ. of Montana, Ctr. for Biomolecular Structure and Dynamics, Div. of Biol. Sci., BioPharmaWorks, LLC, MindImmune Therapeut.*

3:00 H17 **219.07** X11 and X11L regulate the non-synaptic NMDA receptor localization. R. MOTODATE*; Y. SAITO; T. SUZUKI. *Hokkaido Univ.*

4:00 H18 **219.08** $STEP_{61}$ differentially affects NMDARs and AMPARs. S. WON*; S. INCONTRO; R. NICOLL; K. ROCHE. *NIH, Univ. of California.*

1:00 H19 **219.09** Ontogenic profile and synaptic distribution of GluN3 proteins in rat brain and hippocampal neurons. C. LOW*; S. WEE; C. TAN; Y. CHEONG; S. KHANNA. *Yong Loo Lin Sch. of Med., Yong Loo Lin Sch. of Med., Natl. Univ. of Singapore, Natl. Univ. of Singapore.*

2:00 H20 **219.10** The nuclear localization of NMDA receptor in human pulmonary artery smooth muscle cells. Y. DONG; D. R. LYNCH*. *Univ. of Pennsylvania Perelman Sch. of Med.*

3:00 H21 **219.11** Adaptation of NMDARs during exposure to HIV-1 Tat requires GluN2A-subunit signalling. M. GREEN*; S. THAYER. *Univ. of Minnesota, Univ. of Minnesota.*

4:00 H22 **219.12** ● An *in-vivo* target engagement assay for NMDA receptor positive allosteric modulation. M. WEBER*; J. ELSTROTT; Y. CHEN; T. WANG; Z. JIANG; B. LIEDERER; G. DESHMUKH; C. CHAN; B. SELLERS; M. VOLGRAF; J. SCHWARZ; D. HACKOS; R. WEIMER; M. SHENG; K. SCEARCE-LEVIE; J. HANSON. *Genentech Inc., Genentech Inc., Chinese Acad. of Sci., Genentech Inc., Genentech Inc., Denali Therapeut.*

1:00 H23 **219.13** Inhibition of NMDA receptors by the uncharged form of memantine. N. G. GLASGOW*; J. W. JOHNSON. *Univ. of Pittsburgh.*

2:00 H24 **219.14** ● A novel NMDAR positive allosteric modulator that potentiates currents via interaction with the GluN1 transmembrane domain. T. WANG*; D. H. HACKOS; B. M. BROWN; B. D. SELLERS; P. J. LUPARDUS; H. J. A. WALLWEBER; E. WONG; M. VOLGRAF; J. B. SCHWARZ; J. E. HANSON. *Genentech, Genentech, Genentech.*

3:00 H25 **219.15** The new hallucinogen, ephenidine, is an n-methyl-d-aspartate receptor antagonist. H. KANG*; P. PARK; Z. A. BORTOLOTTO; G. L. COLLINGRIDGE; J. WALLACH; S. BRANDT; D. LODGE. *Univ. of Bristol, Univ. of Toronto, Lunnenfeld-Tanenbaum Res. Inst., Univ. of the Sci., Liverpool John Moores Unversity.*

4:00 H26 **219.16** Functional interaction between presynaptic receptors on dopaminergic and noradrenergic nerve terminals of the rat central nervous system. M. PADOLECCHIA*; G. OLIVERO; J. CHEN; A. PITTALUGA; M. MARCHI; M. GRILLI. *Univ. of Genoa.*

1:00 I1 **219.17** Structural and pharmacological evaluation of a class of GluN2A-selective competitive NMDAR antagonists with novel binding mode. G. E. LIND*; A. PINTO; L. TAMBORINI; P. CONTI; K. B. HANSEN. *Univ. of Montana, Univ. of Milan.*

2:00 I2 **219.18** ● Glun2b-containing nmdars and depression-like behavior: Synaptic, cellular, and circuit mechanisms. O. H. MILLER*; B. J. HALL. *Tulane University, Neurosci. Program, Hoffman-La Roche.*

3:00 I3 **219.19** Presynaptic NMDA receptors contribute to short-term plasticity at mossy fiber-CA3 synapses. P. J. LITUMA*; H. KWON; R. LUJAN; P. E. CASTILLO. *Albert Einstein Col. of Med., Univ. of Castilla-La Mancha Inst. de Investigacion en Discapacidades Neurologicas (IDINE).*

4:00 I4 **219.20** Local calmodulin coupling to NMDA receptors mediates their Ca^{2+}-dependent inactivation. G. IACOBUCCI*; G. POPESCU. *State Univ. of New York At Buffalo.*

1:00 I5 **219.21** ▲ Activity-dependent postsynaptic signaling in hippocampal neurons is altered by transgenic expression of chimeric NMDA receptor GluN2 subunits. S. HUSSAIN*; J. P. FOTANG; M. P. GREER; J. M. OILVER; M. DARAB; G. P. MAI; T. C. DUMAS. *George Mason Univ., George Mason Univ.*

2:00 I6 **219.22** ● Evaluation of NMDA receptor human mutations suggests a role for pre-M1 helix in gating. M. J. MCDANIEL*; K. K. OGDEN; W. CHEN; S. A. SWANGER; C. HU; A. TANKOVIC; H. KUSUMOTO; G. J. KOSOBUCKI; A. J. SCHULIEN; Z. SU; J. PECHA; S. BHATTACHARYA; E. AIZENMAN; S. F. TRAYNELIS; H. YUAN. *Emory Univ., Univ. of Pittsburgh Sch. of Med. and Pittsburgh Inst. for Neurodegenerative Dis.*

3:00 I7 **219.23** PSD-95 blocks amyloid-β induced depression by preventing NMDA receptor metabotropic actions. K. B. DORE*; Z. CARRICO; R. MALINOW. *UCSD, UCSD.*

4:00 I8 **219.24** A long non-coding RNA induced in alcoholics reduces NMDA receptor expression without modifying GABA-A nor glycine receptor expression. C. BORGHESE*; K. J. LAWRENCE; E. OSTERNDORFF-KAHANEK; S. P. FARRIS; R. A. HARRIS. *Univ. of Texas At Austin.*

1:00 I9 **219.25** Missense mutations reveal a key role for the M4 eukaryotic specific transmembrane segment in NMDA receptor gating. J. AMIN; K. CHAN; Q. GAN; L. P. WOLLMUTH*. *Stony Brook Univ., Stony Brook Univ., Stony Brook Univ., Stony Brook Univ.*

1:00 DP02 **219.26** (Dynamic Poster) Molecular dynamics simulations reveal the importance of glycans on N-methyl-D-aspartate (NMDA) receptors. A. SINITSKIY*; N. STANLEY; V. PANDE. *Stanford Univ., Genentech Inc.*

3:00 I10 **219.27** Transient neuronal depolarization induces rapid, NMDA receptor-dependent, endogenously reversible and recurrent fission of the neuronal endoplasmic reticulum in physiology and disease *in vivo*. K. KUCHARZ*; M. LAURITZEN. *Univ. of Copenhagen, Glostrup Hosp.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

220. Voltage-Gated Ca2+ Channels

Theme B: Neural Excitability, Synapses, and Glia

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 I11 **220.01** Cav3.1-mediated calcium entry triggers CaM / αCaMKII-dependent CREB activation and potentiation of the parallel fiber EPSP in Purkinje cells. H. ASMARA*; I. MICU; A. P. RIZWAN; G. SAHU; B. A. SIMMS; F. ZHANG; P. K. STYS; G. W. ZAMPONI; R. W. TURNER. *Univ. of Calgary.*

2:00 I12 **220.02** Densin-180 regulates the cell-surface density of voltage-gated $ca_v1.2$ Ca^{2+} channels. S. WANG*; J. HAGEN; R. I. STANIKA; G. J. OBERMAIR; M. B. KENNEDY; R. J. COLBRAN; A. LEE. *Univ. of Iowa, Innsbruck Med. Univ., Caltech, Vanderbilt Univ.*

3:00 J1 **220.03** Cdk5 phosphorylates Cav1.3 channels and regulates its activity. S. LOYA*; R. GONZÁLEZ; A. SANDOVAL; M. RODRIGUEZ SANCHEZ; R. FELIX; D. ERLIJ; B. FLORÁN. *Ctr. De Investigación Y Estudios Avanzados Del Inst. Politécnico Nacional, Hosp. Manuel Gea González, CINVESTAV-IPN, State Univ. of New York.*

4:00 J2 **220.04** Presynaptic α2δ subunits of voltage-gated calcium channels modulate postsynaptic $GABA_A$-receptor abundance. S. GEISLER*; C. L. SCHÖPF; R. STANIKA; L. TRAXLER; G. J. OBERMAIR. *Med. Univ. Innsbruck.*

1:00 J3 **220.05** Phosphorylation of S1928 controls regulation of L-type Cav1.2 channel activity by the β2-adrenergic receptor in neurons. J. L. PRICE*; T. PATRIARCHI; E. HAMMES; C. CHEN; F. HOFMANN; M. NAVEDO; J. HELL. *Univ. of California Davis, Univ. of California Davis, Tech. Univ. of Munich.*

2:00 J4 **220.06** Glycosylation of Cav3.2 channels contributes to hyperalgesia in peripheral neuropathy of type 1 diabetes. S. M. TODOROVIC*; S. L. JOKSIMOVIC; J. G. EVANS; P. EGGAN; V. JEVTOVIC-TODOROVIC. *Univ. of Colorado Anschutz Med. Campus, Univ. of Virginia.*

3:00 J5 **220.07** Early development of thalamic low-threshold T-type calcium current in the VPM of C57BL/6 mice. Q. MIAO*; J. L. NOEBELS. *Dept. of Neurol., Baylor Col. of Med., Baylor Col. of Med.*

4:00 J6 **220.08** Presynaptic R-type (Cav2.3) channels mediate glutamate release at habenulo-interpeduncular nucleus synapses. D. VANDAEL*; P. BHANDARI; R. SHIGEMOTO; P. JONAS. *Inst. of Sci. and Technol. (IST) Austria.*

1:00 J7 **220.09** Modeling voltage sensor movement in Cav2.1 calcium channels. S. ALDRICH*; M. H. CHENG; S. D. MERINEY; I. BAHAR. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

2:00 J8 **220.10** Role of R-type calcium channel (Cav2.3) in medial habenula to interpeduncular nucleus pathway. P. BHANDARI*; L. K. PARAJULI; K. TAKAO; T. MIYAKAWA; Y. KOBAYASHI; K. F. TANAKA; R. SHIGEMOTO. *Inst. of Sci. and Technol. Austria, Natl. Inst. for Physiological Sci., Univ. of Toyama, Fujita Hlth. Univ., RIKEN Brain Sci. Inst., Sch. of Medicine, Keio Univ.*

3:00 J9 **220.11** ▲ Cacna1a loss-of-function mutations impair synaptic release properties from frontal cortical fast-spiking interneurons and result in cognitive and behavioural impairments in humans and mice. A. LUPIEN-MEILLEUR*; X. JIANG; I. RIEBE; L. DAMAJ; C. VANASSE; L. GAGNON; J. LACAILLE; E. ROSSIGNOL. *CHU Sainte-Justine, Univ. de Montréal.*

4:00 J10 **220.12** Regulation of $Ca_V1.3$ channels by the cGMP-PKG signaling pathway. A. SANDOVAL*; P. DURÁN; M. A. GANDINI; V. CASTILLO; A. ANDRADE; R. FELIX. *FES Iztacala UNAM, Cinvestav-IPN, Hotchkiss Brain Institute, Cumming Sch. of Medicine, Univ. of Calgary, Univ. of New Hampshire.*

1:00 J11 **220.13** AChR pre-patterning in early neuromuscular junction development does not require L-type calcium currents. M. M. KAPLAN*; N. SULTANA; A. BENEDETTI; A. DAYAL; M. GRABNER; N. F. LINDE; S. PAPADOPOULOS; G. J. OBERMAIR; B. E. FLUCHER. *Med. Univ. Innsbruck, Med. Univ. Innsbruck, Univ. of Cologne.*

2:00 J12 **220.14** Cannabinoid CB1 and CB2 receptors dichotomously modulate L- and T-type Ca^{2+} channels in rat retinal ganglion cells. Z. WANG*; W. QIAN; N. YIN; F. GAO; Y. MIAO; Q. LI; X. YANG; X. SUN. *Fudan Univ., Fudan Univ.*

3:00 J13 **220.15** Proteolytic processing of the L-type calcium channel Cav1.2 α_1 subunit occurs mostly at its C-terminus. O. BUONARATI*; P. B. HENDERSON; J. W. HELL. *UC Davis, UC Davis.*

4:00 J14 **220.16** Alternative splicing of P/Q-type Ca^{2+} channels controls neurotransmitter release and short-term synaptic plasticity. A. THALHAMMER*; A. CONTESTABILE; T. SOONG; Y. GODA; L. A. CINGOLANI. *Inst. Italiano di Tecnologia, Inst. Italiano di Tecnologia, Yong Loo Lin Sch. of Medicine, Natl. Univ. of Singapore, Natl. Neurosci. Inst., MRC Lab. for Mol. Cell Biology, UCL, RIKEN Brain Sci. Inst.*

1:00 J15 **220.17** The cellular mechanism that controls cell-specific e37a inclusion during alternative splicing of voltage-gated $Ca_V2.2$ channel pre mRNA. E. J. LOPEZ SOTO*; S. E. ALLEN; K. PATEL; D. M. DUBREUIL; S. DENOME; D. LIPSCOMBE. *Brown Univ.*

2:00 J16 **220.18** ▲ PIP_2 in pancreatic β-cells regulates voltage-gated calcium channels by a voltage-independent pathway. L. DE LA CRUZ; E. I. PUENTE; A. REYES-VACA; I. ARENAS; J. GARDUÑO; J. BRAVO-MARTÍNEZ; D. E. GARCIA-DIAZ*. *Univ. Nacional Autonoma Mexico, Ctr. de Ciencias de la Complejidad, UNAM.*

3:00 J17 **220.19** Loss of regulated Cav2.3 expression in a mouse model of Fragile X Syndrome. E. E. GRAY*; Y. LIU; I. TRANG; D. A. HOFFMAN. *NICHD, Natl. Inst. of Hlth., NICHD, Natl. Inst. of Hlth.*

4:00 J18 **220.20** Molecular determinants masking Ca^{2+}-dependent facilitation of $Ca_v2.2$ channels. J. R. THOMAS*; J. HAGEN; A. LEE. *Univ. of Iowa.*

1:00 K1 **220.21** Essential oil of Alpinia zerumbet inhibits low and high voltage activated calcium channels in sensory neurons. T. SANTOS-NASCIMENTO*; K. M. VERAS; A. N. COELHO-DE-SOUZA; L. MOREIRA-JÚNIOR; J. H. LEAL-CARDOSO. *State Univ. of Ceara.*

2:00 K2 **220.22** Protein degradation mechanism of $Ca_V2.1$ (P/Q-type) Ca^{2+} channel. C. TANG; S. FU; C. JENG*. *Natl. Taiwan Univ., Natl. Yang-Ming Univ.*

3:00 K3 **220.23** C-terminal splice variation reveals new insights into calmodulin regulation of $Ca_v1.4$ channels. B. WILLIAMS*; V. KEROV; F. HAESELEER; A. LEE. *Univ. of Iowa, Univ. of Iowa, Univ. of Washington.*

4:00 K4 **220.24** The role of T-type calcium channels in the development of incisional pain model in rats. S. JOKSIMOVIC*; S. M. JOKSIMOVIC; H. OSURU; P. EGGAN; V. JEVTOVIC-TODOROVIC; S. M. TODOROVIC. *Anschutz Med. Campus Univ. of Colorado, Anschutz Med. Campus Univ. of Colorado Denver, Univ. of Colorado Denver Anschutz Med. Campus.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 K5 **220.25** Withdrawn.

2:00 K6 **220.26** Disruption of the Cav1.3 C-terminal automodulatory domain attenuates Cav 1.3/BK channel coupling in mouse chromaffin cells. L. GUARINA*; D. H. F. VANDAEL; A. MARCANTONI; J. STRIESSNIG; E. CARBONE. *Univ. Degli Studi Di Torino, Inst. of Sci. and Technol. Austria, Univ. of Innsbruck.*

POSTER

221. Synaptic Transmission: Synaptic Integration

Theme B: Neural Excitability, Synapses, and Glia

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 K7 **221.01** Improved probes for investigating glutamate neurotransmission. N. HELASSA; C. DURST; U. ARIF; C. SCHULZE; T. OERTNER; K. TÖRÖK*. *SGUL, Inst. for Synaptic Physiol.*

2:00 K8 **221.02** An integrated analysis for the dynamical responses of pre- and postsynaptic neurons through synaptic encoding in the *C. elegans* salt-chemotaxis circuit. M. KURAMOCHI*; M. DOI. *Biomed. R.I., AIST, Univ. of Tsukuba, JSPS Res. Fellow.*

3:00 K9 **221.03** Differential effects of dopaminergic D2 receptor activation on synaptic responses in a subset of layer V mouse medial prefrontal pyramidal neurons. J. M. LEYRER*; M. THOMAS. *Univ. Of Northern Colorado, Univ. of Northern Colorado.*

4:00 K10 **221.04** A distance-dependent gradient in presynaptic release probability along tapering dendrites. F. GRILLO*; J. BURRONE. *Kings Col. London.*

1:00 K11 **221.05** Spine neck morphology shapes postsynaptic potentials in hippocampal neurons. J. TONNESEN*; D. CATTAERT; V. NÄGERL. *Univ. of Bordeaux, CNRS UMR 5297, CNRS UMR 5287.*

2:00 K12 **221.06** Subquantalized synaptic transmission at single active zone contained central synapses. M. KUNPENG*; J. DAI; Q. ZHU; P. SAH; J. SUN. *Inst. of Biophysics,Cas, ShanghaiTech Univ., The Queensland Brain Institude, the Univ. of Queenland.*

3:00 K13 **221.07** Selectivity to temporal information arising from the interaction between dynamic synapses and intrinsic subthreshold oscillations. P. VARONA*; F. BARONI; R. LATORRE; J. J. TORRES. *Univ. Autonoma de Madrid, Monash Univ., Univ. de Granada.*

4:00 K14 **221.08** Impact of vortioxetine on synaptic integration in prefrontal-subcortical circuits: Comparisons with escitalopram. S. CHAKROBORTY*; E. DALE; A. PEHRSON; C. SÁNCHEZ MORILLO; A. R. WEST. *Rosalind Franklin Univ. of Med. and Sci., Lundbeck Res. USA, Inc.*

1:00 K15 **221.09** Neurons in the medial entorhinal cortex integrate locomotion speed information from glutamatergic septo-entorhinal projections. D. JUSTUS*; D. DALÜGGE; S. BOTHE; F. FUHRMANN; C. HANNES; H. KANEKO; D. FRIEDRICHS; L. SOSULINA; I. SCHWARZ; D. A. ELLIOTT; S. SCHOCH; F. BRADKE; M. K. SCHWARZ; S. REMY. *German Ctr. for Neurodegenerative Dis. (DZNE), Univ. of Bonn Med. Ctr., Univ. of Bonn Med. Ctr.*

2:00 K16 **221.10** Disruption of coordinated pre- and postsynaptic maturation underlies the defects in hippocampal synapse stability and plasticity in Abl2/Arg-deficient mice. X. XIAO*; A. LEVY; B. ROSENBERG; M. HIGLEY; A. KOLESKE. *Yale Univ., Yale Univ., Yale Univ.*

3:00 K17 **221.11** Anatomical and physiological aspects of the cerebellar impact on thalamic relay neurons. S. V. GORNATI*; C. B. SCHAEFER; C. I. DE ZEEUW; F. E. HOEBEEK. *Erasmus MC, Erasmus MC, Netherlands Inst. for Neuroscience, Royal Dutch Acad. for Arts and Sci.*

4:00 L1 **221.12** Pathways by which horizontal cell inhibitory amino acid transmitters inhibit cones. J. C. R. GROVE; K. FILER; A. A. HIRANO; N. C. BRECHA; S. A. BARNES*. *UCLA, VAGLAHS, Dalhousie Univ.*

1:00 L2 **221.13** Identifying genetic markers associated with treatment response to lurasidone ; A genome-wide association study on two independent clinical trials. A. YOSHIKAWA*; J. LI; H. Y. MELTZER. *Northwestern University, Feinberg Sch. of Medici, Northwestern University, Feinberg Sch. of Med.*

2:00 L3 **221.14** Dendritic specific integration rules in hippocampal CA1 parvalbumin positive fast spiking interneurons. J. CORNFORD*; D. M. KULLMANN. *UCL.*

3:00 L4 **221.15** Coordinated spiking in CA3 propagates to hilar mossy cells in juvenile mice but only rarely in adult mice. T. HEDRICK*; W. P. NOBIS; G. T. SWANSON. *Northwestern Univ. Feinberg Sch. of Med.*

4:00 L5 **221.16** Measuring the strength nicotinic synapses in rat sympathetic ganglia using stochastic nerve stimulation, voltage-clamp and dynamic-clamp. J. P. HORN*; P. H. M. KULLMANN. *Univ. of Pittsburgh.*

1:00 L6 **221.17** ▲ Interaction of AMPA and NMDA conductances in transducing synaptic drive into action potential output. C. LI; A. T. GULLEDGE*. *Geisel Sch. of Med. at Dartmouth.*

2:00 L7 **221.18** Characterization of a polysynaptic microcircuit involved in sensory vagal afferent activation of dorsomotor vagal neurons in mouse. I. AIBA*; J. L. NOEBELS. *Baylor Col. of Med., Baylor Col. of Med.*

3:00 L8 **221.19** What are the synaptic input properties *in vivo*? A new method. M. C. VAN ROSSUM*; M. JELITAI; I. DUGUID; P. PUGGIONI. *Univ. Edinburgh, Univ. Edinburgh, Univ. Edinburgh.*

4:00 L9 **221.20** Voltage-imaging of electrical signaling in dendritic spines. J. WENG; D. ZECEVIC*. *Yale Univ. Sch. Med.*

POSTER

222. Long-Term Potentiation: Pre- and Postsynaptic Mechanisms

Theme B: Neural Excitability, Synapses, and Glia

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 L10 **222.01** Inhibitory long term potentiation at parvalbumin expressing pallidal thalamic synapses. M. M. VAN SWIETEN*; K. R. TAN. *Univ. of Basel.*

2:00 L11 **222.02** Involvement of NMDAR subunits in the induction of STP and LTP in the GluN2D knockout mouse. D. FERNANDEZ-FERNANDEZ*; A. V. EAPEN; E. BURNELL; D. T. MONAGHAN; D. E. JANE; G. L. COLLINGRIDGE; A. VOLIANSKIS. *Univ. of Bristol, Univ. of Bristol, Univ. of Nebraska Med. Ctr., Queen Mary Univ. of London.*

3:00 L12 **222.03** Short-term potentiation in the ventral hippocampus. R. INGRAM; L. B. YSSENNAGGER; A. T. MICHAEL-TITUS; D. E. JANE; G. L. COLLINGRIDGE; A. VOLIANSKIS*. *Queen Mary Univ. of London, Univ. of Bristol, Univ. of Toronto and LTRI, Mount Sinai Hosp.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 L13 **222.04** Convergent metabotropic and cholinergic signaling in the facilitation of Hebbian synaptic plasticity. C. M. TIGARET*; M. C. ASHBY; J. R. MELLOR. *Univ. of Bristol.*

1:00 L14 **222.05** Thalamo-prefrontal resonance of hippocampal inputs is plastic and attenuated by thalamic silencing. L. S. BUENO-JUNIOR*; R. N. RUGGIERO; J. E. PEIXOTO-SANTOS; D. B. MARQUES; M. A. V. AVILA; C. LOPES-AGUIAR; J. P. LEITE. *Univ. of Sao Paulo.*

2:00 M1 **222.06** Identification of a novel PKA regulatory site in neuroligin-1. J. JEONG*; M. A. BEMBEN; Y. LI; K. W. ROCHE. *NINDS, BUILDING 35.*

3:00 M2 **222.07** ● BDNF regains function in hippocampal long-term potentiation deficits caused by diencephalic damage. L. C. VEDDER; L. M. SAVAGE*, Ph.D. *Binghamton University- SUNY, State Univ. of New York Binghamton.*

4:00 M3 **222.08** ▲ Investigating the roles of atg1 and atg8a in glutamate receptor localization. K. BERNARD*; F. LIEBL. *Southern Illinois Univ. Edwardsville, Southern Illinois University-Edwardsville.*

1:00 M4 **222.09** Motor training promotes both synaptic and intrinsic plasticity of layer II/III pyramidal neurons in the primary motor cortex. H. KIDA*; Y. TSUDA; Y. YAMAMOTO; Y. OWADA; N. ITO; D. MITSUSHIMA. *Yamaguchi university Sch. of Med.*

2:00 M5 **222.10** Different PKM isoforms in the postsynaptic target neuron contribute to different forms of persistent synaptic plasticity expressed at convergent presynaptic inputs. S. SCHACHER*; K. ADLER; M. HASTINGS; W. SOSSIN; J. HU. *Columbia Univ. & NYSPI, Columbia Univ. & NYSPI, McGill University-Montreal Neurolog. Inst., McGill University-Montreal Neurolog. Inst.*

3:00 M6 **222.11** Quantifying information storage in the hippocampus: Lessons from the dentate gyrus. C. BROMER*; T. M. BARTOL; W. C. ABRAHAM; J. BOWDEN; P. GONZALEZ; D. HANKA; D. HUBBARD; M. KUWAJIMA; J. MENDENHALL; P. PARKER; T. J. SEJNOWSKI; K. HARRIS. *Salk Inst. For Biol. Studies, UCSD, Univ. of Otago, Univ. of Texas, Austin.*

4:00 M7 **222.12** KIBRA is an isoform-specific PKM stabilizer in *Aplysia* sensory neurons. L. FERGUSON*; N. BENFEY; T. DUNN; W. SOSSIN. *McGill Univ.*

1:00 M8 **222.13** Cell-specific PKM isoforms are required for maintaining different forms of persistent synaptic plasticity at a behaviorally relevant synapse. J. HU*; K. ADLER; C. A. FARAH; M. HASTINGS; W. SOSSIN; S. SCHACHER. *Columbia Univ. Med. Ctr. & NYSPI, McGill University-Montreal Neurolog. Inst., McGill University-Montreal Neurolog. Inst.*

2:00 M9 **222.14** Increase in metabolic efficiency underlies Hebbian hippocampal long term potentiaiton. P. MIRANDA*; H. PARK; P. LICZNERSKI; C. PEQUIGNOT; S. SACCHETTI; K. ALAVIAN; H. LI; H. IMAMURA; H. NOJI; J. SHEPHERD; A. E. CHAVES; R. S. ZUKIN; E. A. JONAS. *Yale Univ. Dept of Intrnl. Med., Yale Univ., Imperial Col., Kyoto Univ., Univ. of Tokyo, Univ. of Utah Sch. of Med., Albert Einstein Col. of Med.*

3:00 M10 **222.15** Metabotropic glutamate receptor 4 (mGluR4) determines plasticity and associativity in hippocampal area CA2. A. DASGUPTA*; L. YU JIA; S. SREEDHARAN. *NATIONAL UNIVERSITY OF SINGAPORE.*

4:00 M11 **222.16** Phosphoinositide responsive Phldb2 regulates synaptic plasticity. M. XIE*; H. YAGI; T. IGUCHI; Y. OKA; Y. FUKAZAWA; H. MATSUZAKI; K. IWATA; Y. ISHIKAWA; M. SATO. *Fac. of Med. Sciences, Univ. of Fukui, Res. Ctr. for Child Mental Development, Univ. of Fukui, Life Sci. Innovation Center, Univ. of Fukui, United Grad. Sch. of Child Development, Osaka University, Kanazawa University, Hamamatsu Unuversity Sch. of Medicine, Chiba Univ. and Univ. of Fukui, Hyogo Col. of Med., Grad. Sch. of Medicine, Osaka Univ., Dept. of Systems Life Engineering, Maebashi Inst. of Technol.*

1:00 M12 **222.17** Extracellular matrix heparan sulfates contribute to pyramidal cell excitability and synaptic long-term potentiation. D. MINGE*; O. TIKHOBRAZOVA; G. KOCHLAMAZASHVILI; A. DITYATEV; C. HENNEBERGER. *Univ. of Bonn, Med. Sch., German Ctr. for Neurodegenerative Dis., German Ctr. for Neurodegenerative Dis. (DZNE), Univ. Col. London (UCL).*

2:00 M13 **222.18** Input-timing dependent plasticity provides a general synaptic learning rule in hippocampal CA1 and CA2 regions. F. LEROY*; D. H. BRANN; S. A. SIEGELBAUM. *Columbia Univ.*

3:00 M14 **222.19** Sleep slow-wave activity induces long-term potentiation of thalamocortical responses and increase memory consolidation in mice. I. V. TIMOFEEV*; B. LOBO DE FRANCA; A. OZUR; J. SEIGNEUR; S. CHAUVETTE. *Univ. Laval.*

4:00 M15 **222.20** The synaptic role of GSK3 isoforms in adult mouse brain synapticity. T. MIYATA*; A. AVILA; J. GEORGIOU; G. L. COLLINGRIDGE; J. WOODGETT. *Lunenfeld Tanenbaum Res. Inst., Univ. of Toronto, Univ. of Toronto.*

1:00 M16 **222.21** Disentangling negative regulators of plasticity in CA2 pyramidal neurons. K. CARSTENS*; D. LUSTBERG; S. M. DUDEK. *NIEHS, NIEHS.*

2:00 M17 **222.22** Investigating the role of the retromer, an endosomal sorting complex, in long-term potentiation in the adult mouse hippocampus. P. TEMKIN*; W. MORISHITA; D. GOSWAMI; R. MALENKA. *Stanford.*

3:00 M18 **222.23** The role of schizophrenia risk gene dysbindin in stress induced anxiety and aggression. Q. GU*. *NIH.*

4:00 N1 **222.24** N-Acetylcysteine inhibits cue-induced nicotine seeking and relapse-associated rapid, synaptic plasticity. G. L. POWELL*; Y. M. KUPCHIK; S. SPENCER; C. GARCIA-KELLER; N. STANKEVICUITE; D. SCHWARTZ; A. DEL FRANCO; J. GOENAGA; C. D. GIPSON. *Arizona State Univ., Arizona State Univ., Hebrew Univ. of Jerusalem, Med. Univ. of South Carolina.*

1:00 N2 **222.25** Activity-dependent trafficking of lysosomes in dendrites. M. GOO*; L. SANCHO; B. L. BLOODGOOD; G. N. PATRICK. *UCSD.*

2:00 N3 **222.26** Symmetric spike timing-dependent plasticity at recurrent synapses optimizes storage and recall in autoassociatve CA3 networks. R. K. MISHRA; S. KIM; S. J. GUZMAN; M. FROTSCHER*; P. JONAS. *Inst. of Sci. and Technol. (IST) Austria, Seoul Natl. Univ. Col. of Med., Univ. of Hamburg.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

223. Long-Term Depression

Theme B: Neural Excitability, Synapses, and Glia

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 N4 **223.01** Correlation between AMPAR trafficking and probability of neurotransmitter release during DHPG-LTD at CA1 hippocampal synapses. T. M. SANDERSON*; S. J. KIM; G. L. COLLINGRIDGE. *Univ. of Bristol, Seoul Natl. Univ., Univ. of Toronto, Mount Sinai Hosp.*

2:00 N5 **223.02** Inhibition of GSK-3 inhibits NMDAR-LTD *in vivo* and enhances accuracy of spatial memory in mice. Y. LEE*; Z. BORTOLOTTO; B. KAANG; G. COLLINGRIDGE. *Univ. of Bristol, Seoul Natl. Univ., Univ. of Toronto, Lunenfeld-Tanenbaum Res. Inst.*

3:00 N6 **223.03** Stimulus regularity differentially influences synaptic plasticity outcome in control rats vs rats with mild traumatic brain injury. Q. S. FISCHER*; D. KALIKULOV; M. J. FRIEDLANDER. *Virginia Tech. Carilion Res. Inst.*

4:00 N7 **223.04** Role of the temporal pattern of 10 Hz synaptic conditioning stimulation on induction of synaptic plasticity in visual cortex after mild traumatic brain injury. D. KALIKULOV*; Q. S. FISCHER; M. J. FRIEDLANDER. *Virginia Tech. Carilion Res. Inst.*

1:00 N8 **223.05** Soman-induced alterations in plasticity at the hippocampal ca1-schaffer collateral synapse following acute nerve agent exposure. K. M. HOFFMAN*; M. R. NELSON; D. L. NGUYEN; M. R. EISEN; P. M. MCNUTT. *US Army Med. Res. Inst. of Chem. Def.*

2:00 N9 **223.06** Regular and irregular (Poisson) conditioning trains induced synaptic plasticity between individual neurons in layer 4 of mouse visual cortex. J. WU*; M. J. FRIEDLANDER. *Virginia Tech. Carilion Res. Inst.*

3:00 N10 **223.07** Activity and transcription-dependent priming of mGluR-LTD: Mechanisms and alterations in a Fragile X Syndrome mouse model. K. KIM*; J. JOO; T. KIM; K. M. HUBER. *UT Southwestern Med. Ctr., UT Southwestern Med. Ctr.*

4:00 N11 **223.08** The developmental regulation of cofilin in hippocampal long-term depression. F. CAO*; Z. ZHOU; W. XIE; Z. JIA. *The Hosp. For Sick Children, Univ. of Toronto, Southeast Univ.*

1:00 N12 **223.09** The expression of mGluR5 predicts interneuron plasticity in the stratum radiatum. T. M. NUFER*; C. MERILL; L. FRIEND; Z. HOPKINS; J. EDWARDS. *Brigham Young Univ., Univ. of California Irvine, Univ. of Utah Sch. of Med., Brigham Young Univ.*

2:00 N13 **223.10** The interaction of Gβγ and SNAP-25 promotes the expression of presynaptic long-term depression (LTD) of synaptic transmission. K. R. GOPAUL*; M. IRFAN; O. MIRY; G. SUBAH; L. R. VOSE; X. ZHANG; C. BARK; P. K. STANTON. *New York Med. Col., Karolinska Inst.*

3:00 N14 **223.11** Increasing O-GlcNAcylation induces AMPAR internalization at CA3-CA1 synapses. L. T. STEWART*; A. U. KHAN; M. L. OLSEN; J. C. CHATHAM; L. L. MCMAHON. *Univ. of Alabama At Birmingham, Univ. of Alabama At Birmingham, Univ. of Alabama At Birmingham.*

4:00 N15 **223.12** A unified molecular mechanism of bidirectional plasticity at cerebellar parallel fiber-Purkinje cell synapses. A. R. GALLIMORE*; E. DE SCHUTTER. *Okinawa Inst. of Sci. and Technol.*

1:00 N16 **223.13** JAK/STAT signalling underlies leptin-induced LTD at temporoammonic-CA1 synapses in adult hippocampus. G. MCGREGOR*; J. HARVEY. *Univ. of Dundee.*

2:00 N17 **223.14** Analyses of cell-surface amount, individual endo- and exocytosis of AMPA receptors, revealed suppression of exocytosis is important in hippocampal LTD. S. FUJII*; H. TANAKA; T. HIRANO. *Dept. Biophys.,Grad. Sch. Sci. Kyoto Univ.*

3:00 N18 **223.15** Uniform electric field stimulation induces region-specific long-term modulation of cortical excitability in mouse primary motor cortex *in vitro*. Y. SUN*; S. C. DHAMNE; A. ROTENBERG. *Boston Children's Hosp.*

4:00 O1 **223.16** Roles of SUMOylation in hippocampal synaptic plasticity. E. BRAKSATOR*; K. A. WILKINSON; Z. I. BASHIR; J. M. HENLEY. *Univ. of Bristol, Univ. of Bristol, Univ. of Bristol, Univ. of Bristol.*

1:00 O2 **223.17** Synaptic plasticity during cortical slow oscillations *in vitro*. M. KAHN*; J. BARTRAM; S. TUOHY; E. MANN. *Univ. Oxford.*

2:00 O3 **223.18** CaMKII regulates the depalmitoylation and synaptic removal of AKAP79/150 to mediate structural LTD. K. WOOLFREY*; H. CABALLES; D. GOODELL; M. DELL'ACQUA; U. BAYER. *Univ. of Colorado Denver.*

3:00 O4 **223.19** Ethanol has age- and region-dependent effects on synaptic plasticity in the hippocampus. S. SAWCHUK*; J. D. SHIN; B. R. CHRISTIE. *Univ. of Victoria.*

4:00 O5 **223.20** Mechanism of ethanol-induced disinhibition of nucleus accumbens core. M. H. PATTON*; B. M. ROBERTS; T. AKINTOLA; B. N. MATHUR. *Univ. of Maryland, Baltimore.*

1:00 O6 **223.21** Function consequences of structural heterogeneity in hippocampal CA2 pyramidal neurons. T. D. HELTON*; M. ZHAO; S. M. DUDEK. *Natl. Inst. of Envrn. Hlth. Sci.*

POSTER

224. Transcription and Translation: Mechanisms and Dynamics

Theme B: Neural Excitability, Synapses, and Glia

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 O7 **224.01** Simultaneous observation of transcription of Arc mRNA and Ca^{2+} spikes in live hippocampal neurons. H. MOON*; R. H. SINGER; H. PARK. *Seoul Natl. Univ., Janelia Res. Campus, Howard Hughes Med. Inst., Albert Einstein Col. of Med., Albert Einstein Col. of Med.*

2:00 O8 **224.02** Withdrawn.

3:00 O9 **224.03** Translation dynamics of single mrnas in live neurons. B. WU*; C. ELISCOVICH; Y. J. YOON; R. H. SINGER. *Albert Einstein Col. of Med.*

4:00 O10 **224.04** Visualization of transcription dynamics of immediate early gene Arc in hippocampal neurons. S. DAS*; B. WU; Y. YOON; H. PARK; R. SINGER. *Albert Einstein Col. of Med., Seoul Natl. Univ.*

1:00 O11 **224.05** Localization of newly synthesized proteins within dendritic spine microdomains. Y. J. YOON*; B. WU; R. H. SINGER. *Albert Einstein Col. of Med., Albert Einstein Col. of Med.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 O12 **224.06** Novel splice variants of gtf2i expressed in the neuronal dendrites of rat brain. Y. SHIRAI; T. SUZUKI*. *Shinshu Univ. Grad. Sch. Med., Inst. Biomed. Sci, Shinshu Univ.*

3:00 O13 **224.07** Synaptically generated changes in CRTC1 and its role in activity-dependent transcription. S. L. BONANNO*; M. DESALVO; C. CHRONIS; T. J. O'DELL; K. PLATH; K. C. MARTIN. *UCLA, UCLA, UCLA.*

4:00 O14 **224.08** ● Activity-driven phosphorylation of ribosomal protein S6 is differentially regulated in dendrites vs. cell bodies. P. SALGADO*; O. STEWARD. *Univ. of California Irvine Dept. of Neurobio. and Behavior, Univ. of California Irvine.*

1:00 O15 **224.09** ● Npas4 as a marker of recent neuronal activity. D. G. WHEELER*; Y. BEAVER; J. LAPIRA; P. M. ARDESTANI; K. MARUYAMA; F. SERNEO; D. ELOW; K. BAUMGAERTEL; R. SCOTT; M. SHAMLOO; M. PETERS. *Dart NeuroScience, Stanford Univ.*

2:00 O16 **224.10** Transient elevations in neuronal activity induce a subset of the neuronal activity-regulated gene program defined by MAPK/ERK-dependent enhancers. K. TYSSOWSKI*; J. M. GRAY. *Harvard Med. Sch.*

3:00 O17 **224.11** Single cell analysis of neuronal activity-dependent gene transcription shows role for chromatin regulation at distal enhancers in transcriptional inducibility. A. E. WEST*; L. CHEN; M. G. YANG; A. ZHOU. *Duke Univ. Hosp., Duke Univ.*

4:00 O18 **224.12** Functional modulation of activity-dependent gene expression by non-coding enhancer RNAs. R. C. SIMON*; N. V. N. GALLUS; K. E. SAVELL; F. A. SULTAN; J. J. DAY. *Univ. of Alabama At Birmingham.*

1:00 P1 **224.13** Gene regulatory networks activated by pattern-specific generation of action potentials in dorsal root ganglia neurons. P. R. LEE*; J. E. COHEN; D. A. IACOBAS; S. IACOBAS; R. D. FIELDS. *NIH/NICHD, FDA, New York Med. Col. Sch. of Med.*

2:00 P2 **224.14** The role of a brain specific tRNA isodecoder in neuronal function. M. KAPUR*; G. NAGY; S. ADAMSON; J. H. CHUANG; C. ROSE; S. GYGI; S. L. ACKERMAN. *UCSD, Howard Hughes Med. Inst., The Jackson Lab. for Mammalian Genet., The Jackson Lab. for Genomic Med., Harvard Med. Sch.*

3:00 P3 **224.15** Synaptic vesicles contain small ribonucleic acids (sRNAs) including transfer RNA fragments (trfRNAs) and micro-RNAs (miRNAs). M. L. HARLOW*; H. LI; C. WU; R. ARAMAYO; M. S. SACHS. *Texas A&M Univ.*

4:00 P4 **224.16** The effect of sumoylation on the transactivation capacities of different human NFAT isoforms in neurons. H. VIHMA*; T. TIMMUSK. *Tallinn Univ. of Technol.*

1:00 P5 **224.17** Transcriptional regulation of BDNF exon IX: Role of Nuclear respiratory factor 2 (NRF-2). B. A. NAIR*; M. WONG-RILEY. *Med. Col. of Wisconsin.*

2:00 P6 **224.18** Differential genomic expression analysis of neurons mediating the *Aplysia* californica siphon/gill-withdrawal reflex. C. BOSTWICK*; Q. YANG; A. B. KOHN; R. D. HAWKINS; L. L. MOROZ. *Univ. of Florida Whitney Lab. for Marine Biosci., Columbia Univ., Univ. of Florida, Univ. of Florida.*

3:00 P7 **224.19** ● Estrogen prevents input-deprivation related down-regulation of gene expression in the proestrus female rat barrel cortex: RNA-Seq. J. J. ORCZYK*; A. GORE; R. BATKA; P. E. GARRAGHTY. *Indiana Univ., Indiana Univ.*

4:00 P8 **224.20** ▲ Haloperidol modulates glutamate system functional connectivity: Results from a translational immediate early gene based network study. E. F. BUONAGURO*; G. LATTE; C. TOMASETTI; F. MARMO; C. AVAGLIANO; L. VELLUCCI; F. IASEVOLI; A. DE BARTOLOMEIS. *Univ. Federico II.*

1:00 P9 **224.21** Comprehensive proteomic analysis of synaptosome protein turnover during environmental enrichment. S. HEO*; G. H. DIERING; R. S. NIRUJOGI; J. L. BACHMAN; A. PANDEY; R. L. HUGANIR. *Johns Hopkins Univ. Sch. of Med., Kavli Neurosci. Discovery Inst., McKusick-Nathans Inst. of Genet. Med., Inst. of Bioinformatics, Johns Hopkins Univ. Sch. of Med.*

POSTER

225. Alzheimer's Disease: Apolipoproteins

Theme C: Neurodegenerative Disorders and Injury

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 P10 **225.01** Human ApoE ε2 promotes regulatory mechanisms of bioenergetic and synaptic function in female brain: A focus on V-type H^+-ATPase. L. ZHAO*; S. WOODY; H. ZHOU; S. IBRAHIMI; Y. ZHANG. *Univ. of Kansas, Univ. of Kansas.*

2:00 P11 **225.02** Human ApoE isoforms differentially modulate brain bioenergetic metabolism. L. WU*; L. ZHAO. *Univ. of Kansas, Univ. of Kansas.*

3:00 P12 **225.03** Redistribution of brain clusterin (CLU) isoforms in neurodegeneration. S. K. WOODY*; L. ZHAO. *Univ. of Kansas - Sch. of Pharm.*

4:00 Q1 **225.04** ● APOE ε-4 knock-in rat model of Alzheimer's disease - gender differences in cognitive behavior and gray matter microarchitecture: Insights on the neuropathology of disease progression using MRI. P. P. KULKARNI*; J. HONEYCUTT; M. S. TRIVEDI; H. BRENHOUSE; M. NEDELMAN; K. GAMBER; C. F. FERRIS. *Northeastern Univ. Dept. of Psychology, Northeastern Univ., Nova Southeastern Univ., Ekam Imaging Inc, Horizon Discovery.*

1:00 Q2 **225.05** ● Using quantitative anisotropy and computational analysis across 174 brain areas to identify changes in gray matter microarchitecture in the apoe knock-out rat: Evidence of gender differences and alterations in cortico/thalamic and cerebellar connectivity. J. QIAO*; C. GHARAGOUZLOO; P. KULKARNI; L. TIMMS; K. GAMBER; M. NEDELMAN; A. VEN; S. SRIDHAR; C. F. FERRIS. *Northeastern Univ., Northeastern Univ., Northeastern Univ., Northeastern Univ., Horizon Discovery, Ekam Imaging Inc.*

2:00 Q3 **225.06** ● Mapping brain neural circuitry in response to pro-cognitive therapeutics: A pharmacological MRI study in the awake rat. C. F. FERRIS*; P. KULKARNI; M. NEDELMAN; I. E.M DE JONG. *Northeastern University, Ctr. for Translational NeuroImaging, Northeastern University, Ctr. for Translational NeuroImaging, Ekam Imaging, Lundbeck.*

3:00 Q4 **225.07** First capillary blood volume full-brain atlas and absolute functional CBV measurements using QUTE-CE MRI in sprague dawley rats: Preliminary results in the APOE Epsilon 4 knock-in rat model of Alzheimer's disease. C. A. GHARAGOUZLOO*; L. TIMMS; J. QIAO; Z. FANG; J. NNEJI; A. V. VEN; P. KULKARNI; C. F. FERRIS; K. GAMBER; S. SRIDHAR. *Northeastern Univ., Northeastern Univ., Northeastern Univ., Northeastern Univ., Northeastern Univ., Horizon Discovery.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 Q5 **225.08** Particulate air pollutants accelerate neurodegeneration in EFAD mice. M. CACCIOTTOLO*; A. SAFFARI; C. SIOUTAS, 90089-0191; M. LADU; T. E. MORGAN; C. E. FINCH. *USC Davis Sch. of Gerontology, USC Viterbi Sch. of Engin., Univ. of Illinois at Chicago.*

1:00 Q6 **225.09** APOE modulated cerebrovascular dysfunction in Alzheimer's disease. L. M. TAI*; F. M. MAROTTOL; K. P. KOSTER; A. MORRIS; R. THOMAS. *Univ. of Illinois at Chicago, Univ. of Illinois at Chicago.*

2:00 Q7 **225.10** Apoe affects autophagy through TFEB and transcriptional regulation in Alzheimer's and epilepsy. P. A. PARCON*; M. BALASUBRAMANIAM; R. A. JONES; L. LIU; R. E. MRAK; S. T. GRIFFIN. *UAMS, Univ. of Arkansas, Little Rock, Univ. of Arkansas for Med. Sci., UAMS, Central Arkansas Veterans HealthCare Syst., Univ. of Arkansas for Med. Sci., Univ. of Toledo Hlth. Sci. Campus.*

3:00 Q8 **225.11** Integrated systems approach identifies gene networks in APOE3 & APOE4 expressing mice in response to HFD. K. NAM*; A. MOUNIER; C. M. WOLFE; N. F. FITZ; J. SCHUG; I. LEFTEROV; R. KOLDAMOVA. *Univ. of Pittsburgh, Univ. of Pennsylvania.*

4:00 Q9 **225.12** Dietary cholesterol increases neurodegenerative pathology through the blood-cerebrospinal fluid barrier in rabbits. F. OBATA*; R. MINAI; C. WANG; B. NING; M. NIIMI; J. FAN. *Univ. Yamanashi, Dept. Mol Pathol.*

1:00 Q10 **225.13** Impaired cholesterol homeostasis contributes to the increased secretion of β-amyloid peptide in Familial Alzheimer's disease-associated presenilin mutant. Y. CHO*; O. KWON; H. OH; S. CHUNG. *Sungkyunkwan Univ.*

2:00 Q11 **225.14** ● Bexarotene discontinuation maintains behavioral improvement independent of changes in amyloid pathology. B. CASALI*; G. LANDRETH. *Case Western Reserve Univ.*

3:00 Q12 **225.15** Apolipoprotein E4 inhibits cerebral insulin signaling and insulin-regulated glucose metabolism. N. ZHAO*; C. LIU; C. M. LINARES; M. M. PAINTER; G. BU. *Mayo Clin. Jacksonville.*

4:00 Q13 **225.16** ● Effect of apoe e4 variant on progression from mild cognitive impairment to Alzheimer's disease. B. P. TAYLOR*; S. RISACHER; J. KRANTZ. *Hanover Col., IUPUI Neurosci. Ctr., Hanover Col.*

1:00 Q14 **225.17** An HDL-mimetic peptide increases secretion and lipidation of human apoE. D. S. CHERNICK*; G. W. REBECK; L. LI. *Univ. of Minnesota, Georgetown Univ., Univ. of Minnesota.*

2:00 R1 **225.18** ● Tocotrienols for Alzheimer's disease: Vitamin E beyond tocopherols. W. XIA*; C. SHEN; H. MO. *Boston Univ. Sch. of Med., ENR Mem. Veterans Hosp., Texas Tech. Univ. Hlth. Sci. Ctr., Georgia State Univ.*

3:00 R2 **225.19** Molecular mechanism and functional effect of apoE-TREM2 interaction in microglia. Y. ATAGI*; M. M. PAINTER; C. LIU; J. D. FRYER; G. BU. *Mayo Clin. Florida.*

4:00 R3 **225.20** Effects of Liver X receptor agonist treatment on Alzheimer's disease-like phenotype and neuronal regulatory networks in human APOE3 and APOE4-targeted replacement mice. N. F. FITZ*; A. MOUNIER; C. W. WOLFE; A. Y. CARTER; K. NAM; J. SCHUG; I. LEFTEROV; R. KOLDAMOVA. *Univ. of Pittsburgh, Univ. of Pennsylvania.*

1:00 R4 **225.21** Apolipoprotein E and ageing: How is genetic risk and resilience for Alzheimer's disease represented within the resting brain? S. SURI*; N. FILIPPINI; A. TRACHTENBERG; V. HEISE; E. ZSOLDOS; A. MAHMOOD; A. SINGH-MANOUX; M. KIVIMAKI; K. EBMEIER; C. MACKAY. *Univ. of Oxford/Department of Psychiatry, Univ. Col. London.*

2:00 R5 **225.22** Differential white matter extracellular water increase in APOE e4 carriers and non-carriers among healthy normal, mild cognitive impairment, and Alzheimer's disease. F. JI*; O. PASTERNAK; Y. LOKE; S. LIU; S. HILAL; B. TAN; N. VENKETASUBRAMANIAN; C. CHEN; J. ZHOU. *Duke-Nus Med. Sch., Brigham and Women's Hospital, Harvard Med. Sch., Natl. Univ. Hlth. Syst., St. Luke's Hosp., Raffles Hosp.*

3:00 R6 **225.23** A03 reverses ApoE4-induced reductions in SirT1 *in vitro*. J. CAMPAGNA; P. SPILMAN; D. BAI; H. ROLLINS; R. DAMOISEAUX; J. PHAM; T. BILOUSOVA; B. JAGODZINSKA; M. JUNG; D. E. BREDESEN; V. JOHN*. *UCLA, UCLA, UCLA, UCLA, Univ. of California Los Angeles.*

4:00 R7 **225.24** APOE genotype effects on cortical folding of Alzheimer's disease patients, MCI and healthy people. A. FANG*; R. TORO; J. LEWIS; A. EVANS. *Montreal Neurolog. Institute, McGill Univ., Inst. Pasteur.*

1:00 R8 **225.25** Sex and ApoE e4 gene dose effects on lateralized hippocampal volumes in older adults with normal cognition, mild cognitive impairment, and Alzheimer's disease. Z. HOBEL*; B. SHEN; J. PA. *Mark and Mary Stevens Neuroimaging and Informatics.*

2:00 R9 **225.26** Mechanism for APOE4-induced Alzheimer's disease risk predicts therapeutic targets. N. C. COLLINS*; J. GEORGE; S. GHURA; A. VALENCIA; L. VAN ELDIK; M. LADU. *Univ. of Illinois At Chicago, Univ. Of Kentucky.*

3:00 R10 **225.27** Apolipoprotein E4 drives amyloid pathology in an inducible mouse model - Effects at different stages of amyloid pathology. C. LIU*; N. ZHAO; N. WANG; J. ROGER; C. LINARES; C. TSAI; G. BU. *Mayo Clin.*

POSTER

226. Huntington's Disease Mechanisms I

Theme C: Neurodegenerative Disorders and Injury

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 R11 **226.01** Alterations in the density of neurotransmitter receptors in the brain of the zQ175KI mouse model of Huntington's disease. T. HUHTALA; J. RYTKÖNEN; T. PARKKARI*; P. J. SWEENEY; O. KONTKANEN; L. C. PARK; L. MRZLJAK. *Charles River Discovery, CHDI Management/CHDI Fndn.*

2:00 R12 **226.02** Changes in cerebral blood flow in conscious zQ175KI Huntington's disease mouse model mice. T. HUHTALA*; J. RYTKÖNEN; L. TOLPPANEN; P. J. SWEENEY; T. PARKKARI; O. KONTKANEN; L. C. PARK; L. MRZLJAK. *Charles River Discovery, CHDI Management/ CHDI Fndn.*

3:00 R13 **226.03** The branched DNA methodology and analysis of dysregulated expression of Huntington's disease related genes of interest. M. VIHMA; S. MIETTINEN; J. KURKIPURO*; T. PARKKARI; M. CERRADA-GIMENEZ; A. NURMI; D. LAVERY; L. C. PARK. *Charles River Discovery, CHDI Management/CHDI Fndn.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 R14 **226.04** Episodic memory and cognitive flexibility in the Hdh^{Q111} mouse model of Huntington's disease. A. MARIANO*; O. MONTEIRO; E. MOSS; C. BRAZAITIS; V. BROWN; J. LAMBERT; R. LANGSTON. *Univ. of Dundee, Univ. of St Andrews.*

1:00 R15 **226.05** Adaptation of a home-cage motor learning task to assess behaviour in the YAC128 model of Huntington's disease. C. L. WOODARD; F. BOLAÑOS; J. D. BOYD; G. SILASI; T. H. MURPHY; L. A. RAYMOND*. *Univ. of British Columbia.*

2:00 R16 **226.06** Altered dopamine receptor 2 signaling in the zQ175 mouse model of Huntington's disease. H. B. JANSSENS*; A. RASSOULPOUR; I. MUNOZ-SANJUAN; L. MRZLJAK; R. CACHOPE. *Brains On-Line, Brains On-Line, LLC, CHDI Foundation/CHDI Mgmt.*

3:00 R17 **226.07** Early olfactory behavior deficits associated with olfactory bulb atrophy and caspase-8 activation in HD rodent models. R. K. GRAHAM*; M. LAROCHE; M. LESSARD-BEAUDOIN; M. GARCIA-MIRALLES; C. KREIDY; L. YU-TAGER; M. R. HAYDEN; H. NGUYEN; M. A. POULADI. *Univ. of Sherbrooke, Natl. Univ. of Singapore, Univ. of Tuegingen, Univ. of British Columbia.*

4:00 S1 **226.08** Longitudinal assessment of cortico-striatal projections in the zQ175 mouse model of Huntington's disease. N. FOSTER*; H. HINTIRYAN; M. BECERRA; I. BOWMAN; K. COTTER; M. BAY; M. ZHU; M. S. BIENKOWSKI; M. Y. SONG; L. GOU; S. YAMASHITA; H. DONG. *USC.*

1:00 S2 **226.09** Basal ganglia pathology in heterozygous 18 month-old Q175 knock-in Huntington's disease mice. Y. DENG*; H. WANG; M. JONI; A. REINER. *Univ. of Tennessee Hlth. Sci. Ctr.*

2:00 S3 **226.10** HdhQ200/200 mouse model displays rapid Huntington's disease-like behavior and pathology. J. K. CAO*; K. SWINNEY; L. ZWEIFEL; N. STELLA. *Univ. of Washington.*

3:00 S4 **226.11** Axonal injury is protein kinase JNK3 dependent in a murine model of Huntington's disease. R. G. GATTO*; M. KANG; Y. CHU; H. FRIEDECK; B. KIM; J. H. KORDOWER; S. T. BRADY; G. A. MORFINI. *Univ. of Illinois At Chicago, Rush Univ. Med. Ctr.*

4:00 S5 **226.12** Investigation of corticostriatal synaptic transmission and cerebellar Purkinje neuron firing in the R6/2 mouse model of Huntington's disease by using multi-electrode arrays. M. KOPANITSA*; O. KONTKANEN; A. NURMI; P. SWEENEY. *Charles River Discovery.*

1:00 S6 **226.13** Direct and indirect striatal output pathways differentially affect their targets in mouse models of Huntington's disease. J. BARRY*; C. CEPEDA; M. S. LEVINE. *UCLA.*

2:00 S7 **226.14** Altered function of Parvalbumin-expressing interneurons in mouse models of Huntington's disease. L. GALVAN*; S. M. HOLLEY; C. CEPEDA; M. S. LEVINE. *UCLA.*

3:00 S8 **226.15** Impaired functional dynamics of motor cortex microcircuits in mouse models of Huntington's disease. A. M. ESTRADA SANCHEZ*; E. DONZIS; T. INDERSMITTEN; C. TRAN; C. WANG; D. CASTRO; M. NEDJAT-HAIEM; C. CEPEDA; P. GOLSHANI; M. S. LEVINE. *UCLA, UCLA.*

4:00 S9 **226.16** Somatostatin interneurons contribute towards increased striatal inhibition in the Q175 mouse model of Huntington's disease. S. M. HOLLEY*; L. GALVAN; T. KAMDJOU; C. CEPEDA; M. S. LEVINE. *UCLA.*

1:00 S10 **226.17** ● Synaptic alterations in direct and indirect pathway spiny projection neurons in the Q175 mouse model of Huntington's disease. J. SANCHEZ-PADILLA; G. TOMBAUGH; S. GELMAN; K. KRETSCHMANNOVA; J. PALMA; A. GHAVAMI; V. BEAUMONT; R. CACHOPE*. *Psychogenics Inc, CHDI Mgmt. / CHDI Fndn.*

2:00 S11 **226.18** NT-3 effects on corticostriatal plasticity. E. HERNANDEZ-ECHEAGARAY*, Dr; V. GÓMEZ; E. MENDOZA. *Univ. Nacional Autonoma de Mexico, FES-I UNAM.*

3:00 S12 **226.19** *In vivo* characterization of the cortico-basal ganglia connectivity in the zQ175 heterozygous knock-in mouse model of Huntington's disease. S. ZHONG*; A. GHAVAMI; R. CACHOPE; V. BEAUMONT. *PsychoGenics Inc., CHDI Foundation, Inc./CHDI Management, Inc.*

4:00 S13 **226.20** Characterization of ipRGC impairment in Huntington's disease. M. LIN*; C. CHANG; S. CHEN; Y. CHERN. *Inst. of Biomed. Science, Academia Sinica, Inst. of Zoology, Natl. Taiwan Univ.*

1:00 S14 **226.21** The relationship between adult neurogenesis and interval timing is altered in a transgenic Huntington's disease rat model. A. PEREZ*; J. FISCHETTI; D. GARCES; S. WODINSKY; A. TOROSSIAN; C. TSIRIS; J. ROJAS; B. BROWN; N. HEMMES; C. L. PYTTE; J. ARONOWITZ. *The Grad. Center, City Univ. of New York, Queens Col. of the City Univ. of New York.*

POSTER

227. Pathogenic Mechanisms of Motor Neuron Disease

Theme C: Neurodegenerative Disorders and Injury

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 T1 **227.01** IP-MS and CLIP-seq define an extensive RBM45 interactome network. Y. L. LI*; M. COLLINS; J. AN; K. GARCIA; P. PIRROTTE; R. BOWSER. *Barrow Neurolog. Inst., Barrow Neurolog. Inst., TGen.*

2:00 T2 **227.02** The development of therapeutic intrabody against misfolded TDP-43 for ALS. Y. TAMAKI*; A. SHODAI; R. HIKIAMI; S. MINAMIYAMA; T. AYAKI; R. TAKAHASHI; M. URUSHITANI. *Kyoto Univ. Grad. Sch. of Med., Shiga Univ. of Med. Sci.*

3:00 T3 **227.03** Antifibrotic approach targeting the tgfß system. S. KUESPERT*; S. PETERS; E. ZITZELSPERGER; R. HEYDN; T. BRUUN; U. BOGDAHN. *Univ. Hosp. Regensburg.*

4:00 T4 **227.04** Glutamate receptors mediate p-glycoprotein upregulation at the blood brain barrier in amyotrophic lateral sclerosis. L. A. MOHAMED*; S. MARKANDAIAH; P. PASINELLI; D. TROTTI. *Thomas Jefferson Univ.*

1:00 T5 **227.05** Altered mechanisms underlying the abnormal glutamate release in the spinal cord of pre-symptomatic SOD1^{G93A} mouse model of ALS. G. BONANNO*; T. BONIFACINO; E. GALLIA; L. MUSAZZI; M. MILANESE; L. CATTANEO; M. SEGUINI; A. MARTE; F. ONOFRI; M. POPOLI. *Departemnt of Pharmacy, Sch. of Med. and Pharmacy, Univ. of Genoa, Dept. of Pharmacol. and Biomolecular Sci. and Ctr. of Excellence on Neurodegenerative Diseases, Univ. of Milan, Dept. of Pharmacy, Sch. of Med. and Pharmacy, Univ. of Genoa, Dept. of Exptl. Medicine, Unit of Human Physiology, Univ. of Genoa.*

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▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 T6 **227.06** Selective mitochondrial depletion and enhanced mitophagy in human Charcot-Marie-Tooth 2A motor neurons. F. RIZZO, 20122; D. RONCHI; S. SALANI; M. NIZZARDO; F. FORTUNATO; A. BORDONI; G. STUPPIA; R. DEL BO; D. PIGA; N. BRESOLIN; G. COMI, 20099; S. CORTI*. *Univ. of Milan, IRCCS Fondazione Ca' Granda Ospedale Maggiore Policlinico.*

3:00 T7 **227.07** Mitochondria associated ER membranes in amyotrophic lateral sclerosis. D. LARREA*; E. RHODES LOWRY; J. SMERDON; H. WICHTERLE; E. AREA-GOMEZ. *Columbia Univ., Columbia Univ.*

4:00 T8 **227.08** Histopathological findings in an adult Down syndrome patient presenting with ALS. B. PARÉ*; N. DUPRÉ; P. GOULD; F. GROS-LOUIS. *Laval Univ., Laval Univ.*

1:00 T9 **227.09** Motor neurons derived from ALS patients with FUS mutations mimic disease-related phenotypes *in vitro*. W. GUO; S. PATEL; L. FUMAGALLI; D. BOHL; V. BENOY; P. VANDEN BERGHE; W. ROBBERECHT; P. DUPONT*; P. VAN DAMME; C. VERFAILLIE; L. VAN DEN BOSCH. *KU LEUVEN, KU Leuven-Department of Neurosciences, Exptl. Neurol. and Res. Inst. for Neurosci. and Dis. (LIND), KU LEUVEN, Inst. du Cerveau et de la Moelle épinière, KU LEUVEN, Univ. Hosp. Leuven-Department of Neurol., KU LEUVEN.*

2:00 T10 **227.10** Pharmacological profiling of human and mouse motor neurons on microelectrode arrays. D. F. MOAKLEY*; J. D. PEREIRA; J. S. GAL; A. DEVLIN; Y. SAPIR; L. A. WILLIAMS; N. ATWATER; D. BAKER; O. WISKOW; S. LEE; K. ROET; K. EGGAN; C. J. WOOLF; B. J. WAINGER. *Massachusetts Gen. Hosp., Harvard Univ., Boston Children's Hosp., Harvard Stem Cell Inst.*

3:00 T11 **227.11** Cell-to-cell transmission of C9orf72-linked dipeptide repeat proteins. T. R. WESTERGARD*; B. JENSEN; X. WEN; P. PASINELLI; D. TROTTI. *Thomas Jefferson Univ.*

4:00 T12 **227.12** Astrocyte dysfunction in fus-linked amyotrophic lateral sclerosis. K. MCAVOY*; K. KRISHNAMURTHY; D. TROTTI; P. PASINELLI. *Thomas Jefferson Univ.*

1:00 T13 **227.13** Investigating the cortical aspects of ALS in mouse and human stem cell models. M. C. FRANQUIN*; H. PENG; B. PONROY; C. ERNST; D. STELLWAGEN. *Ctr. For Res. In Neurosci., McGill Univ., Douglas Mental Hlth. Univ. Institute, McGill Univ.*

2:00 T14 **227.14** Functional consequences of amyotrophic lateral sclerosis-linked Cyclin F mutations in cultured neuronal cells and post-mortem tissues. S. YANG*; K. Y. ZHANG; N. FARRAWELL; V. SUNDARAMOORTHY; S. T. WARRAICH; A. RÁBANO; A. GARCÍA-REDONDO; J. D. ATKIN; J. J. YERBURY; G. A. NICHOLSON; I. BLAIR. *Macquarie Univ., Univ. of Wollongong, Fundación CIEN, Ctr. de Investigación Biomédica en Red de Enfermedades Raras, ANZAC Res. Inst.*

3:00 T15 **227.15** Development and functional applications of human iPSC-derived spinal motor neurons. E. JONES; C. CHAVEZ; B. MELINE; J. LIU; M. MCLACHLAN; T. BURKE; C. MCMAHON; L. CHASE*; W. WANG. *Cell. Dynamics Intl., Cell. Dynamics International, Inc.*

4:00 T16 **227.16** Identification of potassium channel subtypes involved in human ALS hyperexcitability by patch-seq and patch-RT-qPCR. S. LEE*; O. WISKOW; S. GHOSH; K. ROET; X. HWANG; B. P. BEAN; B. J. WAINGER; K. EGGAN; C. J. WOOLF. *Boston Children's Hosp., Harvard Med. Sch., Harvard Univ., Massachusetts Gen. Hosp.*

1:00 T17 **227.17** Dynactin mutations associated with amyotrophic lateral sclerosis and their effect on axonal transport and neuromuscular junction formation. V. BERCIER*; T. O. AUER; K. DUROURE; F. DEL BENE. *Inst. Curie-Research Ctr., École des Neurosciences de Paris-Ile-de-France, Ctr. for Integrative Genomics, Univ. of Lausanne.*

POSTER

228. Neuroprotective Mechanisms: Diabetes, Neuropathy, and Retina

Theme C: Neurodegenerative Disorders and Injury

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 T18 **228.01** Catfish skin preparations ameliorates neurobehavioral and histopathological alterations of the sciatic nerve following crush injury. W. M. RENNO*; M. AFZAL; B. M. PAUL; J. M. AL-HASSAN. *Kuwait Univ., Kuwait Univ. - Fac. of Sci.*

2:00 U1 **228.02** Galectin-3 as a cytoprotective molecules in Schwann cells under diabetic conditions. H. YAKO*; N. NIIMI; M. TSUKAMOTO; K. SANGO. *Tokyo Metropolitan Inst. of Med. Sci.*

3:00 U2 **228.03** A small heat shock protein protects against vincristine-induced peripheral axonal damage in mice. V. B. CHINE*; G. KUMAR; C. H. E. MA. *Dept. of Biomed. Sci., Ctr. for Biosystems, Neuroscience, and Nanotechnology, City Univ. of Hong Kong.*

4:00 U3 **228.04** ● Neuroprotective effects of P7C3-A20 in a model of paclitaxel-induced peripheral neuropathy. P. M. LOCOCO; H. R. SMITH; J. C. ZAMORA; T. A. CHAVERA; K. A. BERG; W. P. CLARKE*. *Univ. Texas Hlth. Sci. Ctr.*

1:00 U4 **228.05** Diabetes exacerbates methamphetamine induced blood-brain barrier breakdown, edema formation, oxidative stress and myelin damage. Neuroprotective effects of nanowired delivery of antioxidant compound H-290/51. J. V. LAFUENTE*; A. SHARMA; E. A. KIYATKIN; D. MURESANU; A. NOZARI; P. SJOQUIST; R. PATNAIK; A. OZKIZILCIK; R. TIAN; H. S. SHARMA. *Univ. of Basque Country, Uppsala Univ. Hosp., Natl. Inst. on Drug Abuse (NIDA), Univ. of Med. & Pharm., Massachusetts Gen. Hospital, Harvard Med. Sch., Karolinska Institute, Karolinska Univ. Hosp., Indian Inst. of Technology, Banaras Hindu Univ., Univ. of Arkansas, Univ. of Arkansas.*

2:00 U5 **228.06** Central insulin attenuates diet-induced hypothalamic inflammation. A. MAY*; N. D. BEDEL; D. J. CLEGG; M. WORTMAN; S. WOODS; M. LIU. *Univ. of Cincinnati, Univ. of Cincinnati, Cedars-Sinai.*

3:00 U6 **228.07** Dietary restriction promotes cell survival in a mouse model of normal tension glaucoma. X. GUO*; K. NAMEKATA; A. KIMURA; T. NORO; G. AKIYAMA; Y. AZUCHI; C. HARADA; T. HARADA. *Tokyo Metropolitan Inst. of Med. Sci.*

4:00 U7 **228.08** PDGF-AA-mediated retinal ganglion cell neuroprotection results from its interaction with retinal astrocytes and/or a subtype of amacrine cells. S. I. TOMAREV*; S. TAKAHAMA; M. O. ADETUNJI; T. ZHAO; W. LI. *NEI, NIH, NEI, NIH.*

1:00 U8 **228.09** Visual imput is a necessary condition in enriched environment induced neuroprotection against acute retinal ischemia. D. DORFMAN*; M. L. ARANDA; M. F. GONZÁLEZ FLEITAS; M. S. CHIANELLI; M. I. KELLER SARMIENTO; H. H. DIEGUEZ; P. H. SANDE; R. E. ROSENSTEIN. *Sch. of Medicine, UBA, CEFYBO/CONICET.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 U9 **228.10** Neuroprotective functions of apolipoprotein E-containing lipoproteins in neurons and glia of retina. H. HAYASHI*; M. MORI; Y. BAN; B. YUAN; N. TAKAGI. *Tokyo Univ. of Pharm. and Life Sci.*

3:00 U10 **228.11** Tubastatin A, a specific inhibitor of histone deacetylase 6, protects retinal cells against oxidative stress. J. LEYK*; U. JANSSEN-BIENHOLD; C. RICHTER-LANDSBERG. *Carl Von Ossietzky Univ. of Oldenburg.*

4:00 U11 **228.12** Caspase-9 inhibition abrogates retinal edema and provides functional neuroprotection. M. I. AVRUTSKY; Y. Y. JEAN; S. SNIPAS; G. S. SALVESEN; C. M. TROY*. *Columbia Univ. Medl Ctr., Sanford Burnham Prebys Med. Discovery Inst., Columbia Univ. Medl Ctr.*

1:00 U12 **228.13** Brain-derived neurotrophic factor-mediated neuroprotection of retinal and cognitive function in exercised diabetic rats. A. HANIF*; R. ALLEN; M. GOGNIAT; B. PRALL; R. HAIDER; M. AUNG; M. PRUNTY; L. MEES; C. SIDHU; L. HE; M. IUVONE; M. PARDUE. *Atlanta VA Med. Ctr., Emory Univ., Georgia Inst. of Technol.*

2:00 U13 **228.14** DHA regulation of PMP22 in Schwann cells during lipotoxicity. M. A. SERRANO ILLAN*; J. D. FIGUEROA; K. CORDERO; M. DE LEON. *Loma Linda Univ.*

3:00 U14 **228.15** Cell therapy increases the survival and regeneration of retinal ganglion cells after optic nerve injury in adult rats. L. A. MESENTIER-LOURO; L. C. TEIXEIRA-PINHEIRO; A. J. DA SILVA-JUNIOR; F. GUBERT; P. DOMIZI; G. NASCIMENTO-DOS-SANTOS; C. TEIXEIRA; F. TOVAR-MOLL; M. F. SANTIAGO; R. MENDEZ-OTERO*. *Univ. Federal do Rio de Janeiro.*

4:00 U15 **228.16** Reproductive experience improves memory and learning of the spontaneously hypertensive female rats. V. CABRERA PEDRAZA*; C. SOLIS; R. VAZQUEZ-ROQUE; F. DE LA CRUZ; S. ZAMUDIO; M. GOMEZ-VILLALOBOS; G. FLORES. *Escuela Nacional De Ciencias Biologicas, IPN, Benemerita Univ. Autonoma de Puebla.*

1:00 U16 **228.17** Source of optic nerve metabolic vulnerability in a mouse model of glaucoma. D. M. INMAN*; A. H. JASSIM-JABOORI; V. GEVORGYAN; P. G. PALMER. *Northeast Ohio Med. Univ., Northeast Ohio Med. Univ., Bio-Med Sci. Acad.*

2:00 U17 **228.18** Establishment of a spontaneously immortalized Schwann cell line IKARS1 from aldose reductase-deficient mice. K. SANGO*; N. NIIMI; H. YAKO; M. TSUKAMOTO; H. MIZUKAMI; S. K. CHUNG. *Tokyo Met Inst. Med. Sci., Dept Pathol Mol Med, Hirosaki Univ., Dept Anat, Univ. of Hong Kong.*

3:00 U18 **228.19** ● Blockade of gap junctions preserves structural and functional integrity of the retina in a mouse model of glaucoma. A. AKOPIAN*; S. KUMAR; H. RAMAKRISHNAN; S. VISWANATHAN; S. BLOOMFIELD. *SUNY Col. of Optometry, SUNY Col. of Optometry.*

4:00 V1 **228.20** JNK-JUN signaling is important for RGC axonal injury induced soma degeneration. S. SYC*; K. A. FERNANDES; R. T. LIBBY. *Univ. of Rochester.*

1:00 V2 **228.21** ● Profiling mitochondrial defects from nucleoside/nucleotide reverse transcriptase inhibitors in neurons: Potential contribution to HIV-associated neurocognitive disorders. K. HUNG; M. CALKINS*. *Natl. Cheng Kung Univ.*

2:00 V3 **228.22** ● Rapid recovery from several morphological and biochemical effects of chemotherapy-induced neuropathy following paclitaxel and eribulin in mouse sciatic nerves. B. M. COOK*; S. J. BENBOW; K. M. WOZNIAK; B. S. SLUSHER; Y. WU; B. A. LITTLEFIELD; M. A. JORDAN; L. WILSON; S. C. FEINSTEIN. *Biomolecular Sci. and Eng., Univ. of California, Neurosci. Res. Inst., Univ. of California, Johns Hopkins Sch. of Med., Eisai.*

3:00 V4 **228.23** Mitochondrial complex I deficiency decreases canonical Wnt signaling in retinas. L. SONG*; A. YU; G. CORTOPASSI. *Univ. of California Davis.*

POSTER

229. Neurodegenerative Diseases

Theme C: Neurodegenerative Disorders and Injury

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 V5 **229.01** Focused ultrasound-mediated delivery of intravenous immunoglobulins modulates neuroinflammation in an amyloidosis mouse model. S. DUBEY*; B. KIM; A. BURGESS; J. MCLAURIN; D. R. BRANCH; K. HYNYNEN; I. AUBERT. *Sunnybrook Res. Inst., Univ. of Toronto, Univ. of Toronto.*

2:00 V6 **229.02** Experimental exposure to ozone causes oxidative damage to lipids and proteins in rat hippocampus. Dietary curcumin inhibits the damage. M. A. RAMIREZ-HERRERA; J. J. RAMIREZ-VAZQUEZ; M. L. MENDOZA-MAGANA*; S. D. NERI-FLORES; A. CASTILLO-ROMERO; L. HERNANDEZ; G. CAMARGO; M. M. J. ROMERO-PRADO; C. R. CORTEZ-ALVAREZ; A. A. RAMIREZ-MENDOZA. *Univ. Guadalajara Ctr. Univ. Ciencias Salud, Univ. Guadalajara Ctr. Univ. Ciencias Salud, Univ. Guadalajara Ctr. Univ. Ciencias Salud.*

3:00 V7 **229.03** Altered gene expression following whole brain irradiation in nonhuman primates. R. ANDREWS; R. HAMPSON; L. METHENY-BARLOW; D. HANBURY; J. D. BOURLAND; A. PEIFFER; J. M. CLINE; S. A. DEADWYLER*. *Wake Forest Sch. of Med.*

4:00 V8 **229.04** shRNA-mediated knockdown of α-synuclein in brain regions targeted by MRI-guided focused ultrasound. F. NABBOUH*; K. XHIMA; K. MARKHAM-COULTES; P. NAGY; A. BURGESS; K. HYNYNEN; I. AUBERT; A. TANDON. *Univ. of Toronto, Sunnybrook Res. Inst., Sunnybrook Res. Inst.*

1:00 V9 **229.05** Temporal modulation of sonic hedgehog after microtubule disruption in the striatum of mice. T. DUARTE*; G. H. D. ABREU; E. DEL BEL. *FORP, Univ. of Sao Paulo.*

2:00 V10 **229.06** CDK5 activator protein p25 preferentially binds and activates GSK3β. J. ZHANG*. *Xiamen Univ.*

3:00 V11 **229.07** Zebrafish as a model for translational neurobiology: Implications for drug discovery. A. SUDWARTS*; A. BROCK; C. BRENNAN. *Queen Mary, Univ. of London.*

4:00 V12 **229.08** Theoretical study of the quantum-chemical behavior of molecules involved in parkinson. E. M. GARCIA*; C. BARRIENTOS-SALCEDO. *Univ. Veracruzana, Univ. Veracruzana.*

1:00 V13 **229.09** Slowing disease progression in ALS with a targeted neuregulin antagonist. F. SONG*; J. LIU; E. H. SIMPSON; J. A. LOEB. *Univ. of Illinois at Chicago, Columbia Univ.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 V14 **229.10** Amyloid precursor protein (APP) is modulated after cranial radiotherapy to the developing mouse brain. Y. F. ERIKSSON*; M. KALM. *Univ. of Gothenburg/Sahlgrenska Acad.*

3:00 V15 **229.11** Proline isomerization controls toxic amyloid formation. J. D. BAKER*; L. B. SHELTON; D. ZHENG; J. J. SABBAGH; L. J. BLAIR; A. DARLING; C. DICKEY. *Univ. of South Florida, James A. Haley Veteran's Hosp.*

4:00 V16 **229.12** The ς-1 receptor binds hexanucleotide repeat expansions of C9orf72: Implication in ALS and FTD. P. LEE*; T. SU. *IRP/NIDA/NIH, IRP/NIDA/NIH.*

1:00 V17 **229.13** Intrathecal delivery of rAAV9-ABCD1 by osmotic pump in a mouse model of X-ALD. A. BERENSON*; Y. GONG; R. KOK; N. SASIDHARAN; D. MU; A. VOLAK; X. O. BREAKEFIELD; C. A. MAGUIRE; G. GAO; F. EICHLER. *Massachusetts Gen. Hosp., Univ. of Massachusetts.*

2:00 V18 **229.14** Neuroanatomical changes of non-CNS cancer - a cross sectional study using contrast-enhanced clinically-indicated MRIs. M. S. SHIROISHI*; J. FASKOWITZ; F. D'AMORE; A. EMAMI; D. H. HWANG; S. Y. CEN; A. LERNER; A. W. TOGA; R. E. JACOBS; B. ZLOKOVIC; M. LAW; P. M. THOMPSON; N. JAHANSHAD. *USC, Southern California Clin. & Translational Sci. Inst., Imaging Genet. Center/USC Mark and Mary Stevens Neuroimaging and Informatics Institute, Keck Sch. of Medicine, Univ. of Southern California, Lab. of Neuro Imaging/USC Mark and Mary Stevens Neuroimaging and Informatics Institute, Keck Sch. of Medicine, Univ. of Southern California, Caltech, Zilkha Neurogenetic Inst. and Dept. of Physiol. and Biophysics, Keck Sch. of Medicine, Univ. of Southern California.*

POSTER

230. Mechanisms of Microglia Activation

Theme C: Neurodegenerative Disorders and Injury

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 W1 **230.01** Mitophagy in the immature brain after hypoxic-ischaemic injury. C. THORNTON*; K. SOBOTKA; R. VONTELL; S. NAIR; A. A. BABURAMANI; P. GRESSENS; H. HAGBERG. *King's Col. London, Univ. of Gothenburg, King's Col. London, INSERM U1141.*

2:00 W2 **230.02** Drp1 association with Fis1 is a critical mediator in microglial activation and neurodegeneration. A. U. JOSHI; M. DISATNIK; D. MOCHLY-ROSEN*. *Stanford Univ., Stanford Univ.*

3:00 W3 **230.03** Cognitive impairment in male offspring exposed to gestational diabetes is associated with hippocampal neuronal changes & neuroinflammation. T. M. KAUPPINEN*; B. VUONG; G. ODERO; M. STEVENSON; S. ROZBACHER; S. KERELIUK; T. PEREIRA; V. DOLINSKY. *Univ. of Manitoba, Neurosci. Res. Program, Kleysen Inst. for Advanced Med., Univ. of Manitoba, The Children's Hosp. Reserach Inst. of Manitoba.*

4:00 W4 **230.04** ● Possible prolonged endoplasmic reticulum (ER) stress following neonatal hypoxia-ischemia (HI). F. J. NORTHINGTON*; R. CHAVEZ-VALDEZ; D. FLOCK; O. AVERITT; L. J. MARTIN. *Johns Hopkins Sch. of Med., Johns Hopkins Sch. of Med.*

1:00 W5 **230.05** Lipopolysaccharide induces mitochondrial fission and a metabolic shift in microglia. S. NAIR; C. MALLARD; C. THORNTON; K. SOBOTKA; H. HAGBERG*. *Perinatal Ctr., Dept. of Perinatal Imaging and Hlth., Perinatal Ctr., Dept. of Perinatal Imaging and Hlth.*

2:00 W6 **230.06** Role of the α,β-unsaturated carbonyl moiety of curcumin and its bis-demethoxy derivative for inhibition of lipopolysaccharide-induced Toll-like receptor 4 activation and inflammatory response in microglia. P. F. GIUSTI*; F. BELLUTI; C. MARINELLI; E. CARACCIOLO; R. LO; S. STIFANI; S. MORO; M. ZUSSO. *Univ. Padova, Univ. of Bologna, Univ. Padova, McGill Univ.*

3:00 W7 **230.07** Vra4 locus mediated effects on microglial activation and dopaminergic neurodegeneration induced by overexpression of α synuclein. I. JIMENEZ FERRER*; M. JEWETT; A. TONTANAHAL; M. ROMERO-RAMOS; M. SWANBERG. *Lund Univ., Aarhus Univ.*

4:00 W8 **230.08** Erythropoietin in the brain reduces high fat-diet induced microglial activation and regulates glucose metabolism. S. DEY; J. CABAN; Z. CUI; O. GAVRILOVA; M. GASSMANN; C. T. NOGUCHI*. *MMB, NIDDK, Natl. Inst. of Hlth., NIDDK, Univ. of Zurich.*

1:00 W9 **230.09** Non-invasive mitochondrial modulation: A novel approach to reduce cerebral injury following neonatal hypoxia-ischemia. T. H. SANDERSON*; C. A. REYNOLDS; E. GRULEY; C. STRUBAKOS; M. HUTTEMANN. *Wayne State Univ., Wayne State Univ.*

2:00 W10 **230.10** Sex differences in microglia morphology, phagocytic marker CD11b, and cytokines in the adult healthy brain among male, female and post-menopause model mice. K. YOUNG; H. MORRISON*. *Univ. of Arizona, Univ. of Arizona.*

3:00 W11 **230.11** CNS effects of neonatal Staphylococcus epidermidis infection. C. MALLARD*; J. LAI; P. SVEDIN; X. WANG; T. STRUNK; A. CURRIE; M. PETTENGILL; O. LEVY. *Dept Neurosci. and Physiology, Sahlgrenska Academy, Univ. of Gothenburg, Ctr. for Neonatal Res. and Education, The Univ. of Western Australia, Univ. of Rochester, Boston Children's Hospital, Harvard Med. Sch.*

4:00 W12 **230.12** Acute and chronic allergic reactions differentially affect immune signaling in the hippocampus. B. KLEIN*; B. ALTENDORFER; B. HAMMER; J. THALHAMER; S. SCHEIBLHOFER; R. WEISS; L. AIGNER. *Paracelsus Med. Univ., Paracelsus Med. Univ., Univ. of Salzburg.*

1:00 X1 **230.13** Magnesium pre-exposure induces mitoprotection in the immature brain. G. KONING*; C. MALLARD; X. WANG; S. NAIR; C. THORNTON; P. GRESSENS; H. HAGBERG. *Univ. of Gothenburg / Perinatal Ctr., King's Col. London / Ctr. for the Developing Brain, Inserm, U1141, F-75019, Univ. of Gothenburg, Perinatal Ctr.*

2:00 X2 **230.14** ● Generation of an *in vivo*-like phenotype of primary murine microglia cells in culture. H. CYNIS*; S. BARENDRECHT; H. DEMUTH; R. EICHENTOPF; B. HIETEL; C. PÖSEL; S. SCHILLING; D. WAGNER. *Fraunhofer IZI-MWT, Fraunhofer IZI.*

3:00 X3 **230.15** MicroRNAs influence microglia-mediated phagocytosis of $A\beta_{1-42}$ *in vitro*. M. S. ALOI*; W. SU; S. FUNG; S. DAVIDSON; S. JAYADEV; G. A. GARDEN. *Univ. of Washington, Univ. of Washington.*

4:00 X4 **230.16** The sympathetic side of phagocytes. I. SHAKED*. *Univ. of California At San Diego.*

Sun. PM

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 X5 **230.17** ● Concordance between cortical atrophy and distribution of microglia in primary progressive aphasia with TDP-43 inclusions. G. KIM; T. GEFEN; Z. PARTON; N. LALEHZARI; F. RAHMANI; S. WEINTRAUB*; E. H. BIGIO; E. ROGALSKI; M. MESULAM; C. GEULA. *Northwestern University, Feinberg Sch. of Med., Northwestern Univ. Med. Sch.*

2:00 X6 **230.18** Analysis of microglia population dynamics in the healthy and diseased brain. D. E. MARZAN*; W. GAN; J. SALZER. *NYU Sch. of Med., Skirball Inst. of Biomolecular Med., NYU Sch. of Med.*

3:00 X7 **230.19** Optical control of microglial APC function using Cas9 effectors. P. MILLER-RHODES*; R. WYCALLIS; S. LU; H. GELBARD. *Univ. of Rochester Med. Ctr.*

4:00 X8 **230.20** Dock8 deficiency suppresses microglial migration and neuroinflammation. K. NAMEKATA*; X. GUO; A. KIMURA; C. HARADA; T. HARADA. *Tokyo Metropolitan Inst. of Med. Sci.*

1:00 X9 **230.21** Chronic ethanol increases toll-like receptor 7-induced neuroinflammation and neurodegeneration in C57BL/6 mice. L. QIN*; F. T. CREWS. *Univ. North Carolina, Sch. Med.*

2:00 X10 **230.22** The TLR7 agonist imiquimod induces neurotoxicity via HMGB1-let-7 signaling in brain slice cultures: Ethanol potentiation and neuroprotection of rifampin. J. Y. ZOU*; L. G. COLEMAN; F. T. CREWS. *Univ. North Carolina, Chapel Hill.*

3:00 X11 **230.23** The injury-induced up-regulation of glial aromatase is cyclooxygenase dependent in the zebra finch (Taeniopygia guttata). C. J. SALDANHA*; A. L. PEDERSEN; C. J. GOULD. *American Univ., American Univ.*

4:00 X12 **230.24** ● Estrogen therapy modulates inflammatory and apoptotic protein expression in estrogen receptor knock down female rat hippocampus. P. KUMAR*; P. DHAR. *AIIMS.*

1:00 X13 **230.25** ● Peripheral chronic Interleukin-1 exacerbates neuroinflammation via endothelial Interleukin-1 Receptor 1. D. NEMETH*; X. LIU; D. DISABATO; N. QUAN. *Inst. For Behavioral Med. Res.*

2:00 X14 **230.26** Elevated dopamine levels and reduced dopamine turnover in the striatum after Toxoplasma gondii infection. J. B. EELLS*; S. GUO-ROSS; D. BRAMLETT; D. S. LINDSAY; A. VARELA-STOKES. *Mississippi State Univ., Virginia-Maryland Regional Col. of Vet. Med.*

3:00 X15 **230.27** ● Lipopolysaccharide-induced changes in neurotransmitters in the striatum and prefrontal cortex of freely moving animals. N. MOORE*; A. RASSOULPOUR; A. ARANOV; H. KOOIJKER; Y. CHANG; L. YU; H. JANSSENS; C. CIARDELLO; M. VAN DER HART. *Brains On-Line LLC.*

4:00 X16 **230.28** Microglial activation in the developing rodent brain following single-day moderate binge-alcohol exposure. M. J. RUGGIERO*; K. BOSCHEN; A. KLINTSOVA. *Univ. of Delaware.*

1:00 X17 **230.29** Angiotensin II receptor blockers differentially regulate LPS-mediated microglial activation. Z. C. JANATPOUR*; K. AFFRAM; R. SHARMA; A. J. SYMES. *Uniformed Services Univ., Uniformed Services Univ.*

2:00 X18 **230.30** ● Microglial activation and associated pathways as therapeutic targets for Alzheimer's disease. C. N. VILLEGAS LLERENA*; M. MATARIN; J. HARDY; J. POCOCK. *UCL Inst. of Neurol.*

POSTER

231. Ischemia: Cellular Mechanisms

Theme C: Neurodegenerative Disorders and Injury

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 Y1 **231.01** Oxygen-glucose deprivation reduces cortical arteriole lumen diameter by generating 20-hydroxyeicosatetraenoic acid. L. LU*; P. LU; C. M. ANDERSON. *Univ. of Manitoba, Kleysen Inst. for Advanced Med., Hlth. Sci. Ctr.*

2:00 Y2 **231.02** Protective effect of LBP on cortical neurons exposed to OGD by reducing glutamic excitotoxicity Protective effect of LBP on cortical neurons exposed to OGD by reducing glutamic excitotoxicity. L. T. TING*; Z. SHI; L. ZHU; L. XIA; X. HAN; K. SO; Y. RUAN. *Jinan Univ., Jinan Univ., Hongkong Univ.*

3:00 Y3 **231.03** ● 24S-hydroxycholesterol and 25-hydroxycholesterol differentially impact neuronal survival following oxygen-glucose deprivation in primary hippocampal neuronal culture. M. SUN*; A. TAYLOR; C. ZORUMSKI; S. MENNERICK. *Washington Univ. in St. Louis, Washington Univ. in St. Louis, Taylor Family Inst. for Innovative Psychiatric Res.*

4:00 Y4 **231.04** L-type voltage gated calcium channel blockers reduce the severity of spreading depolarizations in murine brain slices. B. S. MEAD*; B. E. LINDQUIST; K. M. REINHART; A. P. CARLSON; C. W. SHUTTLEWORTH. *Univ. of New Mexico, Sch. of Med., Univ. of New Mexico, Sch. of Med.*

1:00 Y5 **231.05** Title: Increased intra-ischemic acidosis in recurrent hypoglycemia exposed rats may activate acid-sensing ion channels in vascular smooth muscle cells. V. SHUKLA*; A. K. REHNI; K. R. DAVE. *Miller Sch. of Med., Univ. of Miami.*

2:00 Y6 **231.06** Influence of tissue metabolic status on Ca^{2+} and glutamate accumulation during spreading depolarization in brain slices. K. M. REINHART*; C. W. SHUTTLEWORTH; R. A. MORTON. *Univ. of New Mexico, Sch. of Med., Univ. of New Mexico, Sch. of Med.*

3:00 Y7 **231.07** Function of perivascular stromal cells in stroke injury. K. K. KELLY; A. MACPHERSON; F. STRNAD; M. KANE; P. S. HERSON; J. SIEGENTHALER*. *Univ. of Colorado Denver, Univ. of Colorado, Denver, Univ. of Maryland, Sch. of Pahrmacy.*

4:00 Y8 **231.08** Systemic administration of adenosine A1 receptor agonist produces hippocampal-dependent spatial memory deficits: Role of microglia activation. F. S. CAYABYAB*; J. STOCKWELL; X. QIN; O. FRIESEN; Z. MING; Z. CHEN; W. WALZ. *Univ. of Saskatchewan, Univ. of Saskatchewan.*

1:00 Y9 **231.09** Hypoxia-induced changes in neural stem cell and microglia characteristics. M. K. TOBIN*; A. M. BARTHOLOMEW; O. LAZAROV. *Univ. of Illinois at Chicago, Univ. of Illinois at Chicago.*

2:00 Y10 **231.10** Changes in excitation-inhibition balance after focal cortical ischemia. N. V. POVYSHEVA*; M. E. ROSE; F. ZHANG; S. H. GRAHAM; G. BARRIONUEVO. *Univ. of Pittsburgh Dept. of Neurosci., Univ. of Pittsburgh.*

3:00 Y11 **231.11** Intracellular zinc increase is required for initial increase of mitochondrial ROS during hypoxia. K. SLEPCHENKO; Q. LU; H. HARAGOPAL; Y. V. LI*. *Ohio Univ., Ohio Univ., Ohio Univ., Ohio Univ.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 Y12 **231.12** ▲ Proliferation and differentiation of NG2-glia following different types of brain disorders. D. KIRDAJOVA*; P. HONSA; M. ANDEROVA. *Inst. of Exptl. Med. AS CR, Fac. of Science, Charles University, 2nd Fac. of Medicine, Charles Univ.*

1:00 Y13 **231.13** Knocking down SIRT3 preserved mitochondrial function and prevented brain injury after stroke. T. I. GUDZ*; S. A. NOVGORODOV; C. L. RILEY; J. A. KEFFLER; J. YU; W. B. MACKLIN. *Med. Univ. South Carolina, Univ. of Colorado.*

2:00 Y14 **231.14** Differential vulnerability of CA1 vs CA3 pyramidal neurons after ischemia: Possible relationship to sources of Zn^{2+} accumulation and its entry into and prolonged effects on mitochondria. Y. MEDVEDEVA; J. H. WEISS*. *Univ. of California Irvine.*

3:00 Y15 **231.15** Systemic administration of adenosine A1 receptor agonist increases leukocyte specific protein-1 (LSP-1) expression in hippocampus: Role in hippocampal neurodegeneration. J. STOCKWELL*; L. HAO; R. TENEYCKE; S. NOSIB; O. FRIESEN; L. LIU; F. S. CAYABYAB, S7N 5E5. *Univ. of Saskatchewan, Univ. of Saskatchewan, Univ. of Saskatchewan.*

4:00 Y16 **231.16** Cell division of hypoxic-ischemic cortical neurons by overriding mitotic safeguards. I. AJIOKA*; M. OSHIKAWA. *Tokyo Med. and Dent. Univ. (TMDU), JST.*

1:00 Y17 **231.17** Upstream modulation of Insulin/IGF signaling-mediated neuroprotection in a nematode model of excitotoxicity. A. CHOWDHURY*; S. PRASHAD; I. MANO. *City Col. CUNY, City College, The City Univ. of New York, The Grad. Ctr. of The City Univ. of New York, City College, The City Univ. of New York.*

2:00 Y18 **231.18** The mitochondrial calcium uniporter is essential for hypoxic preconditioning but not ischemic brain injury. M. J. NICHOLS*; P. A. ELUSTONDO; A. THIRUMARAN; E. V. PAVLOV; G. S. ROBERTSON. *Dalhousie Univ., Dalhousie Univ., Dalhousie university, NYU, Dalhousie.*

POSTER

232. Traumatic Brain Injury: Plasticity and Behavioral Deficits

Theme C: Neurodegenerative Disorders and Injury

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 Z1 **232.01** Examination of conditioned suppression in rodents after frontal tbi with an intervention of magnesium. J. YOUNG*; M. PRICE; E. JACOBS; M. HOANE. *Southern Illinois Univ. Carbondale, Southern Illinois Univ. Carbondale.*

2:00 Z2 **232.02** Exogenous addition of sphingomyelin restores impairments in hippocampal synaptic transmission and plasticity in a mouse model of traumatic brain injury. K. WHITNEY*; L. BUITRAGO-SOTO; J. IQBAL; M. HUSSAIN; H. MORENO; P. J. BERGOLD. *State Univ. of New York Downstate Med. Ctr., State Univ. of New York Downstate Med. Ctr.*

3:00 Z3 **232.03** Choice impulsivity is increased following mild, closed head injury in rats. K. M. MARTENS*; C. WINSTANLEY; C. WELLINGTON; C. VONDER HAAR. *Univ. of British Columbia.*

4:00 Z4 **232.04** Effects of repeated mild traumatic brain injury on hippocampal synaptic plasticity. C. PINAR-CABEZA*; C. J. FONTAINE; B. R. CHRISTIE. *Univ. of Victoria, Univ. of British Columbia.*

1:00 Z5 **232.05** Functional deficits are attenuated in human α synuclein BAC-transgenic rats after traumatic brain injury. C. DIXON*; Z. M. TAPP; S. W. CARLSON. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

2:00 Z6 **232.06** Unique neurocognitive and affective impairments in mouse models f TBI, PTSD and co-morbid TBI-PTSD. A. FESHARAKI*; J. MIYAUCHI; S. E. TSIRKA; P. BERGOLD. *SUNY Downstate Med. Ctr. Col. of Med., Stony Brook Univ., Stony Book Univ., SUNY Downstate Med. Ctr.*

3:00 Z7 **232.07** A novel mouse comorbid model of traumatic brain injury and fear conditioning with cognitive, behavioral and neuropathological impact. G. B. KAPLAN*; S. C. HEINRICHS; K. A. LEITE-MORRIS; X. ZENG; L. WU; D. T. ARENA; O. H. NGUYEN; Y. D. TENG. *VA Boston Healthcare System/Boston Univ. Sch. Med., VA Boston Healthcare Syst., VA Boston Healthcare System/Harvard Med. Sch., Boston Univ/VA Boston Healthcare Syst.*

4:00 Z8 **232.08** Effect of mild TBI on specific cognitive dysfunction with *in vivo* hippocampal activity. R. PATERNO*; H. METHENY; G. XIONG; A. S. COHEN. *Children Hosp. of Philadelphia, Children's Hosp. of Philadelphia.*

1:00 Z9 **232.09** Disrupted entrainment of CA1 hippocampal neurons to hippocampal θ after traumatic brain injury. P. KOCH*; R. RUSSO; M. WEBER; D. H. SMITH; V. E. JOHNSON; J. A. WOLF. *Univ. of Pennsylvania, Corporal Michael J. Crescenz VA Med. Ctr.*

2:00 Z10 **232.10** ▲ Pre-enriched housing impacts progesterone's effect on functional recovery in male rats after traumatic brain injury. Z. BOWERS*; N. SANISLO; N. ALAM; M. SEARLES; J. SMITH. *Saginaw Valley State Univ.*

3:00 Z11 **232.11** A la-icpms time course analysis of changes in cerebral metals following a controlled cortical impact in young and aged mice. S. D. PORTBURY*; D. HARE; C. SGAMBELLONI; D. P. BISHOP; P. A. DOBLE; D. FINKELSTEIN; P. A. ADLARD. *Florey Inst. of Neurosci. and Mental Hlth., Univ. of Technol. Sydney.*

4:00 Z12 **232.12** Manipulating cognitive reserve: Pre-injury environmental conditions influence the severity of concussion symptomology and pathophysiology. R. M. MYCHASIUK*; H. HEHAR; I. MA; K. YU; K. YEATES. *Univ. of Calgary, Univ. of Calgary.*

1:00 Z13 **232.13** Affective outcomes following traumatic brain injury in mice. J. POPOVITZ*; H. ADWANIKAR. *Johns Hopkins Univ.*

2:00 Z14 **232.14** Frontal traumatic brain injury alters risky choice on a rodent analog of the Iowa gambling task. C. VONDER HAAR*; C. A. WINSTANLEY. *Univ. of British Columbia.*

3:00 AA1 **232.15** Plasticity of retinal ganglion cell axon terminals in dorsal lateral geniculate nucleus following traumatic brain injury. V. C. PATEL*; C. W. D. JURGENS; T. E. KRAHE; J. T. POVLISHOCK. *Virginia Commonwealth Univ.*

4:00 AA2 **232.16** ● Changes in rodent emotionality following repeated subconcussive head rotational accelerations. B. D. STEMPER*; N. LETKO; A. SHAH; R. CHIARIELLO; A. GLAVASKI; M. MCCREA; F. PINTAR. *Med. Col. of Wisconsin Dept. of Neurosurg., Med. Col. of Wisconsin.*

1:00 AA3 **232.17** ▲ Learning and memory deficits in a *Drosophila* model of traumatic brain injury. H. ZUCKER; J. ROBBINS; S. WU; H. K. LEHMAN*. *Hamilton Col., Hamilton Col., Hamilton Col.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 AA4 **232.18** Parvalbumin interneuron axonal damage after mild traumatic brain injury (mTBI): Structural evidence implicating GABAergic input loss in neocortical circuit disruption. M. VASCAK*; J. POVLISHOCK. *Virginia Commonwealth University, MCV Campus.*

3:00 AA5 **232.19** Effects of TBI on the limbic system in a differential fear conditioning model of PTSD. C. D. ADAM; R. J. RUSSO; M. T. WEBER; V. E. JOHNSON; J. A. WOLF*. *Univ. of Pennsylvania, Corporal Michael J. Crescenz VA Med. Ctr.*

4:00 AA6 **232.20** Increased aggression and social contact following traumatic brain injury in male zebra finches. K. A. DUNCAN*; E. KELLMAN. *Vassar Col.*

POSTER

233. Transient Receptor Potential Channels: Regulation and Function

Theme D: Sensory Systems

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 AA7 **233.01** Effects of TRPV1 receptor antagonism on orthodontic force induced pain. N. HASEGAWA*; A. SASAKI; T. TSUCHIYA; N. SUDA; H. SAKAGAMI; K. ADACHI. *Meikai Univ. Sch. of Dent., Meikai Univ. Sch. of Dent.*

2:00 AA8 **233.02** New tools to interrogate molecular mechanisms in pain transduction. M. ARTERO; F. TABERNER; G. FERNÁNDEZ-BALLESTER; A. V. FERRER-MONTIEL*. *Inst. of Mol. and Cell. Biology, UMH, Inst. of Pharmacology, Heidelberg Univ., Univ. Miguel Hernandez.*

3:00 AA9 **233.03** Inhibition of TRPM3 ion channels by G-protein β-γ subunits. T. ROHACS*; D. BADHEKA; Y. YUDIN; I. BORBIRO. *Rutgers New Jersey Med. Sch.*

4:00 AA10 **233.04** SHANK3 regulates TRPV1 signaling in mouse and human primary sensory neurons. Y. KIM*; Q. HAN; X. WANG; D. LIU; Y. ZHANG; T. BERTA; Y. JIANG; R. JI. *Duke Univ. Med. Ctr., Duke Univ. Med. Ctr.*

1:00 AA11 **233.05** Tyrosine residue at 511 position in the TRPV1 tightly fasten vanilloids to delay channel deactivation. R. KUMAR*; A. PRIEL. *The Hebrew Univ.*

2:00 AA12 **233.06** New mechanisms of EP1 and EP4 receptors in enhancing the functionality of TRPV1 in dorsal root ganglia (DRG) neurons. S. M. JAFFAL*. *McGill Univ.*

3:00 AA13 **233.07** ● Calcium-dependent ablation of trpv1-lineage axonal terminals by capsaicin. S. WANG; S. WANG; J. JOSEPH; J. RO; F. WEI; J. CAMPBELL; M. CHUNG*. *Univ. of Maryland Dent. Sch., the Centrexion.*

4:00 AA14 **233.08** The complement system component C5a produces thermal and mechanical hyperalgesia via macrophage-to-nociceptor signaling that requires TRPV1. C. WARWICK*; L. P. SHUTOV; T. M. WOODRUFF; A. J. SHEPHERD; D. P. MOHAPATRA; Y. M. USACHEV. *Univ. of Iowa, Univ. of Queensland, Washington Univ. Sch. of Med.*

1:00 AA15 **233.09** Alleviating neuropathic pain by selective expression of trpv1 interfering peptide aptamer in primary sensory neurons. H. YU*; Z. LIU; F. WANG; H. XIANG; G. FISCHER; B. PAN; Q. H. HOGAN. *Med. Col. of Wisconsin.*

2:00 AA16 **233.10** NSAIDs attenuate hyperalgesia induced by TRP channelagonists. M. G. TSAGARELI*; I. NOZADZE; N. TSIKLAURI; G. GURTSKAIA. *Ivane Beritashvili Exptl. Biomedicine Ctr.*

3:00 AA17 **233.11** 17-β-Estradiol enhances serotonergic neuromodulation of the transient receptor potential vanilloid 1 channel-expressing subpopulation of trigeminal sensory neurons. S. LULLA*; R. H. BESHER; W. L. BENTON; S. ANANTH; D. L. AVERITT. *Texas Woman's Univ.*

4:00 AA18 **233.12** ● Behavioral characterization of CRISPR generated TRPA1 knockout rats. R. M. REESE; S. D. SHIELDS*; M. DOURADO; X. WU; E. SUTO; W. P. LEE; A. BALESTRINI; L. RIOL BLANCO; D. HACKOS. *Genentech.*

1:00 BB1 **233.13** The pain receptor TRPV1 displays agonist-dependent activation stoichiometry. A. HAZAN*; R. KUMAR; H. MATZNER; A. PRIEL. *The Hebrew Univ. of Jerusalem.*

2:00 BB2 **233.14** Citral enhances spontaneous excitatory transmission in adult rat spinal substantia gelatinosa neurons by activating TRPA1 channels. L. ZHU; T. FUJITA*; C. JIANG; C. WANG; T. YU; R. HIRAO; R. SUZUKI; N. MAGORI; E. KUMAMOTO. *Saga Med. Sch.*

3:00 BB3 **233.15** Identification of the molecular target of crotamiton, an anti-itch agent. H. KITTAKA*; M. TOMINAGA. *Okazaki Inst. for Integrative Biosci., Natl. Inst. of Physiological Sci.*

4:00 BB4 **233.16** ● Store-operated calcium channels are involved in the function of TRPV1 in dorsal root ganglion neurons. D. WEI*; H. HU. *Drexel Univ. Col. of Med.*

1:00 BB5 **233.17** Expression and distribution of TRPM4 channels in mouse prefrontal cortex. E. LEIVA-SALCEDO*; C. VILLEGAS; H. VALENZUELA; D. RIQUELME. *Univ. de Santiago, Univ. de Santiago.*

2:00 BB6 **233.18** Group I metabotropic glutamate receptors increase excitability of layer III entorhinal pyramidal neurons and changes in excitability involve the activation of a TRPC4/5-like current. N. I. CILZ*; B. HU; S. LEI. *Univ. of North Dakota, Univ. of North Dakota.*

POSTER

234. Spinal Cord Processing: Anatomy and Physiology

Theme D: Sensory Systems

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 BB7 **234.01** Peripheral nerve injury-induced synaptic rearrangement in the spinal dorsal horn revealed by cross-correlation analysis. T. ASAKAWA; Y. TAKEMURA; T. FUJIWARA; K. AKAGAWA; Y. HORI*. *Dokkyo Univ. Sch. Med., Kyorin Univ. Sch. Med.*

2:00 BB8 **234.02** Long-term effects of neonatal surgical injury in rats: Sexual dimorphism in response to neonatal microglial inhibition. O. MORIARTY*; Y. TU; M. W. SALTER; S. BEGGS; S. M. WALKER. *Univ. Col. London, UCL Inst. of Child Hlth., The Hosp. for Sick Children.*

3:00 BB9 **234.03** Plasticity and circuitry of spinal pathways after peripheral nerve injury: An *in vivo* patch-clamp recording. M. KURABE*; H. BABA; T. KOHNO. *Div. of Anesthesiol.*

4:00 BB10 **234.04** Quantitative analysis of spatial distribution of cell bodies in feline dorsal root ganglia. Z. J. SPERRY*; A. K. OSTROWSKI; G. E. KULIK; T. M. BRUNS. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 BB11 **234.05** Activation of spinal dorsal horn astrocytes modulates the processing of tactile sensation. Y. KOHRO*; R. KATSURAGI; T. OKA; S. MUNETA; R. TASHIMA; H. TOZAKI-SAITOH; K. INOUE; M. TSUDA. *Kyushu Univ., Kyushu Univ.*

2:00 BB12 **234.06** Latent Sensitization: Contralateral hyperalgesia and its suppression by mu-opioid receptors develop simultaneously and involve descending pathways. J. G. MARVIZON*; W. CHEN; W. M. WALWYN. *UCLA / VA GLA HS, UCLA.*

3:00 BB13 **234.07** ● Does the allodynic spinal cord have a specific colour? M. R. HUTCHINSON*; V. STAIKOPOULOS; M. GOSNELL; A. ANWAR; S. MUSTAFA; E. GOLDYS. *Univ. Adelaide, Australian Res. Council Ctr. of Excellence for Nanoscale BioPhotonics, Quantitative (Biotechnology) Pty Ltd, Australian Res. Council Ctr. of Excellence for Nanoscale BioPhotonics, Macquarie Univ.*

4:00 BB14 **234.08** ● Flexible wireless NFC-powered optoelectronic devices for long term spinal and peripheral optogenetics. M. PULLEN-COLON*; V. K. SAMINENI; A. D. MICKLE; J. YOON; Y. JEONG; J. G. GRAJALES-REYES; J. P. GOLDEN; K. MCKENZIE; G. SHIN; J. A. ROGERS; R. W. GEREAU, IV. *Washington Univ. In St Louis, Washington Univ. in St Louis, Univ. of Illinois at Urbana-Champaign.*

1:00 BB15 **234.09** Channel Rhodopsin assisted circuit mapping of calretinin neurons in the superficial dorsal horn. K. M. SMITH*; D. I. HUGHES; P. JOBLING; R. J. CALLISTER; C. V. DAYAS; B. A. GRAHAM. *Univ. of Newcastle, Univ. of Glasgow.*

2:00 BB16 **234.10** Genetic dissection of spinal circuits processing different forms of sensory modalities. T. HUANG*; B. DUAN; L. CHENG; Y. ZHANG; Y. ZHANG; M. GOULDING; Q. MA. *Dana-Farber Cancer Institute, Harvard Med. Scho, Salk Inst.*

3:00 BB17 **234.11** NMDA receptors and large conductance calcium-activated potassium channels in enkephalinergic neurons in mouse spinal superficial dorsal horn. E. KATO*; Y. TAKEMURA; Y. HORI. *Dokkyo Med. Univ.*

4:00 BB18 **234.12** PLA_2-prostaglandin signaling mediates spike timing-dependent LTP at primary afferent synapses onto spinal projection neurons. J. LI; M. L. BACCEI*. *Univ. Cincinnati.*

1:00 CC1 **234.13** A role for somatostatin in itch. J. HUANG; J. SOLINSKI; M. KRIEGBAUM; P. TSENG; M. HOON*. *NIH, NIDCR.*

2:00 CC2 **234.14** Characterisation of a novel population of spinal superficial dorsal horn neurons in the Thy1-GFP mice. B. A. GRAHAM*; K. M. SMITH; M. A. GRADWELL; R. J. CALLISTER; D. I. HUGHES; F. R. WALKER. *The Univ. of Newcastle, The Univ. of Newcastle, Univ. of Glasgow.*

3:00 CC3 **234.15** Intrinsic excitability of spinal projection neurons is enhanced by a Na^+ leak conductance activated by substance P. N. C. FORD*; M. L. BACCEI. *Univ. of Cincinnati Dept. of Anesthesiol.*

4:00 CC4 **234.16** Subcellular distribution of Sigma-1 receptor in Dorsal Root Ganglion of rodents. T. A. MAVLYUTOV*; M. L. EPSTEIN; J. YANG. *Univ. of Wisconsin, Univ. of Wisconsin.*

1:00 CC5 **234.17** Diverse firing properties and aβ, aδ and c afferent inputs of small local-circuit neurons in spinal lamina 1. B. V. SAFRONOV*; E. FERNANDES; L. L. LUZ; P. SZUCS. *IBMC, IBMC, MTA-DE-NAP B-Pain Control Res. Group.*

2:00 CC6 **234.18** Postsynaptic and presynaptic inhibition revealed by optogenetic activation of spinal cord dorsal horn parvalbumin interneurons. M. A. GRADWELL*; R. J. CALLISTER; D. I. HUGHES; B. A. GRAHAM. *Univ. of Newcastle, Univ. of Glasgow.*

3:00 CC7 **234.19** Markovian analysis of spontaneous spinal cord dorsum potentials reveals non random dynamic adaptive changes in the configuration of the functional connectivity between segmental populations of dorsal horn neurons in response to acute nociceptive stimulation. P. RUDOMIN*; M. MARTIN; E. CONTRERAS-HERNANDEZ; J. BEJAR; G. ESPOSITO; D. CHAVEZ; U. CORTES; S. GLUSMAN. *Cinvestav IPN Depto. Fisiologia, El Colegio Nacional, Univ. Politecnica de Catalunya, Barcelona Supercomputing Ctr.*

4:00 CC8 **234.20** Activation of spinal STAT6 signaling in M2 like microglia suppressed neuropathic pain. H. OKUTANI; H. YAMANAKA; K. KOBAYASHI; M. OKUBO; M. HIROSE; K. NOGUCHI*. *Hyogo Coll Med., Hyogo Coll Med., Hyogo Coll Med.*

1:00 CC9 **234.21** The VGF-derived neuropeptide TLQP-62 induces neuroplasticity in the dorsal horn. A. G. SKORPUT*; H. TRUONG; W. LIN; J. J. WAATAJA; S. R. SALTON; L. VULCHANOVA. *Univ. of Minnesota, Icahn Sch. of Med. at Mount Sinai.*

2:00 CC10 **234.22** Acyloxyacyl hydrolase modulates pelvic pain severity. W. YANG*; R. E. YAGGIE; M. JIANG; C. N. RUDICK; C. J. HECKMAN; J. DONE; A. J. SCHAEFFER; D. J. KLUMPP. *Northwestern Univ., Northwestern Univ.*

3:00 CC11 **234.23** ▲ Alteration of neurovascular coupling in the rat spinal cord by systemic blood pressure changes evoked by nociceptive stimulation. T. PAQUETTE*; H. LEBLOND; M. PICHÉ. *Univ. Du Québec À Trois-Rivieres, Univ. Du Québec À Trois-Rivieres, Univ. du Québec à Trois-Rivières, Univ. Du Québec À Trois-Rivieres.*

4:00 DD1 **234.24** Resting-state connectivity in the human spinal cord. F. EIPPERT*; Y. KONG; J. BROOKS; I. TRACEY. *Univ. of Oxford, Univ. of Bristol.*

1:00 DD2 **234.25** Utilizing mouse glabrous skin-specific tactile behavior assays to dissect innocuous touch circuits of the spinal cord dorsal horn. A. TOLIVER*; L. L. OREFICE; V. ABRAIRA; D. GINTY. *Harvard Med. Sch.*

2:00 DD3 **234.26** Synapse specificity in peripheral sensory neurons. B. A. COPITS*; K. C. MCKENZIE; K. M. WILSON; S. K. VOGT; J. P. GOLDEN; R. W. GEREAU, IV. *Washington Univ. Sch. of Med.*

3:00 DD4 **234.27** Characterization of Zic2+ dorsal spinal neurons as potential integrators of sensory and motor circuits. S. PAIXAO*; A. ESCALANTE; R. KLEIN. *Max Planck Inst. of Neurobio.*

POSTER

235. Somatosensation: Human and Non-Human Primates

Theme D: Sensory Systems

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 DD5 **235.01** Somatosensory enhancement of the lips size increases tactile acuity. E. AMBRON*; M. COYLE; H. B. COSLETT. *Univ. of Pennsylvania Sch. of Med., Perelman Sch. of Med. at the Univ. of Pennsylvania.*

Sun. PM

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 DD6 **235.02** Neural signatures of vibrotactile stimulation at 7T MRI and links to autism traits. L. K. BRYANT*; L. CHEN; A. MISHRA; C. J. CASCIO; M. T. WALLACE. *Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ.*

3:00 DD7 **235.03** Transcranial oscillatory stimulation at individual somatosensory α frequency specifically decreases network centrality of S1. C. GUNDLACH; T. NIERHAUS; P. RAGERT; M. MUELLER; A. VILLRINGER; B. S. SEHM*. *Univ. of Leipzig, Max Planck Inst. For Human Cognitive and Brain Sci., Univ. of Leipzig.*

4:00 DD8 **235.04** The event-related somatosensory responses to long lasting gentle touch measured with magnetoencephalography. E. J. ERIKSSON*; D. LUNDQVIST; J. SCHNEIDERMAN; V. JOUSMÄKI; J. WESSBERG. *Sahlgrenska Academy, Univ. of Gothenburg, NatMEG, Dept. of Clin. Neuroscience, Karolinska Institutet, MedTech West and the Inst. of Neurosci. and Physiol., Sahlgrenska Academy, Univ. of Gothenburg, Aalto NeuroImaging, Dept. of Neurosci. and Biomed. Engineering, Aalto Univ.*

1:00 DD9 **235.05** Dynamic cortical network processing of a somesthetic stimulus as revealed by magnetoencephalography (MEG). A. C. LEUTHOLD*; C. CHORN; A. P. GEORGOPOULOS. *Univ. Minnesota.*

2:00 DD10 **235.06** fMRI representation of erotic vs non-erotic genital self-stimulation; attenuation during the post-orgasmic refractory period in men. K. ALLEN*; B. KOMISARUK. *Princeton Univ., Rutgers, Rutgers.*

3:00 DD11 **235.07** Neural activity in the secondary somatosensory cortex during the tactile working memory delay period. Y. YU*; J. YANG; H. SHIGEMASU; H. KADOTA; K. NAKAHARA; H. YAMAMOTO; Y. EJIMA; J. WU. *Okayama Univ., Kochi Univ. of Technol., Kyoto Univ.*

4:00 DD12 **235.08** A new simple objective method to evaluate haptic perception. Y. TSENG*; N. ELANGOVAN; J. KONCZAK. *Univ. of Minnesota Twin Cities, Univ. of Minnesota Twin Cities.*

1:00 DD13 **235.09** H-coil rTMS to S2 and insula affects only S2; alters touch intensity but not pleasantness. L. K. CASE; E. A. RICHARDS; C. M. LAUBACHER; H. OLAUSSON; P. A. SPAGNOLO; B. WANG; M. C. BUSHNELL*. *NCCIH/NIH, Linköping Universiy, NIAAA/NIH.*

2:00 DD14 **235.10** Spinal projection pathways of human C-tactile afferents. A. MARSHALL*; M. SHARMA; K. MARLEY; F. MCGLONE. *Salford Royal Hosp. Fndn. Trust, Liverpool John Moores Univ., Univ. of Manchester, The Walton Ctr., Univ. Hosp. Aintree.*

3:00 DD15 **235.11** Is ineffective processing of sensory information linked to rewired pathways for sensory-motor input? A functional connectivity study on Nerve Growth Factor β mutation carriers. H. VAN ETTINGER-VEENSTRA*; I. PERINI; I. MORRISON. *Linköping Univ.*

4:00 DD16 **235.12** ▲ The influence of testosterone on pain perception differences between males and females exposed to the cold pressor test. M. ARCHEY; S. GARDON; E. CROCKETT; K. GOLDEY; J. A. BOYETTE-DAVIS*; J. A. BOYETTE-DAVIS*. *St. Edward's Univ., Southwestern Univ., St. Edward's Univ.*

1:00 DD17 **235.13** Neural correlates of distorted body representations underlying tactile distance perception. L. TAMÈ*; M. I. SERENO; R. SADIBOLOVA; M. R. LONGO. *Birkbeck, Univ. of London, Univ. Col. London/Birkbeck, Univ. of London.*

2:00 EE1 **235.14** Functional MRI responses in monkey somatosensory cortex during grasp and touch observation. S. SHARMA; K. NELISSEN*. *KU Leuven.*

1:00 DP03 **235.15** (Dynamic Poster) Unravelling somatotopy in time. P. AVANZINI*; F. CARUANA; V. PELLICCIA; L. TASSI; G. LO RUSSO; G. A. ORBAN; G. RIZZOLATTI. *Univ. of Parma, Natl. Res. Council, Univ. of Parma, Niguarda Hosp.*

4:00 EE2 **235.16** Knowing about gut feelings. J. S. WINSTON*; A. V. EMMANUEL; E. ATHANASAKOS; K. OHRNBERGER; R. J. DOLAN; S. M. FLEMING; G. REES. *Univ. Col. London, Univ. Col. London Hosp.*

1:00 EE3 **235.17** Interaction of attention, instructions, and proprioception in a joint matching and N-Back task. A. FORREST*; B. LEE; A. THRASHER; R. KABBALIGERE; C. LAYNE. *Ouachita Baptist Univ., Univ. of Houston.*

2:00 EE4 **235.18** Gender differences in kinesthesia. Y. ACOSTA-SOJO*; D. E. ADAMO; B. J. MARTIN. *Univ. of Michigan, Wayne State Univ.*

POSTER

236. Auditory Processing: Cortex

Theme D: Sensory Systems

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 EE5 **236.01** Synaptic or intrinsic, that is the question; parsing out synaptic currents in mapping the auditory corticocollicular inputs with glutamate uncaging. B. SLATER*; S. K. SONS; D. A. LLANO. *Univ. of Illinois Syst., Univ. of Illinois.*

2:00 EE6 **236.02** NMDA receptor-dependent temporal processing plasticity in the developing auditory cortex requires $gaba_b$ receptor-mediated inhibition. D. CAI; R. HAN; M. LIU; F. XIE; L. YOU; Y. WANG; Y. YUE; K. YUAN*. *Tsinghua Univ.*

3:00 EE7 **236.03** Modular innervation of primary auditory cortex (A1) by morphologically diverse thalamocortical axons. E. E. DIEL*; S. KUROKI; S. ITOHARA; T. K. HENSCH. *Harvard Univ., RIKEN Brain Sci. Inst., Boston Children's Hosp.*

4:00 EE8 **236.04** Laminar distribution of calcium binding proteins in macaque auditory cortex. L. A. DE LA MOTHE*; C. R. CAMALIER; H. CANSLER; S. M. HUBBARD; T. A. HACKETT. *Tennessee State Univ., Natl. Insitute of Mental Hlth., Univ. of Texas Southwestern, Vanderbilt Univ.*

1:00 EE9 **236.05** Imbalanced excitation and inhibition in pyramidal cells in awake mouse auditory cortex. H. K. KATO*; J. S. ISAACSON. *UCSD Sch. of Med.*

2:00 EE10 **236.06** Avalanche dynamics during spontaneous and sound evoked activity in the auditory cortex of awake mice. D. E. WINKOWSKI*; Z. BOWEN; S. SESHADRI; T. RIBEIRO; D. PLENZ; P. O. KANOLD. *Univ. of Maryland, Univ. of Maryland, NIH.*

3:00 EE11 **236.07** Control of cortical network activity by somatostatin- and parvalbumin-positive interneurons. B. M. KRAUSE*; D. J. UHLRICH; M. I. BANKS. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

4:00 EE12 **236.08** A role for Martinotti cells in auditory cortex dynamics: A modeling study. D. BEEMAN*; L. NATALE. *Univ. of Colorado Boulder.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 EE13 **236.09** L5 corticocollicular and L6 corticothalamic neurons support a parallel and complementary analysis of auditory stimulus features. R. S. WILLIAMSON*; D. B. POLLEY. *Massachusetts Eye and Ear Infirmary, Boston Univ., Harvard Med. Sch.*

2:00 EE14 **236.10** Anesthetic induced changes in cortical spike timing across awareness states. N. S. MORAN*; J. KAKES; S. M. GRADY; M. I. BANKS. *UW Madison, Dept. of Anesthesiol., Univ. of Wisconsin Madison.*

3:00 EE15 **236.11** Dopaminergic modulation of vocalization-selective neurons in the inferior colliculus acts via D2-like receptors. J. M. HOYT*; R. A. FELIX, II; D. J. PERKEL; C. V. PORTFORS. *Washington State Univ. Vancouver, Univ. of Washington.*

4:00 EE16 **236.12** Functional properties in the secondary auditory field are derived from structural organization of primary auditory thalamus and thalamocortical projections in mice. H. TSUKANO*; K. SHIBUKI. *Brain Res. Institute, Niigata Univ., Brain Res. Inst, Niigata Univ.*

1:00 EE17 **236.13** Activation of auditory cortex induces excitatory postsynaptic potential in midbrain neurons. J. QI; J. YAN*. *Univ. of Calgary Fac. of Med.*

2:00 EE18 **236.14** Cortical network activity in posterior parietal cortex following feedforward and feedback afferent stimulation. C. MURPHY*; R. D. SANDERS; B. K. KRAUSE; M. I. BANKS. *Univ. of Wisconsin.*

3:00 FF1 **236.15** A computational modelling study of cortical network activity. A. RAMAMOORTHY*; N. MORAN; B. KRAUSE; M. I. BANKS. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

4:00 FF2 **236.16** Stimulus-specific adaptation in distinct inhibitory populations in auditory cortex. T. S. YARDEN*; A. MIZRAHI; I. NELKEN. *Hebrew Univ.*

1:00 FF3 **236.17** Anaesthetic choice modulates basic auditory processing: A combined EEG/LFP study in guinea pigs. O. WOOLNOUGH*; J. I. BERGER; B. COOMBER; M. N. WALLACE; A. R. PALMER; C. J. SUMNER. *MRC Inst. of Hearing Res.*

2:00 FF4 **236.18** A layer 1 map in primary auditory cortex (A1). A. E. TAKESIAN*; E. E. DIEL; T. K. HENSCH. *Boston Children's Hosp., Harvard Univ.*

1:00 DP04 **236.19** (Dynamic Poster) Corticothalamic neurons control modes of cortical processing and perception by entraining columnar oscillations. W. GUO*; A. R. CLAUSE; A. N. BARTH-MARON; B. G. SHINN-CUNNINGHAM; D. B. POLLEY. *Massachusetts Eye and Ear Infirmary, Harvard Med. Sch., Boston Univ.*

4:00 FF5 **236.20** Rewiring the deafferented cortical neurons to the remaining auditory inputs: A model for treatment of tinnitus patients. P. JENDRICHOVSKY*; J. FENG; J. HE. *City Univ. of Hong Kong.*

1:00 FF6 **236.21** Reafference integration in an escape circuit. C. R. VON REYN*; G. M. CARD. *Drexel Univ., Janelia Res. Campus, HHMI.*

2:00 FF7 **236.22** Mapping auditory information flow in primate cortex. B. H. SCOTT*; Y. KIKUCHI; K. S. SALEEM; M. FUKUSHIMA; M. MISHKIN; R. C. SAUNDERS. *NIMH, Newcastle Univ. Med. Sch., RIKEN Brain Sci. Inst.*

3:00 FF8 **236.23** Thalamic inactivation does not prevent auditory cortical plasticity induced by intracortical stimulation. L. KONG*; S. WANG; X. LIU; J. YAN. *Hotchkiss Brain Institute, Univ. of Calgary.*

4:00 FF9 **236.24** Opposing shifts in the transcription of AMPA and GABAA receptor subunit genes support homeostatic gain adjustments in the auditory cortex and midbrain following cochlear denervation. P. BALARAM*; D. B. POLLEY. *Massachusetts Eye and Ear Infirmary, Harvard Med. Sch.*

1:00 FF10 **236.25** Influence of sensory activity on the development of subplate neuron circuits. X. MENG*; P. O. KANOLD. *Univ. of Maryland, Univ. of Maryland.*

2:00 FF11 **236.26** ● $GABA_A$ and $GABA_B$ mediated inhibition display distinct critical periods in auditory cortex. T. M. MOWERY*; J. DIMIDSCHSTEIN; G. FISHELL; V. KOTAK; D. SANES. *New York Univ., New York Univ.*

3:00 FF12 **236.27** ▲ Mice with reduced α7 nicotinic receptors demonstrate auditory processing EEG abnormalities relevant to schizophrenia. A. M. PATINO*; D. J. GRAZIANO; D. FEUERBACH; M. M. SIDOR. *Novartis, Novartis.*

4:00 FF13 **236.28** An inhibitory corticostriatal circuit. C. ROCK*; H. ZURITA; C. WILSON; A. APICELLA. *Univ. of Texas at San Antonio.*

1:00 FF14 **236.29** Isoflurane anesthesia attenuates cortical responses to sounds in rats. M. M. HOLDFORD; Z. R. HOLLOWAY; J. J. SABLE; F. ANDRASIK; H. J. SABLE*. *Univ. of Memphis, Christian Brothers Univ.*

POSTER

237. Auditory Processing: Humans

Theme D: Sensory Systems

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 FF15 **237.01** Omissions of expected phonemes generate stimulus specific predictions in superior temporal gyrus, an ecog study. Y. M. FONKEN*; A. MUKERJI; P. BRUNNER; G. SCHALK; R. T. KNIGHT. *Knight Lab. - Univ. of California, Berkeley, Univ. of California, Albany Med. Col., Wadsworth Center, New York state department of health, Wadsworth Center, New York state department of health, Univ. of California, Berkeley.*

2:00 FF16 **237.02** Can transcranial direct current stimulation (tDCS) modulate auditory cortical oscillations? Simultaneous acquisition of tDCS and magnetoencephalography (MEG). M. HOLDING*; P. ADJAMIAN; N. WEISZ; G. DEMARCHI; D. HALL. *MRC Inst. of Hearing Res., Univ. of Salzburg, Nottingham Biomed. Res. Unit.*

3:00 FF17 **237.03** Entrainment of EEG during the music listening. Y. KUMAGAI; T. TANAKA*. *Tokyo Univ. of Agr. and Technol.*

4:00 FF18 **237.04** ▲ Different cortical oscillation patterns effectively distinguish auditory selective and non-selective attention in multi-talker speech perception. Y. GAO*; L. LI. *Dept. of Psychology, Peking Univ.*

1:00 GG1 **237.05** ▲ Neural noise in the human electroencephalogram predicts perceptual decisions. L. WASCHKE*; M. WÖSTMANN; J. OBLESER. *Dept. Of Psychology, Univ. of Lübeck.*

2:00 GG2 **237.06** Neural representation and hierarchical processing of Chinese phonemes in temporal cortex revealed by intracranial EEG. C. SONG*; R. XU; B. HONG. *Tsinghua Univ., Tsinghua Univ.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 GG3 **237.07** Effects of L-dopa on the benefit from attention to memory. S. LIM*; C. THIEL; B. SEHM; L. DESERNO; J. LEPSIEN; J. OBLESER. *Univ. of Luebeck, Max Planck Inst. for Human Cognitive and Brain Sci., Univ. of Oldenburg.*

4:00 GG4 **237.08** Investigating decay in human auditory sensory memory with direct intracranial recordings. A. WILSCH*; A. RHONE; K. V. NOURSKI; C. S. HERRMANN; J. OBLESER. *Univ. of Oldenburg, The Univ. of Iowa, Universitiy of Oldenburg, Univ. of Lübeck.*

1:00 GG5 **237.09** Ongoing dynamics of frequency-specific large-scale brain networks predict the speed of auditory decisions. M. ALAVASH*; C. DAUBE; M. WÖSTMANN; A. BRANDMEYER; J. OBLESER. *Inst. of Psychology I, Max Planck Inst. for Human Cognitive and Brain Sci.*

2:00 GG6 **237.10** ● Scalp EEG predicts listener's attentional focus and attentional demands under continuously varying signal-to-noise ratio. L. FIEDLER*; M. WÖSTMANN; S. HERBST; C. GRAVERSEN; T. LUNNER; J. OBLESER. *Univ. of Luebeck, Univ. of Lübeck, Eriksholm Res. Ctr.*

3:00 GG7 **237.11** Imagined rhythm can be decoded from EEG. H. OKAWA*; K. SUEFUSA; T. TANAKA. *Tokyo Univ. of Agr. and Technol.*

4:00 GG8 **237.12** Predictability modulates excitation in the auditory cortex of macaques. N. C. AGGELOPOULOS*; E. SELEZNEVA; S. KNYAZEVA; A. G. GORKIN; M. BROSCH. *Leibniz Inst. for Neurobio., Russian Acad. of Sci.*

1:00 GG9 **237.13** ● Subconscious detection of the pitch change direction. K. SAITO*; M. MATSUHASHI; T. AWAYA; T. KATO; T. MIMA; A. IKEDA; H. FUKUYAMA; T. HEIKE. *Human Brain Res. Center, Kyoto Univ. Grad, Kyoto Univ. Grad. Sch. of Med., Kyoto Univ., Ritsumeikan Univ., Kyoto Univ. Grad. Sch. of Med.*

2:00 GG10 **237.14** ● Cyborgs have problems too: Measuring the cognitive cost of assistive technologies for the deaf. H. WILLIS*; S. ROSEN; D. VICKERS. *Univ. Col. London.*

3:00 GG11 **237.15** Electrophysiology of the human superior temporal sulcus during speech and language processing. M. STEINSCHNEIDER*; K. V. NOURSKI; A. E. RHONE; H. KAWASAKI; M. A. HOWARD, III. *Albert Einstein Col. of Med., Univ. of Iowa.*

4:00 GG12 **237.16** ▲ Biological motion sensitivity in deaf adults:an fMRI study. M. SIMON*; L. LAZZOUNI; E. CAMPBELL; F. CHAMPOUX; A. NEWMAN; F. LEPORE. *Univ. De Montreal, Univ. De Montreal, Dalhousie Univ.*

1:00 GG13 **237.17** Listening to music increases motor evoked potential amplitude in healthy older adults. P. IZBICKI*; S. ANDERSON; E. STEGEMOLLER. *Iowa State Univ., Iowa State Univ.*

2:00 GG14 **237.18** A neural signature of segregation of tone sequences, independent of the attended stream. A. J. BILLIG*; M. H. DAVIS; R. P. CARLYON. *Brain and Mind Inst., MRC Cognition and Brain Sci. Unit.*

3:00 HH1 **237.19** Direct human electrical recordings demonstrating fundamental bases for auditory figure-ground analysis. P. E. GANDER*; S. KUMAR; K. V. NOURSKI; H. OYA; H. KAWASAKI; M. A. HOWARD, III; T. D. GRIFFITHS. *Univ. of Iowa, Newcastle Univ., Univ. Col. London.*

4:00 HH2 **237.20** Cortical mechanisms of auditory streaming in humans: An intracranial electrophysiology study. X. WANG*; R. CURTU; B. BRUNTON; K. NOURSKI. *The Univ. of Iowa, Univ. of Washington.*

1:00 HH3 **237.21** Cortical encoding of speech intonation on human superior temporal gyrus. C. TANG*; L. S. HAMILTON; E. F. CHANG. *Univ. of California, San Francisco.*

2:00 HH4 **237.22** The contribution of cognition in speech-in-noise perception in younger and older normal hearing listeners. A. DRYDEN*; H. A. ALLEN; H. HENSHAW; A. HEINRICH. *Univ. of Nottingham, MRC Insitute of Hearing Res., NIHR Nottingham Hearing BRU.*

3:00 HH5 **237.23** ▲ How to create the intelligible speech perception by cochlear nerve stimulation? Y. TAMAI*; S. HIRYU; K. I. KOBAYASI. *Doshisha Univ.*

4:00 HH6 **237.24** Auditory-motor integration in the dorsal stream of the early blind. J. PHILLIPS-SILVER*; J. P. RAUSCHECKER. *Georgetown Univ. Med. Ctr., Georgetown Univ. Med. Ctr.*

1:00 HH7 **237.25** Cortical plasticity for own and partner material after short-term musical duet training. C. LAPPE*; S. BODECK; M. LAPPE; C. PANTEV. *Univ. Muenster.*

2:00 HH8 **237.26** Auditory aversion in subjects with absolute pitch. L. ROGENMOSER*; H. LI; G. SCHLAUG. *Harvard Med. Sch.*

3:00 HH9 **237.27** Investigating the effect of perceptual enhancement on the cortical representation of speech using source space analysis with MEG. G. M. DI LIBERTO*; R. E. MILLMAN; E. C. LALOR. *Trinity Ctr. for Bioengineering, Trinity Col., Univ. of Manchester.*

4:00 HH10 **237.28** Decoding cocktail party attention using EEG signatures of hierarchical speech processing. E. TEOH*; E. C. LALOR. *Trinity Col. Dublin.*

1:00 HH11 **237.29** Scenereader: A high-level visual prosthesis. Y. LIU*; M. MEISTER. *Caltech.*

POSTER

238. Retina Photoreceptors

Theme D: Sensory Systems

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 HH12 **238.01** Assessment of the effects of Schisandrin-B on apoptosis in the pde6c Zebrafish mutant retina. P. VENKATRAMAN*; Y. LEUNG. *Purdue Univ., Purdue Univ.*

2:00 HH13 **238.02** Determine the development basis of retina-SCN functional connectone. P. CHIN*; Y. CHANG; S. CHEN. *Natl. Taiwan Univ., Natl. Taiwan Univ.*

3:00 HH14 **238.03** Possible role of zinc dyshomeostasis in matrix metalloproteinase-2, 9, endoplasmic reticulum stress, and photoreceptor cell death in experimental retinal detachment. J. CHOI*; Y. KIM; B. SEO; J. KOH; Y. YOON. *Asan Inst. For Life Sci., Asan Med. Center, Univ. of Ulsan Col. of Med., Asan Med. Center, Univ. of Ulsan Col. of Med.*

4:00 HH15 **238.04** Characterisation of a mouse model for testing the efficacy of transplanted human RPE cells. A. LYNCH*; M. SEMO; J. ASLAN; A. VUGLER. *UCL Inst. of Ophthalmology.*

1:00 HH16 **238.05** Effects of prolonged treatment with UV-A radiations in arpe19 cells: Expression of early and late cellular damage markers. G. TRINGALI*; B. SAMPAOLESE; M. CLEMENTI. *Catholic Univ. Sch. Med., Catholic Univ. Sch. Med.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 HH17 **238.06** Dim light at night influence gut microbe and metabolic status through melanopsin. C. LEE*; Y. ZOU; S. CHEN. *Natl. Taiwan Univ., Natl. Taiwan Univ. and Academia Sinica.*

3:00 II1 **238.07** ▲ Photoreceptor-glial signaling during neurovascular coupling underlying functional retinal imaging. M. BEGUM*; D. Y. TS'O. *SUNY Upstate Med. Univ.*

4:00 II2 **238.08** Transcriptomic and epigenetic profiling of cone photoreceptor generation from a restricted retinal progenitor population. D. F. BUENAVENTURA*; M. EMERSON. *City Col. of New York, City Col. of New York.*

1:00 II3 **238.09** Photoreceptor shape variation does not account for perceptual threshold variation in single cones. M. DEFENDERFER; A. MEADWAY; K. S. BRUCE; L. C. SINCICH*. *Univ. of Alabama Birmingham, Univ. of Alabama Birmingham.*

2:00 II4 **238.10** C-terminal phosphorylation of mouse melanopsin plays a crucial role in the kinetics of non-image forming visual behavior. P. SOMASUNDARAM; D. FERNANDEZ; A. RUPP; T. BADEA; Z. WU; R. BROWN; S. HATTAR; P. ROBINSON*. *UMBC, Johns Hopkins Univ., Natl. Eye Inst., Natl. Eye Inst., Washington State Univ.*

3:00 II5 **238.11** Comparison of developmental dynamics in human fetal retina and human stem cell-derived retinal tissue. R. K. SINGH; H. STERNBERG; O. CUZZANI; M. D. WEST; I. O. NASONKIN*. *Biotime, Inc.*

4:00 II6 **238.12** A neural circuit uses distinct mechanisms to support transient and sustained pupil constriction. W. T. KEENAN*; A. C. RUPP; P. SOMASUNDARAM; S. HIRIYANNA; Z. WU; T. C. BADEA; P. R. ROBINSON; S. HATTAR. *Johns Hopkins Univ., Univ. of Maryland, NIH.*

POSTER

239. Retina Circuitry

Theme D: Sensory Systems

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 II7 **239.01** Circuits in the retina: A deep learning framework for algorithmic modeling. D. BAGHERIAN*; M. MEISTER. *Caltech.*

2:00 II8 **239.02** ATP vesicular pools present in VNUT expressing zebrafish horizontal cells. D. S. MCDEVITT*; S. L. STELLA, Jr. *Pennsylvania State Univ. Col. of Med.*

3:00 II9 **239.03** ▲ Immunohistochemical comparison of retinal cell populations in an aquatic predator species and a terrestrial prey species that share a common evolutionary ancestor. N. Y. KHORSANDI*; J. W. MADDOX; E. GLEASON. *Louisiana State Univ.*

4:00 II10 **239.04** Effects of light luminance level on retinal dopamine metabolism and lens induced myopia susceptibility. E. LANDIS*; H. PARK; C. SIDHU; K. STOUT; G. MILLER; M. IUVONE; M. PARDUE. *Emory Univ., Emory Univ., Emory Univ., Emory Univ., Georgia Inst. of Technol.*

1:00 II11 **239.05** Inhibition within starburst amacrine cell network localizes SAC dendritic signaling and sharpens direction selectivity. H. DING*; J. S. DIAMOND. *NIH.*

2:00 II12 **239.06** Optogenetic interrogation of synaptic computation in the retina. J. POTTACKAL*; G. E. PERRIN; J. H. SINGER; J. B. DEMB. *Yale Univ., Univ. of Maryland.*

3:00 II13 **239.07** Mechanisms of surround inhibition in the object motion sensitive circuit of the mouse retina. T. KIM*; D. KERSCHENSTEINER. *Washington Univ. In St.Louis.*

4:00 II14 **239.08** GABA-induced chloride gradients in cone bipolar cells of the mammalian retina. S. L. STELLA*, Jr.; D. S. MCDEVITT. *Penn State Univ. Hershey-College of Med.*

1:00 II15 **239.09** VIP-expressing amacrine cells comprise different cell types in mouse retina. L. PEREZ DE SEVILLA*; H. TE HAPUKINO; N. BRECHA. *UCLA, UCLA.*

2:00 II16 **239.10** Spectral-spatial mapping by primary photoreceptors organized in a somatotopic array. T. K. H. GROVES; J. A. JELLIES*. *Western Michigan Univ., Western Michigan Univ.*

3:00 II17 **239.11** Nitric oxide promotes neurotransmitter release by activating a voltage-independent Ca^{2+} influx pathway in amacrine cells. J. W. MADDOX*; E. GLEASON. *Louisiana State Univ.*

4:00 JJ1 **239.12** Extrasynaptic $GABA_A$ receptor Gabra6 and Gabra4 are expressed in mouse outer retina. A. A. HIRANO*; A. SOLOMON; S. A. BARNES; N. C. BRECHA. *David Geffen Sch. of Med. At UCLA, VAGLAHS, Dalhousie Univ.*

1:00 JJ2 **239.13** ATP-induced changes in intracellular Ca^{2+} levels and extracellular H+ concentration from retinal Muller (glial) cells. B. K. TCHERNOOKOVA*; C. HEER; M. YOUNG; D. SWYGART; R. KAUFMAN; M. KREITZER; R. MALCHOW. *Univ. of Illinois at Chicago, Indiana Wesleyan Univ., Univ. of Illinois at Chicago.*

2:00 JJ3 **239.14** Choline transport through P2X2-purinergic receptors in the mouse retina. M. KANEDA*; T. ISHII; H. KOHEI; A. MANO; Y. SHIGEMATSU; H. INOUE; Y. SHIMODA; Y. KAKINUMA. *Nippon Med. Sch., Nippon Med. Sch., Tokyo Women's Med. Univ., Keio Univ. Sch. of Med.*

3:00 JJ4 **239.15** Retinal dopaminergic function after 6 weeks of diabetes. M. FLOOD*. *Univ. of Arizona.*

4:00 JJ5 **239.16** Simultaneous modeling of neural phenomena from multiple time scales. R. RAMEZAN*; D. WYNNE. *California State University, Fullerton, California State Univ.*

1:00 JJ6 **239.17** Synaptic transfer between ON and OFF visual channels mediated by aII amacrine cells in mouse retina. C. W. GRAYDON*; J. S. DIAMOND. *NINDS.*

2:00 JJ7 **239.18** Temporal progression of retinal, cognitive, and motor deficits in a rat model of Type II diabetes. R. E. ALLEN*; A. FEOLA; C. MOTZ; A. L. OTTENSMEYER; L. HE; P. IUVONE; P. M. THULE; M. T. PARDUE. *Atlanta VA Med. Ctr., Georgia Inst. of Technol., Atlanta VA Med. Ctr., Emory Univ., Georgia Inst. of Techonology.*

3:00 JJ8 **239.19** Revisiting cannabinoid receptor 2 expression and function in murine retina. N. MURATAEVA; J. BOROWSKA-FIELDING; A. SZCZESNIAK; B. SMITH; C. HILLARD; J. ROMERO; M. KELLY; A. STRAIKER*. *Indiana Univ., Dalhousie Univ., Med. Col. of Wisconsin, Cajal Inst.*

4:00 JJ9 **239.20** Dendritic plasticity of deafferented cone bipolar cells. C. BEIER*; A. HOVHANNISYAN; D. V. PALANKER; A. SHER. *UC Santa Cruz, Stanford Univ.*

1:00 JJ10 **239.21** Probing selectivity and connectivity in *Drosophila* visual projection neurons. M. MORIMOTO*; A. NERN; A. M. WONG; M. B. REISER. *Howard Hughes Med. Inst. Janelia Farm Res. Campus.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 JJ11 **239.22** ▲ Real-time characterization of dmp 543-mediated elevations in acetylcholine release in porcine retina. B. SINCOX; D. LINN; E. RAMSSON*. *Grand Valley State Univ.*

POSTER

240. Retina Ganglion Cells and Circuitry

Theme D: Sensory Systems

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 JJ12 **240.01** The impact of sensory uncertainty on maximally informative adaptive dynamics in neural populations. W. HSU*; D. B. KASTNER; S. A. BACCUS; T. O. SHARPEE. *Salk Inst., UCSD, UCSF, Stanford Univ.*

2:00 JJ13 **240.02** ▲ Asymmetric distribution of melanopsin ganglion cell outer retinal dendrites in the mouse retina. J. R. ONYAK; S. W. ISLAM; J. M. RENNA*. *Univ. of Akron.*

3:00 JJ14 **240.03** The diurnal control of visual sensitivity in the mouse retina and visually guided behavior. S. KOSKELA*; T. TURUNEN; P. ALA-LAURILA. *Univ. of Helsinki, Aalto Univ.*

4:00 JJ15 **240.04** Gap junctional coupling between retinal ganglion and amacrine cells underlies reduced global object perception in connexin 36 knockout mice. K. ROY*; S. A. BLOOMFIELD. *SUNY, Col. of Optometry.*

1:00 JJ16 **240.05** Cell-attached recordings of light-induced postsynaptic potentials in mouse retinal ganglion cells. S. KITORA; T. YAGI; Y. HAYASHIDA*. *Grad.Eng., Osaka Univ.*

2:00 JJ17 **240.06** Receptive field analysis using whole-cell spatiotemporal maps. S. COOLER*; G. W. SCHWARTZ. *Northwestern Univ.*

3:00 KK1 **240.07** The effects of D1 and D4 dopamine receptor knockouts on retinal ganglion cell receptive fields and contrast sensitivity. D. SPRINZEN*; H. DAI; A. KHANDHADIA; D. MCMAHON. *Vanderbilt.*

4:00 KK2 **240.08** Light adaptation across diverse retinal ganglion cell types in the mouse retina. K. RUDA*; G. D. FIELD. *Duke Univ.*

1:00 KK3 **240.09** Intra-retinal feedback connections composed of melanopsin expressing retinal ganglion cells and amacrine cells. P. YEH*; S. CHEN. *Natl. Taiwan Univ.*

2:00 KK4 **240.10** Adaptive and predictive coding by spatiotemporal dynamics in the retina. K. S. CHEN*; C. CHAN; C. YEN. *Inst. of Physics, Academia Sinica, Natl. Taiwan Univ.*

3:00 KK5 **240.11** Congenital nystagmus gene FRMD7 is required to establish a neuronal circuit asymmetry for retinal direction selectivity. A. DRINNENBERG*; K. YONEHARA; M. FISCELLA; F. ESPOSTI; S. TRENHOLM; J. KROL; F. FRANKE; B. GROSS-SCHERF; A. KUSNYERIK; J. MUELLER; A. SZABO; J. JUETTNER; F. CORDOBA; A. REDDY; J. NEMETH; Z. NAGY; F. MUNIER; A. HIERLEMANN; B. ROSKA. *Friedrich Miescher Inst. For Biomed. Res., Danish Res. Inst. of Translational Neurosci. – DANDRITE, Novartis Inst. for Biomed. Res., Bio Engin. Lab., Semmelweis Univ., Jules-Gonin Eye Hosp.*

4:00 KK6 **240.12** High resolution *in vivo* imaging tracks progressive retinal degeneration in aged marmosets. T. NORO*; K. NAMEKATA; A. KIMURA; T. NAKANO; H. TSUNEOKA; T. HARADA. *Tokyo Metropolitan Inst. of Med. Sci., The Jikei Univ. Sch. of Med.*

1:00 KK7 **240.13** Circuit mechanisms underlying orientation selectivity in the zebrafish retina. P. ANTINUCCI*; R. HINDGES. *King's Col. London.*

2:00 KK8 **240.14** Direction selective and intrinsically light sensitive retinal ganglion cells of the tree shrew. E. N. JOHNSON; R. SHAYESTEH; E. CHEN; J. SCHUMACHER; D. FITZPATRICK; G. D. FIELD*. *Duke Univ., Max Plank Florida Inst. for Neurosci.*

3:00 KK9 **240.15** S100 alone or combined with HSP27 leads to specific retinal ganglion cell loss in a glaucoma model. S. C. JOACHIM*; S. REINEHR; C. CASOLA; S. KUEHN; H. B. DICK. *Exptl. Eye Res. Insitute, Ruhr-University Bochum.*

4:00 KK10 **240.16** Connectomics and color tuning of S-OFF midget ganglion cells. L. E. WOOL*; O. PACKER; Q. ZAIDI; D. M. DACEY. *SUNY Col. of Optometry, Univ. of Washington.*

1:00 KK11 **240.17** Altered physiological function and dendritic morphology of retinal ganglion cells in optic neuropathy. S. PASINI*; M. L. RISNER; D. J. CALKINS. *Vanderbilt Univ.*

2:00 KK12 **240.18** Rapid processing of global motion images by locally coordinated retinal ganglion cells. A. MATSUMOTO*; M. TACHIBANA. *Grad. Sch. of Humanities and Sociology, Ctr. for Systems Vision Science, Organization of Sci. and Technology, Ritsumeikan Univ.*

3:00 KK13 **240.19** FLRT3 a new retinal ganglion cell marker and attempts towards a functional analysis. T. RUFF*; D. DEL TORO; R. KLEIN. *Max Planck Inst. For Neurobio.*

4:00 KK14 **240.20** Lycium barbarum polysaccharides delay the functional decay of retinal ganglion cells during photoreceptors degeneration. F. LIU*; J. ZHANG; Z. XIANG; D. XU; Y. XU. *Jinan Univ.*

1:00 KK15 **240.21** ▲ Temporal facilitation of retinal ganglion cell responses to drifting gratings. A. R. GOEL*; D. KERSCHENSTEINER. *Washington Univ. In St. Louis, Washington Univ. Sch. of Med., Washington Univ. Sch. of Med., Washington Univ. Sch. of Med., Washington Univ. Sch. of Med.*

2:00 KK16 **240.22** The effect of retinal GABA depletion on mouse retinal ganglion cell receptive fields. E. SERNAGOR*; R. B. M. AMIN; S. SOFTLEY; G. HILGEN. *Newcastle Univ., Newcastle University, Fac. of Med. Sci.*

3:00 KK17 **240.23** Genetic disruption of amacrine cell spacing alters the tuning of direction selective retinal ganglion cells. S. ROY*; J. CAFARO; J. N. KAY; G. D. FIELD. *Duke Univ.*

4:00 KK18 **240.24** Chromophore acts on the retina to restore the intrinsic pupillary light reflex to isolated rd12 mouse eyes. A. A. VUGLER*; A. LYNCH. *Inst. of Ophthalmology.*

1:00 LL1 **240.25** Electrical coupling between ganglion cell photoreceptors regulates light sensitivity of the developing retina. F. HOLME*; M. FELLER. *UC Berkeley.*

2:00 LL2 **240.26** A portable steady-state visual evoked potential-based method for assessment of visual impairment in glaucoma. M. NAKANISHI*; T. JUNG; Y. WANG; Y. CHIEN; J. K. ZAO; A. DINIZ-FILHO; Z. WU; F. A. MEDEIROS. *UCSD, Cerebra Technologies (CerebraTek) Co. Ltd.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

241. Primate Visual Cortex

Theme D: Sensory Systems

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 LL3 **241.01** Motion prediction in V1 is facilitated by cortico-cortical feedback. T. S. HARTMANN*; S. G. LOMBER; R. T. BORN. *Harvard Med. Sch., Univ. of Western Ontario.*

2:00 LL4 **241.02** Primate V1 population responses to local properties of natural backgrounds predict behavioral target detection thresholds. S. C. CHEN*; Y. BAI; S. SEBASTIAN; Y. CHEN; W. S. GEISLER, III; E. SEIDEMANN. *Univ. of Texas At Austin.*

3:00 LL5 **241.03** Mean luminance responsive cells in Primary Visual Cortex of Rhesus macaque. S. CHANDRA*; R. FALCONE; B. J. RICHMOND. *NIH.*

4:00 LL6 **241.04** Altered functional circuitry in the primary visual cortex of amblyopic macaque monkeys. K. CLEMENS*; L. KIORPES; J. A. MOVSHON; M. A. SMITH. *Univ. of Pittsburgh, Ctr. For Neurosci., Carnegie Mellon Univ., New York Univ., Univ. of Pittsburgh, Univ. of Pittsburgh.*

1:00 LL7 **241.05** Synaptic organization of ON and OFF inputs within the dendritic field of individual layer 2/3 neurons in tree shrew primary visual cortex. K. LEE*; D. E. WILSON; D. FITZPATRICK. *Max Planck Florida Inst., Florida Atlantic Univ.*

2:00 LL8 **241.06** An optogenetic study of feedback circuitry in macaque visual cortex. S. S. SOLOMON*; A. ASCHNER; A. KOHN. *Albert Einstein Col. of Med.*

3:00 MM1 **241.07** Stimulus dependent laminar microcircuit interactions in primate V1. M. A. GIESELMANN*; A. THIELE. *Newcastle Univ.*

4:00 MM2 **241.08** Structural evolution of high-acuity circuitry in the primate primary visual cortex. D. J. MILLER*; J. H. KAAS. *Vanderbilt Univ.*

1:00 MM3 **241.09** Spatiotemporal profile of dichoptic cross-orientation suppression across the layers of primate V1. M. A. COX*; K. DOUGHERTY; A. MAIER. *Vanderbilt Univ.*

2:00 MM4 **241.10** The origins of spatial frequency tuning in macaque visual cortex. P. LEVY*; C. ZIEMBA; J. MOVSHON; E. SIMONCELLI; R. GORIS. *New York Univ.*

3:00 MM5 **241.11** Contextual effects of spatial receptive fields in macaque monkey V1. H. WU*; C. LIN; C. YEH. *Inst. of Neuroscience, Natl. Yang-Ming Univ., Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ. Col. of Med.*

4:00 MM6 **241.12** Response properties in cytochrome oxidase modules of capuchin monkey visual area V2. R. PERES*; J. GM SOARES; B. LIMA; M. FIORANI; M. CHIORRI; M. FLORENTINO; R. GATTASS. *UFRJ.*

1:00 MM7 **241.13** Tracking orientation map and neural response dynamics during discrimination and perceptual learning in tree shrew V1 with chronic calcium imaging. J. W. SCHUMACHER*; T. WALKER; V. K. HOKE; S. FRELING; R. J. CORLEW; D. FITZPATRICK. *Max Planck Florida Inst.*

2:00 MM8 **241.14** Emergence of structured neuronal correlations during the learning of a perceptual discrimination task. C. GOMEZ-LABERGE*; R. M. HAEFNER; R. T. BORN. *Harvard Med. Sch., Univ. of Rochester.*

3:00 MM9 **241.15** Comparing the time course of adaptation in V1 neurons with perception. P. L. APARICIO*; B. G. CUMMING. *Natl. Eye Inst.*

4:00 MM10 **241.16** Cortical areas with low dopamine content represent prospective regions for voltammetric detection of norepinephrine *in vivo*. N. J. WARD*; A. A. DISNEY. *Vanderbilt Univ.*

1:00 MM11 **241.17** Interactions between feedback and lateral connections in the primary visual cortex. H. LIANG; X. GONG; M. CHEN; Y. YAN; C. D. GILBERT; W. LI*. *Drexel Univ., Beijing Normal Univ., The Rockefeller Univ.*

2:00 MM12 **241.18** Coordinated neuronal activity reflects correct perceptual reports. N. SHAHIDI*; M. HU; A. R. ANDREI; V. DRAGOI. *Univ. of Texas, Med. Sch. At Houston, MIT, Univ. of Texas, Med. Sch. at Houston.*

3:00 NN1 **241.19** The effects of adaptation on normalization signals within the receptive field. A. ASCHNER*; S. G. SOLOMON; M. S. LANDY; D. J. HEEGER; A. KOHN. *Albert Einstein Col. of Med., Inst. for Behavioral Neurosci., New York Univ.*

POSTER

242. Visual Learning, Memory, and Categorization

Theme D: Sensory Systems

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 NN2 **242.01** ● Neurogranin gates experience dependent synaptic pruning and maturation in visual cortex. K. HAN*; S. COOKE; M. F. BEAR; W. XU. *MIT.*

2:00 NN3 **242.02** Network coding strategies underlying perceptual learning in primary visual cortex. N. D. OLIVAS*; L. O. JIMENEZ; D. L. RINGACH; J. T. TRACHTENBERG. *UCLA.*

3:00 NN4 **242.03** Visual perceptual learning and visual cortical plasticity in monkeys caused by VTA microstimulation in the absence of attention. J. T. ARSENAULT*; W. VANDUFFEL. *K.U. Leuven, Athinoula A. Martinos Ctr. for Biomed. Imaging, Harvard Med. Sch.*

4:00 NN5 **242.04** Modulation of visual processing by projection from the orbitofrontal cortex to the primary visual cortex. L. DECHEN*; J. DENG; Y. SUN; H. YAO. *Inst. of Neuroscience,CAS.*

1:00 NN6 **242.05** Gamma-band synchronization in primate visual cortex can increase or decrease with stimulus repetition. A. PETER*; J. DOWDALL; L. KLEIN; J. KLON-LIPOK; K. KOUROUPAKI; M. SCHOELVINCK; J. SCHMIEDT; K. SHAPCOTT; M. SCHMID; W. SINGER; P. FRIES. *Ernst Struengmann Inst. For Neurosci. In Cooperation With Max Planck Soci, Max Planck Inst. for Brain Res.*

2:00 NN7 **242.06** Effect of training on stimulus representation in V1 and V2 neuronal ensemble. T. LEE*; G. HUANG; Y. ZHANG. *Carnegie Mellon Univ.*

3:00 NN8 **242.07** Contextual modulation is responsible for image familiarity effect in V1 and V2 neurons. G. HUANG*; S. RAMACHANDRAN; J. SAMONDS; T. LEE; C. R. OLSON. *Carnegie Mellon Univ.*

4:00 NN9 **242.08** Single trial familiarity judgments are reflected in the IT population response. T. MEYER*; N. C. RUST. *Univ. of Pennsylvania.*

Sun. PM

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 NN10 **242.09** A neural mechanism of retaining category information in prefrontal cortex. Y. KASHIMORI*. *Univ. Electro-Communications.*

2:00 NN11 **242.10** Neuronal population changes underlying visual perceptual learning and attention. A. M. NI*; D. A. RUFF; J. J. ALBERTS; J. SYMMONDS; M. R. COHEN. *Univ. of Pittsburgh.*

3:00 NN12 **242.11** Central versus peripheral vision in scene recognition: A modeling exploration. P. WANG*; G. COTTRELL, 92093. *UCSD, UCSD.*

4:00 NN13 **242.12** Long-term high-capacity memories of object values in the primate brain - fMRI study on macaque monkeys. A. GHAZIZADEH*; W. GRIGGS; D. A. LEOPOLD; O. HIKOSAKA. *LSR NIH, NIMH NIH, NIDA NIH.*

1:00 NN14 **242.13** Representing features and summary statistics. S. HOCHSTEIN*. *Hebrew Univ. Jerusalem.*

2:00 OO1 **242.14** Cooperative encoding of visuo-spatial categories in human posterior parietal cortex and primary visual cortex. L. WANG*; Y. LI; X. HU; K. ZHAO; Y. YU. *Inst. of Psychology, Chinese Acad. of Sci., First Affiliated Hosp. of Anhui Med. Univ.*

3:00 OO2 **242.15** MVPA investigation of working memory maintenance period: Decoding memory content and retrieval success from EEG. S. ALIZADEH*; M. SCHÖNAUER; H. JAMALABADI; S. GAIS. *Univ. of Tuebingen, IMPRS for Cognitive and Systems Neurosci.*

4:00 OO3 **242.16** Behavioral and neuronal outcome of generalization following visual aversive learning. L. SHALEV; R. PAZ; G. AVIDAN*. *Dept. of Psychology, Ben-Gurion Univ. of the Negev, Dept. of Neurobiology, Weizmann Inst. of Sci.*

1:00 OO4 **242.17** Perceptual learning with minimized early cortical plasticity and neuron-specific response reweighting. C. YU*; X. XIE. *Peking Univ.*

2:00 OO5 **242.18** ● Investigating neural plasticity in the amblyopic brain with perceptual learning in a global motion discrimination task. Y. GAO*; A. BALDWIN; R. HESS. *McGill Univ.*

3:00 OO6 **242.19** The feature-weighted receptive field: An interpretable encoding model for complex feature spaces. T. NASELARIS*; G. ST-YVES; N. DESISTO. *Med. Univ. of South Carolina, Med. Univ. of South Carolina, Col. of Charleston.*

4:00 OO7 **242.20** Imagery receptive fields. J. BREEDLOVE*; G. ST-YVES; T. NASELARIS; C. OLMAN. *Med. Univ. of South Carolina, Univ. of Minnesota.*

1:00 OO8 **242.21** ● A deep predictive coding model of mental imagery. G. ST-YVES*; T. NASELARIS. *Med. Univ. of South Carolina, Med. Univ. of South Carolina.*

POSTER

243. Visually Guided Reaching

Theme D: Sensory Systems

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 OO9 **243.01** Oscillatory activity in motor cortical regions is modulated by expected visual reafferent feedback. P. BERNIER*; B. DUFOUR; F. THÉNAULT; K. WHITTINGSTALL. *Univ. De Sherbrooke, Univ. de Sherbrooke.*

2:00 OO10 **243.02** Establishing normative eye movement patterns during upper-limb functional tasks. E. B. LAVOIE*; E. A. CROCKETT; O. KOVIC; A. M. VALEVICIUS; Q. A. BOSER; P. M. PILARSKI; A. H. VETTE; J. S. HEBERT; C. S. CHAPMAN. *Univ. of Alberta, Univ. of Alberta, Univ. of Alberta.*

3:00 OO11 **243.03** Reach-related sensory prediction errors produce event-related potentials similar to feedback-related negativity during visuomotor rotation. F. SAVOIE*; K. WHITTINGSTALL; P. BERNIER. *Univ. De Sherbrooke, Univ. De Sherbrooke, Univ. De Sherbrooke.*

4:00 OO12 **243.04** Decoding perceptual consequences of swiping movements. S. FABBRI*; K. SUTTER; I. TONI; P. MEDENDORP. *Radboud Univ.*

1:00 OO13 **243.05** Subtle preparatory movements reveal future actions. M. VAZIRI PASHKAM*; R. GONZALEZ; S. CORMIEA; K. NAKAYAMA. *Harvard Univ., Massacheusetts Inst. of technology.*

2:00 OO14 **243.06** The effects of varying cognitive and motor demand on an attention-mediated reaching task. C. FUEGER*; L. PETROVSKA; W. E. HUDDLESTON. *Univ. of Wisconsin - Milwaukee.*

3:00 PP1 **243.07** Hd-tDCS modulated EEG correlations during reaching. J. JEYACHANDRA*; S. XU; J. P. GALLIVAN; G. BLOHM. *Queen's Univ., Canadian Action and Perception Network (CAPnet), Assn. for Canadian Neuroinformatics and Computat. Neurosci. (CNCN).*

4:00 PP2 **243.08** Reaching across midline is increased by cognitive load. J. LIANG*; K. M. WILKINSON; C. REGIEC; R. L. SAINBURG. *The Pennsylvania State Univ., The Pennsylvania State Unversity, Western Carolina Univ., The Pennsylvania State Unversity.*

1:00 PP3 **243.09** Human neuroimaging suggests overlapping but distinct representations for planning vs. imagining hand actions. S. MONACO*; G. MALFATTI; J. C. CULHAM; L. TURELLA; L. CATTANEO. *Ctr. for Mind/Brain Sci., Univ. of Western Ontario, Univ. of Verona.*

2:00 PP4 **243.10** Differential effects of hd-tDCS on mIPS and PMd in reach planning. S. XU*; J. JEYACHANDRA; J. GALLIVAN; G. BLOHM. *Queen's Univ., Canadian Action and Perception Network (CAPnet), Assn. for Canadian Neuroinformatics and Computat. Neurosci. (CNCN).*

POSTER

244. Multi-Sensory Integration: Circuits and Development

Theme D: Sensory Systems

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 PP5 **244.01** Cross-modal sensory information integration in modulation of vertebrate visual system functions. S. BANERJEE*; W. J. SCHEIRER; L. LI. *Univ. of Notre Dame, Univ. of Notre Dame.*

2:00 PP6 **244.02** Claustrum neurons projecting to anterior cingulate cortex are topologically organized and exhibit sexual dimorphism. Z. CHIA*; G. J. AUGUSTINE. *Nanyang Technological Univ., Nanyang Technological Univ., A*STAR.*

3:00 PP7 **244.03** Expression patterns of NF200, $Na_v1.6$, Ankyrin G and related proteins in a multimodal cell type of the avian optic tectum. K. LISCHKA; S. LADEL; H. LUKSCH; S. WEIGEL*. *Tech. Univ. Munich, Technische Univ. München.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 PP8 **244.04** ● *In vivo* investigation of the morphogenesis of sensory spinal neurons in zebrafish. L. DESBAN*; A. E. PRENDERGAST; C. WYART; P. BARDET. *Inst. For Brain and Spinal Cord, ICM.*

1:00 PP9 **244.05** An implicit approximate normalization model for multisensory integration across reference frames. P. ABEDI KHOOZANI*; D. STANDAGE; G. BLOHM. *Queen's Univ., Canadaian Action and Perception Network, Assn. for Canadian Neuroinformatics and Computat. Neurosci.*

2:00 PP10 **244.06** Neural circuit basis for decision-making in *C. elegans* chemotaxis. T. MURAYAMA; I. MARUYAMA*. *Okinawa Inst. of Sci. & Technol. Grad. Univ., Okinawa Inst. of Sci. & Technol. Grad. Univ.*

3:00 PP11 **244.07** Adaptive shifts in owls reared with single pane prisms. W. M. DEBELLO*; D. SANCULI; D. TOTTEN. *UC Davis.*

4:00 PP12 **244.08** Sensory cross-modulation in thalamo-reticular interactions. K. PAUL*; D. A. LLANO. *Univ. of Illinois at Urbana-Champaign.*

1:00 PP13 **244.09** Multiple spatial and temporal orders of cortical mesoscale spontaneous activity are present in in GCaMP6 mice. M. P. VANNI*; G. SILASI; Y. SEKINO; M. BALBI; A. CHAN; J. LEDUE; D. XIAO; F. BOLANOS; T. H. MURPHY. *Univ. of British Columbia.*

2:00 PP14 **244.10** Toric spines in the owl inferior colliculus. D. SANCULI*; K. PANNONI; M. SUNG; V. POPAT; C. ZAHER; W. DEBELLO; M. ELLISMAN; E. BUSHONG. *Univ. of California Davis, Univ. of California San Diego.*

3:00 PP15 **244.11** Air-Track: A real-world environment for active sensing in head-fixed mice. M. N. ABDELHAMID*; H. ORABY; S. DOMINIAK; R. SACHDEV; Y. WINTER; M. E. LARKUM. *Neurocure Cluster of Excellence, Humboldt Universi, Berlin Sch. of Mind and Brain.*

4:00 PP16 **244.12** Basal forebrain circuits implicated in cortical modulation. I. CHAVES-COIRA*; A. NUNEZ; M. L. RODRIGO-ANGULO. *Univ. Autonoma Madrid, Univ. Autonoma Madrid.*

1:00 QQ1 **244.13** Thalamic inputs to cortical areas involved in skilled forelimb movements and tool use. A. MAYER*; G. LEWENFUS; R. E. BITTENCOURT-NAVARRETE; J. G. FRANCA. *Federal Univ. of Rio De Janeiro, Federal Univ. of Juiz de Fora.*

2:00 QQ2 **244.14** Early sensory experience sculpts the development of multisensory connections of primary sensory cortices. J. U. HENSCHKE; A. M. OELSCHLEGEL; F. ANGENSTEIN; F. W. OHL; J. GOLDSCHMIDT; P. O. KANOLD; E. BUDINGER*. *Leibniz Inst. for Neurobio. Magdeburg, Leibniz Inst. for Neurobio. Magdeburg, German Ctr. for Neurodegenerative Dis. within the Helmholtz Assn., Univ. of Maryland, Leibniz Inst. for Neurobio. Magdeburg.*

3:00 QQ3 **244.15** Auditory input and receptive fields in the optic tectum of the chicken, an auditory generalist avian species. H. LUKSCH*; H. A. SCHNYDER; B. NIEDERLEITNER; Q. KRABICHLER; C. GUTIERREZ-IBANEZ; U. FIRZLAFF. *Tech. Univ. of Munich.*

4:00 QQ4 **244.16** Controlling plasticity in sensory cortical regions using multisensory neuromodulation. C. GLOECKNER*; J. NOCON; H. LIM. *Univ. of Minnesota.*

1:00 QQ5 **244.17** Integration of auditory and visual inputs depends on differential properties of Mauthner-cell dendrites. V. MEDAN; T. MÄKI-MARTTUNEN; J. SZTARKER; T. PREUSS*. *Univ. of Buenos Aires, Univ. of Oslo, City Univ. of New York, Hunter Col.*

2:00 QQ6 **244.18** Input-specific functional heterogeneity of the thalamostriatal circuitry. B. C. JONGBLOETS*; B. J. HUNNICUTT; W. T. BIRDSONG; K. GERTZ; H. ZHONG; T. MAO. *Oregon Hlth. & Sci. Univ.*

3:00 QQ7 **244.19** Identification of multiple classes of GABAergic sensory neurons contacting the cerebrospinal fluid in the vertebrate spinal cord. A. PRENDERGAST*; L. DJENOUNE; L. DESBAN; J. GOMEZ; J. STERNBERG; P. BARDET; C. WYART. *Inst. du Cerveau et de la Moelle Épinère.*

4:00 QQ8 **244.20** Pkd2l1 underlies spontaneous activity in intraspinal sensory neurons. J. R. STERNBERG*; L. DJENOUNE; A. PRENDERGAST; J. MCDEARMID; H. PASCAL MOUSSELLARD; C. WYART. *Inst. Du Cerveau Et De La Moelle Épinière, Muséum Natl. d'Histoire Naturelle, CNRS UMR 7221, Univ. of Leicester.*

1:00 QQ9 **244.21** Phase-locking of cortical slow waves induced by multisensory inputs at hub areas in excitatory networks. T. YOSHIDA*; S. KUROKI; H. TSUTSUI; M. IWAMA; T. MICHIKAWA; A. MIYAWAKI; T. OHSHIMA; S. ITOHARA. *RIKEN Brain Sci. Inst., Waseda Univ., RIKEN Brain Sci. Inst., Japan Advanced Inst. of Sci. and Technol., RIKEN Ctr. for Advanced Photonics.*

2:00 QQ10 **244.22** Characterization and functional analysis of claustral VIP interneurons. M. GRAF*; G. J. AUGUSTINE. *A*STAR/ Inst. of Mol. and Cell Biol., Lee Kong Chian Sch. of Med.*

1:00 DP05 **244.23** (Dynamic Poster) Cellular and behavioral correlates of the principle of inverse effectiveness in multisensory integration in the developing optic tectum. T. L. S. TRUSZKOWSKI*; O. A. CARRILLO; J. L. BLEIER; C. M. RAMIREZ-VIZCARRONDO; C. D. AIZENMAN. *Brown Univ.*

4:00 QQ11 **244.24** Synaptic inputs to toric spines. K. E. PANNONI*; D. SANCULI; E. BUSHONG; M. SUNG; V. POPAT; C. ZAHER; M. ELLISMAN; W. DEBELLO. *Univ. of California, UCSD.*

1:00 QQ12 **244.25** ● Auditory dominance over visual perception in the mouse integrating visual-auditory conflict. Y. SONG*; J. KIM; H. JEONG; I. CHOI; D. JEONG; K. KIM; S. LEE. *KAIST.*

2:00 QQ13 **244.26** Visual modulation of activity in mouse auditory cortex. R. J. MORRILL*; A. R. HASENSTAUB. *Univ. of California, San Francisco, Kavli Inst. for Fundamental Neurosci., Coleman Mem. Lab. for Auditory Neurosci.*

3:00 QQ14 **244.27** Lack of intrinsic GABAergic connections in the thalamic reticular nucleus of the mouse. G. HOU; A. G. SMITH; Z. ZHANG*. *The Jackson Lab.*

4:00 QQ15 **244.28** The role of ionotropic glutamate receptors in non-synaptic cross-depolarization in the mammalian dorsal root ganglia. G. CARVALHO; Y. MULPURI; A. DAMASIO; I. SPIGELMAN*. *USC, Univ. of California Los Angeles.*

● Indicated a real or perceived conflict of interest, see page 140 for details.
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* Indicates abstract's submitting author

POSTER

245. Basal Ganglia: Neuromodulation of Striatal Circuits

Theme E: Motor Systems

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 QQ16 **245.01** Cell-type-specific plasticity at corticostriatal synapses prevents suppression of habitual control of behavior. A. CAVACCINI*; V. PAGET-BLANC; M. TRUSEL; A. ROCCHI; M. PENNUTO; A. CONTESTABILE; B. GRECO; R. TONINI. *Fondazione Inst. Italiano di Tecnologia, Fondazione Inst. Italiano di Tecnologia, Univ. of Trento.*

2:00 QQ17 **245.02** Excitatory serotonergic signaling regulates synaptic plasticity at striatal glutamatergic inputs. M. GRITTI*; M. TRUSEL; A. GIORGI; A. CAVACCINI; S. MIGLIARINI; A. GOZZI; M. PASQUALETTI; R. TONINI. *Fondazione Inst. Italiano Di Tecnologia, Universitá di Pisa, Fondazione Inst. Italiano di Tecnologia.*

3:00 QQ18 **245.03** Chemogenetic control of striatal cholinergic interneurons in haloperidol treated mice. A. ZUCCA*; S. ZUCCA; J. WICKENS. *Okinawa Inst. of Sci. and Technol.*

4:00 QQ19 **245.04** A dual purpose optical system for fluorescence imaging and spectrally resolved fiber array photometry in freely moving animals. C. MENG*; G. CUI. *NIH/NIEHS, NIEHS/NIH.*

1:00 QQ20 **245.05** Simultaneous multi-component measurements in the striatum using spectrally resolved *in vivo* fiber photometry. J. ZHOU*; C. MENG; G. CUI. *NIEHS/NIH.*

2:00 RR1 **245.06** Exploration - exploitation at the cellular level. R. LINDROOS; J. HELLGREN KOTALESKI*. *Karolinska Institutet, Kungliga Tekniska Hogskolan.*

3:00 RR2 **245.07** Nociceptin/orphanin FQ and dopamine receptors co-localization in the mouse basal ganglia. D. MERCATELLI*; A. RIMESSI; P. BOLOGNESI; A. CIPPITELLI; B. L. KIEFFER; L. TOLL; M. MORARI. *Univ. of Ferrara, Univ. of Ferrara, Univ. of Ferrara, Torrey Pines Inst. for Mol. Studies, McGill University, Douglas Res. Ctr. and Inst. de Génétique et de Biologie Moléculaire et Cellulaire, Univ. de Strasbourg.*

4:00 RR3 **245.08** Striosome-dendron bouquet formations: A unique striatonigral circuit connection engaging dopamine-containing neurons and their ventrally extending dendrites. J. R. CRITTENDEN*; M. H. RIAD; P. W. TILLBERG; Y. SHIMA; D. E. HOUSMAN; S. B. NELSON; E. S. BOYDEN; A. M. GRAYBIEL. *MIT, MIT, Brandeis Univ.*

1:00 RR4 **245.09** Striatal cholinergic interneurons: Their depletion and its progression. N. ABUDUKEYOUMU*; M. GARCIA-MUNOZ; O. P. JAIDAR; G. ARBUTHNOTT. *Okinawa Inst. of Sci. and Technol., Stanford Univ.*

2:00 RR5 **245.10** Striatal cholinergic interneuron firing evokes spontaneous synaptic activation of muscarinic receptors. A. MAMALIGAS*; C. P. FORD. *Case Western Reserve Univ., Case Western Reserve Univ., Case Western Reserve Univ.*

3:00 RR6 **245.11** Effect of striatal membrane cholesterol removal and replenishment on the dopamine transporter. T. P. DIPAOLO*; N. MORIN; M. MORISSETTE. *Ctr. de Recherche de CHUQ-CHUL, Laval University, Fac. of Pharm.*

4:00 RR7 **245.12** ▲ Novel glycinergic circuitry in the basal ganglia. R. A. PEREZ*; R. ORTEGA; Y. P. HUIZAR; E. CASTANEDA; M. MIRANDA. *Univ. of Texas At El Paso.*

1:00 RR8 **245.13** Local action of 17β-estradiol increases phasic dopamine release in the dorsal striatum. W. SHAMS*; M. COSSETTE; P. SHIZGAL; W. G. BRAKE. *Concordia Univ.*

2:00 RR9 **245.14** Effect of reduction in GABA function using a modified diphtheria toxin on behavior in mice. S. CALDWELL; D. KNOWLAND; J. DESLAURIERS; S. B. POWELL*; X. ZHOU. *Univ. of California San Diego, San Diego VA Healthcare Syst.*

3:00 RR10 **245.15** Critical role of striatal d2r signaling in the psychomotor effects of cocaine. D. RADL*; G. KHARKWAL; R. LEWIS; E. BORRELLI, 92617. *Univ. of California Irvine.*

4:00 RR11 **245.16** GABAergic input to the globus pallidus externus (GPe) is depressed by activation of dopamine D4 receptors. I. CONDE-ROJAS; R. CABALLERO-FLORAN; J. ACEVES; D. ERLIJ; G. B. FLORAN*. *CINVESTAV IPN, State Univ. of New York.*

1:00 RR12 **245.17** Evidence for cross-hemispheric preconditioning in experimental Parkinson's disease. R. K. LEAK*; J. N. WEILNAU; N. NOURAEI; D. F. HUTCHISON; K. M. MINER; M. A. CARCELLA. *Duquesne Univ.*

2:00 RR13 **245.18** Influence of aversive stimulation on haloperidol-induced catalepsy in rats. A. R. OLIVEIRA*; N. C. B. BARROCA; M. D. GUARDA; N. T. SILVA; A. COLOMBO; A. E. REIMER; M. L. BRANDÃO. *Univ. Federal De Sao Carlos, Inst. de Neurociencias e Comportamento, Univ. de Sao Paulo, Univ. Federal do Rio de Janeiro, Harvard Med. Sch.*

POSTER

246. Striatal Cell Biology and Plasticity

Theme E: Motor Systems

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 RR14 **246.01** Regulation of striatal circuit function by fast-spiking interneurons. S. F. OWEN*; J. D. BERKE; A. C. KREITZER. *Gladstone Inst. of Neurolog. Dis., Univ. of Michigan.*

2:00 RR15 **246.02** Cellular taxonomy of the mouse striatum as revealed by single-cell RNA-seq. O. GOKCE*; G. STANLEY; B. TREUTLEIN; N. F. NEFF; G. J. CAMP; R. MALENKA; P. ROTHWELL; M. FUCCILLO; T. SÜDHOF; S. QUAKE. *Lmu-Klinikum Der Univ. München, Howard Hughes Med. Institute, Max Planck Inst. for Evolutionary Anthropology, Dept. of Evolutionary Genetics, Howard Hughes Med. Institute, Max Planck Inst. for Evolutionary Anthropology, Dept. of Evolutionary Genetics, Nancy Pritzker Laboratory, Dept. of Psychiatry and Behavioral Sci., Nancy Pritzker Laboratory, Dept. of Psychiatry and Behavioral Sci., 4Nancy Pritzker Laboratory, Dept. of Psychiatry and Behavioral Sciences, Dept. of Mol. and Cell. Physiology, Howard Hughes Med. Institute, Departments of Bioengineering and of Applied Physics.*

3:00 RR16 **246.03** Modeling mechanisms underlying K-ATP mediated bursting in medial SNc dopaminergic neurons. C. J. KNOWLTON*; J. ROEPER; C. C. CANAVIER. *LSUHSC, Goethe Univ. Frankfurt.*

4:00 RR17 **246.04** Striatal neurons show aberrant firing in levodopa-induced dyskinesia. M. RYAN*; A. B. NELSON. *UC San Francisco, UC San Francisco.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 RR18 **246.05** Manipulating activated striatal neurons in levodopa-induced dyskinesia. A. E. GIRASOLE*; M. Y. LUM; D. NATHANIEL; A. C. KREITZER; A. B. NELSON. *UCSF, UCSF, UCSF, Gladstone Inst., UCSF.*

2:00 RR19 **246.06** Striatal microcircuit mechanisms for the expression of habit. J. O'HARE*; K. ADE; E. GAIDIS; H. LI; N. KIM; H. YIN; N. CALAKOS. *Duke Univ. Med. Ctr., Duke Univ. Med. Ctr., Duke Univ.*

3:00 RR20 **246.07** Spike time predictability and noise sensitivity in repetitively firing striatal spiny neurons. C. J. WILSON*. *Univ. Texas San Antonio.*

4:00 RR21 **246.08** Calcium-activated chloride currents regulate spiking in striatal LTS interneurons by generating medium AHPs. S. C. SONG*; J. A. BEATTY; C. J. WILSON. *Univ. of Texas At San Antonio, Michigan State Univ.*

1:00 RR22 **246.09** Unexpected diversity of striatal Drd2-expressing neurons revealed by cell-type specific mRNA profiling. E. PUIGHERMANAL*; M. MARTIN; J. VITRE; A. ESTEVE; M. GUT; E. VALJENT. *Inst. of Functional Genomics (CNRS-INSERM-UM), CNAG-CRG, Ctr. for Genomic Regulation (CRG), Barcelona Inst. of Sci. and Technol. (BIST), Univ. Pompeu Fabra (UPF).*

1:00 DP06 **246.10** ▲ (Dynamic Poster) Evidence of synchronous and asynchronous activity between left and right striatum in both direct and indirect paths during goal oriented behaviors in mice. R. M. MIKOFSKY*; J. M. LAWSON; H. MACOMBER; S. CLARK; D. SULZER. *Suzler Lab. At Columbia Univ., Columbia Univ.*

3:00 SS1 **246.11** Mapping spatial connectivity between the subthalamic nucleus and substantia nigra in brain slices using optogenetic 'functional mapping'. P. S. FREESTONE*; K. L. TODD; J. LIPSKI. *Univ. of Auckland, Ctr. for Brain Res., Brain Res. New Zealand.*

4:00 SS2 **246.12** Coordinated corticostriatal input produces supralinear calcium in dendritic spines in a spiny projection neuron model. D. B. DORMAN*; J. JEDRZEJEWSKA-SZMEK; K. T. BLACKWELL. *George Mason Univ.*

1:00 SS3 **246.13** Calcium based plasticity rule can predict plasticity direction for a variety of stimulation paradigms. J. JEDRZEJEWSKA-SZMEK*; D. B. DORMAN; K. T. BLACKWELL. *George Mason Univ., George Mason Univ.*

2:00 SS4 **246.14** Neuronal diversity in substantia nigra pars reticulata delineates specialized basal ganglia output pathways. L. E. MCELVAIN*; B. LIM; D. KLEINFELD; R. COSTA. *UCSD, UCSD, Champalimaud Neurosci. Programme.*

3:00 SS5 **246.15** Ultrastructural features of pallidal GABAergic terminals in the ventral motor and caudal intralaminar thalamic nuclei in normal and MPTP-treated Parkinsonian monkeys. A. J. SWAIN*; R. M. VILLALBA; C. KATONA; A. GALVAN; T. WICHMANN; Y. SMITH. *Yerkes Natl. Primate Res. Ctr., Udall Ctr. of Excellence for Parkinson's Dis. Res., Dept. of Neurol.*

4:00 SS6 **246.16** ▲ Morphological study of calbindin-positive and calbindin-negative dopamine neurons located in the substantia nigra pars compacta. M. ZHU*; R. EVANS; Z. KHALIQ. *NIH.*

1:00 SS7 **246.17** AMP kinase regulates ligand-gated K-ATP channels in substantia nigra compacta dopamine neurons. S. W. JOHNSON*; Y. WU; A. C. MUNHALL; K. SHEN. *Portland VA Med. Ctr., Oregon Hlth. & Sci. Univ.*

2:00 SS8 **246.18** Comparison of high frequency firing mechanisms in mesocortical, mesoaccumbal and mesostriatal dopamine neurons. R. A. TARFA*; Z. KHALIQ. *NIH, Brown Univ., NIH/NINDS.*

POSTER

247. Reaching: Neurophysiology

Theme E: Motor Systems

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 SS9 **247.01** Time-course of cortical motor preparation during self-paced reaches. A. J. ZIMNIK*; A. H. LARA; G. F. ELSAYED; J. P. CUNNINGHAM; M. M. CHURCHLAND. *Columbia Univ. Med. Ctr., Columbia Univ. Med. Ctr., Columbia Univ., Columbia Univ. Med. Ctr., Columbia Univ. Med. Ctr.*

2:00 SS10 **247.02** Changes in motor cortex population structure between movement types. A. A. RUSSO*; B. LONDON; S. PERKINS; M. CHURCHLAND. *Columbia Univ.*

3:00 SS11 **247.03** Comparison of the modulation of primary motor cortex by dorsal and ventral premotor areas in Cebus apella. S. COTE*; A. HAMADJIDA; M. DEA; S. QUESSY; N. DANCAUSE. *Neurosciences Department, Univ. of Montreal, Groupe de Recherche sur le Système Nerveux Central.*

4:00 SS12 **247.04** Preparatory responses in primary motor and premotor cortex are conserved across self-initiated, quasi-automatic and cue-initiated movements. A. H. LARA*; G. F. ELSAYED; J. P. CUNNINGHAM; M. M. CHURCHLAND. *Columbia Univ., Columbia Univ.*

1:00 SS13 **247.05** Emergence of neural representations in premotor (M2) and primary motor (M1) cortices during early motor learning. T. VEUTHEY*; K. GANGULY. *Ganguly Lab, UCSF, UCSF, Veterans Affairs Med. Ctr.*

2:00 SS14 **247.06** Action planning and action observation in rodent parietal cortex. T. TOMBAZ*; B. A. DUNN; K. HOVDE; J. R. WHITLOCK. *NTNU.*

3:00 SS15 **247.07** Endogenous motor errors in parietal area 5 but exogenous target errors in area 7 drive adaptation in reaching. M. INOUE*; S. KITAZAWA. *Natl. Inst. of Information and Communicatio, Osaka Univ., Osaka Univ.*

4:00 SS16 **247.08** Mapping neural correlates of natural behavior in 3D. B. DUNN*; T. TOMBAZ; K. HOVDE; G. TAYLOR; J. WHITLOCK. *Kavli Inst. for Systems Neurosci. and Ctr. for Biol. of Memory, NTNU, Sch. of Engineering, Univ. of Guelph.*

1:00 SS17 **247.09** Ensemble coding of self-motion in parieto-frontal circuits in rats. B. MIMICA*; B. A. DUNN; J. R. WHITLOCK. *NTNU.*

2:00 SS18 **247.10** Predicting neural activity in behaviorally-irrelevant dimensions. J. A. HENNIG*; M. D. GOLUB; P. J. LUND; P. T. SADTLER; K. M. QUICK; S. I. RYU; E. C. TYLER-KABARA; A. P. BATISTA; B. M. YU; S. M. CHASE. *Carnegie Mellon Univ., Carnegie Mellon Univ., Carnegie Mellon Univ., Carnegie Mellon Univ., Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh, Palo Alto Med. Fndn., Stanford Univ., Univ. of Pittsburgh, Univ. of Pittsburgh.*

3:00 SS19 **247.11** Neuronal activity in the posterior parietal cortex encodes arm direction, not saccade direction, during bimanual reaching. E. F. MOOSHAGIAN*; L. H. SNYDER. *Washington Univ. Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 SS20 **247.12** Populations of mirror neurons capture similar sequences of hidden Markov states during execution and observation of a reach, grasp, and manipulate task. K. A. MAZUREK*; M. H. SCHIEBER. *Univ. of Rochester.*

1:00 SS21 **247.13** Neural correlates of motor skill learning in dorsal premotor cortex (PMd) reflect mainly predictive feedforward compensation rather than online error correction. N. BHUTANI; J. F. KALASKA*; R. SHADMEHR; A. M. GREEN. *Univ. De Montréal, Johns Hopkins Univ.*

2:00 SS22 **247.14** More active neural dynamics during movement control in monkey dorsal premotor cortex compared to parietal reach region. H. GUO*; S. KUANG; A. GAIL. *German Primate Ctr., Inst. of Psychology, Chinese Acad. of Sci., Bernstein Ctr. for Computat. Neurosci., Georg-August-Universität Göttingen.*

3:00 SS23 **247.15** ● Deactivation of PMd and A5 in non-human primates impairs feedback responses to mechanical disturbances of the limb. T. TAKEI*; S. G. LOMBER; D. J. COOK; S. H. SCOTT. *Queen's Univ., Western Univ.*

4:00 SS24 **247.16** Local circuits in reshaping of motor cortex projection neurons during motor training. D. C. CHAN*; H. KO; Y. KE; W. YUNG. *The Chinese Univ. of Hong Kong, Li Ka Shing Inst. of Hlth. Sci., The Chinese Univ. of Hong Kong.*

1:00 SS25 **247.17** Strong neuron-to-body coupling implies weak neuron-to-neuron coupling in motor cortex. P. KELLS*; S. GAUTAM; W. L. SHEW. *Univ. of Arkansas, Univ. of Arkansas.*

2:00 SS26 **247.18** Dynamic representation of reach speed in the motor cortex. S. B. SUWAY*; J. ORELLANA; A. B. SCHWARTZ. *Univ. of Pittsburgh, Carnegie Mellon Univ.*

3:00 TT1 **247.19** Neural dynamics of reach-to-grasp: Sequential location-potent and then object-potent projections of state-space trajectories. A. G. ROUSE; M. H. SCHIEBER*. *Univ. of Rochester.*

4:00 TT2 **247.20** Decoding kinetic information from PMd and M1 during reaching. E. TRAUTMANN*; S. STAVISKY; J. KAO; S. RYU; K. SHENOY. *Stanford Neurosciences.*

1:00 TT3 **247.21** Neural activity in primary motor cortex correlates with previous trial performance during adaptation of reaching movements to a visuomotor rotation. A. J. SUMINSKI*; J. KOSER. *Milwaukee Sch. of Engin.*

2:00 TT4 **247.22** Cortico-cerebellar integration in the motor thalamus. C. B. SCHAEFER*; S. V. GORNATI; F. HOEBEEK. *Erasmusmc.*

3:00 TT5 **247.23** Electrical microstimulation in primate premotor cortex hijacks local neural activity. D. J. O'SHEA*; K. V. SHENOY. *Stanford Univ., Stanford Univ.*

4:00 TT6 **247.24** Multi-scale electrophysiology in macaque motor cortex during reaching. A. L. ORSBORN*; C. WANG; K. CHIANG; N. C. BOLES; J. VIVENTI; B. PESARAN. *New York Univ., Duke Univ.*

1:00 TT7 **247.25** Error-related motor cortical activity transforms from output-null to output-potent dimensions. S. D. STAVISKY*; J. C. KAO; S. I. RYU; K. V. SHENOY. *Stanford Univ., Stanford Univ., Palo Alto Med. Fndn., Stanford Univ., Stanford Univ., Howard Hughes Med. Inst. at Stanford Univ., Stanford Univ.*

2:00 TT8 **247.26** Dorsal premotor (PMd) neurons code reaching movements preferentially in a space of action choices, not the salient sensory-property space of instructional cues. C. MONTANEDE*; J. F. KALASKA. *Univ. of Montreal.*

3:00 TT9 **247.27** Dorsal premotor cortex activity reflects a candidate decision variable during the action selection epoch of an abstract perceptual decision-making task. M. WANG*; C. CHANDRASEKARAN; D. PEIXOTO; W. T. NEWSOME; K. V. SHENOY. *Stanford Univ., Stanford Univ., Stanford Univ., Champalimaud Neurosci. Inst., Stanford University/ HHMI, Stanford Univ.*

4:00 TT10 **247.28** Conserved patterns of neural coordination across sleep, movement and brain-control training. A. JACKSON*; F. DE CARVALHO; J. TULIP; T. M. HALL. *Newcastle Univ.*

1:00 TT11 **247.29** Spatial tuning for both manual and oculomotor movement in dorsal anterior cingulate cortex neurons. S. YOO*; S. PIANTADOSI; B. HAYDEN. *Univ. of Rochester, Univ. of Rochester.*

POSTER

248. Neuroprosthetics: Sensory Processing

Theme E: Motor Systems

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 TT12 **248.01** Development of a rootlet interface to localize cutaneous stimuli applied to specific regions of the rat hindlimb. I. BLACK*; J. ABBAS; A. THOTA; R. JUNG. *Florida Intl. Univ., Arizona State Univ.*

2:00 TT13 **248.02** Detection of sensory information in whole nerve recordings using a multi-contact cuff. E. K. BRUNTON*; C. BLAU; K. NAZARPOUR. *Newcastle Univ., Newcastle Univ.*

3:00 TT14 **248.03** Artificial sensations through cortical stimulation of human somatosensory cortex with subdural mini-ECoG grids. M. ARMENTA SALAS*; D. R. KRAMER; B. LEE; D. BROWN; T. DOBREVA; C. KLAES; C. Y. LIU; R. A. ANDERSEN. *Caltech, USC, USC.*

4:00 UU1 **248.04** Electrical stimulation of the cervical dorsal root ganglia for sensory restoration in upper-limb amputees. S. CHANDRASEKARAN*; A. NANIVADEKAR; E. HELM; M. BONINGER; J. COLLINGER; R. GAUNT; L. FISHER. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

1:00 UU2 **248.05** Fascicular organization affects tactile sensation evoked from peripheral nerve cuff stimulation. E. L. GRACZYK*; M. A. SCHIEFER; H. P. SAAL; B. P. DELHAYE; S. J. BENSMAIA; D. J. TYLER. *Case Western Reserve Univ., Univ. of Chicago.*

2:00 UU3 **248.06** Psychophysical correspondence between vibrotactile stimulation of glabrous skin and intracortical microstimulation of the primary somatosensory cortex in the rat. I. DEVECIOGLU*; B. GÜÇLÜ. *Inst. of Biomed. Engin., Bogazici Univ., Namık Kemal Univ.*

3:00 UU4 **248.07** High frequency electrical stimulation: Effect of spatial location on retinal ganglion cell responses *in vitro*. J. W. MORLEY*; C. Y. YANG; D. TSAI; T. GUO; G. J. SUANING; S. DOKOS; N. H. LOVELL. *Western Sydney Univ., Univ. of New South Wales, Columbia Univ.*

4:00 UU5 **248.08** Exploration patterns in a visual prosthesis simulation. N. J. KILLIAN*; M. J. KYADA; J. S. PEZARIS. *Massachusetts Gen. Hosp., Harvard Med. Sch., Northeastern Univ., Massachusetts Gen. Hosp.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 UU6 **248.09** The potential for evoking visual perception using epicortical microelectrodes: Microstimulation of primary visual cortex in nonhuman primates. D. OSWALT*; D. ZHOU; D. TOBEY; P. DATTA; N. TALBOT; R. GREENBERG; L. RIETH; R. SHARMA; P. HOUSE; B. GREGER. *Arizona State Univ., Second Sight Med. Products, Blackrock Microsystems, Univ. of Utah.*

2:00 UU7 **248.10** Addition of pupil diameter measurements increases brain computer interface performance. K. A. FERCHO*; E. BURNISON; E. K. HANSON; L. A. BAUGH. *Univ. of South Dakota, Univ. of South Dakota, Univ. of South Dakota.*

3:00 UU8 **248.11** Threshold manipulation of retinal ganglion cells using precondition anodic stimulation. Y. CHANG*; J. D. WEILAND. *USC.*

4:00 UU9 **248.12** Neuronal responses in the primary somatosensory cortex during reach-to-grasp movements using native and robotic arm. H. MAO*; S. N. FLESHER; R. A. GAUNT; A. B. SCHWARTZ. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

1:00 UU10 **248.13** Comparing perceptual latency of microstimulation in human somatosensory cortex to peripheral sensory input. J. M. WEISS*; M. KRYGER; S. FLESHER; D. J. WEBER; J. L. COLLINGER; R. A. GAUNT. *Univ. of Pittsburgh, Univ. of Pittsburgh, Ctr. for the Neural Basis of Cognition, DVA.*

2:00 UU11 **248.14** A sensory substitution system for providing grasping force and hand opening feedback from a sensorized myoelectric hand. A. E. PENA*; L. RINCON-GONZALEZ; D. AGUILAR; J. ABBAS; R. JUNG. *Florida Intl. Univ., Arizona State Univ.*

3:00 UU12 **248.15** Intracortical microstimulation of human somatosensory cortex elicits cutaneous percepts. S. N. FLESHER*; J. L. COLLINGER; S. T. FOLDES; J. M. WEISS; J. E. DOWNEY; E. C. TYLER-KABARA; S. J. BENSMAIA; A. B. SCHWARTZ; M. L. BONINGER; R. A. GAUNT. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Chicago, Univ. of Pittsburgh.*

4:00 UU13 **248.16** Investigation of peripheral nervous system interfaces for motor decoding and somatosensory stimulation. J. M. BUIL*; H. SCHERBERGER. *Deutsches Primatenzentrum GmbH, Deutsches Primatenzentrum GmbH.*

1:00 UU14 **248.17** Quantification of tactile sensory content in multielectrode array recordings from finger area of macaque motor cortex. K. E. SCHROEDER*; Z. T. IRWIN; A. J. BULLARD; D. E. THOMPSON; J. BENTLEY; P. G. PATIL; C. A. CHESTEK. *Univ. of Michigan, Kansas State Univ., Univ. of Michigan Med. Sch., Univ. of Michigan Med. Sch., Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

2:00 VV1 **248.18** Neural speech recognition: Continuous phoneme decoding using spatiotemporal representations of human cortical activity. D. A. MOSES*; N. MESGARANI; M. K. LEONARD; E. F. CHANG. *UC Berkeley - UC San Francisco, UC San Francisco, UC San Francisco.*

3:00 VV2 **248.19** Muscle contraction is significantly associated with proprioception restored with electrical nerve stimulation with a Flat Interface Nerve Electrode (FINE). M. SCHIEFER*; I. CUBEROVIC; E. L. GRACZYK; D. J. TYLER. *Case Western Reserve Univ., Louis Stokes Cleveland Dept. of Veterans Affairs Med. Ctr. (LSCDVAMC).*

4:00 VV3 **248.20** Intraneural implants enable long-term bidirectional control of hand prostheses. S. RASPOPOVIC*; F. PETRINI; E. D'ANNA; G. VALLE; I. STRAUSS; G. GRANATA; R. DI IORIO; D. GUIRAUD; T. STIEGLITZ; S. MICERA. *Ecole Polytechnique Federale De Lausanne, Catholic Univ. of The Sacred Heart, Lab. d'Informatique, de Robotique et de Microélectronique de Montpellie, Lab. for Biomed. Microtechnology Dept. of Microsystems Engin. Univ. of Freiburg - IMTEK.*

POSTER

249. Neural Control of Respiration I

Theme E: Motor Systems

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 VV4 **249.01** ▲ Determining the role of TRP channels in inspiratory burst generation. K. E. DORST; M. C. D. PICARDO*; C. A. DEL NEGRO. *Col. of William and Mary.*

2:00 VV5 **249.02** Ca^{2+}-activated K^+ (BK) channels contribute to the ATP excitation of inspiratory rhythm generating networks *in vitro*. V. JALUBULA; Y. ZHANG; A. K. KATZELL; V. RANCIC; A. L. REVILL*; K. BALLANYI; G. D. FUNK. *Univ. of Alberta.*

3:00 VV6 **249.03** ATP excites the pre-Bötzinger Complex network *in vitro* via activation of a $G_{\alpha q}$-signaling pathway. Y. ZHANG*; T. ALVARES; A. V. GOURINE; S. KASPAROV; G. D. FUNK. *Univ. of Alberta, Univ. Col. London, Univ. of Bristol, Univ. of Alberta, Univ. of Alberta.*

4:00 VV7 **249.04** Optogenetic dissection reveals principles underlying respiratory frequency control. J. CREGG*; K. CHU; T. E. DICK; L. T. LANDMESSER; J. SILVER. *Case Western Reserve Univ., Case Western Reserve Univ.*

1:00 VV8 **249.05** Optogenetic analysis of neuronal network of medullary respiratory center in brainstem-spinal cord preparations from transgenic newborn rats expressing Archaerhodopsin in Phox2b positive cells. H. ONIMARU*; K. IKEDA; M. OGAWA; K. IHARA; K. KOBAYASHI; K. KAWAKAMI. *Showa Univ. Sch. of Med., Hyogo Col. Med., NIPS, Fukushima Med. Univ., Jichi Med. Univ.*

2:00 VV9 **249.06** Optogenetic stimulation of pre-Bötzinger complex and Bötzinger complex inhibitory neurons reveals a major role of inhibition in respiratory central pattern generation. H. KOIZUMI*; W. BARNETT; M. F. TARIQ; B. MOSHER; T. JOHN; R. ZHANG; I. A. RYBAK; Y. I. MOLKOV; J. C. SMITH. *Cell. & Systems Neurobio. Sec, NINDS, NIH, Georgia State Univ., Drexel Univ.*

3:00 VV10 **249.07** Optogenetic inhibition of Dbx1 pre-Bötzinger complex neurons suppresses breathing in mice. N. C. VANN*; F. D. PHAM; C. A. DEL NEGRO. *Col. of William and Mary.*

4:00 VV11 **249.08** Adenosine inhibits the pre-Bötzinger complex inspiratory network during the first two weeks of postnatal development. R. J. REKLOW*; G. D. FUNK. *Univ. of Alberta.*

1:00 VV12 **249.09** Glycinergic neurons in the pre-Bötzinger complex are crucial for eupnea: An optogenetic study. Y. I. MOLKOV*; A. P. L. ABDALA; B. LIU; D. J. MORAES; S. KASPAROV; W. H. BARNETT; J. C. SMITH; J. F. R. PATON. *Georgia State Univ., Univ. of Bristol, Univ. of São Paulo, NINDS, NIH.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
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* Indicates abstract's submitting author

2:00 VV13 **249.10** Breathing responses produced by selective optogenetic activation of rostral ventrolateral medullary catecholaminergic neurons are dependent on the integrity of Pre-Bötzinger complex. M. R. MALHEIROS-LIMA; L. T. TOTOLA; M. V. G. LANA; E. CONSTANZI-STRAUSS; B. E. STRAUSS; A. C. TAKAKURA; T. S. MOREIRA*. *Univ. of Sao Paulo, Univ. of Sao Paulo, Univ. of Sao Paulo, Univ. of Sao Paulo, Univ. of Sao Paulo.*

3:00 VV14 **249.11** Defining the respiratory role of pre-Bötzinger Complex Dbx1-derived and somatostatinergic neurons *in vivo*. Y. CUI*; K. KAM; D. SHERMAN; W. A. JANCZEWSKI; Y. ZHENG; J. L. FELDMAN. *UCLA, Sichuan Univ.*

4:00 VV15 **249.12** Imaging of dendritic calcium transients in pre-Bötzinger neurons in organotypic slice cultures. W. S. PHILLIPS*; C. A. DEL NEGRO; J. C. REKLING. *Univ. of Copenhagen, Col. of William & Mary.*

1:00 VV16 **249.13** The consequence of antiepileptic drug treatment on the respiratory activity generated in the Pre-Bötzinger Complex. H. KOCH*; J. BRANDES; L. RÜSCHSTROER; H. LERCHE. *Univ. Tübingen, Hertie Inst. for clinical brain research.*

2:00 VV17 **249.14** Pre-Bötzinger Complex SST^+ neurons modulate breathing rhythm and pattern. R. P. DE SOUSA ABREU*; J. L. FELDMAN. *UCLA, Fundação Champalimaud.*

3:00 VV18 **249.15** Unbuckling the Buccal oscillator in the American Bullfrog. M. I. BAGHDADWALA*; R. J. A. WILSON. *Hotchkiss Brain Institute, Univ. of Calgary.*

4:00 VV19 **249.16** Kolliker Fuse orchestrates timing of abdominal nerve bursting. W. H. BARNETT*; A. P. ABDALA; J. F. R. PATON; D. B. ZOCCAL; Y. I. MOLKOV. *Georgia State Univ., Univ. of Bristol, São Paulo State University, São Paulo.*

1:00 VV20 **249.17** Acetylcholinesterase and respiration: Where this essential enzyme is required? A. NERVO; C. REYMOND; F. NACHON; G. CALAS; E. KREJCI*. *Inst. de Recherche Biomédicale des Armées, COGNAC G, UMR 8257 CNRS.*

2:00 VV21 **249.18** Parametrization of a closed-loop adaptive controller for respiratory pacing in a rodent model. R. SIU*; B. HILLEN; A. THOTA; S. RENAUD; J. ABBAS; R. JUNG. *Florida Intl. Univ., Univ. de Bordeaux, Arizona State Univ.*

3:00 VV22 **249.19** Developmental nicotine exposure alters the frequency of miniature inhibitory post-synaptic currents in hypoglossal motoneurons. L. B. WOLLMAN*; R. B. LEVINE; R. F. FREGOSI. *The Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

4:00 VV23 **249.20** Role of potassium conductances in shaping excitability in hypoglossal motoneurons in developmental nicotine exposure model. M. CHOLANIAN; R. B. LEVINE; R. F. FREGOSI*. *Univ. of Arizona, Univ. Arizona.*

1:00 VV24 **249.21** ● Neuromodulation of limb proprioceptive afferents decreases apnea and stabilizes blood pressure (BP) in premature neonates. K. KESAVAN*; D. M. CORDERO; R. M. HARPER. *Univ. of California, UCLA, UCLA.*

POSTER

250. Motor Unit Recordings: EMG

Theme E: Motor Systems

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 VV25 **250.01** Identification of cortical drive to arm muscles during arm cycling by analysis of power spectrum. T. C. RICHARDS*; S. CHAKRABARTY, Sr; K. POWER. *Univ. of Leeds, Mem. Univ. of Newfoundland.*

2:00 VV26 **250.02** ● The effects of waveform and current direction on test-retest reliability of transcranial magnetic stimulation. P. DAVILA PEREZ*; A. JANNATI; M. SHAFI; J. CUDEIRO; A. PASCUAL-LEONE. *BIDMC - Harvard Med. Sch., Univ. of A Coruña.*

3:00 WW1 **250.03** Probing causal relevance of oscillatory power and phase for corticospinal excitability in humans: A new experimental tACS-TMS paradigm. L. SCHILBERG*; T. ENGELEN; T. DE GRAAF; T. SCHUHMANN; A. SACK. *Maastricht Univ.*

4:00 WW2 **250.04** Corticospinal excitability during normal gait at varying speeds and inter-limb velocities: A transcranial magnetic stimulation study. L. KOGAN*; V. GRITSENKO; S. YAKOVENKO. *West Virginia Univ.*

1:00 WW3 **250.05** Sequence of forelimb muscle activations during symmetric and asymmetric locomotion in rats. E. M. SALIDO*; K. TUNTEVSKI; S. YAKOVENKO. *West Virginia University, Ctr. For Neurosci.*

2:00 WW4 **250.06** Linear vs nonlinear control of populations of motor neurons during voluntary contractions. F. NEGRO*; A. DEL VECCHIO; J. L. DIDERIKSEN; F. FELICI; D. FARINA. *Univ. Med. Ctr. Göttingen, Univ. degli Studi di Roma Foro Italico, Aalborg Univ., Univ. Med. Ctr. Goettingen.*

3:00 WW5 **250.07** ●▲Sarcopenia and connectivity of the aging motor unit. K. SHETH, 45459; V. L. MCGOVERN; K. M. CORLETT; A. BRATASZ; A. BURGHES; W. ARNOLD*. *The Ohio State Univ., The Ohio State Univ.*

4:00 WW6 **250.08** ● Grouping and averaging motor unit data obscures the adaptations of motor unit firing rates during muscle fatigue. J. C. KLINE*; C. J. DE LUCA; P. CONTESSA. *Delsys, Inc, Boston Univ.*

1:00 WW7 **250.09** ● Fatigue is characterized by a compensatory interaction between motor unit firing behavior and muscle force. P. CONTESSA*; C. DE LUCA; J. KLINE. *Delsys Inc, Boston Univ.*

2:00 WW8 **250.10** Motor point stimulation as a tool to modify spinal neural circuits. T. YAMASHITA; A. BERGUQUIST; T. YOSHIDA; K. MASANI*. *Toronto Rehab Inst., Univ. of Toronto.*

3:00 WW9 **250.11** Task dependent change in Rectus Femoris activity in normal participants. P. SRIYA*; T. RICHARDS; S. ASTILL; S. CHAKRABARTY. *Fac. of Biol. Sci.*

4:00 WW10 **250.12** Characterization of arm muscle activity during arm cycling at different workloads. C. P. CHAYTOR*; M. R. MONKS; D. A. FORMAN; J. M. BYRNE; A. LOUCKS-ATKINSON; K. E. POWER. *Mem. Univ., Mem. Univ.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 WW11 **250.13** Neuronal circuits involved in the reflex activity of pubococcygeus muscle motoneurons of female rats. O. LARA GARCIA*; M. LARA GARCÍA; D. PÉREZ HERNÁNDEZ; M. MARTÍNEZ-GÓMEZ; E. CUEVAS; P. PACHECO. *Ctr. de Investigaciones Cerebrales, UV, Inst. de Neuroetología, Univ. Veracruzana, Ctr. Tlaxcala Biologia de la Conducta, Univ. Autonoma de Tlaxcala, Inst. de Investigaciones Biomédicas, UNAM.*

2:00 WW12 **250.14** Sex differences in the control of vastus medialis and vastus medialis oblique. Y. PENG; M. S. TENAN; L. GRIFFIN*. *Univ. Texas Austin, U.S. Army Res. Lab.*

3:00 WW13 **250.15** Pattern of masseter muscle activity during chewing with dental implants. A. GRIGORIADIS*; M. TRULSSON. *Karolinska Institutet.*

4:00 WW14 **250.16** Differences in force steadiness and EMG amplitude during a dorsiflexion steadiness task in young and older adults. J. J. PETERSON*; K. G. KEENAN. *Univ. of Wisconsin - Milwaukee.*

1:00 WW15 **250.17** Precision and accuracy in human motor control. A. KUMAR*; Y. TANAKA; J. GRIGORIADIS; M. TRULSSON; P. SVENSSON. *Karolinska Institutet, Osaka Univ. Grad. Sch. of Dent.*

2:00 WW16 **250.18** Characterization of arm muscle activity during asynchronous and synchronous arm cycling using different forearm positions. A. P. HYNES*; C. P. CHAYTOR; L. R. ALCOCK; D. C. BUTTON; K. E. POWER. *Mem. Univ. of Newfoundland, Mem. Univ. of Newfoundland.*

3:00 WW17 **250.19** ● Chronaxie of motor responses to S3 sacral nerve stimulation in sheep. D. DINSMOOR; M. CUTINELLA; J. AGRAN; X. SU*. *Medtronic.*

4:00 WW18 **250.20** Emg regression as a measure of the contribution of central signals to force perception. S. TOMA*; F. LACQUANITI, 00173. *Arizona State Univ. - Tempe Campus, Univ. of Rome Tor Vergata.*

1:00 WW19 **250.21** Static synergy patterns used to model time-varying functional task muscle activation of the hand. N. M. COLE*; A. B. AJIBOYE. *Case Western Reserve Univ., Louis Stokes Cleveland Dept. of Veterans Affairs Med. Ctr.*

2:00 WW20 **250.22** Neural control of forelimb locomotor behaviors. A. ISLAM; T. PENG; P. SHAH*. *Stony Brook Univ.*

3:00 WW21 **250.23** Impaired oral motor control due to anesthesia during intraoral manipulation of food. J. GRIGORIADIS*; A. KUMAR; P. SVENSSON; K. SVENSSON; M. TRULSSON. *Karolinska Institutet.*

4:00 WW22 **250.24** ▲ Assessing movement variability with quantitative motion capture in able-bodied individuals performing the Jebsen Taylor Hand Function Test. L. WOZNICZKA; S. WANG; K. KONTSON*; E. CIVILLICO. *Univ. of Marquette, U.S. Food and Drug Admin., Univ. of Maryland.*

POSTER

251. Bird Song: Auditory Processing and Song Acquisition

Theme F: Integrative Physiology and Behavior

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 XX1 **251.01** Principles of auditory processing in sensory and premotor structures of the songbird forebrain. E. SOYMAN*; D. S. VICARIO. *Rutgers Univ.*

2:00 XX2 **251.02** Effects of complex acoustic contexts on stimulus encoding in songbird auditory forebrain. M. DONG*; D. VICARIO. *Psychology, Rutgers Univ.*

3:00 XX3 **251.03** Mechanisms underlying the social enhancement of vocal learning in songbirds. Y. CHEN*; L. E. MATHESON; J. T. SAKATA. *McGill Univ.*

4:00 XX4 **251.04** Experimental evidence for innate biases in vocal sequencing learning. L. JAMES*; J. T. SAKATA. *McGill Univ.*

1:00 XX5 **251.05** Representation of calls in the activity of neurons in the songbird premotor nucleus HVC. K. MURPHY*; J. F. PRATHER. *Univ. of Wyoming.*

2:00 XX6 **251.06** Anatomical links between auditory perception and motor behavior in female mate choice. J. L. DUNNING*; S. MAZE; E. J. ATWOOD; K. MURPHY; J. F. PRATHER. *Univ. of Wyoming, Univ. of Wyoming.*

3:00 XX7 **251.07** Mismatch response in auditory area of freely-moving songbird. C. MORI*; K. OKANOYA. *The Univ. of Tokyo.*

4:00 XX8 **251.08** Mechanism and function of physiologically heterogeneous cell types in caudolateral mesopallium. A. N. CHEN*; C. D. MELIZA. *Univ. of Virginia, Univ. of Virginia, Univ. of Virginia.*

1:00 XX9 **251.09** ▲ Song exposure affects HVC ultrastructure in juvenile zebra finches. H. G. KHALED; Z. HUANG; R. H. R. HAHNLOSER; S. M. H. GOBES*. *Wellesley Col., ETH, Wellesley Col.*

2:00 XX10 **251.10** Motor and sensory coding in duetting wrens. E. S. FORTUNE; N. DAY; P. RIVERA; M. J. COLEMAN*. *New Jersey Inst. of Technol., Univ. California Los Angeles, Claremont McKenna, Pitzer and Scripps Colleges.*

3:00 XX11 **251.11** Early auditory experience does not affect c-Fos expression in catecholaminergic neurons in response to socially modulated song. H. J. BARR*; Y. CHEN; S. C. WOOLLEY. *McGill Univ., McGill Univ.*

4:00 XX12 **251.12** Parental experience counts in a socially monogamous songbird: Enhanced neural and behavioral responses to fledgling begging calls in male and female parents. B. A. BELL*; N. NARAYANAN; D. S. VICARIO. *Rutger's Univ.*

1:00 XX13 **251.13** ▲ Statins affect the quality of auditory memories and performance on a behavioral discrimination paradigm in an avian model. D. VALIVETI; S. SRINIVASAN; D. S. VICARIO*; M. L. PHAN. *Rutgers The State Univ. of New Jersey.*

2:00 XX14 **251.14** Zebra finches still recognize their tutor song after manipulation of temporal structure. C. MOL*; G. J. L. BECKERS; R. W. J. KAGER; J. J. BOLHUIS. *Utrecht Univ., Utrecht Univ.*

3:00 XX15 **251.15** Matching tutors to students: Efficient two-stage learning and birdsong. T. TESILEANU*; B. OLVECZKY; V. BALASUBRAMANIAN. *CUNY Grad. Ctr., Harvard Univ., Univ. of Pennsylvania.*

4:00 XX16 **251.16** Mechanisms for category learning in songbirds. T. SAINBURG*; T. Q. GENTNER. *UCSD, UCSD.*

1:00 XX17 **251.17** Early auditory experience modifies neuronal firing properties of neurons in zebra finch auditory cortex. T. KUDO*; Y. YAZAKI-SUGIYAMA. *OIST.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 XX18 **251.18** Relationship between song acoustic similarity and neural activity in female zebra finches. R. TABATA*; M. INDA; K. HOTTA; K. OKA. *Grad. Sch. of Sci. and Technology, Keio Un.*

3:00 XX19 **251.19** Auditory neural activity in zebra finch forebrain depends on acoustic strucures of syllables. M. INDA*; R. TABATA; K. HOTTA; K. OKA. *Keio-Univ. Biophysics and Neuroinformatics Lab.*

POSTER

252. Molecular and Pharmacological Mechanisms of Sexual Behavior

Theme F: Integrative Physiology and Behavior

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 XX20 **252.01** ▲ G protein-coupled estrogen receptor 1 (GPER) is found in the plasma membrane and cytoplasmic fractions of tissue from the arcuate nucleus of the hypothalamus. M. FERI*; J. PHAN; K. SINCHAK. *California State Univ. Long Beach, California State University, Long Beach, California State University, Long Beach.*

2:00 XX21 **252.02** ▲ Dopamine receptor D1 and D5 do not form physical complexes with Src kinase on the plasma membrane to mediate actions of progesterone signaling in the arcuate nucleus of hypothalamus. J. PHAN*; J. RODMAN; K. SINCHAK. *California State University, Long Beach, California State University, Long Beach.*

3:00 XX22 **252.03** Subpopulations of arcuate nucleus β-endorphin neurons express G protein-coupled estrogen receptor 1 and estrogen receptor-α. T. CHUON*; S. HUERTA; J. RODMAN; K. SINCHAK. *California State University, Long Beach, California State University, Long Beach.*

4:00 YY1 **252.04** ▲ Tamoxifen and ICI 182,780 activation of G protein-coupled estrogen receptor 1 (GPER) acts through orphanin FQ (nociception) neurons to rapidly facilitate sexual receptivity. S. M. CHOKR*; N. LONG; A. CHHAN; K. SINCHAK. *California State Univ. Long Beach.*

1:00 YY2 **252.05** Measuring the tonic and phasic release of dopamine during sexual behavior in female hamsters using fixed potential amperometry. B. T. HIMMLER*; K. M. MOORE; L. E. BEEN; B. A. TEPLITZKY; R. L. MEISEL. *Univ. of Minnesota, Haverford Col., Univ. of Minnesota.*

2:00 YY3 **252.06** Investigation of glutamate neurotransmission in the copulatory reward of sex behavior in female Syrian hamsters. K. M. MOORE*; R. L. MEISEL. *Univ. of Minnesota Dept. of Neurosci.*

3:00 YY4 **252.07** RU-486 enhances 8-OH-DPAT's inhibition of female rat sexual behavior. R. S. HORNUNG*; L. UPHOUSE. *Texas Woman's Univ., Texas Woman's Univ.*

4:00 YY5 **252.08** Melanocortin 4 receptors expressed only on sim1 neurons are sufficient for male sexual behavior. E. SEMPLE*; J. HILL. *Univ. of Toledo.*

1:00 YY6 **252.09** Prenatal exposure to diazepam or flunitrazepam produces sexual behavior modifications of male mice. M. MARQUEZ-OROZCO*; A. MARQUEZ-OROZCO; G. DE LA FUENTE-JUAREZ; L. A. I. HERNANDEZ-ALVAREZ. *Univ. of Mexico (UNAM), Univ. of Mexico (UNAM), Hosp. Gen. Zona Norte de Puebla.*

2:00 YY7 **252.10** Diazepam administered prenatally induces sexual behavior alterations in adult and senile mice. A. MARQUEZ-OROZCO*; L. A. I. HERNANDEZ-ALVAREZ; G. DE LA FUENTE-JUAREZ; M. C. MARQUEZ-OROZCO. *Univ. of Mexico (UNAM), Hosp. Gen. Zona Norte de Puebla.*

3:00 YY8 **252.11** The converging roles of progesterone receptor, dopamine receptor, and neuronal activation in the medial amygdala to mediate female sexual motivation. S. A. RUDZINSKAS*; S. JURADO; J. A. MONG. *Univ. of Maryland Baltimore.*

4:00 YY9 **252.12** Neural estrogen receptor α and β signalling pathways in mice. S. MHAOUTY-KODJA*. *CNRS UMR 8246, INSERM U1130, UPMC.*

1:00 YY10 **252.13** Disruption of conditioned sexual inhibition in male rats: Alcohol and cue effects on nucleus accumbens GABA release. K. GERMÉ*; J. ALVAREZ-BARKHAM; L. CUSACK; L. R. GOSSIP; H. S. POUPEL; H. RAJABI; J. G. PFAUS. *Concordia Univ., Concordia Univ.*

POSTER

253. Cellular Effects of Stress

Theme F: Integrative Physiology and Behavior

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 YY11 **253.01** Cellular substrates for interactions between neuropeptide Y (NPY) and corticotropin-releasing factor (CRF) in the rat locus coeruleus. M. J. WARNER*; B. A. S. REYES; E. J. VAN BOCKSTAELE. *Drexel Univ. Col. of Med.*

2:00 YY12 **253.02** Activation of amygdalar corticotropin releasing factor and brainstem enkephalinergic afferents to the locus coeruleus in female rats following social stress. B. A. REYES*; H. GUAJARDO; E. C. DUFOURT; R. J. VALENTINO; E. J. VAN BOCKSTAELE. *Drexel Univ., Children's Hosp. of Philadelphia.*

3:00 YY13 **253.03** Simultaneous acute stresses impair memory enduringly via novel convergent actions of multiple stress hormones. Y. CHEN*; J. MOLET; J. C. LAUTERBORN; B. H. TRIEU; J. L. BOLTON; K. P. PATTERSON; C. M. GALL; G. LYNCH; T. Z. BARAM. *Univ. of California Irvine, Univ. of California Irvine, Univ. of California Irvine.*

4:00 YY14 **253.04** Mood, stress and longevity: Convergence on Ankyrin 3. A. NICULESCU*; S. RANGARAJU; D. LEVEY; K. NHO; H. LE-NICULESCU; A. SAYKIN; D. SALOMON; M. PETRASCHECK. *Indiana Univ. Sch. of Med., The Scripps Res. Inst., Indiana Univ. Sch. of Med.*

1:00 ZZ1 **253.05** The role of $Ca_v1.2$ in mediating susceptibility to chronic stress in the prefrontal cortex. C. C. BAVLEY*; A. M. RAJADHYAKSHA. *Weill Cornell Med.*

2:00 ZZ2 **253.06** Effects of social housing on measures of stress in male and female Syrian hamsters. A. P. ROSS*; A. NORVELLE; D. C. CHOI; J. C. WALTON; H. E. ALBERS; K. L. HUHMAN. *Georgia State Univ.*

3:00 ZZ3 **253.07** Acute and repeated exposure to social stress alters gut microbiota composition in Syrian hamsters. K. A. PARTRICK*; B. CHASSAING; A. T. GEWIRTZ; K. L. HUHMAN. *Georgia State Univ., Georgia State Univ., Georgia State Univ.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
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* Indicates abstract's submitting author

4:00 ZZ4 **253.08** Sex differences in the effects of arginine vasopressin (AVP) in the anterior hypothalamus (AH) on resilience to social stress in Syrian hamsters. J. I. TERRANOVA*; N. HARDCASTLE; K. L. HUHMAN; H. E. ALBERS. *Georgia State Univ., Ctr. for Behavioral Neurosci.*

1:00 ZZ5 **253.09** An acute social defeat stressor during puberty increases susceptibility to conditioned defeat in adulthood. A. M. ROSENHAUER*; K. E. MCCANN; A. NORVELLE; K. L. HUHMAN. *Georgia State Univ.*

2:00 ZZ6 **253.10** Prenatal exposure to social stress alters adult response to social stress in Syrian hamsters. A. NORVELLE*; G. M. F. JONES; A. M. ROSENHAUER; K. E. MCCANN; K. L. HUHMAN. *Georgia State Univ.*

3:00 ZZ7 **253.11** Gene expression and network analyses in the basolateral amygdala dominant and subordinate Syrian hamsters. K. E. MCCANN*; D. M. SINKIEWICZ; K. L. HUHMAN. *Georgia State Univ.*

4:00 ZZ8 **253.12** Prelimbic and infralimbic cortical TrkB signaling differentially regulates conditioned defeat learning. D. C. CHOI*; K. A. PARTRICK; A. M. ROSENHAUER; K. L. HUHMAN. *GSU Neurosci. Inst., GSU.*

1:00 ZZ9 **253.13** Transcriptional regulation of corticotropin-releasing factor gene expression. L. AGUINIGA*; D. J. KLUMPP. *Northwestern Univ., Northwestern Univ.*

2:00 ZZ10 **253.14** The aberrant behavior and altered protein expression associated with neuropsychiatric disorders in crmp2 gene-deficient mice. H. NAKAMURA*; N. YAMASHITA; A. KIMURA; Y. KIMURA; H. HIRANO; H. KIYONARI; G. SHIOI; H. MAKIHARA; Y. KAWAMOTO; A. JITSUKI-TAKAHASHI; K. YONEZAKI; K. TAKASE; T. MIYAZAKI; F. NAKAMURA; F. TANAKA; Y. GOSHIMA. *Yokohama City Univ. Grad. Sch. of Med., Yokohama City Univ. Grad. Sch. of Med., Advanced Med. Res. Center, Yokohama City Univ. Grad. Sch. of Med. Life Sci., Animal Resources Develop. Unit, RIKEN Ctr. for Life Sci. Technologies, Genet. Engin. Team, RIKEN Ctr. for Life Sci. Technologies, Yokohama City Univ. Grad. Sch. of Med., Jichi Med. Univ., Yokohama City Univ. Grad. Sch. of Med.*

3:00 ZZ11 **253.15** Acute ketamine reverses changes in glutamate release and related molecular mechanisms induced by chronic stress. L. MUSAZZI*; P. TORNESE; N. SALA; M. SEGUINI; M. MILANESE; T. BONIFACINO; D. BONINI; G. RACAGNI; A. BARBON; G. BONANNO; M. POPOLI. *Univ. of Milano, Univ. of Genova, Univ. of Brescia.*

4:00 ZZ12 **253.16** Engineered transcription factors targeted to the Fosb gene are sufficient to model the epigenetic and transcriptional phenomena that underlie stress-related behaviors. P. J. HAMILTON*; E. A. HELLER; D. D. BUREK; S. I. LOMBROSO; S. T. PIRPINIAS; M. FARIS; J. D. KOURIS; A. D. AVAKIAN; H. M. CATES; R. L. NEVE; E. J. NESTLER. *Mount Sinai Sch. of Med., Univ. of Pennsylvania, Mount Sinai Sch. of Med., MIT, Mount Sinai Sch. of Med.*

1:00 ZZ13 **253.17** The NeuroD element is associated with selectivity for mineralocorticoid over glucocorticoid receptor binding in the brain. L. T. C. M. VAN WEERT*; J. C. BUURSTEDE; A. MAHFOUZ; P. S. M. BRAAKHUIS; J. A. E. POLMAN; H. C. M. SIPS; B. ROOZENDAAL; E. R. DE KLOET; N. A. DATSON; O. C. MEIJER. *Leiden Univ. Med. Ctr., Radboudumc, Radboud Univ., Leiden Univ. Med. Ctr., Leiden/Amsterdam Ctr. for Drug Res.*

2:00 ZZ14 **253.18** Mild chronic unpredictable stress is not sufficient toinduce depressive-like symptoms in rats. C. J. FONTAINE*; C. CHIU; S. YAU; A. R. PATTEN; B. R. CHRISTIE. *Univ. of Victoria.*

3:00 AAA1 **253.19** Deletion of regulator of g protein signaling 2 promotes fear memory in Pavlovian fear condtioning. A. RAAB*; L. HOMMERS; S. POPP; K. LESCH; J. DECKERT. *Univ. Hosp. Wuerzburg, Ctr. of Mental Hlth., Univ. Hosp. of Wuerzburg, Univ. Hosp. of Wuerzburg.*

4:00 AAA2 **253.20** Molecular fundamentals of the impaired epinephrine response following recurrent hypoglycemia: A clue from microarray analysis. B. B. NANKOVA*; J. KIM; N. KUDRICK; E. F. LAGAMMA. *New York Med. Col. Dept. of Pediatrics, The Regional Neonatal Center, Maria Fareri Children's Hosp. at Westchester Med. Ctr., New York Med. Col. Dept. of Pediatrics and The Regional Neonatal Center, Maria Fareri Children's Hosp. at Westchester Med. Ctr.*

1:00 AAA3 **253.21** Acute stress is not acute: Early and sustained effects of acute stress. M. POPOLI*; L. MUSAZZI; P. TORNESE; N. SALA; G. TRECCANI; D. TARDITO; M. SEGUINI. *Univ. Degli Studi Di Milano, Aarhus Univ.*

2:00 AAA4 **253.22** Effects of acute systemic corticosterone treatment on clock gene expression in the male rat brain. M. J. HARTSOCK*; A. C. TOMCZIK; A. M. JANAS; L. E. CHUN; E. R. WOODRUFF; R. L. SPENCER. *Univ. of Colorado Boulder.*

3:00 AAA5 **253.23** Characterization of glucocorticoid-induced loss of DNA methylation of the stress gene Fkbp5 in neuronal cells. O. H. COX*; H. SONG; N. GADIWALLA; J. MENZIES; R. LEE. *Johns Hopkins Univ.*

4:00 AAA6 **253.24** Environmentally malleable epigenomic regions in the mammalian brain. S. ODELL*; S. L. KLEIN; A. SHARMA; E. MITCHELL; M. TOTH. *Weill Cornell Med. Col., Weill Cornell Med. Col.*

POSTER

254. Sleep Behavior and Systems I

Theme F: Integrative Physiology and Behavior

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 AAA7 **254.01** Physiological variations in the number of hypocretin and histamine producing neurons. R. MCGREGOR; L. SHAN; M. WU; J. M. SIEGEL*. *Univ. California Los Angeles.*

2:00 AAA8 **254.02** Orexin neurons are inhibited by local GABAergic neurons. L. FERRARI*; D. PARK; E. ARRIGONI. *Beth Israel Deaconess Med. Ctr. - Harvard Med. Sch.*

3:00 AAA9 **254.03** Orexin gene transfer in pons projecting amygdala neurons suppresses cataplexy induced by predator odor in narcoleptic mice. M. LIU*; P. SHIROMANI; C. BLANCO-CENTURION; D. PELLURU; R. KONADHODE. *Med. Univ. of SC, Ralph H. Johnson VA Med. Ctr.*

4:00 AAA10 **254.04** An *in vitro* study of pre and post synaptic cholinergic control of hypoglossal motor neurons in adult mice. L. ZHU*; L. L. FERRARI; D. PARK; N. L. CHAMBERLIN; E. ARRIGONI. *Beth Israel Deaconess Med. Center/ Harvard Med. Sch.*

1:00 AAA11 **254.05** Malapropros noradrenaline impairs hippocampal plasticity and prevents memory consolidation. M. A. FRAZER*; A. SERGEEVA; B. GROSS; D. BAUER; K. SWIFT; G. POE. *Univ. of Michigan, Univ. of Michigan.*

2:00 AAA12 **254.06** CGRP neurons in the external lateral parabrachial nucleus and the pathways regulating hypercapnia induced cortical EEG arousal. S. KAUR*; J. L. WANG; P. M. FULLER; C. B. SAPER. *Beth Israel Deaconess Med. Ctr. and Harvard M.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 AAA13 **254.07** Activation of NOS1 neurons of the caudal hypothalamus produces prolonged wakefulness. N. P. PEDERSEN*; C. B. SAPER; P. M. FULLER. *Emory Univ., Emory Epilepsy Service, Beth Israel Deaconess Med. Ctr., Harvard Med. Sch.*

4:00 AAA14 **254.08** Sleep and wake differentially affect superficial and deep layers of mouse cortex. K. PEELMAN; C. M. FUNK; A. V. RODRIGUEZ; S. HONJOH; G. TONONI; C. CIRELLI*. *UW-Madison, Univ. of Wisconsin Madison Dept. of Psychiatry.*

1:00 AAA15 **254.09** Sleep-wake discharge activity of neurons in the parafacial zone in rats. M. ALAM*; A. KOSTIN; D. MCGINTY; R. SZYMUSIAK; N. ALAM. *VA Greater Los Angeles Healthcare Syst.*

2:00 AAA16 **254.10** Sleep restores slow intrinsic timescales of cortical dynamics after sustained wakefulness in rats. C. MEISEL*; D. PLENZ. *NIMH.*

3:00 AAA17 **254.11** Reduced effective connectivity between the frontal cortex and striatum during sleep. M. J. REDINBAUGH*; G. E. SPENCER; I. N. PIGAREV; Y. B. SAALMANN. *UW Madison, Inst. for Information Transmission Problems (Kharkevich Institute), Russian Acad. of Sci.*

4:00 AAA18 **254.12** Basal forebrain cholinergic neurons are vital for sleepiness observed after alcohol consumption. A. SHARMA*; R. SHARMA; P. SAHOTA; M. THAKKAR. *Harry S Truman Mem. Veterans' Hosp.*

1:00 AAA19 **254.13** Electrical stimulation of the nucleus of the solitary tract: Effects on electroencephalographic spectral power and the sleep-wake cycle in freely moving cats. D. MARTÍNEZ-VARGAS*; A. VALDÉS-CRUZ; V. M. MAGDALENO-MADRIGAL; R. FERNÁNDEZ-MAS; S. ALMAZÁN-ALVARADO. *Inst. Nacional De Psiquiatría.*

2:00 AAA20 **254.14** Peripheral tumors disrupt normal sleep/wake states in mice. J. C. BORNIGER*; A. H. HINZEY; N. ZHANG; Y. M. CISSE; W. H. WALKER, II; M. M. GAUDIER-DIAZ; U. J. MAGALANG; M. B. LUSTBERG; R. J. NELSON; A. C. DEVRIES. *The Ohio State Univ. Wexner Med. Ctr.*

3:00 AAA21 **254.15** ● Altered sleep-wake behavior in a novel murine model of type 2 diabetes and Alzheimer's disease (db/AD mice). M. SETHI*; L. GUERRIERO; C. WANG; R. BERNAT; A. M. HELMAN; T. MACHEDA; A. AGARWAL; M. P. MURPHY; M. J. DUNCAN; B. F. O'HARA. *Univ. of Kentucky, Signal Solutions LLC, Univ. of Kentucky, Univ. of Kentucky.*

4:00 AAA22 **254.16** ▲ Activation of PPARα enhaces wake-related molecules after total sleep deprivation in rats. A. POOT-AKE*; K. GUZMÁN; G. ARANKOWSKY-SANDOVAL; R. JIMÉNEZ-MORENO; M. ERIC. *Univ. Anahuac Mayab, Univ. Anahuac Mayab, Univ. Anahuac Mayab, Fisiología Celular Univ. Nacional Autonoma de Mexico, Univ. Autónoma de Yucatan, Univ. Anahuac Mayab.*

1:00 AAA23 **254.17** Exploring PPARg as a mediator of diet/energy balance effects on sleep/wake behavior. I. J. PERRON*; K. CHELLAPPA; A. PACK; S. VEASEY. *Univ. of Pennsylvania, Univ. of Pennsylvania.*

2:00 AAA24 **254.18** Pumilio regulates sleep in *Drosophila melanogaster* through suppression of synaptic proteins. L. DE JESUS*; N. RODRIGUEZ; J. ALEMAN; J. ORTEGA; C. PACHECO; A. AVALOS; J. L. AGOSTO. *Univ. of Puerto Rico Rio Piedras, Univ. of Puerto Rico Rio Piedras.*

3:00 AAA25 **254.19** Systematic behavioral screening of Sleepy and Dreamless, newly identified mouse pedigrees with sleep abnormalities. T. HONDA*; T. FUJIYAMA; C. MIYOSHI; M. SATO; H. FUNATO; M. YANAGISAWA. *Univ. of Tsukuba, Intl. Inst. for Intergrative Sleep Med. (WPI-IIIS), Universitu of Tsukuba, Ph.D. Program in Human Biol. (HBP), Sch. of Integrative and Global Majors (SIGMA), Univ. of Tsukuba / Japan Society fo the Promotion of Sci. (JSPS) Res. Fellow (DC1), Toho Univ., Howard Hughes Med. Inst. (HHMI), Univ. of Texas Southwestern Med. Ctr.*

4:00 AAA26 **254.20** Sleep affects operant conditioning memory in *Aplysia* californica. A. P. VORSTER*; J. BORN. *Univ. of Tübingen, Univ. of Tübingen.*

1:00 BBB1 **254.21** CUBIC-MAP: Whole-brain profiling of patio-temporal cellular activity during sleep-wake cycles. H. YUKINAGA*; D. PERRIN; Q. ZHANG; G. A. SUNAGAWA; K. TAINAKA; H. R. UEDA. *RIKEN, Queensland Univ. of Technol., The Univ. of Tokyo, RIKEN.*

POSTER

255. Anatomy and Development of Central Pathway Regulating Energy Balance

Theme F: Integrative Physiology and Behavior

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 BBB2 **255.01** Hypothalamic lipotoxicity coordinates insulin sensitivity inmale offspring of obese rats. R. CARDENAS-PEREZ; L. FUENTES-MERA; J. CORONA-CASTILLO; L. REYES CASTRO; E. ZAMBRANO; A. CAMACHO*. *Univ. Autónoma De Nuevo León, Univ. Autónoma De Nuevo León, Hosp. Infantil de México "Federico Gómez", Inst. Nacional de Ciencias Médicas y Nutrición Salvador Zubirán, Univ. Autónoma De Nuevo León.*

2:00 BBB3 **255.02** Paraventricular thalamus drives high fat diet-induced compulsive eating behavior. J. CHENG*; C. LI; X. MA; Y. HE; H. ZHOU; G. XIAO; Y. ZHOU. *Mail Box 22, Zhejiang Univ. Sch. of Medicin.*

3:00 BBB4 **255.03** Effects of a high-fat diet during gestation on learning/memory processes and leptin receptor expression on the hippocampus of Wistar rat pups. N. Y. CORTÉS*; C. R. VUELVAS-OLMOS; M. F. PINTO-GONZÁLEZ; O. GONZÁLEZ-PÉREZ; J. L. COLLÁS-AGUILAR; J. GUZMÁN-MUÑIZ; N. A. MOY-LÓPEZ. *Univ. of Colima.*

4:00 BBB5 **255.04** Silencing hypothalamic inputs to the VTA differentially affects feeding and reward-seeking behavior. G. VAN DER PLASSE*; K. C. G. DE GIT; E. M. HAZELHOFF; M. C. M. LUIJENDIJK; R. A. H. ADAN. *Brain Ctr. Rudolf Magnus, Univ. Med. Ctr.*

1:00 BBB6 **255.05** Selective activation of catecholamine neurons in the caudal ventrolateral medulla using DREADD technology stimulates feeding. A. LI*; Q. WANG; S. RITTER. *Washington State Univ.*

2:00 BBB7 **255.06** Pancreatic projections of glucose sensing CNS neurons. A. ALVARSSON*; M. BAYNE; S. A. STANLEY. *Icahn Sch. of Med. At Mount Sinai.*

3:00 BBB8 **255.07** TrkB-expressing neurons in the paraventricular hypothalamus regulate food intake through specific projections. C. E. KINNEY*; J. AN; G. LIAO; B. XU. *Scripps Florida, Georgetown Univ.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 BBB9 **255.08** Effects of perinatal undernutrition on pyramidal neurons of the anterior cingulate and its correlation with the maternal response of rats. M. ORTIZ VALLADARES*; M. REGALADO; C. TORRERO; M. SALAS. *Univ. Nacional Autónoma De México.*

1:00 BBB10 **255.09** Alterations in cortical thickness are related to the combined effects of age and BMI in adolescence and adulthood. M. L. WESTWATER*; R. VILAR-LÓPEZ; K. M. J. DIEDEREN; H. ZIAUDDEEN; P. C. FLETCHER; A. VERDEJO-GARCIA. *Univ. of Cambridge, Univ. de Granada, Monash Univ.*

2:00 BBB11 **255.10** Temporal and regional changes in neuroimmune signaling with post-ovariectomy weight gain in rats. K. S. CURTIS*; K. MCCRACKEN; D. BUCK; W. BLAIK; B. BRANTLEY; R. L. DAVIS. *Oklahoma State Univ. Ctr. for Hlth. Sci.*

3:00 BBB12 **255.11** Effects of perinatal undernourishment on the maternal kyphotic posture of lactating rats. C. A. SALCEDO BARRÓN*; M. REGALADO; C. TORRERO; M. SALAS. *Univ. Nacional Autónoma De México.*

4:00 BBB13 **255.12** Parcellation of human hypothalamus using high-resolution resting-state fMRI. T. OSADA*; A. OGAWA; M. TANAKA; M. HORI; S. AOKI; S. KONISHI. *Dept Neurophysiol, Juntendo Univ. Sch. Med., Dept Radiol, Juntendo Univ. Sch. Med.*

1:00 BBB14 **255.13** Leptin specifies GLP-1 innervation to the paraventricular nucleus of the hypothalamus. J. E. BIDDINGER*; M. M. SCOTT; R. B. SIMERLY. *Children's Hosp. Los Angeles, Univ. of Virginia, USC.*

2:00 BBB15 **255.14** Hunger-driven motivational state competition. J. BURNETT*; C. LI; E. WEBBER; E. TSAOUSIDOU; S. Y. XUE; J. C. BRUNING; M. J. KRASHES. *Natl. Inst. of Hlth. (NIH), NIH, Brown Univ., Max Plank Inst. for Metabolism Res., Univ. Hosp. Cologne, Univ. of Cologne, Natl. Ctr. for Diabetes Res. (DZD).*

3:00 BBB16 **255.15** Hindbrain prolactin-releasing peptide (PrRP) neurons are not strongly connected to pre- motor circuits controlling jaw or tongue movements. H. ZHENG*; A. K. OWEN; J. R. STROTHER; L. RINAMAN. *Univ. of Pittsburgh Dept. of Neurosci.*

4:00 BBB17 **255.16** Manipulations of hypothalamic melanocortin circuitry produce lasting changes in body weight. S. C. FUNDERBURK*; C. LI; M. J. KRASHES. *NIH, NIH.*

1:00 BBB18 **255.17** GABAergic receptor neurons trigger consumption in *Drosophila melanogaster*. S. K. CHEUNG*; K. SCOTT. *Univ. of California, Berkeley.*

2:00 BBB19 **255.18** Obesity is linked to a global increase in cortical Gaussian curvature. N. MEDIC*; H. ZIAUDDEEN; L. RONAN; P. C. FLETCHER. *Univ. of Cambridge, Univ. of Cambridge.*

3:00 BBB20 **255.19** Up-regulation of miR-210 in hypothalamus leads to increases in food intake and body weight in mice. K. KIM*; J. PARK; M. KIM; H. NAM. *DGIST, DGIST, Asan Med. Ctr.*

4:00 BBB21 **255.20** A cholinergic basal forebrain feeding circuit modulates appetite suppression. A. M. HERMAN*; J. ORTIZ-GUZMAN; I. HERMAN; M. KOCHUKOV; K. QUAST; J. PATEL; J. SELEVER; J. CARLSON; B. ARENKIEL. *Baylor Col. of Med., Baylor Col. of Med., Baylor Col. of Med.*

1:00 BBB22 **255.21** The role of melanocortin-4 receptors in the paraventricular hypothalamic circuits in homeostatic processes of appetite. C. LI*; M. KRASHES. *NIH/NIDDK.*

2:00 BBB23 **255.22** How does the brain implement decision-making to eat: Implication of the 5-HT4 receptors. V. COMPAN*. *Nimes Univ.*

3:00 BBB24 **255.23** Intermittent access to palatable food leads to compulsive self-administration subserved by anterior insula to ventral striatal projections. S. R. SPIERLING*; A. KREISLER; G. DE GUGLIELMO; O. GEORGE; E. ZORRILLA. *The Scripps Res. Inst.*

4:00 BBB25 **255.24** The melanocortin_3 receptor controls autoinhibitory feedback from agrp neurons onto mc4r neurons in PVN. M. GHAMARI-LANGROUDI*. *Vanderbilt Univ.*

Sun. PM

POSTER

256. Integration of Peripheral Signals for Energy Balance

Theme F: Integrative Physiology and Behavior

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 BBB26 **256.01** The combination of 5-HTP/carbidopa plus phentermine showed a synergistic effect on weight loss and decreases the locomotor activity induced by phentermine, and neural activity in nucleus accumbens shell correlates with the reduction of locomotor side effects. C. I. PEREZ*; B. KALYANASUNDAR; M. G. MORENO; S. A. SIMON; R. GUTIERREZ. *CINVESTAV, Duke Univ. Med. Ctr.*

2:00 CCC1 **256.02** Consumption of a high-fat diet increases persistent sodium currents in AgRP neurons in the arcuate nucleus of the hypothalamus. W. WEI*; A. SMITH; K. O'CONNELL. *The Univ. of Tennessee, Univ. of Tennessee Hlth. Sci. Ctr.*

3:00 CCC2 **256.03** Alcohol injection but not voluntary drinking robustly suppresses appetite in rats. N. NELSON*. *Univ. of Illinois At Urbana-Champaign.*

4:00 CCC3 **256.04** The glucose sensitivity of lateral hypothalamic area (LHA) orexin glucose-inhibited (GI) neurons may influence reward-based feeding via modulation of ventral tegmental area (VTA) dopamine (DA) neurons. S. B. TEEGALA; Z. SHENG; U. KHAN; M. P. THOMAS; V. H. ROUTH*. *RBHS: New Jersey Med. Sch., Univ. Northern CO.*

1:00 CCC4 **256.05** Leptin receptor-expressing neurons in the nucleus of the solitary tract receive mono-synaptic input from CCK-sensitive visceral afferents. D. NEYENS*; S. APPLEYARD; H. ZHAO; S. PAGE. *Washington State Univ.*

2:00 CCC5 **256.06** MRAP2 is essential to central ghrelin activity. D. SRISAI*; J. A. SEBAG. *Univ. of Iowa / F.O.E.D.R.C.*

3:00 CCC6 **256.07** Fasting promotes liver oleoylethanolamide signaling through a histamine-dependent mechanism. A. MISTO*; G. PROVENSI; V. VOZELLA; B. PASSANI; D. PIOMELLI. *Fondazione Inst. Italiano Di Tecnologia, Univ. di Firenze, Univ. di Firenze, Univ. of California.*

4:00 CCC7 **256.08** Endogenous cholinergic activation of NTS catecholamine neurons depends on glucose concentration. S. PAGE*; S. M. APPLEYARD. *Washington State Univ.*

1:00 CCC8 **256.09** ▲ Access to snacks from weaning onward in female rats causes obesity, insulin insensitivity and sustained leptin resistance in adulthood. L. N. DELA CRUZ; R. C. CLAWSON; T. J. WENGER; S. T. ALLEN; H. I'ANSON*. *Washington & Lee Univ.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 CCC9 **256.10** Effects of peripherally and centrally evoked swallow on the jaw-opening reflex responses. T. SUZUKI*; S. SAKAI; K. TSUJI; J. MAGARA; T. TSUJIMURA; M. INOUE. *Niigata Univ. Grad. Sch. of Med. and.*

3:00 CCC10 **256.11** Acute hypoglycemic and hyperglycemic states induce specific changes in cervical vagus nerve activity. E. A. BATTINELLI*; J. NEWMAN; T. TSAAVA; H. SILVERMAN; M. CUCINO; C. BOUTON; S. S. CHAVAN; K. J. TRACEY. *Feinstein Inst. at Northwell Hlth., Hofstra Northwell Sch. of Med. at Hofstra Univ., Feinstein Inst. at Northwell Hlth.*

4:00 CCC11 **256.12** An inhibitory septum to lateral hypothalamus circuit that mediates stress induced anorexia. P. SWEENEY*; Z. XU; Y. YANG. *SUNY Upstate Med. Univ.*

1:00 CCC12 **256.13** ▲ TNFα contributes to the development of hyperalgesia in overweight ovariectomized rats. O. A. JARAMILLO-MORALES*; J. V. ESPINOSA-JUÁREZ; F. J. LÓPEZ-MUÑOZ. *Cinvestav, Cinvestav.*

2:00 CCC13 **256.14** Withdrawn.

3:00 CCC14 **256.15** ▲ Stimulation of AgRP neurons eliminates the effects of appetite suppressing compounds. R. A. ESSNER; M. CARTER*. *Williams Col.*

4:00 CCC15 **256.16** ▲ Metabolic triglycerides and glucose circadian rhythms are altered by perinatal cafeteria diet in rat. D. J. BUSTAMANTE VALDEZ*; P. DURAN. *Facultad de Ciencias, UNAM.*

1:00 CCC16 **256.17** ▲ Voluntary wheel running and removal produces alterations in locomotor behavior and improvements in diabetic symptoms in mice. N. L. ARRUDA*; A. HATZIDIS; J. A. HICKS; I. DE PINA MONTEIRO; R. R. GELINEAU; A. V. CUSHMAN; M. H. CHASSE; J. A. SEGGIO. *Bridgewater State Univ.*

2:00 CCC17 **256.18** Morning pulsed leptin infusion reduces body weight but avoids onset of leptin resistance. P. J. SCARPACE; K. Y. E. STREHLER; M. K. MATHENY; N. KIRICHENKO; Y. SAKARYA; E. BRUCE; C. S. CARTER; D. MORGAN; N. TUMER*. *Univ. Florida, Univ. Florida, Univ. Florida.*

3:00 CCC18 **256.19** Dysregulation of gut-brain endocannabinoid signaling and expression of the endocannabinoid system in mice maintained on Western Diet. D. ARGUETA; N. V. DIPATRIZIO*. *Univ. of California Riverside Sch. of Med.*

4:00 CCC19 **256.20** Neuronal activity in the mouse brain during endotoxemia. T. TSAAVA*; B. E. STEINBERG; M. GUNASEKARAN; E. A. BATTINELLI; M. J. TAYLOR; S. S. CHAVAN; K. J. TRACEY. *Feinstein Inst. at Northwell Hlth., Univ. of Toronto, Hofstra Northwell Sch. of Med. at Hofstra Univ.*

1:00 CCC20 **256.21** Catecholaminergic innervation and the neuronal activation of hypothalamic glucose sensitive regions during rapid- and slow-onset hypoglycemia in adult male rats. A. JOKIAHO*; A. G. WATTS. *USC, USC.*

2:00 CCC21 **256.22** ▲ Combined consumption of alcohol and a high fat diet: Sex differences in anxiety, feeding and drinking behavior. R. R. GELINEAU*; N. L. ARRUDA; J. A. HICKS; I. DE PINA MONTEIRO; A. HATZIDIS; J. A. SEGGIO. *Bridgewater State Univ.*

3:00 CCC22 **256.23** Withdrawn.

4:00 CCC23 **256.24** Peripherally injected oxytocin activates vagal afferents to suppress food intake and ameliorates hyperphagic obesity in db/db mice. Y. IWASAKI*; Y. MAEJIMA; S. SUYAMA; M. YOSHIDA; M. KAKEI; T. YADA. *Jichi Med. Univ., Jichi Med. Univ.*

1:00 CCC24 **256.25** Na^+,K^+-ATPase in the hypothalamic arcuate nucleus senses lowering glucose to initiate feeding behavior. T. YADA*; H. KURITA; K. Y. XU; P. SANTOSO; Y. YANG; K. DEZAKI; M. NAKATA. *Jichi Med. Univ., Univ. of Maryland Sch. of Med.*

2:00 CCC25 **256.26** Transcriptional alterations in a model of compulsive food taking or abstinence in the presence of contingent footshocks. M. T. MCCOY*; N. TERRY; B. LADENHEIM; I. KRASNOVA; S. JAYANTHI; D. WALTHER; J. CADET. *DHHS/NIH/NIDA/IRP.*

3:00 CCC26 **256.27** Regulation of feeding behavior: A new circuit from the raphe nuclei to the hypothalamus. C. A. GRILLO*; C. E. PETYAK; B. L. SOMERA; V. A. MACHT; J. L. WOODRUFF; J. R. FADEL; L. P. REAGAN. *Univ. of South Carolina Sch. of Med., WJB Dorn VA Med. Ctr.*

4:00 DDD1 **256.28** Regional effects of maternal high fat diet exposure on one carbon metabolism and methylation machinery. S. E. MCKEE*; S. ZHANG; L. CHEN; J. D. RABINOWITZ; T. M. REYES. *Univ. of Pennsylvania, Princeton Univ., Univ. of Cincinnati.*

POSTER

257. Thermoregulation and Neuropeptide Regulators of Energy Balance

Theme F: Integrative Physiology and Behavior

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 DDD2 **257.01** Withdrawn.

2:00 DDD3 **257.02** Hypothalamic AMPK-induced autophagy increases food intake by regulating NPY and POMC expression. T. OH*. *Daegu Gyeongbuk Inst. of Sci. & Technol.*

3:00 DDD4 **257.03** The hypothalamic corticotropin-releasing hormone system and its involvement in metabolism and energy homeostasis. J. RICHTER*; A. CHEN; W. WURST; J. M. DEUSSING. *MPI of Psychiatry, Helmholtz Zentrum München.*

4:00 DDD5 **257.04** The relationship between neuronal histamine and neurosecretory protein GM in the chick hypothalamus. K. UKENA*; K. SHIKANO; Y. BESSHO; E. IWAKOSHI-UKENA. *Hiroshima Univ.*

1:00 DDD6 **257.05** Deletion of melanin-concentrating hormone receptor 1 from the accumbens nucleus increases locomotor activity. M. J. CHEE*; S. E. FLAHERTY, III; P. PISSIOS; N. BRIANCON; J. S. FLIER; E. MARATOS-FLIER. *BIDMC, Harvard Med. Sch.*

2:00 DDD7 **257.06** Nicotine and high fat diet differentially modulate body weight, behavior, and neuropeptide expression in female and male C57BL/6J mice. C. A. CALARCO*; S. LEE; M. R. PICCIOTTO. *Yale Univ. Sch. of Med.*

3:00 DDD8 **257.07** Neuropeptide-y directly inhibits ventral tegmental area dopamine neurons through g protein-coupled inwardly rectifying potassium channel currents. K. STUHRMAN*; A. G. ROSEBERRY. *Georgia State Univ., Georgia State Univ.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 DDD9 **257.08** Tectal CRF R1 receptors modulate food intake. C. PRATER*; B. HARRIS; A. MERRILL; A. ALIYAS; K. ANDERSON; J. CARR. *Texas Tech. Univ.*

1:00 DDD10 **257.09** Effects of FGF23/αKlotho on the NPY/AgRPergic system in the hypothalamus. T. KOMORI*; Y. MORIKAWA. *Dept. of Anat. & Neurobiology, Wakayama Med. Univ.*

2:00 DDD11 **257.10** Optogenetic stimulation of MCH axons in the hippocampus: Effects on synaptic plasticity. J. J. HARRIS*; D. BURDAKOV. *Imperial Col. London, Francis Crick Inst.*

3:00 DDD12 **257.11** ● Hyperphagic obesity in adult Dicer CKO mice- the role of hypothalamic AgRP/NPY neurons. K. HAJDUKIEWICZ*; W. KONOPKA. *Nencki Inst. of Exptl. Biol., Nencki Inst. of Exptl. Biol. in Warsaw.*

4:00 DDD13 **257.12** Dietary macronutrient composition affects the influence of exogenous neuropeptide Y on food intake responses and hypothalamic gene expression in chicks. B. MCCONN*; E. R. GILBERT; M. A. CLINE. *Virginia Tech.*

1:00 DDD14 **257.13** Des-Tyr DYN, a non opioid DYN peptide regulates physical activity, energy expenditure and hedonic food intake in the paraventricular hypothalamic nucleus. C. E. PEREZ-LEIGHTON*; L. GAC; B. ALVAREZ; E. MORSELLI; M. HERNANDEZ; J. TESKE. *Univ. Andres Bello, Pontificia Univ. Católica de Chile, Univ. of Arizona.*

2:00 EEE1 **257.14** Role of enkephalin in dopamine d2-receptor expressing neurons in licking microstructure. I. A. MENDEZ*; H. A. LAM; S. N. LEE; J. BOULTER; S. B. OSTLUND; N. P. MURPHY; N. T. MAIDMENT. *UCLA, UCI.*

3:00 EEE2 **257.15** Investigation of leptin mediated trafficking of K_{ATP} channels in the arcuate nucleus of high fat induced obese mice. J. RUAN; R. HUANG*; P. CHEN. *Natl. Cheng Kung Univ., Chang Gung Univ.*

4:00 EEE3 **257.16** Intrinsic and synaptic plasticity of appetite-promoting MCH neurons during growth, high-fat diet feeding, and food deprivation. V. LINEHAN*; M. HIRASAWA. *Mem. Univ. of Newfoundland.*

1:00 EEE4 **257.17** Differences between mice lacking neural POMC enhancers 1 and 2 on food intake and body weight after peripheral leptin treatment. E. NA*; D. D. LAM; E. YOKOSAWA; M. LOW. *Univ. of Michigan, Inst. of Neurogenomics, Helmholtz Ctr. Munich.*

2:00 EEE5 **257.18** Genetically anorexic and obese chickens differ in expression of hypothalamic genes involved in appetite and stress response mechanisms. J. WANG*; J. YI; E. R. GILBERT; P. B. SIEGEL; M. A. CLINE. *Virginia Tech.*

3:00 EEE6 **257.19** Galanin neurons in the lateral hypothalamus modulate food reward and locomotor activity. E. QUALLS-CREEKMORE; S. YU; M. FRANCOIS; C. HUESING; C. MORRISON; H. BERTHOUD; H. MUNZBERG*. *Pennington Biomed Res. Ctr.*

4:00 EEE7 **257.20** PI3K is integral for the acute activity of leptin and insulin in arcuate AgRP neurons. T. YAO*; Y. GAO; J. SUN; Y. HUANG; T. LIU; K. WILLIAMS. *UT Southwestern Med. Ctr., Xi'an Jiaotong Univ. Sch. of Med., Chinese Acad. of Med. Sci. and Peking Union Med. Col., Southern Med. Univ.*

1:00 EEE8 **257.21** Lateral hypothalamic neurotensin neurons engage the mesolimbic dopamine system to regulate locomotor and ingestive behavior. H. WOODWORTH*; G. KURT; H. BATCHELOR; J. BROWN; R. BUGESCU; G. LEINNINGER. *Michigan State Univ.*

2:00 EEE9 **257.22** Neuronal mechanisms involved in thermal tolerance of Antarctic fishes. I. I. ISMAILOV*; J. B. SCHARPING; I. E. ANDREEVA; M. J. FRIEDLANDER. *Virginia Tech. Carilion Res. Inst., Virginia Tech. Carilion Sch. of Med.*

3:00 EEE10 **257.23** Trpm8-/- mice have impaired core temperature regulation and altered body composition in response to three-week cold exposure. K. J. MOTYL*; C. ROSEN. *Maine Med. Ctr. Res. Inst.*

4:00 EEE11 **257.24** Dorsal hypothalamic bombesin-like receptor-3 neurons regulate body temperature. R. A. PINOL*; S. H. ZAHLER; B. K. TAN; C. XIAO; O. GAVRILOVA; A. KRAVITZ; M. J. KRASHES; M. L. REITMAN. *Natl. Inst. of Diabetes and Digestive and Kidney Dis., NIDDK, NIH.*

1:00 EEE12 **257.25** The insulin-like growth factor 1 receptor modulates core body temperature during calorie restriction. R. CINTRON-COLON*; M. SANCHEZ-ALAVEZ; W. NGUYEN; S. MORI; T. BARTFAI; M. HOLZENBERGER; B. CONTI. *The Scripps Res. Inst., Univ. of Stockholm, Inst. Natl. de la Santé et de la Recherche Médicale, Ctr. de Recherche UMR938, Hôpital Saint-Antoine.*

1:00 DP07 **257.26** ●▲(Dynamic Poster) Heterotypic signaling by neural HSF-1 specifies thermotolerance and age regulation. I. J. GONZALEZ*; P. M. DOUGLAS. *Univ. of Texas At Dallas, Univ. of Texas Southwestern Med. Ctr.*

3:00 EEE13 **257.27** Activation of TRPV1 receptors in the vagus nerve exacerbates thermal hyperpnea in immature rats. K. BARRETT*; A. ROY; R. J. A. WILSON; M. H. SCANTLEBURY. *Univ. of Calgary, Univ. of Calgary, Univ. of Calgary, Univ. of Calgary.*

4:00 EEE14 **257.28** A TRP channel serves as a hypothalamic heat sensor that regulates thermal homeostasis. H. WANG*; K. SONG; G. KAMM; F. DE CASTRO REIS; P. HEPPENSTALL; H. WENDE; J. SIEMENS. *Univ. of Heidelberg, Max Delbrück Ctr. for Mol. Med., European Mol. Biol. Lab. (EMBL), European Mol. Biol. Lab. (EMBL).*

POSTER

258. Reward Mechanisms

Theme G: Motivation and Emotion

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 FFF1 **258.01** Effects of pharmacologically induced physiological need states on reward processing through intracranial self-stimulation. J. L. SEILER*; S. M. CONWAY; M. F. ROITMAN. *Univ. of Illinois at Chicago.*

2:00 FFF2 **258.02** μ-opioid receptor inhibition decreases voluntary wheel running in a dopamine-dependent manner rats in bred for high voluntary running. G. RUEGSEGGER*; F. BOOTH. *Univ. of Missouri.*

3:00 FFF3 **258.03** Optogenetic modulation of the subthalamic nucleus impairs the motivation for food in rats. A. TIRAN-CAPPELLO*; Y. PELLOUX; C. MONTANARI; M. DEGOULET; C. BAUNEZ. *CNRS - Inst. De Neurosciences De La Timone, Natl. Inst. on Drug Abuse Intramural research program.*

4:00 FFF4 **258.04** Optogenetic excitation in the ventral tegmental area of glutamatergic or cholinergic inputs from the laterodorsal tegmental area drives reward. S. STEIDL*; H. WANG; M. ORDONEZ; A. CHAKRABORTI; S. ZHANG; M. MORALES. *Loyola Univ. Chicago, Natl. Inst. on Drug Abuse.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 FFF5 **258.05** Persistent conditioned place preference to rewarding aggression experience in male CD-1 mice. C. HEINS*; S. GOLDEN; S. RUSSO; Y. SHAHAM. *NIH, Icahn Sch. of Med. at Mount Sinai.*

2:00 FFF6 **258.06** Addiction-like aggressive behavior in CD1 mice. S. A. GOLDEN*; R. C. HEINS; D. LIN; Y. SHAHAM. *Natl. Inst. on Drug Abuse.*

3:00 FFF7 **258.07** ▲ Restricted access to palatable food induces neuronal plasticity and behavioral changes similar to addiction. G. MUÑOZ ESCOBAR*, SR; S. D. GRACIA GONZALEZ; C. ESCOBAR BRIONES. *Univ. Nacional Autonoma De México, Univ. Nacional Autonoma de México.*

4:00 FFF8 **258.08** ▲ Amygdalar, accumbal and ventral tegmental ghrelin and endocannabinoid signaling in alcohol reward. H. M. BAUMGARTNER; L. J. ZALLAR; S. ABTAHI; E. E. GARLING; P. J. CURRIE*. *Dept. Psychology, Reed Col.*

1:00 FFF9 **258.09** Neurochemical phenotype of cannabinoid CB1 receptors in the ventral tegmental area of mice. C. ZHAO*; L. RITERS; S. GAMMIE. *Univ. of Wisconsin-Madison, Neurosci. Training Program, Univ. of Wisconsin-Madison.*

2:00 FFF10 **258.10** Glutamatergic and GABAergic projections from the Lateral Preoptic Area to the Lateral Habenula differentially drive motivated behavior. D. J. BARKER*; J. MIRANDA BARRIENTOS; D. ROOT; H. WANG; S. ZHANG; M. MORALES. *Natl. Inst. on Drug Abuse.*

3:00 FFF11 **258.11** The lateral habenula has vesicles that accumulate either GABA or glutamate. S. ZHANG*; D. H. ROOT; D. J. BARKER; M. MORALES. *Natl. Inst. of Health, Natl. Inst. on Drug Abuse, IRP, Natl. Inst. on Drug Abuse.*

4:00 FFF12 **258.12** Corticosterone in the ventral hippocampus differentially affects accumbal dopamine release in drug-naive and amphetamine-withdrawn rats. B. BRAY*; M. A. WEBER; G. FORSTER. *Univ. of South Dakota Sanford Sch. of Med.*

1:00 FFF13 **258.13** Physical effort discounts ACC-VTA moment-by-moment estimates of future reward. T. W. ELSTON*; D. K. BILKEY. *Univ. of Otago, Brain Hlth. Res. Ctr.*

2:00 FFF14 **258.14** ▲ Effects of memantine administration on progressive ratio schedule performance of rats after binge eating induction. W. ZEPEDA-RUIZ*; D. N. VELAZQUEZ-MARTINEZ. *Univ. Nacional Autonoma De Mexico, Univ. Nacional Autónoma de México.*

3:00 FFF15 **258.15** ▲ Examination of the persistence of the anti-craving effects of acute environmental enrichment in rats. J. HYDE; E. GLUECK; K. NORTH; D. GINDER; O. DEMCHENKO; J. SULC; K. JIGANTI; J. W. GRIMM*. *Western Washington Univ.*

4:00 FFF16 **258.16** Sex determines effect of exercise on diet preference: Role of opioid reward system and microbiome diversity. J. R. LEE*; J. MUCKERMAN; A. WRIGHT; D. DAVIS; A. ERICSSON; C. HAGAN; T. CHILDS; F. BOOTH; M. WILL. *Univ. of Missouri, Univ. of Missouri, Univ. of Missouri, Univ. of Missouri, Univ. of Missouri.*

1:00 FFF17 **258.17** Striosomes may control dopamine activity via disynaptic projections to macaque lateral habenula. S. HONG*; S. AMEMORI; K. AMEMORI; A. M. GRAYBIEL. *MIT.*

2:00 FFF18 **258.18** The striatal striosome compartment encodes the value of sensory stimulus. T. YOSHIZAWA*; M. ITO; K. DOYA. *Okinawa Inst. of Sci. and Technol.*

3:00 FFF19 **258.19** ▲ A within-subjects operant model to examine strength theory and ego depletion in rats: Effects of glucose administration. A. L. LASKE*; J. E. MEYERS-MANOR, 55105; E. P. WIERTELAK. *Macalester Col.*

4:00 FFF20 **258.20** Fos expression after exposure to an effort discounting procedure. E. E. HANSON*; S. H. MITCHELL. *Oregon Hlth. & Sci. Univ., Oregon Hlth. & Sci. Univ.*

POSTER

259. Motivation Neurocircuitry: Cortex, Extended Amygdala, and Striatum

Theme G: Motivation and Emotion

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 FFF21 **259.01** Role of the prelimbic prefrontal cortex in operant responding to appetitive, aversive and conflicting cues. L. M. HAMEL*; B. CAVDAROGLU; R. ITO. *Univ. of Toronto.*

2:00 FFF22 **259.02** Cocaine pre-exposure enhances negative incentive motivation in a novel mixed-valence approach-avoidance task. D. NGUYEN*; Y. NESARAJAH; S. ERB; R. ITO. *Univ. of Toronto.*

3:00 FFF23 **259.03** Differential effects of ventral hippocampal CA1 and CA3 inactivation on learned approach-avoidance decision making in rats. A. SCHUMACHER*; F. VILLARUEL; R. ITO. *Univ. of Toronto.*

4:00 FFF24 **259.04** Repeated ketamine exposure impairs the acquisition of negative incentive salience in rats. R. ITO*; A. SCHUMACHER. *Univ. of Toronto.*

1:00 FFF25 **259.05** Opposing roles of infralimbic and prelimbic cortices in contextual biconditional discrimination memory retrieval. S. RIAZ*; D. KHAN; P. PUVEENDRAKUMARAN; R. ITO. *Univ. of Toronto.*

2:00 FFF26 **259.06** Chemogenetic perturbations of the medial prefrontal cortex and the control of consummatory behavior. T. K. SWANSON*; L. M. AMARANTE; M. C. CLASEN; I. TERWINDT; M. I. KONAKLIEVA; R. KUSKOVSKY; M. LAUBACH. *American Univ., American Univ.*

3:00 GGG1 **259.07** Functional interactions among medial, orbital, and motor cortices in the control of consummatory actions. L. M. AMARANTE*; M. S. CAETANO; N. K. HORST; M. LAUBACH. *American Univ., UFABC, Univ. of Cambridge.*

4:00 GGG2 **259.08** Cellular resolution calcium imaging and optogenetic excitation reveal a role for IL to NAc projection neurons in encoding of spatial information during cocaine-seeking. C. M. CAMERON*; J. PILLOW; I. B. WITTEN. *Princeton Univ.*

1:00 GGG3 **259.09** Toward a Greater Moderation and efficient markets: Neuroeconomics-based financial-system regulation may reduce bubble-crash effects of brain risk-seeking and -avoiding networks. J. L. HARACZ*. *Dept. Psychol. Brain Sci., Indiana Univ.*

2:00 GGG4 **259.10** Disconnection of basolateral amygdala-insular cortex interferes with goal-tracking but not sign-tracking. H. M. NASSER*; E. N. LESSER; D. S. LAFFERTY; D. J. CALU. *Univ. of Maryland Dept. of Anat. and N.*

3:00 GGG5 **259.11** Dynamic causal modeling of human motivation neural circuitry. A. KOHLI*; D. N. BLITZER; D. R. WEINBERGER; C. F. ZINK. *Lieber Inst. For Brain Develop., Natl. Inst. of Mental Health, NIH.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
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* Indicates abstract's submitting author

4:00 GGG6 **259.12** Activation of D1 and D2 expressing neurons in the nucleus accumbens enhances motivation. C. SOARES-CUNHA*; B. COIMBRA; A. DAVID-PEREIRA; S. BORGES; L. PINTO; P. COSTA; N. SOUSA; A. J. RODRIGUES. *Life and Hlth. Sci. Res. Inst. (ICVS), Life and Hlth. Sci. Res. Inst. (ICVS), Sch. of Hlth. Sciences, Univ. of Minho and ICVS/3B's - PT Government Associate Lab.*

1:00 GGG7 **259.13** Effects of cholinergic receptors blokade in the orbitofrontal cortex on Pavlovian-to-instrumental transfer task. Y. CUI*; A. T. LIU; K. WASSUM; S. B. OSTLUND. *UCI, UCLA.*

2:00 GGG8 **259.14** Time-course expression and locomotor effects of chemogenetic modulation of prelimbic projections to the paraventricular nucleus of the thalamus in the rat. S. A. LOPEZ*; I. R. COVELO; M. KOMAIHA; S. M. FERGUSON; S. B. FLAGEL. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Washington, Univ. of Michigan.*

3:00 GGG9 **259.15** Anterior insular cortex inhibition attenuates optogenetic self-stimulation of the medial prefrontal cortex. A. F. PIERCE*; S. IKEMOTO. *Natl. Inst. On Drug Abuse.*

4:00 GGG10 **259.16** Decoding reward, punishment, and motivation in the primary sensory and motor cortices of non-human primates. J. P. HESSBURG*; A. TARIGOPPULA; D. B. MCNIEL; J. S. CHOI; J. T. FRANCIS. *SUNY Downstate Med. Ctr., Cullen Col. of Engineering, Univ. of Houston.*

1:00 GGG11 **259.17** The supramammillary-septum glutamate pathway modulates affective processes. A. KESNER*; R. SHIN; S. IKEMOTO. *Natl. Inst. On Drug Abuse.*

2:00 GGG12 **259.18** Depicting the neural architecture constituting human motivational decision making: From single-cell to whole brain activation. T. GAZIT*; T. GONEN; G. GUREVITCH; H. YAMIN; M. NEUFELD; S. KIPERVASSER; F. FAHOUM; I. FRIED; T. HENDLER. *Tel Aviv Med. Ctr., Tel Aviv Med. Ctr., Tel Aviv Univ., Tel Aviv Med. Ctr., Tel Aviv Med. Ctr., UCLA.*

3:00 GGG13 **259.19** How do cortical hubs in the striatum impact on downstream basal ganglia circuitry? S. R. HEILBRONNER*; M. A. A. MEYER; S. N. HABER. *Univ. of Rochester, Univ. of Rochester.*

4:00 GGG14 **259.20** Extended amygdala neuropeptide circuits for bi-valent hyperarousal states. W. J. GIARDINO*; D. J. CHRISTOFFEL; L. DE LECEA. *Stanford Univ.*

1:00 GGG15 **259.21** Gustatory responses in macaque monkeys revealed with fMRI. P. M. KASKAN*; A. M. DEAN; M. A. NICHOLAS; A. R. MITZ; L. G. UNGERLEIDER; E. A. MURRAY. *Natl. Inst. of Mental Hlth., Natl. Inst. of Mental Hlth., Natl. Inst. of Mental Hlth.*

POSTER

260. Social Behavior: Motivational Systems

Theme G: Motivation and Emotion

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 GGG16 **260.01** Illuminating aggression circuitry in *Drosophila*. M. P. WOHL*; K. ASAHINA. *Salk Inst., UCSD, Salk Inst.*

2:00 GGG17 **260.02** Identification of negative regulators for aggressive behaviors in *Drosophila*. K. ISHII*; K. ASAHINA. *The Salk Inst. For Biol. Studies.*

3:00 GGG18 **260.03** Genetic dissection of aggressive behavior in the BXD recombinant-inbred mouse strains. W. E. CRUSIO*; M. ALGEO; B. BONHEUR; L. LU; R. W. WILLIAMS; A. DELPRATO. *Univ. Bordeaux and CNRS, Univ. of Tennessee Hlth. Sci. Ctr., BioScience Project, Univ. of Bordeaux and CNRS.*

4:00 GGG19 **260.04** Social dominance status predicts vicarious fear learning from conspecifics in male laboratory rats. C. E. JONES*; M. MONFILS. *Univ. of Texas at Austin Dept. of Psychology, Oregon Hlth. & Sci. Univ.*

1:00 GGG20 **260.05** Involvement of ventral pallidal vasopressin in the sex-specific regulation of opposite-sex preference in rats. B. DIBENEDICTIS*; C. J. SMITH; H. K. CHEUNG; E. R. NUSSBAUM; A. H. VEENEMA. *Boston Col.*

2:00 GGG21 **260.06** Lateral septum vasopressin system interacts with nucleus accumbens and prefrontal cortex to regulate social play in sex-specific ways. N. NASCIMENTO*; G. S. RO; C. J. REPPUCCI; R. BREDEWOLD; A. H. VEENEMA. *Boston Col.*

3:00 GGG22 **260.07** Involvement of dopamine and noradrenaline in the sex-specific regulation of social play by vasopressin. R. BREDEWOLD*; N. F. NASCIMENTO; A. H. VEENEMA. *Boston Col., Boston Col.*

4:00 GGG23 **260.08** Role of arginine-vasopressin (AVP), serotonin (5-HT) and galanin (GAL) within the anterior hypothalamus (AH) on aggression and social communication in male and female hamsters. N. HARDCASTLE*; T. E. LARKIN; J. I. TERRANOVA; Z. SONG; A. NORVELLE; H. E. ALBERS. *Georgia State Univ.*

1:00 GGG24 **260.09** Socially rewarding behavior recruits orexin/hypocretin neurons in juvenile male and female rats. C. J. REPPUCCI*; C. K. GERGELY; N. F. NASCIMENTO; G. S. RO; R. BREDEWOLD; A. H. VEENEMA. *Boston Col.*

2:00 GGG25 **260.10** Novel behavioral test for social motivation in Syrian hamsters. J. BORLAND*; E. SONG; K. GRANTHAM; L. AIANI; A. NORVELLE; K. FRANTZ; H. E. ALBERS. *Georgia State Univ. Neurosci. Inst.*

3:00 GGG26 **260.11** Dissecting prefrontal circuitry that supports social investigation. M. MURUGAN*; J. P. TALIAFERRO; M. PARK; H. JANG; I. B. WITTEN. *Princeton Univ., Princeton Univ.*

4:00 HHH1 **260.12** Involvement of μ opioid receptors in the regulation of juvenile social novelty seeking behavior: Brain region specific effects and modulation by social separation. C. J. SMITH*; A. M. RATNASEELAN; S. LI; A. H. VEENEMA. *Boston Col.*

1:00 HHH2 **260.13** ● Role of opioids and endocannabinoids on the expression and motivational properties of social play behaviour in rats. M. ACHTERBERG*; M. M. H. VAN SWIETEN; D. J. HOUWING; M. AALDERINK; N. V. DRIEL; V. TREZZA; L. J. M. J. VANDERSCHUREN. *Fac. of Vet. Med., Fac. of Vet. Med., Univ. Roma.*

2:00 HHH3 **260.14** Social representations in the mouse prefrontal cortex. D. R. LEVY*; A. WEISSBROD; O. YIZHAR. *Weizmann Inst. of Sci.*

3:00 HHH4 **260.15** Post-weaning social isolation of female mice delays maturation of parvalbumin-positive interneurons in the orbitofrontal cortex. D. JEONG*; E. KANG; D. JO; M. KIM; Y. KIM; S. KIM; S. LEE. *KAIST, Daejeon Sci. High Sch. for the Gifted, Univ. of California.*

4:00 HHH5 **260.16** Single neuronal correlates of social bias. R. BÁEZ-MENDOZA*; F. BOUNNI; Z. M. WILLIAMS. *Massachusetts Gen. Hospital-Harvard Med. Sch.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 HHH6 **260.17** Differential effects of oxytocin on maternal attachment in Sprague-Dawley and Fisher 344 preweanling rats. D. E. HUMPHREY; A. TERAN; E. M. ALDERSON; Z. R. HARMONY; C. A. CRAWFORD*. *California State Univ.*

2:00 HHH7 **260.18** Female mice social preference - interaction with the reproductive cycle. L. F. MOREIRA*; S. Q. LIMA. *Champalimaud Fndn.*

1:00 DP08 **260.19** (Dynamic Poster) Robust activation of nucleus accumbens neurons during selective affiliation in prairie voles. J. L. SCRIBNER*; E. M. KLEIN; J. C. JIMENEZ; E. CARAZO; A. M. CUNNINGHAM; M. A. KHEIRBEK; R. HEN; Z. R. DONALDSON. *Columbia Univ., Columbia Univ., Univ. of Colorado, Boulder, Brown Univ., Columbia Univ., Univ. of California, San Francisco, Univ. of Colorado, Boulder, Univ. of Colorado, Boulder.*

4:00 HHH8 **260.20** Neural correlates of socio-emotional states in macaques. M. JAZAYERI*; S. WIRTH; J. DUHAMEL. *CNRS.*

1:00 HHH9 **260.21** Neural mechanisms of communication via facial expression. S. V. SHEPHERD*; W. A. FREIWALD. *Rockefeller Univ.*

2:00 HHH10 **260.22** Neural encoding of dynamic social interactions. M. AINSWORTH*; D. KYRIAZIS; M. G. KELLY; O. JOLY; A. H. BELL. *Oxford Univ., MRC Cognition and Brain Sci. Unit, Oxford Univ.*

3:00 HHH11 **260.23** Effects of varying social interaction parameters to optimize acquisition of a socially transmitted food preference. L. AGEE*; L. K. CORMACK; M. MONFILS. *Univ. of Texas At Austin.*

4:00 HHH12 **260.24** Aggressive arousal and escalated aggression are dissociated by CRF-amine VTA-DRN-LH microcircuits in mice: Targets for alcohol. H. E. COVINGTON; D. STEIN; M. LEONARD; E. NEWMAN; L. M. DARNIEDER; M. DAWES; K. GOBROGGE; J. F. DEBOLD; K. A. MICZEK*. *Tufts Univ., Tufts Univ., Tufts Univ.*

POSTER

261. Animal Cognition: Memory Consolidation and Reconsolidation in Behavior

Theme H: Cognition

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 HHH13 **261.01** ▲ Post-retrieval midazolam inhibits ethanol memory reconsolidation in adolescent rats. K. BYRKET*; J. HICKEY; A. SIBERT; E. SMALLEY; J. J. QUINN. *Miami Univ.*

2:00 HHH14 **261.02** The role of NMDA receptors in the retrieval and reconsolidation of context fear discrimination memory. D. E. KOCHLI*; A. F. POSTLE; R. S. LAB; E. W. HOLLINGSWORTH; T. L. CAMPBELL; V. C. MORDZINSKI; J. J. QUINN. *Miami Univ.*

3:00 HHH15 **261.03** ▲ The effect of extinction on the destabilization of an overtrained memory. M. MCDANIEL*; M. DUNN; M. MYERS; V. DIANA. *Miami Univ.*

4:00 HHH16 **261.04** ▲ The role of the ventral tegmental area in the reconsolidation of context fear discrimination memory. M. M. PERRY; J. L. GENARO; H. E. LINDNER; C. N. DYE; D. E. KOCHLI; R. J. FLOYD; J. J. QUINN*. *Miami Univ. Dept. of Psychology.*

1:00 HHH17 **261.05** ▲ Effects of the swimming exercise on the consolidation and persistence of auditory and contextual fear memory. G. T. REIS*; A. B. BERETA; L. S. GUTIERRES; F. F. C. SOBRINHO; I. D. MIRANDA; J. DOS REIS; E. V. DIAS; C. R. SARTORI; R. S. DE FARIA; D. A. R. MOREIRA. *Faculdade De Medicina De Itajubá, Fac. of Med. of Itajubá, Unicamp.*

2:00 HHH18 **261.06** ▲ Effects of the swimming exercise on the extinction of contextual fear memory. A. L. BERETA*; G. H. T. REIS; M. S. GOMES; L. B. BRAGA; E. V. DIAS; C. R. SARTORI; R. S. FARIA; D. A. R. MOREIRA. *Faculdade De Medicina De Itajuba/ AISI, Faculdade de Medicina de Itajuba, UNICAMP.*

3:00 HHH19 **261.07** Saliency and distributed conditioning contribute to making context fear memory independent of the hippocampus. S. KISHUN; K. JUNGKUNZ; C. CARTER; H. LEHMANN*. *Trent Univ.*

4:00 HHH20 **261.08** Persistence of long-term contextual fear memory in the absence of the hippocampus. D. C. GIDYK*; R. J. MCDONALD; R. J. SUTHERLAND. *Univ. of Lethbridge.*

1:00 HHH21 **261.09** Glucocorticoid receptor phosphorylation in the amygdala and hippocampus after acquisition of contextual fear conditioning. R. PONCE-LINA; M. CARRANZA; N. SERAFIN; R. A. PRADO-ALCALÁ; G. L. QUIRARTE*. *Inst. de Neurobiologia, UNAM Juriquilla.*

2:00 HHH22 **261.10** Maternal seperation exaggerates spontaneous recovery of extinguished contextual fear in adult female rats. W. LIPING*; G. XIONG; L. XU. *Kunming Inst. of Zoology, Kunming Inst. of Zoology, CAS.*

3:00 HHH23 **261.11** Effects of stress and corticosterone on spatial memory consolidation and Arc protein expression in hippocampal dentate gyrus in rats. J. M. CERÓN GONZÁLEZ*; M. LAMPREA. *Natl. Univ. of Colombia.*

4:00 HHH24 **261.12** The dynamic nature of systems consolidation stress during learning as a switch guiding the rate of the hippocampal dependency and memory quality. L. K. PEDRAZA CORREA*; R. SIERRA; F. BOOS; J. HAUBRICH; J. QUILLFELDT; L. ALVARES. *Federal Univ. of Rio Grande Do Sul, Federal Univ. of Rio Grande do Sul.*

1:00 HHH25 **261.13** Reconsolidation-induced memory persistence: Participation of late phase hippocampal ERK activation. M. KRAWCZYK*; N. NAVARRO; M. BLAKE; A. ROMANO; M. FELD; M. BOCCIA. *Lab. Neurofarmacología De Los Procesos De Memoria, Inst. de Fisiología y Biofísica (IFIBIO UBA-CONICET), Lab. de Neurobiología de la Memoria.*

2:00 HHH26 **261.14** Role of NMDA receptors in the storage of conditioned fear memory. S. YAN*; F. WINDELS; P. SAH. *Queensland Brain Inst.*

3:00 HHH27 **261.15** Assessment of memory mechanisms in rat brain by administration of the NMDA receptor antagonist AP5 using *in vivo*, *in vitro* and behavioral methods. C. W. SPANIS*; R. R. BEYER. *Univ. San Diego, Univ. of San Diego.*

4:00 HHH28 **261.16** Observational learning of a spatial discrimination task in the rat. P. MEYRAND*; B. JURA, Jr; B. BONTEMPI; T. BEM, s. *CNRS UMR5293 Univ. de Bordeaux, Nalecz Inst. of Biocybernetics and Biomed. Engin. Polish Acad. of Sci.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 HHH29 **261.17** Past experience with complexity enables strategy formation and rapid learning by rats in novel environments, without affecting synapse counts. C. D. COX*; L. C. PALMER; D. T. PHAM; B. H. TRIEU; J. HUI; K. NGUYEN; I. MANFREDO; C. M. GALL; G. LYNCH. *Univ. of California Irvine.*

2:00 HHH30 **261.18** Novel object recognition: Importance of counterbalancing and retention intervals. M. CANEN*; A. M. BABCOCK. *Montana State Univ.*

3:00 HHH31 **261.19** The mechanism of rimonabant's facilitatory effect on cocaine-associated memory consolidation in mice: A sex difference study. S. HU*; H. CHANG; W. DAI. *Dept of Psychology, Natl. Cheng Kung Univ.*

4:00 HHH32 **261.20** Novel function of histone demethylase of JHDM in spatial learning and memory. H. KIM*; S. KIM; M. KIM; J. PARK; S. KIM; Y. CHUN. *Seoul Natl. Univ. Col. of Med., Ctr. for Cognition and Sociality, Inst. for Basic Sci. (IBS).*

1:00 HHH33 **261.21** Synthesis of a memory blocker during *Aplysia* sleep prevents maladaptive long-term memory formation. R. LEVY*; A. SUSSWEIN. *Bar Ilan Univ., Bar |ilan Univ.*

2:00 HHH34 **261.22** New learning while consolidating memory during sleep is actively blocked by a protein synthesis dependent process. A. J. SUSSWEIN*; I. HURWITZ; R. LEVY. *Bar-Ilan Univ., Bar Ilan Univ.*

3:00 HHH35 **261.23** Retuning memory valence: Novel reconsolidation-mediated updating procedure to disrupt fear memories. J. HAUBRICH*; A. CRESTANI; L. CASSINI; F. SANTANA; R. ORDONEZ SIERRA; L. DE OLIVEIRA ALVARES; J. QUILLFELDT. *Federal Univ. of Rio Grande Do Sul, Federal Univ. of Rio Grande do Sul.*

4:00 HHH36 **261.24** Potential interplay between the lysine acetyltransferase PCAF and estrogen receptors in the rat hippocampus for short-term object-in-place memory. K. A. MITCHNICK*; S. D. CREIGHTON; R. JAMIESON-WILLIAMS; A. LACOUSIERE; J. M. CLOKE; S. CASTELLANO; C. MILITE; G. SBARDELLA; B. E. KALISCH; E. CHOLERIS; B. D. WINTERS. *Univ. of Guelph, Univ. of Guelph, Univ. of Salerno, Univ. of Guelph.*

POSTER

262. Learning and Memory: Extinction

Theme H: Cognition

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 HHH37 **262.01** Examining sex-based differences in unconditioned and conditioned fear. M. VOULO*; R. G. PARSONS. *Stony Brook Univ.*

2:00 HHH38 **262.02** Acoustic startle response as a predictive index of a PTSD-like phenotype in rats. A. S. RUSSO*; R. G. PARSONS. *Stony Brook Univ.*

3:00 HHH39 **262.03** Good made better: L-DOPA reduces return of fear after successful within-session extinction. R. KALISCH*; A. M. V. GERLICHER; O. TÜSCHER. *Johannes Gutenberg Univ. Med. Ctr.*

4:00 HHH40 **262.04** Propranolol as a potential adjunct to exposure therapy in the treatment of pathological fear memory: An animal model. A. M. SCHNEIDER*; P. E. SIMSON; Z. FRANK; N. PALADUGU; V. GOMES; R. ABISHEK; J. KANG; C. H. WONG; C. EVERBACH; L. G. KIRBY. *Swarthmore Col., Miami Univ., Swarthmore Col., Lewis Katz Sch. of Med. at Temple Univ.*

1:00 III1 **262.05** Neurogenesis regulates fear recovery after extinction by recruiting hippocampal and prefrontal activity. A. MARTINEZ-CANABAL*; G. LOPEZ-OROPEZA; A. GAONA-GAMBOA; P. BALLESTEROS-ZEBADUA; O. GALVAN DE LA CRUZ; S. MORENO-JIMENEZ; F. SOTRES-BAYON. *Natl. Autonomous Univ. of Mexico, Neurol. and Neurosurg. Natl. Inst. - Radioneurosurgery Dept.*

2:00 III2 **262.06** A novel DNA modification associated with extinction learning and memory formation. X. LI*; C. MAGNAN; W. WEI; M. EMAMI; L. E. WEARICK-SILVA; T. VIOLA; R. GRASSI-OLIVEIRA; S. NAINAR; C. B. VÅGBØ; M. BJØRÅS; P. BALDI; R. SPITALE; T. BREDY. *Ctr. for Neurobio. of Learning and Memory, Univ. of California Irvine, Univ. of Queensland, Pontifical Catholic Univ. of Rio Grande do Sul, Univ. of California Irvine, Norwegian Univ. of Sci. and Technol., Univ. of California Irvine.*

3:00 III3 **262.07** ADAR1 dual function as RNA editing and potential DNA binding enzyme in the activity-dependent regulation of adaptive behaviour in the mouse. P. MARSHALL*; X. LI; L. WEARICK; T. VIOLA; T. BREDY. *Univ. of California Irvine, Univ. of California Irvine, Pontifícia Univ. Católica do Rio Grande do Sul.*

4:00 III4 **262.08** Infralimbic projections to the basolateral amygdala, but not the nucleus accumbens, are required for the extinction of fear memories. D. W. BLOODGOOD*; J. A. SUGAM; H. JO; M. TORRUELLA SUAREZ; T. L. KASH. *UNC-Chapel Hill, UNC-Chapel Hill.*

1:00 III5 **262.09** Fear memory extinction is associated with an increased expression of synaptic small conductance calcium-activated potassium channels, type 2 (SK2) in male C57BL/6J mice. R. W. STACKMAN*, JR; G. ZHANG; D. A. CINALLI, Jr.; C. RICE-KUCHERA; X. HUANG; T. YUAN; R. HUA; Y. ZHANG. *Florida Atlantic Univ. Dept. of Psychology, Florida Atlantic Univ., Florida Atlantic Univ., Florida Atlantic Univ., Nanjing Normal Univ., Xuzhou Med. Col.*

2:00 III6 **262.10** Mechanisms underlying the structural, functional and epigenetic responses in the primary sensory system of adult mice accompanying olfactory fear learning. F. G. MORRISON*; B. G. DIAS; K. J. RESSLER. *McLean Hosp., Emory Univ.*

3:00 III7 **262.11** The role of cholinergic input from the medial septum in cued and contextual fear extinction memory. J. M. STAIB*; D. KNOX. *Univ. of Pennsylvania, Univ. of Delaware.*

4:00 III8 **262.12** Fear conditioning and extinction alter ventral hippocampus activation of nmdar currents in infralimbic neurons. O. SOLER-CEDENO; O. TORRES-RODRIGUEZ; L. MALDONADO-LABOY; A. HERNANDEZ-LOPEZ; J. T. PORTER*. *Ponce Hlth. Sci. Univ., Interamerican Univ. of Puerto Rico, Pontifical Catholic Univ. of Puerto Rico, Ponce Hlth. Sci. Univ., Ponce Sch. Med.*

1:00 III9 **262.13** Early life stress does not result in impaired generalized extinction in adult rats. N. ELLIOTT*; R. RICHARDSON. *Univ. of New South Wales.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 III10 **262.14** Systemic administration of 5-HT receptor agonist m-chlorophenylpiperazine (mCPP) modulates fear extinction. A. E. REIMER*; A. R. DE OLIVEIRA; M. R. MILAD; M. L. BRANDÃO. *Univ. de Sao Paulo, Inst. de Neurociências e Comportamento, MGH – Harvard Med. Sch., Univ. Federal de São Carlos.*

3:00 III11 **262.15** Impaired fear extinction retention in adolescent rats: Pharmacological evidence for a failure to recruit NMDA receptors during extinction. K. D. BAKER*; R. RICHARDSON. *UNSW Australia.*

4:00 III12 **262.16** The neural correlates of fear extinction in adults and adolescents: An fMRI study. D. E. GANELLA*; E. P. GANELLA; J. H. KIM; S. L. WHITTLE. *Florey Inst. of Neurosci. and Mental Hlth., Melbourne Neuropsychiatry Centre, The Univ. of Melbourne.*

1:00 III13 **262.17** Characterizing adolescent fear extinction learning in a rodent model of youth anxiety. I. ZBUKVIC*; J. PARK; D. GANELLA; A. J. LAWRENCE; J. H. KIM. *Florey Inst. of Neurosci. & Mental Hlth., Univ. of Melbourne.*

2:00 III14 **262.18** The role of heritable phenotype and social environment on fear extinction learning in rats. K. E. PRATER*; E. L. AURBACH; H. K. LARCINESE; P. BLANDINO, Jr.; S. J. WATSON; S. MAREN; H. AKIL. *Univ. of Michigan, Univ. of Michigan, Texas A&M Univ.*

POSTER

263. Cortical and Hippocampal Circuits: Place Cells

Theme H: Cognition

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 III15 **263.01** The independent contributions of position, direction, and velocity to single unit activity in the hippocampus of freely-moving rats. R. SANDLER*; S. DHINGRA; C. VUONG; L. ACHARYA; M. MEHTA. *UCLA, UCLA, UCLA, Baylor Col. of Med., UCLA, UCLA, UCLA.*

2:00 III16 **263.02** Emergence of hippocampal half-θ in virtual reality. K. SAFARYAN; Y. SHEN; M. R. MEHTA*. *Univ. of California at Los Angeles (UCLA), UCLA, UCLA, UCLA.*

3:00 III17 **263.03** Place cells encode path dependent episodic distance during virtual navigation. J. J. MOORE*; L. ACHARYA; J. D. CUSHMAN; C. VUONG; M. R. MEHTA. *W. M. Keck Ctr. For Neurophysics, UCLA, UCLA, UCLA, Baylor Col. of Med., UCLA, UCLA, UCLA.*

4:00 III18 **263.04** Comparative influence of visual versus other multisensory cues on hippocampal spatial and directional tuning. S. DHINGRA*; R. SANDLER; C. VUONG; L. ACHARYA; M. MEHTA. *UCLA, UCLA, UCLA, UCLA, UCLA, Baylor Col. of Med.*

1:00 III19 **263.05** Hippocampal place cells differentially integrate visual and locomotor inputs. O. V. HAAS*; J. HENKE; C. LEIBOLD; K. THURLEY. *Ludwig-Maximilians-Universität München, Bernstein Ctr. for Computat. Neurosci., Grad. Sch. of Systemic Neurosciences.*

2:00 III20 **263.06** The Honeycomb Maze: A new behavioral apparatus for testing spatial navigation. J. M. O'KEEFE*; M. BAUZA; M. BERTELLI; S. BURTON; A. DELEKATE; A. HASTINGS; D. HOWETT; J. KRUPIC; R. WOOD. *Univ. Col. London.*

3:00 III21 **263.07** Structural determinants of granule cell activity in the dentate gyrus of freely-moving rats. M. DIAMANTAKI*; M. FREY; P. PRESTON-FERRER; A. BURGALOSSI. *Werner-Reichardt Ctr. For Integrative Neurosci., Grad. Training Ctr. of Neurosci. - IMPRS.*

4:00 III22 **263.08** Degenerate mechanisms mediate decorrelation and pattern separation in the dentate gyrus. P. MISHRA*; R. NARAYANAN. *INDIAN INSTITUTE OF SCIENCE.*

1:00 III23 **263.09** Measuring the topological dimensions of hippocampal place cell firing rate space generalizes to all classes of neurons. S. E. FOX*; J. B. RANCK, Jr. *State Univ. of New York Downstate Med. Ctr.*

2:00 III24 **263.10** Asymmetry of temporal and rate codes for space by hippocampal place cells. A. B. TORT*; B. C. SOUZA. *Brain Institute, UFRN.*

3:00 III25 **263.11** A nonlinear unsupervised-learning method extracts spatial information and more from hippocampal population activity of freely-moving rats. M. ITO*; K. DOYA. *Okinawa Inst. of Sci. and Technol. (OIST).*

4:00 III26 **263.12** Dynamical properties of hippocampal reactivation of two-dimensional spatial representations. F. STELLA*; P. BARACSKAY; J. CSICSVARI. *IST Austria.*

1:00 III27 **263.13** Hippocampal neuron firing during a cue preparation period for trajectory planning. H. IGATA*; T. SASAKI; Y. IKEGAYA. *The Univ. of Tokyo.*

2:00 III28 **263.14** ▲ The role of hippocampal replay in a computational model of path learning. M. J. RAGONE*; S. GIANELLI; D. SCHWARTZ; L. SU; O. O. KOYLUOGLU; J. FELLOUS. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Zhejiang Univ., Univ. of Arizona.*

3:00 III29 **263.15** Real-time identification and closed-loop control of hippocampal replay content in freely behaving rats. D. CILIBERTI*; F. MICHON; F. KLOOSTERMAN. *NERF, KU Leuven, VIB.*

4:00 III30 **263.16** Hippocampal representations of spatial information of self and other. T. DANJO*; S. FUJISAWA. *Riken Brain Sci. Inst.*

1:00 III31 **263.17** Spatial non-grid cells in the primate entorhinal cortex. M. L. MEISTER*; E. A. BUFFALO. *Washington Natl. Primate Res. Ctr.*

2:00 III32 **263.18** View cells in the primate hippocampus during visual exploration and directed saccades. S. D. KOENIG*; E. A. BUFFALO. *Univ. of Washington, Univ. of Washington, Univ. of Washington, Washington Natl. Primate Res. Ctr.*

3:00 III33 **263.19** Spatial representations in the monkey hippocampus during free-foraging in virtual reality. Y. BROWNING*; M. J. JUTRAS; K. L. MORRISROE; C. LEWIS; E. FIEDLER; T. STIEGLITZ; P. FRIES; A. L. FAIRHALL; E. A. BUFFALO. *Univ. of Washington, Univ. of Washington, Univ. of Washington, Univ. of Washington, Univ. of Washington, Ernst Strüngmann Inst. for Neurosci., Univ. of Freiburg.*

4:00 III34 **263.20** Logical representation of space in monkey hippocampus. P. BARADUC; J. DUHAMEL; A. PLANTÉ; S. PINÈDE; S. C. WIRTH*. *Ctr. de Neurosci. Cognitive, Ctr. De Neurosci. Cognitive.*

1:00 III35 **263.21** A novel shortcut task for analyzing hippocampal sequences. E. M. IRVINE*; M. A. VAN DER MEER. *Psychological and Brain Sciences,Dartmouth Col.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 III36 **263.22** Intra-hippocampal cell synapse learning may support pre-exposure based latent learning by means of improved replay events. M. LLOFRIU ALONSO*; P. SCLEIDOROVICH; T. PELC; N. CAZIN; P. F. DOMINEY; J. FELLOUS; A. WEITZENFELD. *Univ. of South Florida, Univ. of South Florida, Univ. of Arizona, INSERM.*

3:00 III37 **263.23** A hippocampal-entorhinal microcircuit model for dynamic communication in a memory-based navigation task. T. KURIKAWA*; T. FUKAI. *RIKEN, Brain Sci. Inst.*

4:00 III38 **263.24** Hippocampal place cell remapping encodes alterations in task contingencies rather than valence in an aversive decision making task. J. ORMOND*; J. P. JOHANSEN. *RIKEN Brain Sci. Inst.*

1:00 III39 **263.25** Role of dopamine in spatial acquisition and reversal learning. L. ZHANG*; A. GARTHE; C. WINTER; G. KEMPERMANN. *Dfg-Center For Regenerative Therapies (CRTD), German Ctr. for Neurodegenerative Dis. (DZNE), Med. Fac. Carl Gustav Carus, Technische Univ. Dresden.*

2:00 III40 **263.26** A subset of CA1 and subiculum neurons selectively encode rewarded locations. J. L. GAUTHIER*; D. W. TANK. *Princeton Univ., Princeton Univ., Princeton Univ.*

3:00 III41 **263.27** Micro-organization of grid cells in layer II of medial entorhinal cortex. Y. GU*; A. A. KINKHABWALA; D. W. TANK. *Princeton Univ., Northwestern Univ.*

4:00 III42 **263.28** Representation of an abstract non-spatial coordinate by firing fields in the hippocampal/entorhinal circuit. D. ARONOV*; R. NEVERS; D. W. TANK. *Princeton Univ.*

POSTER

264. Learning and Memory

Theme H: Cognition

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 III43 **264.01** Learning on multiple timescales with metaplasticity. P. KHORSAND*; S. FARASHAHI; A. SOLTANI. *Dartmouth Col., Dartmouth Col.*

2:00 III44 **264.02** Taming synaptic heterogeneity for adaptive learning. M. MORADI SPITMAAN*; P. KHORSAND; A. SOLTANI. *Dartmouth Col., Dartmouth Col.*

3:00 III45 **264.03** ▲ Chronic taurine administration from gestational day E15 to adulthood causes damage in the cerebral cortex hippocampus of male rats. R. GÓMEZ-DÍAZ*; G. GARCIA-ROBLES; C. TOMAS-SANCHEZ; V. BLANCO-ALVAREZ; D. MARTINEZ-FONG; J. EGUIBAR CUENCA; J. GONZALEZ-BARRIOS; D. LIMON-PEREZ; A. UGARTE; B. LEON-CHAVEZ. *Benemérita Univ. Autónoma De Puebla, Benemerita Univ. Autonoma de Puebla, Ctr. de Investigaciones de Estudios Avanzados, Benemerita Univ. Autonoma de Puebla, ISSSTE.*

4:00 III46 **264.04** ▲ Sexual dimorphism to zinc requirements of pubertal rats. V. M. BLANCO ALVAREZ*; C. TOMAS-SANCHEZ; J. GONZALEZ-BARRIOS; D. MARTINEZ-FONG; G. GARCIA-ROBLES; G. SOTO-RODRIGUEZ; E. BRAMBILA; I. LIMON; S. RUIZ-PASTRANA; A. DIAZ RUIZ; B. LEON-CHAVEZ. *Benemerita Univ. Autonoma De Puebla, Benemerita Univ. Autonoma de Puebla, Inst. De Seguridad Y Servicios Sociales De Los Trabajadores Del Estado, Ctr. de Investigación y de Estudios Avanzados del Inst. Politécnico Nacional.*

1:00 III47 **264.05** Coadministration of 5-HT7 receptor antagonist and agonist on forgetting. R. SOLÍS GUILLÉN*; A. MENESES. *Ctr. De Investigación Y De Estudios Avanzados De, CINVESTAV.*

2:00 III48 **264.06** Effect of environmental enrichment as adjunctive therapy to administration of EMD386088 5-HT_6 receptor agonist on memory formation & amnesia. F. APARICIO NAVA*. *Ctr. De Investigación Y Estudios Avanzados Del I.*

3:00 III49 **264.07** ● Preclinical characterization of SUVN-I4035- a novel and selective muscarinic m1 positive allosteric modulator. R. ABRAHAM*; R. MEDAPATI; R. BADANGE; V. REBALLI; A. SHINDE; V. GOYAL; S. PANDEY; S. YATHAVAKILLA; V. GOURA; S. EDULA; R. SUBRAMANIAN; V. MEKALA; N. MUDDANA; V. UTHUKAM; S. DARIPELLI; B. DEVARAPALLI; R. EEDA; R. NIROGI. *Suven Life Sci., Suven Life Sci., Suven Life Sci., Suven Life Sci., Suven Life Sci., Suven Life Sci., Suven Life Sci.*

4:00 III50 **264.08** Esculetin attenuates sleep deprivation-induced cognitive dysfunction by modulating neuroinflammation and TrkB-BDNF signaling pathway in mice. K. SULAKHIYA*; C. C. BARUA; V. PARAMANIK. *Indira Gandhi Natl. Tribal Univ., Col. of Vet. Sciences, Assam Agricultur Univ., Fac. of Science, Indira Gandhi Natl. Tribal Univ. (IGNTU).*

1:00 III51 **264.09** Positive effect of biflorin: Memory amelioration in cholinergic blockade-induced memory deficit in mice. Y. GWON*. *Kyunghee Univ.*

2:00 III52 **264.10** Sex differences in ventral hippocampal muscarinic acetylcholine antagonist scopolamine effects on spatial memory in rats. B. J. HALL*; Y. ABREU-VILLAÇA; M. CAULEY; A. KIANY; S. JUNIAD; H. WHITE; E. D. LEVIN. *Duke Univ. Med. Ctr., Duke Univ. Med. Ctr.*

3:00 JJJ1 **264.11** ● Prolonged exposure to varenicline did not alter the memory of male rats. J. Z. MAGALHÃES*; D. P. FIGUEIREDO; G. R. ABREU; E. L. RICCI; M. S. B. UDO; H. S. SPINOSA. *Sch. of Vet. Med. and Animal Sci. U, Mackenzie Presbiterian Univ., Sch. of Pharmaceut. Sci. - Univ. of São Paulo, Sch. of Vet. Med. and Animal Sci. - Univ. of São Paulo.*

4:00 JJJ2 **264.12** The T-type calcium channel blocker, z944, reduces conditioned fear in genetic absence epilepsy rats from strasbourg and the non-epileptic control. W. N. MARKS*; N. K. ZABDER; Q. GREBA; S. M. CAIN; T. P. SNUTCH; J. G. HOWLAND. *Univ. of Saskatchewan, Univ. of British Columbia.*

1:00 JJJ3 **264.13** Impact of short-term fructose ingestion on brain plasticity and function. A. JIMENEZ MALDONADO*; Z. YING; H. BYUN; F. GOMEZ-PINILLA. *UCLA, UCLA, UCLA.*

2:00 JJJ4 **264.14** Antidepressant reactivates the plasticity of vestibular-dependent navigation in the adult. Q. JIANG*; D. MA; D. SHUM; Y. CHAN. *The Univ. of Hong Kong.*

3:00 JJJ5 **264.15** In quest for finding the key regulators of the molecular mechanisms of long-term memory. I. MICHAELEVSKI*; N. BOROVOK; E. NESHER; A. SHEININ; M. REICHENSTEIN; A. PINHASOV. *Tel Aviv Univ., Ariel Univ.*

4:00 JJJ6 **264.16** Attentional gating of learning in monkey visual cortex. U. H. SCHNABEL*; X. CHEN; P. R. ROELFSEMA. *Netherlands Inst. of Neurosci.*

1:00 JJJ7 **264.17** Conditioned inhibition and extinction of conditioned excitation in Hermissenda: Similarity of cellular and intracellular signaling mechanisms. J. FARLEY*. *Indiana Univ. Bloomington.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 JJJ8 **264.18** ● NSI-189, a neurogenic compound enhances short-term and long-term potentiation in C57BL/6 mice and reverses LTP impairment in a mouse model of Angelman Syndrome. Y. LIU*; M. P. HEFFERAN; K. JOHE; X. BI; M. BAUDRY. *Western Univ. of Hlth. Sci., Neuralstem, Inc.*

3:00 JJJ9 **264.19** Social isolation decreases social memory persistence and induces a depressive-like phenotype in Swiss mice via distinct mechanism. L. D. GUARNIERI*; A. R. PEREIRA-CAIXETA; N. S. S. AQUINO; R. E. SZAWKA; M. F. D. MORAES; G. S. PEREIRA. *Univ. Federal De Minas Gerais - Núcleo De N, Univ. Federal De Minas Gerais.*

4:00 JJJ10 **264.20** Topographical memory impairments in the Hamlet Test. T. MAURICE*; D. GILABERT; L. CROUZIER. *INSERM U 1198.*

1:00 JJJ11 **264.21** Adolescent cannabinoid exposure and novelty-seeking: Effects on spatial memory and hippocampal neurogenesis in female Long-Evans rats. K. L. STANSAK; A. L. RIGDON; F. E. GRIFFEY; P. A. JACKSON*; D. M. HAYES. *Radford Univ., Radford Univ.*

2:00 JJJ12 **264.22** Genetic deletion of neurexin-1 in rats impairs learning and memory. L. VER DONCK*; S. EMBRECHTS; M. MAHIEU; H. VAN CRAENENDONCK; H. DUYTSCHAEVER; P. DE HAES; R. WILLEMS. *Janssen Res. & Development, A Div. of Jans, Janssen Res. & Development, A Div. of Janssen Pharmaceutica NV.*

3:00 JJJ13 **264.23** Learning and memory of sweet taste in rats with bilateral transection of chorda tympani nerves. J. JAHNG*; S. CHUNG; J. LEE. *Seoul Natl. Univ. Sch. Dent.*

POSTER

265. Human Learning: Perceptual, Motor, and Category

Theme H: Cognition

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 JJJ14 **265.01** Stimulus viewing duration prompts divergent learning trajectories in a same-different visual discrimination task. M. AYLWIN*; M. S. M. QUIÑONES; D. M. GOMEZ. *Univ. de Talca, Univ. de Chile.*

2:00 JJJ15 **265.02** Feature-unspecific repetitive sensory stimulation induces visual perceptual learning. A. MARZOLL*; H. R. DINSE. *Ruhr-Universität Bochum, Neurologische Klinik am Berufsgenossenschaftlichen Universitätsklinikum Bergmannsheil, Ruhr-Universität Bochum.*

3:00 JJJ16 **265.03** Refocusing mental fixation and visual one-shot learning. T. ISHIKAWA*; M. TOSHIMA; K. MOGI. *Tokyo Inst. Technol., Sony Computer Sci. Labs., Grad. Univ. for Advanced Studies.*

4:00 JJJ17 **265.04** Anodal but not cathodal stimulation (tDCS) over the human right occipital cortex modulates visual cognition. D. RIVOLTA*; M. BARBIERI; M. NEGRINI; M. A. NITSCHE. *Univ. of East London, Maastricht Univ., Leibniz Res. Ctr. for Working Envrn. and Human Factors (IfADo).*

1:00 JJJ18 **265.05** Orienting to probable stimuli affects early perception: Modulating the ‘C1’ visual evoked potential in an orientation estimation task. S. JABAR*; A. FILIPOWICZ; B. ANDERSON. *Univ. of Waterloo, Univ. of Waterloo.*

2:00 JJJ19 **265.06** FMRI evidence for an intrinsic positive prediction error signal in the putamen for memory guided visual search. S. POLLMANN*; S. SOMMER. *Univ. Magdeburg.*

3:00 JJJ20 **265.07** Timing of the lateralized readiness potential is consistent with analyses of behavioral reaction times: Application to perceptual learning. M. J. WENGER*; S. E. RHOTEN. *The Univ. of Oklahoma, The Univ. of Oklahoma.*

4:00 JJJ21 **265.08** The neural bases of interoceptive recall. D. C. DEVILLE; K. BURROWS; K. L. KERR; J. A. AVERY; C. MULLINS; J. BODURKA; M. PAULUS; W. K. SIMMONS*. *Laureate Inst. For Brain Res.*

1:00 JJJ22 **265.09** You look like an expert: Eye movement dynamics and performance in cognitive tasks. J. PERRICONE*; B. HELFER; D. FORD; T. QUATIERI. *MIT Lincoln Lab., MIT Lincoln Lab., NCSU.*

2:00 JJJ23 **265.10** Human EEG exhibits task related changes in fractal scaling and dimensionality, congruent with a soft-assembled system. T. L. MCKINNEY*; T. J. WILTSHIRE; M. J. EULER; J. E. BUTNER. *Univ. of Utah, Universioty of Utah.*

3:00 JJJ24 **265.11** Sensorimotor orienting in immersive virtual reality: Psychophysics of skill learning. H. M. RAO*; R. KHANNA; D. J. ZIELINSKI; Y. LU; N. D. POTTER; R. KOPPER; M. A. SOMMER; L. G. APPELBAUM. *Duke Univ., Duke Univ. Sch. of Med., Duke Univ., Duke Univ., Duke Univ., Duke Univ., Duke Univ. Sch. of Med., Duke Univ.*

4:00 JJJ25 **265.12** Sensorimotor orienting in immersive virtual reality: EEG correlates of skill learning. L. G. APPELBAUM*; J. CLEMENTS; Y. LU; H. M. RAO; R. KHANNA; D. J. ZIELINSKI; K. VITTETOE; N. D. POTTER; R. KOPPER; M. A. SOMMER. *Duke Univ., Duke Univ., Duke Univ., Duke Univ., Duke Univ., Duke Univ.*

1:00 JJJ26 **265.13** Novel representations that support rule-based categorization are acquired on-the-fly during category learning. F. A. SOTO*; F. G. ASHBY. *Florida Intl. Univ., Univ. of California, Santa Barbara.*

2:00 JJJ27 **265.14** The role of frontal polar cortex in category learning: Rule integration or switching? D. PANIUKOV*; T. DAVIS. *Texas Tech. Univ.*

3:00 JJJ28 **265.15** Lengthening of circuit memory via mechanisms of synaptic plasticity. K. HIMBERGER*; A. FINN; C. J. HONEY. *Univ. of Toronto.*

POSTER

266. Human Cognition: Attention I

Theme H: Cognition

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 JJJ29 **266.01** Can adaptive cognitive training improve efficiency of attentional control in the aging brain? J. KENT*; H. LEE; E. SCHULTZ; E. FOSTER; F. WOLINSKY; M. MERZENICH; M. VOSS. *Univ. of Iowa, Brain Plasticity Inst., Univ. of Iowa, Univ. of Iowa.*

2:00 JJJ30 **266.02** Perceptual and motor contributions to spatial neglect following parietal damage. T. D. PUNT*; G. W. HUMPHREYS. *Univ. of Birmingham, Univ. of Oxford.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract’s submitting author

3:00 JJJ31 **266.03** Attention changes connectivity strength in a hierarchical manner across the visual network. S. KWON*; A. BARTELS. *Max Planck Inst. for Biol. Cybernetics, Vision and Cognition Lab, Ctr. for Integrative Neurosci., Univ. of Tuebingen.*

4:00 JJJ32 **266.04** Effects of top-down attention to a polygon on N2pc in a visual search task. A. KITAMI*; T. URAKAWA; H. AZETAKA; A. SAYAMA; O. ARAKI. *Tokyo Univ. of Sci., Tokyo Univ. of Sci.*

1:00 JJJ33 **266.05** τ and α oscillations play dissociable roles in goal-directed attention. A. M. HARRIS*; P. E. DUX; C. N. JONES; J. B. MATTINGLEY. *The Univ. of Queensland, The Univ. of Queensland.*

2:00 JJJ34 **266.06** Mental fatigue in a prolonged multiple object tracking task. Y. MOHSENZADEH*; K. MICHMIZOS; D. METAXAS; D. PANTAZIS. *MIT, Rutgers Univ.*

3:00 JJJ35 **266.07** Flow: The application of psychophysiology to understand user experience in video games. M. ROSAZZA; M. M. NIEDZIELA*; B. THAU. *HCD Res.*

4:00 JJJ36 **266.08** Rhythmic sampling of visual objects is mediated by inhibitory α activity. J. JIA*; F. FANG; H. LUO. *Peking Univ., Peking Univ., Peking Univ.*

1:00 JJJ37 **266.09** Neurophysiological signatures of proactive versus reactive control in young adults. V. EXPOSITO*; T. HAGEN; J. HALVORSEN; S. AMINIHAJIBASHI; M. STAVRINOU; M. FOLDAL; T. ESPESETH. *Univ. of Oslo.*

2:00 JJJ38 **266.10** Neural correlates of perceptual grouping during a visual illusion. T. A. CARTHER-KRONE*; J. LAWRENCE-DEWAR; S. SHOMSTEIN; J. J. MAROTTA. *Univ. of Manitoba, Thunder Bay Regional Res. Inst., George Washington Univ.*

3:00 JJJ39 **266.11** Variability in performance during perceptual decision making is related to attentional filtering. M. D. NUNEZ*; A. GOSAI; J. VANDEKERCKHOVE; R. SRINIVASAN. *Univ. of California, Irvine.*

4:00 JJJ40 **266.12** Cholinergic modulation of eyes-closed to eyes-open α reactivity. L. WAN*; N. LAM; A. RAJAN; H. HUANG; N. SCHWAB; C. PRICE; M. DING. *Univ. of Florida.*

1:00 JJJ41 **266.13** Illusory conjunctions in visual short-term memory: Individual differences in Corpus Callosum connectivity and splitting attention between the two hemifields. S. QIN*; N. RAY; M. O'CONNELL; C. BASAK. *Univ. of Texas At Dallas.*

2:00 JJJ42 **266.14** Top-down adjustment of α phase in anticipation of predictable relevant stimuli. R. SOLIS-VIVANCO*; M. BONNEFOND; O. JENSEN. *Inst. Nacional De Neurologia Y Neurocirugia Ma, Donders Inst. for Brain, Cognition and Behaviour, Radboud Univ.*

3:00 JJJ43 **266.15** Inattentional deafness is signified by activity in brain regions involved with attentional bottleneck. D. E. CALLAN*; F. DEHAIS; N. GONTHIER; G. DURANTIN. *Ctr. For Information and Neural Networks NICT, ISAE: Inst. Supérieur de l'Aéronautique et de l'Espace, Univ. de Toulouse, Sch. of Information Technol. and Electrical Engineering, The Univ. of Queensland.*

4:00 JJJ44 **266.16** Gamma band analysis in DLPFC during stroop task : MEG Study. S. HWANG*; W. CHANG, 03722; B. KIM; J. CHANG. *Dept. of Neurosurgery, Yonsei University, Col. of Med., Dept. of neurosurgery, Yonsei Univ. Col. of Med., EIT/LOFUS R&D Ctr. Intl. St. Mary`s hospital, catholic Kwandong Univ.*

1:00 JJJ45 **266.17** The effects of task irrelevant information on the dynamics of selective attention. J. KIM*; M. KANG; S. LEE. *Seoul Natl. Univ., Sungkyunkwan Univ.*

2:00 JJJ46 **266.18** Neural correlates of goal directed attentional capture in the absence of conscious perception. S. L. TRAVIS*; P. E. DUX; J. MATTINGLEY. *The Queensland Brain Inst., The Sch. of Psychology.*

3:00 JJJ47 **266.19** Exploring the neural signatures of multi-modal inhibition of return. R. M. KLEIN*; G. D'ENTREMONT; A. JONES; M. A. LAWRENCE. *Dalhousie Univ., Middlesex Univ.*

4:00 JJJ48 **266.20** The difficulty of response pattern-dependent tasks to affect attention. M. TAKAYOSE*; R. KOSHIZAWA; K. OKI. *Nihon Univ. Col. of Industrial Technol., Nihon Univ. Col. of Commerce, Nihon Univ. Col. of Sci. and Technol.*

1:00 JJJ49 **266.21** The N2pc and localization of visual information. A. DREW; J. BERGER; K. BOWE; R. TIMMINS; A. T. KARST*. *Miami Univ., Univ. of Wisconsin, Oshkosh.*

2:00 JJJ50 **266.22** ● Improving dorsal stream functioning remediates visual timing deficits, improving figure-ground discrimination, reading fluency, attention, and memory. T. A. LAWTON*; J. SHELLEY-TREMBLAY. *Perception Dynamics Inst., Univ. of South Alabama.*

3:00 JJJ51 **266.23** Neurogenetically altered norepinephrine availability affects behavioral and electrocortical indices of affect-biased attention. M. R. EHLERS*; K. H. ROBERTS; M. G. M. MANALIGOD; D. J. MUELLER; L. J. FÜRST; M. J. WIESER; R. M. TODD. *Univ. of British Columbia, Ctr. for Addiction and Mental Hlth., Univ. Würzburg.*

4:00 JJJ52 **266.24** Does spatial attention modulate afferent activity in primary visual cortex? M. A. PITTS*; H. BAUMGARTNER. *Reed Col.*

1:00 JJJ53 **266.25** Distractor expectation modulates proactive control mechanisms in visual search. M. A. PETILLI*; F. MARINI; R. DAINI. *Univ. of Milano-Bicocca, UCSD.*

2:00 JJJ54 **266.26** Amphetamine effects on a traditional and a cross-species variant of the continuous performance task. D. A. MACQUEEN*; J. W. YOUNG; M. A. GEYER; B. L. HENRY; A. MINASSIAN; W. PERRY. *VA San Diego Healthcare Syst., Univ. of California San Diego.*

3:00 JJJ55 **266.27** Dissociable suppression of salient distractors during perception and goal-directed action. J. D. MCCARTHY*; J. SONG. *Brown Univ., Brown Univ.*

4:00 JJJ56 **266.28** Effects of mindfulness training on behavior and electrophysiology in the Psychomotor Vigilance Test. J. Z. LIM*; K. WONG; J. TENG; M. W. CHEE; K. DOSHI. *Duke-Nus Med. Sch., Duke-NUS Med. Sch., Singapore Gen. Hosp.*

1:00 JJJ57 **266.29** Intrusive effects of task-irrelevant semantic relationships between real-world objects. J. C. NAH*; G. L. MALCOLM; S. SHOMSTEIN. *The George Washington Univ., Univ. of East Anglia.*

2:00 JJJ58 **266.30** Decrease in the visual search & spatial working memory function accompanying Long-term Consecutive Visual Search. K. OKI*; R. KOSHIZAWA; M. TAKAYOSE. *Nihon Univ., Nihon Univ., Nihon Univ.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

267. Perceptual and Motor Decision Making

Theme H: Cognition

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 JJJ59 **267.01** Removing the curse of dimensionality: A trade-off between adaptability and precision. S. GHAANIFARASHAHI*; K. ROWE; Z. ASLAMI; A. SOLTANI. *Dartmouth Col.*

2:00 JJJ60 **267.02** ▲ Timing the onset of the decision to move in arbitrary and deliberate decisions. N. ZIARI*; S. WONG; M. SAMAD; U. MAOZ. *UCLA, UCLA.*

3:00 JJJ61 **267.03** ● Modality specific neural signals of evidence accumulation for spatial decisions. A. NAZZAL*; C. SCHMIDT-SAMOA; M. HOLZGRAEFE; M. BÄHR; J. ERLICH; M. WILKE. *Univ. Med. Ctr. Göttingen, ASKLEPIOS Hosp. Schildautal, Inst. of Brain and Cognitive Sci.*

4:00 KKK1 **267.04** Wide-eyed and wrong? Pupil dilation correlates with imperfect evidence accumulation in auditory perceptual decisions. T. HAGEN*; R. C. WILSON. *Univ. of Arizona.*

1:00 KKK2 **267.05** Humans represent visuo-spatial probability distribution as k-means clusters. J. SUN*; J. LI; H. ZHANG. *Dept. of Psychology, Peking Univ., PKU-IDG/ McGovern Inst. for Brain Research, Peking Univ., Peking-Tsinghua Ctr. for Life Science, Peking Univ.*

2:00 KKK3 **267.06** Discrimination of brightness biased by flicker rate in α frequency range. J. K. BERTRAND*; N. J. WISPINSKI; D. L. CORMIER; A. SINGHAL; K. E. MATHEWSON; C. S. CHAPMAN. *Univ. of Alberta, Univ. of Alberta.*

3:00 KKK4 **267.07** The tuning of reflexes to environmental risk. A. DUNNING*; M. BERTUCCO; T. SANGER. *USC.*

4:00 KKK5 **267.08** Comparing visual and tactile Simon effects: A model-based analysis. Y. SALZER*; G. DE HOLLANDER; L. VAN MAANEN; M. SALTI; B. U. FORSTMANN. *Univ. of Amsterdam, Ben-Gurion Univ. of the Negev.*

1:00 KKK6 **267.09** Perceptual confidence: A true reflection of objective human visual discrimination? L. ZIZLSPERGER*; L. MEISSAUER; T. HAARMEIER. *Univ. Hosp. and Univ. of Zürich, Dept. of Neurosurg. RWTH, Dept. of Neurology, HELIOS Clin. Krefeld.*

2:00 KKK7 **267.10** How does the brain infer the shape of an object based on hand pose and skin contacts? F. MEHRABAN POUR BEHBAHANI*; G. SINGLA-BUXARRAIS; A. FAISAL. *Imperial Col. London.*

3:00 KKK8 **267.11** The role of time in perceptual decision-making. D. M. ZOLTOWSKI*; Á. KOBLINGER; J. FISER; M. LENGYEL. *Univ. of Cambridge, Central European Univ.*

4:00 KKK9 **267.12** Perceptual decoupling is not the same as mind-wandering: Using experience sampling to measure the dynamics of thought. Q. RAFFAELLI*; A. C. HERRERA-BENNETT; K. CHRISTOFF. *Univ. of British Columbia, Univ. of British Columbia.*

1:00 KKK10 **267.13** Age effects on visual perceptual decisions of ambiguous stimuli. E. ARANI*; R. VAN EE; R. VAN WEZEL. *Donders Institute, Radboud Univ., Univ. of Leuven, Twente Univ.*

2:00 KKK11 **267.14** Contributions of neural adaptation to value-based and perceptual choice. O. HORNO*; M. SPITMAAN; A. SOLTANI. *Dartmouth Col., Dartmouth Col.*

3:00 KKK12 **267.15** Eye-hand interaction in perceptual decision making. A. ZGONNIKOV; K. WONG-LIN*; P. T. PIIROINEN; D. O'HORA. *Natl. Univ. of Ireland, Galway, Ulster Univ., Natl. Univ. of Ireland, Galway, Natl. Univ. Ireland, Galway.*

4:00 KKK13 **267.16** EEG-based classification of intended responses in a multi-modal crewstation simulation. P. M. CONNOLLY*; S. SIMONS; K. ZACHERY; D. KRNAVEK. *Teledyne Scientific and Imaging, LLC.*

1:00 KKK14 **267.17** Overimitation in a virtual environment. M. LILJEHOLM*; E. CASTILLO. *Univ. of California, Irvine.*

2:00 KKK15 **267.18** Pre-movement stretch responses predict changes-of-mind. L. P. SELEN*; J. MARESCH. *Radboud Univ.*

3:00 KKK16 **267.19** An attack-and-defend competition as a redundant cognitive-motor system. K. FUJII*; Y. YOSHIHARA; Y. YAMAMOTO. *Nagoya Univ.*

4:00 KKK17 **267.20** Motor affordance biases subjective value. C. C. ROMERO*; M. A. GOMEZ; M. WEBSTER; J. T. MCGUIRE; T. SCHONBERG; J. C. SNOW. *Univ. of Nevada, Reno, Boston Univ., Tel Aviv Univ.*

1:00 KKK18 **267.21** Optimized functional MRI in the subthalamic nucleus at 7 Tesla and 3 Tesla. G. DE HOLLANDER*; M. C. KEUKEN; W. VAN DER ZWAAG; R. TRAMPEL; B. U. FORSTMANN. *Univ. of Amsterdam, Spinoza Ctr. for Neuroimaging, Max Planck Inst. for Human Cognitive and Brain Sci.*

2:00 KKK19 **267.22** Dynamics of perceptual decision-making and choice confidence. K. LIM*; D. M. MERFELD. *Massachusetts Eye and Ear Infirmary, Harvard-MIT Div. of Hlth. Sci. and Technol., Harvard Med. Sch.*

POSTER

268. Neural Processes of Social Cognition

Theme H: Cognition

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 KKK20 **268.01** Structural and functional architecture of the brain network for social cognition. A. A. SOKOLOV*; M. ERB; F. E. POLLICK; R. S. J. FRACKOWIAK; K. J. FRISTON; M. A. PAVLOVA. *Ctr. Hospitalier Universitaire Vaudois (CHUV), Univ. Col. London, Univ. of Tübingen Med. Sch., Univ. of Glasgow, Ecole Normale Supérieure DEC.*

2:00 KKK21 **268.02** Visual population codes for perceived actions in the human brain. A. P. SAYGIN*; B. A. URGEN; S. PEHLIVAN. *UCSD, UCSD, UCSD, Univ. of Parma, TED Univ.*

3:00 KKK22 **268.03** ▲ Cortical processing of emotion: An electroencephalogram study. E. H. ZHANG*; O. WANG. *Univ. of Shanghai For Sci. & Technol.*

4:00 KKK23 **268.04** Body motion presented upright and upside-down: Human ultra high field 9.4T fMRI. M. PAVLOVA*; M. ERB; G. HAGBERG; K. SCHEFFLER. *Univ. of Tübingen Med. Sch., Univ. of Tübingen Med. Sch., Univ. of Tübingen Med. Sch., Max Planck Inst. for Biol. Cybernetics and Univ. of Tuebingen Med. Sch.*

1:00 KKK24 **268.05** Event-related synchronization-desynchronization features of social altruistic and selfish decision. I. P. KUZNIETSOV*; O. RAKOVETS; N. IEVPAK; T. KACHYNSKA; O. ABRAMCHUK. *Lesya Ukrainka Eastern European Natl. Universit.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 KKK25 **268.06** Brain structure and social belonging: Expectations of social pleasure and pain are reflected in regional brain volumes. B. CRAWFORD*; N. MUHLERT; G. MACDONALD; A. D. LAWRENCE. *Cardiff Univ., Univ. of Manchester, Univ. of Toronto.*

3:00 KKK26 **268.07** ▲ Brain rhythms during aesthetic experience. E. JIMENEZ*; L. E. ROLDÀN MORALES; F. GARCÍA-PALMA; V. CALDERÓN-ORTÍZ; M. ARIAS-GARCÍA. *Univ. Nacional Autónoma De México, Facultad de Psicología, Univ. Nacional Autónoma de México, Facultad de Artes, Univ. Autónoma del Estado de Morelos., Healthy Brain., Facultad de Psicología, Univ. Nacional Autónoma de México.*

4:00 KKK27 **268.08** ▲ Effects of repetitive transcranial magnetic stimulation (rTMS) on human movement responses to the Rorschach test and its electrophysiological correlates. G. Z. SOGHOYAN*; A. ANDO; Y. QUN; L. GIROMINI; A. ZENNARO; M. BOHM; D. MARYANOVSKY; J. A. PINEDA. *UC San Diego, Univ. of Turin, Fourth Military Med. Univ.*

1:00 KKK28 **268.09** ▲ Attachment styles and their relation to respiratory sinus arrhythmia and μ suppression. N. C. CASTRO*; M. WIDDOWSON; M. BOHM; D. MARYANOVSKY; A. MINICHINO; J. PINEDA. *Univ. of California San Diego, Sapieniza Univ. of Rome.*

2:00 KKK29 **268.10** Understanding the moral brain: A meta-analysis of regions involved in sociomoral processing using multilevel kernel density analysis and activation likelihood estimation. S. J. FEDE*; C. L. HARENSKI; K. A. KIEHL. *Univ. of New Mexico, Mind Res. Network and Lovelace Biomed. and Envrn. Reserch Inst.*

3:00 KKK30 **268.11** Effect of cheering on functional connectivity between the player's and the observer's brain activity during a competitive game. T. KOIDE*; S. SHIMADA. *Meiji Univ.*

4:00 KKK31 **268.12** Task and stimulus representation in face responsive cortex in autism spectrum disorder. D. KLIEMANN*; S. ANZELLOTTI; D. AYYASH; J. GABRIELI; R. SAXE. *MIT.*

1:00 KKK32 **268.13** Neural control strategies underlying human-human physical joint interaction for object manipulation. K. MOJTAHEDI*; J. FINE; M. SANTELLO. *Arizona State Univ.*

2:00 KKK33 **268.14** The role of the orbitofrontal cortex in regulation of interpersonal space: Evidence from lesions and intracranial recordings. A. PERRY*; J. STISO; C. DEWAR; J. LIN; R. T. KNIGHT. *Univ. of California, Berkeley, Univ. of California, Irvine.*

3:00 KKK34 **268.15** Facial affect recognition in schizotypy using the n170 and n250 of the event-related potential. J. MORALES*; S. SARKISSIANS; J. ABARA; M. SERGI. *California State Univ. Northridge.*

4:00 KKK35 **268.16** Cortical activity during others' preference estimation. J. PARK*; S. KIM; J. SOHN. *UNIST, Daegu-Gyeongbuk Med. Innovation Fndn.*

1:00 KKK36 **268.17** Disruptions in connectivity to frontal theory of mind networks underlies deficits in naturalistic social cognition in schizophrenia. G. H. PATEL*; S. ARKIN; N. STRAUSS; H. M. DE BAUN; C. C. KLIM; R. BERMAN; D. LEOPOLD; D. C. JAVITT. *Columbia Univ., Natl. Inst. of Mental Hlth.*

2:00 KKK37 **268.18** Naturalistic viewing and neuronal signatures in a ketamine model of schizophrenia. R. A. BERMAN*; G. H. PATEL; D. C. JAVITT; D. A. LEOPOLD. *Natl. Inst. of Mental Hlth., Columbia Univ., New York State Psychiatric Hosp., Nathan Kline Inst. for Psychiatric Res.*

3:00 KKK38 **268.19** Engagement of visual, face, attention, and theory of mind areas in schizophrenia during naturalistic viewing. S. ARKIN*; C. C. KLIM; R. BERMAN; D. LEOPOLD; D. C. JAVITT; G. H. PATEL. *Columbia Univ., Columbia Univ., Natl. Inst. of Mental Hlth.*

4:00 KKK39 **268.20** Characterizing mentalizing processes during cooperative decisions using EEG-hyperscanning. T. RUSCH*; M. SPEZIO; J. P. GLÄSCHER. *Univ. Med. Ctr. Hamburg-Eppendorf, Scripps Col., Univ. Med. Ctr. Hamburg-Eppendorf.*

1:00 KKK40 **268.21** Food-related symptoms in autism are related to aberrant gustatory cortex intrinsic functional connectivity. M. A. COLLINS*; S. C. MILLEVILLE; S. E. WOHLTJEN; J. E. INGEHOLM; G. L. WALLACE; W. K. SIMMONS; S. J. GOTTS; A. MARTIN. *NIH, George Washington Univ., Laureate Inst. for Brain Res.*

2:00 KKK41 **268.22** Discriminating between sarcasm and lying using neural correlates from the amygdala and cingulate cortex. Y. PATHAK*; E. H. SMITH; S. SINHA; G. M. MCKHANN, II; S. A. SHETH. *Columbia Univ., Rutgers Robert Wood Johnson Med. Sch.*

3:00 KKK42 **268.23** Common neural substrates of initiator and responder in spatial and feature-based joint attention: A hyperscanning fMRI study. A. YOSHIOKA; T. KOIKE; E. NAKAGAWA; M. SUMIYA; S. OKAZAKI; N. SADATO; H. C. TANABE*. *Nagoya Univ. Grad. Sch. of Envrn. Studies, Natl. Inst. for Physiological Sci.*

4:00 KKK43 **268.24** ▲ Cognition of biological body movement as a risk factor for social bullying in unaffected siblings of children with autism spectrum disorders. V. E. NEWTON*; I. SOLIS; C. BOUCHARD; C. KING; G. E. AVINA; J. MCCLAIN; K. R. CIESIELSKI. *Pediatric Neurosci. Laboratory, UNM, Pediatric Neurosci. Laboratory, UNM, Univ. of New Mexico, Sandia Natl. Labs., Massachusetts Gen. Hosp.*

1:00 KKK44 **268.25** Neural integration of costs and outcomes in evaluations of prosocial actions. N. VELEZ*; H. GWEON. *Stanford Dept. of Psychology.*

2:00 KKK45 **268.26** Socially anxious tendency affects discrimination of emotions in other's gaze. Y. TSUJI*; S. SHIMADA. *Meiji Univ.*

3:00 KKK46 **268.27** ▲ An fNIRS study of cooperativeness during synchronized tapping task. A. MURAKAMI*; H. YOKOUCHI; S. HIWA; T. HIROYASU. *Doshisha Univ.*

4:00 KKK47 **268.28** Visual erotic stimulation: Different cerebral responses in homosexual and heterosexual men. C. GÓMEZ*; C. AMEZCUA-GUTIÉRREZ; M. HERNÁNDEZ-GONZÁLEZ; M. A. GUEVARA. *Inst. De Neurociencias, Inst. de Neurociencias.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

269. Schizophrenia: Experimental Therapeutics

Theme H: Cognition

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 KKK48 **269.01** ● Preclinical characterization of SUVN-1507035 with multimodal activity alleviating psychosis and depression in preclinical models. N. MUDDANA*; R. SUBRAMANIAN; S. EDULA; S. PETLU; S. YATHAVAKILLA; R. ABRAHAM; P. JAYARAJAN; R. PALACHARLA; J. THENTU; R. DYAVARASHETTY; H. KALYANI; A. MOHAMMED; S. RAVELLA; R. NIROGI. *Suven Life Sci.*

2:00 KKK49 **269.02** ● Pharmacologic augmentation of cognitive training (PACT): Amphetamine enhances gains in auditory discrimination training in adult schizophrenia patients. N. R. SWERDLOW*; M. TARASENKO; S. G. BHAKTA; J. A. TALLEDO; A. I. ALVAREZ; E. L. HUGHES; B. K. RANA; S. VINOGRADOV; G. A. LIGHT. *UCSD Sch. of Medicine, Dept of Psychiatry, UC San Francisco, Dept of Psychiatry.*

3:00 KKK50 **269.03** ● High-dose pyridoxamine add-on treatment for schizophrenia with enhaced carbonyl stress. M. MIYASHITA*; M. ARAI; K. TORIUMI; T. ICHIKAWA; Y. HORIUCHI; A. KOBORI; K. TAKAHASHI; T. TOKUNAGA; K. ISHIMOTO; H. YUZAWA; S. USAMI; T. YOSHIKAWA; Y. OKAZAKI; S. WASHIZUKA; N. AMANO; S. TAKIZAWA; T. MIYATA; M. ITOKAWA. *Tokyo Metoropolitan Inst. of Med. Sci., Meiji Pharmaceut. Univ., Tokyo Metropolitan Matsuzawa Hosp., Tokai Univ., Univ. of Tsukuba, RIKEN Brain Sci. Inst., Shinshu Univ. Sch. of Med., Tohoku Univ. Grad. Sch. of Med.*

4:00 KKK51 **269.04** Juvenile treatment with mGluR2 3 agonist LY379268 ameliorates learning deficits via enhancing NMDAR GluN2B function in a developmental model of schizophrenia. B. XING*; M. WANG; M. A. SNYDER; W. GAO. *Drexel Univ. Col. of Med.*

1:00 KKK52 **269.05** The role of P2X7 receptors in a rodent PCP-induced schizophrenia model. B. SPERLAGH*; B. KOVÁNYI; C. CSÖLLE; S. CALOVI; E. KATÓ; L. KÖLES; A. BHATTACHARYA; J. HALLER. *Inst. of Exptl. Med., Fac. of Medicine, Semmelweis Univ., Janssen Res. & Develop.*

2:00 KKK53 **269.06** ▲ Neurophysiological correlates of cognitive impairment in schizophrenia inpatients. W. ZHANG*; A. SHILUK; S. RACKELMANN; S. T. PIANKA; J. SPROCK; A. W. BISMARK; C. KAUFFMAN; M. L. THOMAS; M. TARASENKO; G. A. LIGHT. *UCSD, UCLA, Alpine Special Treatment Center, Inc.*

3:00 KKK54 **269.07** Effect of deficiency of vitamin B6 on mouse behavior and monoaminergic system. K. TORIUMI*; M. MIYASHITA; A. KOBORI; Y. HORIUCHI; I. NOHARA; N. OBATA; M. ITOKAWA; G. KONOPKA; M. ARAI. *Tokyo Metropolitan Inst. of Med. Sci., Univ. of Texas Southwestern Med. Ctr.*

4:00 KKK55 **269.08** ● Tolcapone improvement of cortical information processing in patients with schizophrenia is modulated by COMT val158met genotype. J. A. APUD*; Y. TONG; T. VARGAS; J. H. CALLICOTT; B. KOLACHANA; D. R. WEINBERGER; V. S. MATTAY; K. F. BERMAN. *NIH, Natl. Inst. of Mental Hlth., NIH, Natl. Inst. of Mental Hlth., CTNB-NIMH-NIH, HBCC-NIMH-NIH, Lieber Inst. for Brain Develop.*

1:00 KKK56 **269.09** Cortisol levels in schizophrenic patients treated with typical and atypical antipsychotic drugs. C. VEGA MICHEL*; M. ROJAS; S. MENESES-ORTEGA. *ITESO, A. C., Univ. de Guadalajara.*

2:00 KKK57 **269.10** N-acetyl-cysteine and environmental enrichment reversed the long-lasting effect of oxidative stress on PVI circuitry: Relevance for schizophrenia. D. DWIR*; J. CABUNGCAL; P. STEULLET; M. SCHNIDER; M. CUÉNOD; K. DO. *Ctr. For Psychiatric Neurosci. (CNP).*

3:00 KKK58 **269.11** ▲ Targeting an upstream neuromodulator of dopamine release rectifies a propsychotic response in a DREADD induced hyperdopaminergic state. T. COOMER*; E. E. RENN; R. DAS; E. B. OLESON. *Univ. of Colorado Denver.*

4:00 KKK59 **269.12** Impact of exercise training on prefrontal gray matter volume in schizophrenia. J. W. CHO; T. TESLOVICH; X. YOU; L. C. KORSHAK; J. P. POWELL; C. J. VAIDYA; P. KOKKINOS; B. L. SCHWARTZ*. *VA Med. Ctr., Natl. Intrepid Ctr. of Excellence, Children's Natl. Med. Ctr., Georgetown Univ.*

POSTER

270. Optical Methods Development

Theme I: Techniques

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 KKK60 **270.01** Mutlicolor two-photon excitation for increasing fluorescence excitation depth. M. YANG; C. G. FERRI*; P. A. SAISAN; M. ABASHIN; P. TIAN; A. DEVOR; Y. FAINMAN. *Univ. of California San Diego, Univ. of California San Diego, John Carroll Univ., Univ. of California San Diego, MGH/HMS.*

2:00 KKK61 **270.02** Mesoscale mapping of cortical neuron activity. N. J. SOFRONIEW*; D. FLICKINGER; J. FREEMAN; K. SVOBODA. *Janelia Farm Res. Campus / HHMI.*

3:00 KKK62 **270.03** Two-photon imaging of neurons using stereoscopy (TwINS). A. SONG*; A. S. CHARLES; S. Y. THIBERGE; J. L. GAUTHIER; S. KOAY; J. W. PILLOW; D. W. TANK. *Princeton Univ., Princeton Univ., Princeton Univ., Princeton Univ.*

4:00 KKK63 **270.04** Characterisation of spontaneous hippocampal circuit dynamics by two-photon minimal inertia scanning. R. SCHUCK*; P. QUICKE; A. FOUST; L. A. ANNECCHINO; C. COPELAND; S. GARASTO; S. R. SCHULTZ. *Imperial Col. London, Imperial Col. London.*

1:00 KKK64 **270.05** Miniaturized two-photon microscopy enabled single-spine resolution brain imaging in freely-behaving mice. W. ZONG*; R. WU; M. LI; H. JIA; Y. HU; Y. LI; H. RONG; Y. ZHANG; A. WANG; Z. ZHOU; L. CHEN; H. CHENG. *Inst. of Mol. Med.*

2:00 KKK65 **270.06** An implantable two-photon fiber-coupled microscope with electrically-tunable focus for applications to awake behaving mouse brain imaging. B. OZBAY*; G. L. FUTIA; M. MA; J. T. LOSACCO; D. RESTREPO; E. A. GIBSON. *Univ. of Colorado Anschutz Med. Campus, Univ. of Colorado Anschutz Med. Campus.*

3:00 KKK66 **270.07** Miniscope.org: An open-source miniature wide-field imaging platform and online collaborative resource. D. AHARONI*; T. SHUMAN; D. J. CAI; T. LU; S. FLORES; M. LA-VU; B. S. KHAKH; A. J. SILVA; P. GOLSHANI. *UCLA, UCLA, UCLA, UCLA, UCLA, UCLA.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 DP09 **270.08** (Dynamic Poster) Video-rate volumetric functional imaging of the brain with synaptic resolution. R. LU*; W. SUN; Y. LIANG; A. KERLIN; J. BIERFELD; J. SEELIG; D. WILSON; M. TANIMOTO; B. SCHOLL; B. MOHAR; M. KOYAMA; D. FITZPATRICK; V. JAYARAMAN; M. ORGER; N. JI. *Janelia Res. Campus, Champalimaud Neurosci. Programme, Ctr. of Advanced European Studies and Res., Max Planck Florida Inst. for Neurosci.*

1:00 KKK67 **270.09** Optimized volumetric live imaging with light field microscopy and selective volume illumination. T. V. TRUONG*; A. ANDREEV; S. MADAAN; D. HOLLAND; S. E. FRASER. *USC, USC.*

2:00 KKK68 **270.10** Optical monitoring of behavior-related calcium dynamics in 12 brain regions using a novel multi-fiber array. Y. SYCH*; F. HELMCHEN. *Brain Res. Institute, Univ. of Zurich.*

3:00 KKK69 **270.11** Swept confocally aligned planar excitation (SCAPE) microscopy for the identification of neural circuits in adult *Drosophila*. W. LI*; N. MISHRA; E. S. SCHAFFER; V. VOLETI; E. M. C. HILLMAN. *Columbia Univ., Columbia Univ., Columbia Univ.*

4:00 KKK70 **270.12** Design of a modular microscope for flexible, high-resolution imaging of neural activity in the non-human primate. J. CHOI*; V. GONCHAROV; J. KLEINBART; A. ORSBORN; B. PESARAN. *New York Univ., Janelia Res. Campus.*

1:00 LLL1 **270.13** Optical adaptor for subcortical two-photon microscopy. G. JUHASZ*; L. JUDAK; G. SZALAY; G. KATONA; P. MAAK; M. VERESS; B. ROZSA. *Pazmany Peter Catholic Univ., Inst. of Exptl. Med., Budapest Univ. of Technol. and Econ.*

2:00 LLL2 **270.14** Highly sensitive implantable imaging device for flavoprotein fluorescence imaging. Y. SUNAGA*; M. HARUTA; T. YAMAGUCHI; H. TAKEHARA; T. NODA; K. SASAGAWA; T. TOKUDA; J. OHTA. *Nara Inst. of Sci. and Technol.*

3:00 LLL3 **270.15** Deep brain fluorescence imaging using an ultra-thin optical fiber. S. OHAYON*; A. M. C. AGUIRRE; R. PIESTUN; J. DICARLO. *MIT, Boulder.*

4:00 LLL4 **270.16** High-fidelity functional and structural whole-brain imaging with Bessel-beam light-sheet microscopy. C. MUELLENBROICH*; L. SILVESTRI; L. TURRINI; A. P. DI GIOVANNA; T. ALTERINI; A. GHEISARI; P. RICCI; L. SACCONI; F. VANZI; F. S. PAVONE. *LENS, Univ. of Florence.*

1:00 LLL5 **270.17** Towards two-photon SCAPE microscopy for extended depth, fast volumetric imaging of brain function. H. YU*; P. T. GALWADUGE; W. LI; V. VOLETI; K. PATEL; E. M. C. HILLMAN. *Columbia Univ., Columbia Univ., Columbia Univ.*

2:00 LLL6 **270.18** Non-invasive functional neuroimaging in mice using structured illumination diffuse optical tomography. M. REISMAN*; Z. MARKOW; A. Q. BAUER; J. P. CULVER. *Washington Univ. In St. Louis.*

3:00 LLL7 **270.19** Super-field two-photon microscopy for simultaneous imaging of multiple cortical areas at cellular resolution. S. TERADA*; M. OHKURA; J. NAKAI; M. MATSUZAKI. *The Univ. of Tokyo, Kyoto Univ., Saitama Univ.*

4:00 LLL8 **270.20** 3D functional brain activity recording in zebrafish with compressive light field microscopy. D. P. MOSSING*; N. PEGARD; L. WALLER; H. ADESNIK. *Univ. of California, Berkeley, Univ. of California, Berkeley, Univ. of California, Berkeley, Univ. of California, Berkeley.*

1:00 LLL9 **270.21** 48-channel hyperspectral multiphoton microscopy in live mouse cortex. A. J. BARES*; M. A. PENDER; M. A. MEJOOLI; S. TILLEY; K. E. CHEN; J. DONG; P. C. DOERSCHUK; C. B. SCHAFFER. *Cornell Univ.*

2:00 LLL10 **270.22** Remote z-scanning with a macroscopic voice coil motor for fast 3D calcium imaging in the zebrafish olfactory system. P. RUPPRECHT*; R. W. FRIEDRICH; C. WYART; A. PRENDERGAST. *Friedrich Miescher Inst., Inst. du Cerveau et de la Moelle Épinière (ICM).*

3:00 LLL11 **270.23** ● A robust and simple adaptive optics module for multiphoton fluorescence microscopy of the brain. I. A. CHEN*; W. SUN; Y. LIANG; D. MILKIE; T. BIFANO; N. JI. *Howard Hughes Med. Inst., Boston Univ. Photonics Ctr.*

4:00 LLL12 **270.24** A modular system for transcranial optical imaging in behaving mice. B. R. MULLEN*; J. D. MAYO; S. L. HILL; A. FONG; J. B. ACKMAN. *UC Santa Cruz, UC Santa Cruz.*

1:00 LLL13 **270.25** Application of industrial product development principles to intrinsic signal imaging systems. C. FARRELL*; D. SULLIVAN; R. DIETZMAN; C. SLAUGHTERBECK; T. KEENAN; J. PERKINS; N. GAUDREAULT; A. BERNARD; M. GARRETT; F. LONG; L. NG; K. ROLL; W. WAKEMAN; J. PHILLIPS. *Allen Inst. For Brain Sci., Allen Inst. for Brain Sci.*

2:00 LLL14 **270.26** Photonflow: An open-source fluorescence microscopy simulator. S. DRAGLY*; M. WIGESTRAND; A. DEVOR; A. MALTHE-SØRENSSEN; G. T. EINEVOLL; T. HAFTING; M. FYHN. *Univ. of Oslo, Univ. of Oslo, UCSD, Norwegian Univ. of Life Sci., Univ. of Oslo.*

POSTER

271. Data Analysis and Statistics: Human Data II

Theme I: Techniques

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 LLL15 **271.01** Crowdsourced label learning for independent components of EEG data. L. PION-TONACHINI*; R. MARTINEZ-CANCINO; K. KREUTZ-DELGADO; S. MAKEIG. *Swartz Ctr. For Computat. Neurosci., UC San Diego.*

2:00 LLL16 **271.02** Adjusting permutation tests for multivariate analysis of neuroimaging data with subclasses. H. JAMALABADI*; S. ALIZADEH; M. SCHÖNAUER; S. GAIS. *Univ. of Tuebingen, IMPRS for Cognitive and Systems Neurosci.*

3:00 LLL17 **271.03** ▲ Neural oscillatory power is not Gaussian distributed across time. L. IZHIKEVICH*; E. PETERSON; B. VOYTEK. *UCSD.*

4:00 LLL18 **271.04** Improving detection and localization of spontaneous oscillatory dynamics in simultaneous EEG-fMRI. L. D. LEWIS*; G. BONMASSAR; K. SETSOMPOP; J. R. POLIMENI; B. R. ROSEN. *Harvard Univ., Massachusetts Gen. Hosp.*

1:00 LLL19 **271.05** Stability of representational similarity analysis across a large range of overall activation levels. S. ARBUCKLE*; A. YOKOI; J. DIEDRICHSEN. *Univ. of Western Ontario.*

2:00 LLL20 **271.06** Multivariate pattern connectivity. S. ANZELLOTTI*; A. CARAMAZZA; R. SAXE. *MIT, Harvard Univ., Ctr. for Mind/Brain Sci.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 LLL21 **271.07** Identification of "hot" local brain networks during motor sequence learning. Y. ZHAO; X. LUO; E. UPFAL; P. BÉDARD; J. N. SANES*. *Brown Univ., Brown Univ., Brown Univ.*

4:00 LLL22 **271.08** Cortical current source estimation improves detection of sensorimotor rhythm in resting-state: Validation through simultaneous EEG-fMRI recording in humans. S. SHIBUSAWA*; S. TSUCHIMOTO; S. KASUGA; K. KATO; E. YAMADA; H. EBATA; M. LIU; J. USHIBA. *Keio Univ., Keio Univ. Sch. of Med., Saiseikai Kanagawa-ken hospital, Keio Univ.*

1:00 LLL23 **271.09** Optimal resolution for searchlight classification of BOLD fMRI data? H. MANDELKOW; J. DE ZWART; D. PICCHIONI*; J. DUYN. *NIH, NIH.*

2:00 LLL24 **271.10** Improving predictive models using non-spherical Gaussian priors. A. O. NUNEZ-ELIZALDE*; A. G. HUTH; J. GALLANT. *UC Berkeley.*

3:00 LLL25 **271.11** Correlations between myelin water fraction, ratio of T1- and T2-weighted images, and diffusion tensor imaging measures in human brain white matter. M. UDDIN*; K. G. SOLAR; A. SHATIL; S. YOUNAS; S. M. COURTNEY; C. R. FIGLEY. *Univ. of Manitoba, Univ. of Manitoba, Univ. of Manitoba, Johns Hopkins University, MD, USA.*

4:00 LLL26 **271.12** Combining fMRI and ECoG using common naturalistic stimulus. A. C. CONNOLLY*; J. HAXBY; B. C. JOBST. *Dartmouth Col. Geisel Sch. of Med., Dartmouth, Geisel Sch. of Med. at Dartmouth.*

1:00 LLL27 **271.13** ● Association of gray matter imaging markers with alcoholism incorporating structural connectivity information: A regularized statistical approach. J. HAREZLAK*; M. KARAS; M. DZEMIDZIC; J. GONI; B. G. OBERLIN; D. A. KAREKEN. *Indiana Univ. RM Fairbanks Sch. of Publ. H, Indiana Univ. Sch. of Med., Purdue Univ.*

2:00 LLL28 **271.14** Supervised and blind voxel-based state space methods recover task-related states from fMRI responses. T. ZHANG*; J. GAO; J. GALLANT. *Univ. of California, Berkeley, Univ. of California, Berkeley, Univ. of California, Berkeley.*

3:00 LLL29 **271.15** ● Anatomical evaluation of Colin 27 against a database of labeled brain scans. A. J. WORTH*; J. A. TOURVILLE. *Neuromorphometrics, Inc., Boston Univ.*

4:00 LLL30 **271.16** LesionWarp: An automated approach to lesion mapping through the use of nonlinear registration techniques from popular neuroimaging pipelines. J. BRUSS; M. SUTTERER; D. WARREN; J. HESKJE; D. TRANEL*. *Univ. Iowa, Univ. of Nebraska Med. Ctr.*

1:00 LLL31 **271.17** Method to account for spatial bias in multimodal neuroimaging. N. J. HEUGEL*; S. BEARDSLEY; E. LIEBENTHAL. *Marquette Univ., Marquette Univ., Med. college of Wisconsin, Boston Univ., Med. college of Wisconsin, Bringham Women's Hosp. and Harvard Univ.*

2:00 LLL32 **271.18** ● Cortical parcellation for functional brain "fingerprinting". L. NIE; P. M. MATTHEWS*; Y. GUO. *Imperial Col. London, Div. of Brain Sciences, Dept of Medicine, Imperial Col. London.*

3:00 LLL33 **271.19** Using PLSC method to detect hyperacusis condition based on audiogram and fMRI data of tinnitus patients. N. GHAZALEH*; W. VAN DER ZWAAG; R. MAIRE; M. SAENZ; D. VAN DE VILLE. *École Polytechnique Fédérale De Lausanne (EPFL), Spinoza Ctr. for Neuroimaging, Royal Netherlands Acad. for Arts and Sci., Dept. of Otorhinolaryngology, Head and Neck Surgery, Lausanne Univ. Hosp., Dept. of Clin. Neurosciences, Lausanne Univ. Hosp., Dept. of Radiology and Med. Informatics, Univ. of Geneva.*

4:00 LLL34 **271.20** Classification of visual stimuli from electrocorticographic recordings using stacked autoencoders. S. CANCINO*; J. F. DELGADO SAA. *Univ. Del Norte.*

1:00 LLL35 **271.21** Exploring conductive materials for low-cost EEG phantom devices. W. HAIRSTON*; A. B. YU; B. BURKE; G. A. SLIPHER. *US Army Res. Lab., US Army Res. Lab., US Army Res. Lab.*

2:00 LLL36 **271.22** Getting ahead of ourselves: Fabricating an inexpensive EEG phantom. A. B. YU*; G. A. SLIPHER; W. D. HAIRSTON. *United States Army Res. Lab., United States Army Res. Lab., United States Army Res. Lab.*

3:00 LLL37 **271.23** Graph models and recursive feature elimination identify biomarkers of schizophrenia. D. MASTROVITO*; S. HANSON; C. HANSON. *Rutgers Univ., Rutgers Unviersity.*

4:00 LLL38 **271.24** Development of a targeted proteomics approach to unravel the molecular etiologies of synaptic pathologies. T. W. BRADSHAW*; A. UEZU; E. J. SODERBLOM; S. H. SODERLING. *Duke Univ., Duke Univ., Duke Univ., Duke Univ.*

POSTER

272. Data Analysis and Statistics: Software Tools II

Theme I: Techniques

Sun. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 LLL39 **272.01** Sophion Analyzer as a tool for biophysical and pharmacological characterization of eight Na_v subtypes evaluated in parallel on Qube. A. LINDQVIST; P. CHRISTOPHERSEN*; M. P. G. KORSGAARD; H. L. OLSEN; L. D. LØJKNER; T. BINZER. *Sophion A/S, Saniona.*

2:00 LLL40 **272.02** Fast, accurate spike sorting pipeline for large-scale extracellular recordings. J. J. JUN*; C. LAI; T. HARRIS. *HHMI - Janelia Res. Campus.*

3:00 LLL41 **272.03** The methodology of developing interleaved transcranial magnetic stimulation (TMS) with functional magnetic resonance imaging (fMRI) at UBC. R. GE*; A. DIPINTO; L. BARLOW; E. MACMILLAN; A. MACKAY; M. ALFONSO; F. VILA-RODRGUEZ. *Univ. of British Columbia, PLC Electronic Solutions Ltd.*

4:00 LLL42 **272.04** DeepNeuron: Applying convolutional networks as a web service for neuroscientists. J. WU, 08540; I. TARTAVULL; H. SEUNG*. *Princeton Neurosci. Institite, Princeton Univ., Princeton Univ.*

1:00 LLL43 **272.05** Hierarchical general-linear modeling of EEG data in EEGLAB and LIMO extension. R. MARTINEZ-CANCINO*; S. MAKEIG; C. PERNET; A. DELORME. *Swartz Ctr. for Computat. Neurosciences, Univ. of Edinburgh. Brain Res. Imaging Ctr.*

• Indicated a real or perceived conflict of interest, see page 140 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 LLL44 **272.06** ▲ Neurotransmitter identification Raman spectroscopy in rat brain. R. BELTRAN-RAMIREZ*; C. VENTURA-MEJIA; J. CHAVEZ-GARCIA; J. ESPINOZA-JR; C. GONZALEZ-SANDOVAL; R. MACIEL-ARELLANO; R. ZEPEDA-GOMEZ. *Univ. De Guadalajara, Ctr. de Enseñanza Tecnica Industrial.*

3:00 LLL45 **272.07** Advanced perception threshold estimation using neurophysiological and behavioral parameters. A. SCHILLING*; P. KRAUß; K. TZIRIDIS; H. SCHULZE. *Erlangen Univ. Hosp.*

4:00 LLL46 **272.08** NES: An open-source tool for management of neuroscience experimental data. A. C. ROQUE*; C. D. VARGAS; K. R. BRAGHETTO; E. S. ROCHA; M. RUIZ-OLAZAR; S. S. RABAÇA; C. E. RIBAS; A. S. NASCIMENTO. *Univ. de Sao Paulo, Univ. Federal do Rio de Janeiro, Univ. de São Paulo, Univ. Federal de Ouro Preto.*

1:00 LLL47 **272.09** The real-time experiment interface: A hard real-time closed-loop data acquisition system with sub-millisecond latencies. A. GEORGE*; Y. PATEL; F. ORTEGA; D. CHRISTINI; A. DORVAL; R. BUTERA; J. WHITE. *Weill Cornell Med. Col., Georgia Inst. of Technol., The Univ. of Utah, Boston Univ.*

2:00 LLL48 **272.10** A new method to analyze the synaptic connection between interneuron and pyramidal neuron in 3D mice brain. Q. XIA*; W. CAO; Y. DU; S. LIN; Q. YANG; J. LUO; J. XU; J. XIA. *Zhejiang Univ., The Hong Kong Univ. of Sci. and Technol.*

3:00 LLL49 **272.11** LabStreamingLayer: A general multi-modal data capture framework. D. E. MEDINE*; C. KOTHE; M. GRIVICH; S. MAKEIG. *Univ. of California San Diego, Qusp, Nerobehavioral Systems, UC San Diego.*

4:00 LLL50 **272.12** Total conductive flux analysis provides fast and physiologically relevant quantification of amyloid pore toxicity in bilayer recordings. A. L. GILLMAN*; J. PHANEUF; J. LEE; R. LAL. *UCSD, Worcester Polytechnic Inst., UCSD.*

1:00 LLL51 **272.13** Quantification of immunohistochemistry on adjacent sections comparing fluorescent and dab markers. J. BAUN*; C. ZURHELLEN; T. YORK; B. TIPTON; R. C. SWITZER, III. *Neurosci. Associates Inc.*

2:00 LLL52 **272.14** Web-based real-time 3D visualization framework for teravoxel volumes. J. KWON*; A. ASHWINI; S. RAGHAVAN; Y. CHOE; D. MAYERICH; T. HUFFMAN; M. GOODMAN; C. DANIEL. *Kettering Univ., Texas A&M Univ., Univ. of Houston, 3Scan.*

3:00 LLL53 **272.15** Multiple statistical comparisons. Is it really a problem? V. L. TSIBULSKY*. *Univ. Cincinnati.*

4:00 LLL54 **272.16** Automated functional analysis of astrocytes from chronic time-lapse calcium imaging data. G. YU*; Y. WANG; G. SHI; D. J. MILLER; Y. WANG; G. BROUSSARD; Y. WANG; L. TIAN. *Virginia Tech., UC Davis, The Pennsylvania State Univ.*

1:00 LLL55 **272.17** New Data Science tools for analyzing neural data and computational models. E. M. MEYERS*; M. DEAN; G. HALE. *Hampshire Col., Hampshire Col., MIT.*

2:00 LLL56 **272.18** The Allen cortical activity map data processing pipeline. F. LONG*; D. FENG; W. WAKEMAN; L. KUAN; Y. LI; T. FLISS; N. SJOQUIST; F. LEE; T. DOLBEARE; A. SODT; M. CHAPIN; C. BARBER; S. SHI; C. LAU; J. ZHUANG; J. PERKINS; C. THOMPSON; S. DE VRIES; J. LECOQ; M. GARRETT; G. OCKER; M. BUICE; A. BERNARD; M. HAWRYLYCZ; C. REID; J. PHILLIPS; H. ZENG; C. KOCH; L. NG. *Allen Inst. For Brain Sci., Allen Inst. for Brain Sci.*

3:00 LLL57 **272.19** Enabling large scale analysis of calcium imaging data on standalone machines. A. GIOVANNUCCI*; E. A. PNEVMATIKAKIS. *Simons Fndn.*

4:00 LLL58 **272.20** Bigneuron toolbox for neuron image acquisition, visualization, annotation, reconstruction, analysis, retrieval, and sharing. H. PENG*; Z. ZHOU; X. LIU; B. LONG; H. CHEN; Y. LI; Y. WAN; A. BRIA; T. BIGNEURON CONSORTIUM. *Allen Inst. For Brain Sci., Janelia Res. Campus, Univ. of Cassino, Allen Inst.*

1:00 LLL59 **272.21** Oculomatic: High speed, reliable, and accurate open-source eye tracking for humans and non-human primates. Y. VAZQUEZ; J. ZIMMERMANN; P. W. GLIMCHER; B. PESARAN; K. LOUIE*. *New York Univ.*

• Indicated a real or perceived conflict of interest, see page 140 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
100.03	**N. Kraus:** F. Consulting Fees (e.g., advisory boards); I'm chief scientific officer of Synaural, a company working to develop a user-friendly measure of auditory processing..
102	**B. De Strooper:** F. Consulting Fees (e.g., advisory boards); Janssen Pharmaceutica, Remynd NV, Forum pharmaceuticals.
102.02	**B. De Strooper:** F. Consulting Fees (e.g., advisory boards); Janssen Pharmaceutica.
102.03	**I. Bezprozvanny:** F. Consulting Fees (e.g., advisory boards); Ataxion, TEVA.
108.05	**N.M. Alam:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); CerebralMechanics Inc. **G.T. Prusky:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); CerebralMechanics Inc.
112.05	**L.J. Marnett:** 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; collaborative research contract with Lundbeck Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); co-inventor on a patent entitled "Composition and method of Substrate-Selective COX-2 inhibition". **S. Patel:** 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; collaborative research contract with Lundbeck Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); co-inventor on a patent entitled "Composition and method of Substrate-Selective COX-2 inhibition".
112.13	**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. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Johnson & Johnson.
115.13	**A. Pastuszak:** A. Employment/Salary (full or part-time); University of Birmingham. **S. Hanslmayr:** A. Employment/Salary (full or part-time); nversity of Birmingham. **K.L. Shapiro:** A. Employment/Salary (full or part-time); University of Birmingham.
116.06	**N. Grossman:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); N.G is a cofounder of a medical device company. N.G. is inventor on patent applications describing methods and devices for noninvasive brain stimulation. **D. Bono:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); D.B. is inventor on patent applications describing methods and devices for noninvasive brain stimulation. **E.S. Boyden:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); E.S.B. is inventor on patent applications describing methods and devices for brain stimulation.
117.02	**G. Wang:** A. Employment/Salary (full or part-time); Bio-techne. **L. Xiong:** A. Employment/Salary (full or part-time); bio-techne. **T. Gerassenkov:** A. Employment/Salary (full or part-time); bio-techne. **V. Kalabokis:** A. Employment/Salary (full or part-time); bio-techne. **A. Person:** A. Employment/Salary (full or part-time); bio-techne.
118.22	**K. Nishida:** A. Employment/Salary (full or part-time); Kyoto Pharmaceutical University. **A. Ohishi:** A. Employment/Salary (full or part-time); Kyoto Pharmaceutical University. **K. Nagasawa:** A. Employment/Salary (full or part-time); Kyoto Pharmaceutical University.
120.01	**M.A. Leon:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Mendability, LLC. **E. Aronoff:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Mendability, LLC. **R. Hillyer:** A. Employment/Salary (full or part-time); Mendability, LLC.
120.08	**E.C. Walsh:** A. Employment/Salary (full or part-time); Health Sciences and Technology Research Assistantship 2015-2016. **J.M. Lee:** A. Employment/Salary (full or part-time); Health Sciences and Technology (HST) Research Assistantship. **E.N. Brown:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Dr. Purdon is an inventor on patents pending on anesthetic brain monitoring that have been licensed by Massachusetts General Hospital to Masimo Corporation.. F. Consulting Fees (e.g., advisory boards); Masimo Corporation. **P.L. Purdon:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Dr. Purdon is an inventor on patents pending on anesthetic brain monitoring that have been licensed by Massachusetts General Hospital to Masimo Corporation.. F. Consulting Fees (e.g., advisory boards); Masimo Corporation.
120.22	**N. Yahata:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Advanced Telecommunications Research Institute International. **J. Morimoto:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Advanced Telecommunications Research Institute International. **R. Hashimoto:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Advanced Telecommunications Research Institute International. **G. Lisi:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Advanced Telecommunications Research Institute International. **K. Shibata:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Advanced Telecommunications Research Institute International. **H. Kuwabara:** D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); Kanekoshobo. **M. Kuroda:** D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); Kanekoshobo. **H. Imamizu:** D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); Shimadzu Co., Nippon Boehringer Ingelheim Co., Ltd.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Advanced Telecommunications Research Institute International. **H. 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; Takeda. D. Fees for Non-CME Services Received

PRESENTATION NUMBER	STATEMENT
	Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); Otsuka, Meiji Seika, MSD, Dainippon-Sumitomo, GlaxoSmithKline. **Y. Okamoto:** D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); Otsuka, Dainippon-Sumitomo, Astellas, Pfizer, Eli Lilly, Janssen, Meiji Seika Pharma, Mochida, Yoshitomi Yakuhin, Eizai, GlaxoSmithKline. **K. Kasai:** 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; Astellas, GlaxoSmithKline, Dainippon-Sumitomo, Eisai, MSD, Yoshitomi. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); Daiichi-Sankyo, Otsuka, Meiji Seika, MSD, Astellas, Yoshitomi, Novartis, Eli Lilly, Dainippon-Sumitomo, Janssen, GlaxoSmithKline, Pfizer. **N. Kato:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Advanced Telecommunications Research Institute International. **Y. Sasaki:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Advanced Telecommunications Research Institute International. **T. Watanabe:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Advanced Telecommunications Research Institute International. **M. Kawato:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Advanced Telecommunications Research Institute International.
121.05	**I. Watanabe:** A. Employment/Salary (full or part-time); Department of Cellular Neurobiology, Brain Research Institute, Niigata University.
122.14	**Z. Tang:** A. Employment/Salary (full or part-time); Nanjing University of Chinese Medicine, Jishou University,. **G. Yu:** A. Employment/Salary (full or part-time); Nanjing University of Chinese Medicine. **C. Wang:** A. Employment/Salary (full or part-time); Nanjing University of Chinese Medicine. **C. Zhu:** A. Employment/Salary (full or part-time); Nanjing University of Chinese Medicine. **Y. Yang:** A. Employment/ Salary (full or part-time); Nanjing University of Chinese Medicine. **X. Yuan:** A. Employment/Salary (full or part-time); Nanjing University of Chinese Medicine. **K. Tang:** A. Employment/Salary (full or part-time); Jishou University. **L. Lan:** A. Employment/Salary (full or part-time); Nanjing Normal University. **G. Wu:** A. Employment/Salary (full or part-time); Guangxi University of Chinese Medicine.
123.10	**Y. Dou:** A. Employment/Salary (full or part-time); Drexel University College of Medicine. **J. Xia:** A. Employment/ Salary (full or part-time); Drexel University College of Medicine. **R. Gao:** A. Employment/Salary (full or part-time); Drexel University College of Medicine. **H. Hu:** A. Employment/Salary (full or part-time); Drexel University College of Medicine.
123.19	**H. Wulff:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inventor on University of California patent claimining PAP-1 for immunsuppression.
124.06	**C.A. Friedman:** A. Employment/Salary (full or part-time); Advanced Targeting Systems. **B.J. Russell:** A. Employment/Salary (full or part-time); Advanced Targeting Systems. **M.D. Kohls:** A. Employment/Salary (full or part-time); Advanced Targeting Systems. **L.R. Ancheta:** A. Employment/Salary (full or part-time); Advanced Targeting Systems. **P.A. Shramm:** A. Employment/Salary (full or part-time); Advanced Targeting Systems. **D.A. Lappi:** 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; Advanced Targeting System.
124.15	**M. Nakanishi:** A. Employment/Salary (full or part-time); Ono Pharmaceutical Co., Ltd. **S. Kawaharada:** A. Employment/Salary (full or part-time); Ono Pharmaceutical Co., Ltd. **B. Bader:** A. Employment/Salary (full or part-time); NeuroProof GmbH. **O. Schröder:** A. Employment/ Salary (full or part-time); NeuroProof GmbH. **T. Yasuhiro:** A. Employment/Salary (full or part-time); Ono Pharmaceutical Co., Ltd. **S. Katsumata:** A. Employment/ Salary (full or part-time); Ono Pharmaceutical Co., Ltd..
124.16	**A. Palvolgyi:** A. Employment/Salary (full or part-time); Egis Pharmaceuticals PLC. **L. Etherington:** A. Employment/ Salary (full or part-time); Dundee University. **B. Mihalik:** A. Employment/Salary (full or part-time);Egis Pharmaceuticals PLC. **I. Ling:** A. Employment/Salary (full or part-time);Egis Pharmaceuticals PLC. **K. Pallagi:** A. Employment/Salary (full or part-time);Egis Pharmaceuticals PLC. **S. Kertesz:** A. Employment/Salary (full or part-time);Egis Pharmaceuticals PLC. **B.G. Gunn:** A. Employment/Salary (full or part-time); Dundee University. **A.R. Brown:** A. Employment/Salary (full or part-time); Dundee University. **M.R. Livesey:** A. Employment/Salary (full or part-time); Dundee University. **D. Belelli:** A. Employment/Salary (full or part-time); Dundee University. **J. Barkoczi:** A. Employment/Salary (full or part-time);Egis Pharmaceuticals PLC. **P. Varga:** A. Employment/Salary (full or part-time);Egis Pharmaceuticals PLC. **M. Spedding:** A. Employment/Salary (full or part-time); Institut de Recherches Servier. **I. Gacsalyi:** A. Employment/Salary (full or part-time);Egis Pharmaceuticals PLC. **J.J. Lambert:** A. Employment/Salary (full or part-time); Dundee University. **F. Antoni:** A. Employment/Salary (full or part-time);Egis Pharmaceuticals PLC.
125.07	**L.C. James:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pfizer Inc. **T. Lanz:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pfizer Inc. **M. Weber:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pfizer Inc. **J. Edgerton:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pfizer Inc. **A. Gutteridge:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pfizer Inc. **H. Xi:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pfizer Inc. **B. Kormos:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pfizer Inc. **P. O'Donnell:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Pfizer Inc.
127.06	**S. Sutton:** A. Employment/Salary (full or part-time); Janssen Research & Development, LLC. **B. Zhu:** A. Employment/Salary (full or part-time); Janssen Research & Development, LLC. **C. Flores:** A. Employment/Salary (full or part-time); Johnson & Johnson Consumer, Inc. **M. Macielag:** A. Employment/Salary (full or part-time); Janssen Research & Development, LLC. **P.J. Connolly:** A. Employment/Salary (full or part-time); Janssen Research & Development, LLC. **K. Chevalier:** A. Employment/Salary (full or part-time); Janssen Research & Development, LLC. **S. Zhang:** A. Employment/Salary (full or part-time); Janssen Research & Development, LLC. **A. Bhattacharya:** A. Employment/Salary (full or part-time); Janssen Research & Development, LLC. **M. Ameriks:** A. Employment/Salary (full or part-time); Janssen Research & Development, LLC. **N. Carruthers:** A. Employment/Salary (full or part-time); Janssen Research & Development, LLC. **T. Lovenberg:** A. Employment/Salary (full or part-time); Janssen Research & Development, LLC. **P. Bonaventure:** A. Employment/Salary (full or part-time); Janssen Research & Development, LLC.

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128.12	**H. Patel:** A. Employment/Salary (full or part-time); Biogen. **A.W. Dunah:** A. Employment/Salary (full or part-time); Biogen.
128.21	**M. Guillermo:** D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); Guillermo Monsalve is a consultant of Boston Scientific. **J.J. Sutachan:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); This work was funded by Boston Scientific to Jhon Sutachan.
129.08	**M.C. Micsenyi:** A. Employment/Salary (full or part-time); Biogen/full time employee. **R. Pandit:** A. Employment/Salary (full or part-time); Biogen/full time employee. **M. Wittmann:** A. Employment/Salary (full or part-time); Biogen/full time employee. **T. Bussiere:** A. Employment/Salary (full or part-time); Biogen/full time employee.
129.18	**R. Huang:** A. Employment/Salary (full or part-time); University of California, Los Angeles. Other; J. Yang and Family Foundation..
130.15	**C.C. Banos:** A. Employment/Salary (full or part-time); Biogen. **H. Patel:** A. Employment/Salary (full or part-time); Biogen. **A. Cheung:** A. Employment/Salary (full or part-time); Biogen. **A. Valencia:** A. Employment/Salary (full or part-time); Biogen. **P. Weinreb:** A. Employment/Salary (full or part-time); Biogen. **T. Bussiere:** A. Employment/Salary (full or part-time); Biogen. **M. Wittmann:** A. Employment/Salary (full or part-time); Biogen. **C. Henderson:** A. Employment/Salary (full or part-time); Biogen. **A.W. Dunah:** A. Employment/Salary (full or part-time); Biogen.
130.16	**A.M. Jablonski:** A. Employment/Salary (full or part-time); Merck & Co., Inc. **B. Connolly:** A. Employment/Salary (full or part-time); Merck & Co., Inc. **M. Usenovic:** A. Employment/Salary (full or part-time); Merck & Co., Inc. **R. Gentzel:** A. Employment/Salary (full or part-time); Merck & Co., Inc. **S. Parmentier-Batteur:** A. Employment/Salary (full or part-time); Merck & Co., Inc. **B. Voleti:** A. Employment/Salary (full or part-time); Merck & Co., Inc..
130.18	**A. Ahnaou:** A. Employment/Salary (full or part-time); Janssen Pharmaceutica. **K. Tahon:** A. Employment/Salary (full or part-time); Janssen Pharmaceitca. **L. Raeymaekers:** A. Employment/Salary (full or part-time); Janssen Pharmaceutica. **K. Van Kolen:** A. Employment/Salary (full or part-time); Janssen Pharmaceutica. **W.H. Drinkenburg:** A. Employment/Salary (full or part-time); Janssen Pharmaceutica.
130.24	**E.D. Roberson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Dr. Roberson is an owner of intellectual property related to tau..
131.07	**E.D. Roberson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Dr. Roberson is an owner of intellectual property related to tau..
131.09	**L. Mucke:** 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; For other studies from Bristol-Myers Squibb and Cure Network Dolby Acceleration Partners, an LLC whose Board appointed Dr. Mucke as a non-compensated officer.
131.20	**S.M. Strittmatter:** 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; S.M.S. is a co-founder of Axerion Therapeutics seeking to develop PrP-based therapeutics for Alzheimer's disease.
131.22	**U. Neumann:** A. Employment/Salary (full or part-time); Novartis AG. **D.R. Shimshek:** A. Employment/Salary (full or part-time); Novartis AG. **C. Haass:** F. Consulting Fees (e.g., advisory boards); advisor of F. Hoffmann - La Roche.
131.28	**R.A. Marr:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroLucent. **G.E. Stutzmann:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroLucent.
132.01	**M.C. Campbell:** 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. **W. Shannon:** A. Employment/Salary (full or part-time); Biorankings. 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. **J. Perlmutter:** 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. F. Consulting Fees (e.g., advisory boards); medical-legal consulting.
133.21	**E. Versi:** A. Employment/Salary (full or part-time); Eboo Pharmaceuticals Inc. **B.E. Reidenberg:** F. Consulting Fees (e.g., advisory boards); Eboo Pharmaceuticals Inc..
134.07	**B.M. Bader:** A. Employment/Salary (full or part-time); NeuroProof GmbH, Rostock, Germany. **K. Juegelt:** A. Employment/Salary (full or part-time); NeuroProof GmbH. **O.H. Schröder:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroProof GmbH.
135.04	**K.A. Svensson:** A. Employment/Salary (full or part-time); Emploment. **H.Y. Meltzer:** 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; Research Grant. F. Consulting Fees (e.g., advisory boards); Consultant.
135.05	**K.A. Svensson:** A. Employment/Salary (full or part-time); Eli Lilly and Company. 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; Chempartner. **J.P. Beck:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **J. Hao:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **J.M. Schaus:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **M.M. Menezes:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **D.L. Maren:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **J.F. Falcone:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **W.A. Anderson:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **K.L. Knopp:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **B.L. Adams:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **A.J. Harper:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **K.A. Wafford:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **C.R. Yang:** 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; Chempartner. **L. Zhang:** 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; Chempartner. **M.M. Masquelin:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **J.M. Witkin:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **X. Li:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **J.W. Cramer:**

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	A. Employment/Salary (full or part-time); Eli Lilly and Company. **R.F. Bruns:** A. Employment/Salary (full or part-time); Eli Lilly and Compnay.
136.02	**P.C. Bickford:** F. Consulting Fees (e.g., advisory boards); Nutrex, Hawaii.
138.06	**M. Han:** A. Employment/Salary (full or part-time); Northeastern University. **J. Kim:** A. Employment/Salary (full or part-time); Northeastern University.
139.01	**K.E. Richter:** A. Employment/Salary (full or part-time); Biogen. **M.S. Brennan:** A. Employment/Salary (full or part-time); Biogen. **Z. Xin:** A. Employment/Salary (full or part-time); Biogen. **E.Y.S. Lin:** A. Employment/Salary (full or part-time); Biogen. **B. Lucas:** A. Employment/Salary (full or part-time); Biogen. **R.H. Scannevin:** A. Employment/Salary (full or part-time); Biogen.
139.02	**M. Shirai:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Eisai Food Chemical Co, Ltd..
139.04	**J. Sirviö:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); E. **A. Muona:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); E. **M. Koistinaho:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); E. **G. Goldsteins:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); E. **J. Koistinaho:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); E.
139.05	**A.L. Pan:** 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; R01 DA020142 from the National Institute on Drug Abuse. **J.A. Angulo:** 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; R01 DA020142 from the National Institute on Drug Abuse.
139.10	**K. Fukui:** A. Employment/Salary (full or part-time); Shibaura Institute of Technology. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Eisai Food Chemical Co. Ltd..
141.08	**P. Ferchmin:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patents: US 9,000,030 B2; US 9,259,400 B2; US 9,259411 B2; US 9,259,411 B2. **V. Eterovic:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patents: US 9,000,030 B2; US 9,259,400 B2; US 9,259411 B2; US 9,259,411 B2.
141.14	**M. Shamloo:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Xamoterol patent has been put by Fortis Biosciences.
141.15	**I. Gacsályi:** A. Employment/Salary (full or part-time); Egis Pharmaceuticals. **G. Gigler:** A. Employment/Salary (full or part-time); Egis Pharmaceuticals. **K. Moricz:** A. Employment/Salary (full or part-time); Egis Pharmaceuticals. **J. Wellmann:** A. Employment/Salary (full or part-time); Egis Pharmaceuticals. **E. Mocaer:** A. Employment/Salary (full or part-time); Servier. **P. Machado:** A. Employment/Salary (full or part-time); Servier. **F. Antoni:** A. Employment/Salary (full or part-time); Egis Pharmaceuticals.
142.01	**A. Kroner-Milsch:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); IL23 ko mice: Genentech.
142.28	**D. Gadiagellan:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); There is a patent pending for this device (UK 1607278.7).. Other; A Director of Research Devices Limited which is a new start-up company founded with the goals of commercialising the device described in this Abstract. **L.D.F. Moon:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); There is a patent pending for this device (UK 1607278.7).. Other; A Director of Research Devices Limited which is a new start-up company founded with the goals of commercialising the device described in this Abstract.
143.10	**S. Park:** A. Employment/Salary (full or part-time); Daewooong Pharmaceutical Co., Ltd. **I. Kim:** A. Employment/Salary (full or part-time); Daewooong Pharmaceutical Co., Ltd. **S. Kim:** A. Employment/Salary (full or part-time); Daewooong Pharmaceutical Co., Ltd. **M. Jung:** A. Employment/Salary (full or part-time); Daewooong Pharmaceutical Co., Ltd. **H. Lee:** A. Employment/Salary (full or part-time); Daewooong Pharmaceutical Co., Ltd. **C. Lee:** A. Employment/Salary (full or part-time); Daewooong Pharmaceutical Co., Ltd. **B. Lee:** A. Employment/Salary (full or part-time); Daewooong Pharmaceutical Co., Ltd..
144.10	**T. Dalkara:** 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; Scientific and Technological Research Council of Turkey (TUBITAK) Research Grant (No:113S211) (PI: T.Dalkara), Turkish Academy of Sciences (TUBA), Hacettepe University Scientific Research Grant.
145.01	**C.M. Brenner:** 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; ChromaDex, Inc., Irvine, CA. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ChromaDex, Inc., Irvine, CA. F. Consulting Fees (e.g., advisory boards); ChromaDex, Inc., Irvine, CA.
145.02	**W. Gu:** A. Employment/Salary (full or part-time); Boston Scientific. **M. Moffitt:** A. Employment/Salary (full or part-time); Boston Scientific. **S. Hochman:** F. Consulting Fees (e.g., advisory boards); Boston Scientific.
145.03	**N.D. Crosby:** 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; Stryker Corporation. **J.J. Janik:** A. Employment/Salary (full or part-time); Stryker Corporation. **W.M. Grill:** 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; Stryker Corporation.
145.06	**W.G. Besio:** A. Employment/Salary (full or part-time); CREmedical.
145.12	**B. Fitzsimmons:** A. Employment/Salary (full or part-time); Ionis Pharmaceuticals. **A. Mohan:** A. Employment/Salary (full or part-time); Ionis Pharmaceuticals. **H. Zhao:** A. Employment/Salary (full or part-time); Ionis Pharmaceuticals. **Y. Jiang:** A. Employment/Salary (full or part-time); Ionis Pharmaceuticals. **S. Chun:** A. Employment/Salary (full or part-time); Ionis Pharmaceuticals. **F. Rigo:** A. Employment/Salary (full or part-time); Ionis Pharmaceuticals. **H. Kordasiewicz:** A. Employment/Salary (full or part-time); Ionis Pharmaceuticals. **E. Swayze:** A. Employment/Salary (full or part-time); Ionis Pharmaceuticals.
145.16	**L.A. Cortes-Burgos:** A. Employment/Salary (full or part-time); Regeneron Pharmaceuticals. E. Ownership

PRESENTATION NUMBER	STATEMENT
	Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Regeneron Pharmaceuticals. **E.F. Thayer:** A. Employment/Salary (full or part-time); Regeneron. **M. Gao:** A. Employment/Salary (full or part-time); Regeneron Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Regeneron Pharmaceuticals. **L. Xie:** A. Employment/Salary (full or part-time); Regeneron Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Regeneron Pharmaceuticals. **A. Rafique:** A. Employment/Salary (full or part-time); Regeneron Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Regeneron Pharmaceuticals. **J. Fairhurst:** A. Employment/Salary (full or part-time); Regeneron Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Regeneron Pharmaceuticals. **A. Badithe:** A. Employment/Salary (full or part-time); Regeneron Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Regeneron Pharmaceuticals. **R. Babb:** A. Employment/Salary (full or part-time); Regeneron Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Regeneron Pharmaceuticals. **F. Delfino:** A. Employment/Salary (full or part-time); Regeneron Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Regeneron Pharmaceuticals. **C. Hunt:** A. Employment/Salary (full or part-time); Regeneron Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Regeneron Pharmaceuticals. **W.T. Poueymirou:** A. Employment/Salary (full or part-time); Regeneron Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Regeneron Pharmaceuticals. **A.J. Murphy:** A. Employment/Salary (full or part-time); Regeneron Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Regeneron Pharmaceuticals. **L.E. Macdonald:** A. Employment/Salary (full or part-time); Regeneron Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Regeneron Pharmaceuticals. **S.D. Croll:** A. Employment/Salary (full or part-time); Regeneron Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Regeneron Pharmaceuticals.
145.19	**J.M. Kramer:** A. Employment/Salary (full or part-time); St. Jude Medical, Inc. **Q.H. Hogan:** 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; St. Jude Medical, Inc..
145.20	**R.M. Harper:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); UCLA. **E.K. Sauerland:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); self.
146.01	**R. Gujjar:** A. Employment/Salary (full or part-time); Organx, Inc. **A. Mahadevan:** A. Employment/Salary (full or part-time); Organx, Inc.
146.04	**Y. Darbaky:** A. Employment/Salary (full or part-time); ANS Biotech. **V. Maffre:** A. Employment/Salary (full or part-time); ANS Biotech. **L. Diop:** A. Employment/Salary (full or part-time); ANS Biotech.
146.10	**P.S. Pall:** A. Employment/Salary (full or part-time); Merck & Co., Inc. **J.D. Vardigan:** A. Employment/Salary (full or part-time); Merck & Co., Inc. **H.S. Lange:** A. Employment/Salary (full or part-time); Merck & Co., Inc. **J. Ballard:** A. Employment/Salary (full or part-time); Merck & Co., Inc. **A.K. Houghton:** A. Employment/Salary (full or part-time); Merck & Co., Inc. **C. Burgey:** A. Employment/Salary (full or part-time); Merck & Co., Inc. **M.E. Layton:** A. Employment/Salary (full or part-time); Merck & Co., Inc. **R.M. Kim:** A. Employment/Salary (full or part-time); Merck & Co., Inc. **J.M. Uslaner:** A. Employment/Salary (full or part-time); Merck & Co., Inc..
146.15	**B.L. Adams:** A. Employment/Salary (full or part-time); Eli Lilly & Co. **R.T. Gors:** A. Employment/Salary (full or part-time); Eli Lilly & Co. **F. Li:** A. Employment/Salary (full or part-time); CleverSys, Inc. **X. Bai:** A. Employment/Salary (full or part-time); CleverSys, Inc. **R.M.A. Simmons:** A. Employment/Salary (full or part-time); Eli Lilly & Co. **B. Forster:** A. Employment/Salary (full or part-time); Eli Lilly & Co. **V. Kobla:** A. Employment/Salary (full or part-time); CleverSys, Inc. **Y. Liang:** A. Employment/Salary (full or part-time); CleverSys, Inc. **K.L. Knopp:** A. Employment/Salary (full or part-time); Eli Lilly & Co..
146.17	**J.E. Zadina:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); JE Zadina.
146.19	**P. Rauhala:** F. Consulting Fees (e.g., advisory boards); Orion Pharma. **E. Kalso:** F. Consulting Fees (e.g., advisory boards); Orion Pharma, Gruenenthal. Other; Astra Zeneca. **M. Karelson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); GeneCode Ltd, Chemedest. **M. Saarma:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); GeneCode Ltd, Chemedest.
146.21	**S. Howard:** A. Employment/Salary (full or part-time); Xenon Pharmaceuticals. **G. Bankar:** A. Employment/Salary (full or part-time); Xenon Pharmaceuticals. **K. Nelkenbrecher:** A. Employment/Salary (full or part-time); Xenon Pharmaceuticals. **M. Waldbrook:** A. Employment/Salary (full or part-time); Xenon Pharmaceuticals. **Z. Xie:** A. Employment/Salary (full or part-time); Xenon Pharmaceuticals. **K. Khakh:** A. Employment/Salary (full or part-time); Xenon Pharmaceuticals. **E. Chang:** A. Employment/Salary (full or part-time); Xenon Pharmaceuticals. **C. Young:** A. Employment/Salary (full or part-time); Xenon Pharmaceuticals. **S. Lin:** A. Employment/Salary (full or part-time); Xenon Pharmaceuticals. **J.P. Johnson:** A. Employment/Salary (full or part-time); Xenon Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Xenon Pharmaceuticals. **L.E. Sojo:** A. Employment/Salary (full or part-time); Xenon Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Xenon Pharmaceuticals. **A. Lindgren:** A. Employment/Salary (full or part-time); Xenon Pharmaceuticals. **N. Chahal:** A. Employment/Salary (full or part-time); Xenon Pharmaceuticals. **S. Chowdhury:** A. Employment/Salary (full or part-time); Xenon Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Xenon Pharmaceuticals. **S. Decker:** A. Employment/Salary (full or part-time); Xenon Pharmaceuticals. **I. Hemeon:** A. Employment/Salary (full or part-time); Xenon Pharmaceuticals. **C.M. Dehnhardt:** A. Employment/Salary (full or part-time); Xenon Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Xenon

PRESENTATION NUMBER	STATEMENT
	Pharmaceuticals. **J. Chang:** A. Employment/Salary (full or part-time); Genentech. **B. Safina:** A. Employment/Salary (full or part-time); Genentech. **D.P. Sutherlin:** A. Employment/Salary (full or part-time); Genentech. **D. Hackos:** A. Employment/Salary (full or part-time); Genentech. **C.L. Robinette:** A. Employment/Salary (full or part-time); Xenon Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Xenon Pharmaceuticals. **C.J. Cohen:** A. Employment/Salary (full or part-time); Xenon Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Xenon Pharmaceuticals.
146.24	**J.S. Sprouse:** A. Employment/Salary (full or part-time); 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.
146.30	**C. Nodin:** A. Employment/Salary (full or part-time); Cellectricon. **C. Lindwall-Blom:** A. Employment/Salary (full or part-time); Cellectricon. **Å. Jägervall:** A. Employment/Salary (full or part-time); Cellectricon. **J. Pihl:** A. Employment/Salary (full or part-time); Cellectricon. **J. Svensson Dalén:** A. Employment/Salary (full or part-time); Cellectricon. **S. Lardell:** A. Employment/Salary (full or part-time); Cellectricon. **A. Karlsson:** A. Employment/Salary (full or part-time); Cellectricon. **M. Karlsson:** A. Employment/Salary (full or part-time); Cellectricon. **P. Karila:** A. Employment/Salary (full or part-time); Cellectricon.
147.14	**M. Nemenov:** A. Employment/Salary (full or part-time); LasMed LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); LasMed LLC.
148.10	**A.F. DaSilva:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); PainTrek, MoxyTech LLC, and University of Michigan.
148.19	**J. Kurata:** 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; KAKENHI #26460695.
148.23	**S.E. Harte:** 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; Cerephex, Forest Laboratories and Merck. F. Consulting Fees (e.g., advisory boards); Pfizer, Analgesic Solution, Aptinyx, deCode Genetics. **D.J. Clauw:** 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; Cerephex, Forest Laboratories, Merck and Pfizer. F. Consulting Fees (e.g., advisory boards); Tonix, Theravance, Cerephex, Pfizer, Abbot, Merck, Merck, Eli Lilly, UCB, Johnson & Johnson, Forest Laboratories and Purdue Pharma. **R.E. Harris:** 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; Pfizer. F. Consulting Fees (e.g., advisory boards); Pfizer.
150.08	**T. Knott:** A. Employment/Salary (full or part-time); Cytocentrics Inc. **J. Zhang:** A. Employment/Salary (full or part-time); Cytocentrics Inc..
151.26	**H. Oh:** A. Employment/Salary (full or part-time); University of Nebraska - Lincoln. **R. Custead:** A. Employment/Salary (full or part-time); University of Nebraska - Lincoln. **Y. Wang:** A. Employment/Salary (full or part-time); University of Nebraska - Lincoln. **S. Barlow:** A. Employment/Salary (full or part-time); University of Nebraska - Lincoln.

PRESENTATION NUMBER	STATEMENT
152.02	**J. Mainland:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Ajinomoto Co, Inc. **Y. Ihara:** A. Employment/Salary (full or part-time); Ajinomoto Co, Inc. **L. Vosshall:** F. Consulting Fees (e.g., advisory boards); International Flavors & Fragrances, Inc..
152.17	**A.R. Hirsch:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Smell and Taste Treatment and Research Foundation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Smell and Taste Treatment and Research Foundation.
155.06	**D.A. Brown:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Royalty KineAssist.
156.08	**J.W. Mink:** 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; Abeona Therapeutics Inc. F. Consulting Fees (e.g., advisory boards); Medtronic Inc, Biomarin Inc.
156.09	**J.W. Mink:** 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; Abeona Therapeutics Inc. F. Consulting Fees (e.g., advisory boards); Medtronic Inc, Biomarin Inc.
156.21	**V. Duveau:** A. Employment/Salary (full or part-time); SynapCell SAS. **B. Mandé-Niedergang:** A. Employment/Salary (full or part-time); SynapCell SAS. **R. Maury:** A. Employment/Salary (full or part-time); SynapCell SAS. **C. Dumont:** A. Employment/Salary (full or part-time); SynapCell SAS. **B. Pouyatos:** A. Employment/Salary (full or part-time); SynapCell SAS. **C. Roucard:** A. Employment/Salary (full or part-time); SynapCell SAS. **Y. Roche:** A. Employment/Salary (full or part-time); SynapCell SAS.
157.03	**K. Utsumi:** A. Employment/Salary (full or part-time); Research Institute of National Rehabilitation for Persons with Disabilities.
157.05	**A. Prochazka:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Rehabtronics Inc, Kinova Inc. **M. Blouin:** A. Employment/Salary (full or part-time); Kinova Inc..
158.06	**G.F. Forrest:** 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; New Jersey on Spinal Cord Research.
158.08	**A. Behrman:** D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); Neurorecovery Training Institute. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Oxford University Press, NeuroEd. F. Consulting Fees (e.g., advisory boards); NeuroEd.
158.09	**A.L. Behrman:** A. Employment/Salary (full or part-time); University of Louisville, Department of Neurological Surgery. 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, Kosair Charities Center for Pediatric NeuroRecovery, PI, Award from The Leona M. & Harry B. Helmsley Charitable Trust, PI, Award from Craig H. Neilsen Foundation, PI, Award from Coulter Translational Award. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroEd/NeuroRecovery Training Institute, Royalties from Oxford

PRESENTATION NUMBER	STATEMENT
	University Press. F. Consulting Fees (e.g., advisory boards); Grant Reviewer - VA RR and D, Grant Reviewer - Shriners' Childrens Hospitals.
158.10	**A.L. Behrman:** D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); NeuroRecovery Training Institute. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Oxford University Press. F. Consulting Fees (e.g., advisory boards); NeuroEd.
160.05	**S. Shigaki:** 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-in-Aid for JSPS Fellows 15J06227. **D. Kurabayashi:** 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-in-Aid for Scientific Research(C) 25420212.
161.15	**L.J. Young:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); LJY has applied for a patent for the use of MC4R agonists in the treatment of social cognitive deficits..
165.02	**D.A. Morilak:** 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 Research, USA. F. Consulting Fees (e.g., advisory boards); Psychopharmacology Advisory Board for H. Lundbeck A/S.
165.08	**G. Clarke:** 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; Health Research Board. **A.P. Allen:** 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; Health Research Board. **A. Ní Chorcoráin:** 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; Health Research Board. **J. Wall:** 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; Health Research Board. **P. Kearney:** 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; Health Research Board. **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; Health Research Board. **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; Health Research Board. **D.W. Molloy:** 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; Health Research Board.
166.01	**D.A. Granger:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Salimetrics LLC, SalivaBio LLC.
167.02	**A. Kalafateli:** Other; Elisabet Jerlhag. **D. Vallöf:** Other; Elisabet Jerlhag. **M. Heilig:** Other; Elisabet Jerlhag. **J. Engel:** Other; Elisabet Jerlhag. **E. Jerlhag:** Other; Elisabet Jerlhag.
170.08	**Y. Zhou:** A. Employment/Salary (full or part-time); Shanghai Jiaotong University, Brain Science and Technology Research Center, Bio-X Institutes, Key Laboratory for the Genetics of Development and Neuropsychiatric Disorders (Ministry of Education), Shanghai Key Laboratory of Psychotic Disorders.
171.02	**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; Janssen. F. Consulting Fees (e.g., advisory boards); Johnson and Johnson, Lundbeck, Pfizer, GSK, Merck, Takeda, Dainippon Sumitomo, Lilly, Otsuka, Roche, Asubio, Abbott.
171.09	**T. Kato:** A. Employment/Salary (full or part-time); Sumitomo Dainippon Pharma Co., Ltd..
171.10	**T. Kato:** A. Employment/Salary (full or part-time); Sumitomo Dainippon Pharma Co., Ltd..
171.13	**R.S. Duman:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Taisho Pharmaceuticals.
171.22	**P. Zanos:** Other; patent application/(2R,6R)-HNK. **R. Moaddel:** Other; co-inventor on a patent for (2R,6R)-HNK in the treatment of depression and neuropathic pain; patent application/(2R,6R)-HNK. **P.J. Morris:** Other; patent application/(2R,6R)-HNK. **I.W. Wainer:** Other; co-inventor on a patent for (2R,6R)-HNK in the treatment of depression and neuropathic pain. **C.J. Thomas:** Other; patent application/(2R,6R)-HNK. **C.A. Zarate:** Other; patent application/(2R,6R)-HNK. **T.D. Gould:** Other; patent application/(2R,6R)-HNK.
174.12	**R.V. Grandhi:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **R. Medapati:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **J. Tadiparthy:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **N. Ganuga:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **R. Abraham:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **P. Jayarajan:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **R. Nirogi:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd.
176.09	**R. Barlow:** A. Employment/Salary (full or part-time); Boehringer Ingelheim Pharma GmbH & Co. KG CNS Diseases. **J. Nicholson:** A. Employment/Salary (full or part-time); Boehringer Ingelheim Pharma GmbH & Co. KG CNS Diseases. **A. Pekcec:** A. Employment/Salary (full or part-time); Boehringer Ingelheim Pharma GmbH & Co. KG CNS Diseases.
178.06	**T.W. Robbins:** 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; T.W.R. has received research grants from Lilly, Lundbeck and GSK.. F. Consulting Fees (e.g., advisory boards); T.W.R. consults for Cambridge Cognition, Lilly, Lundbeck, Teva, Shire Pharmaceuticals and Merck, Sharp and Dohme..
182.23	**R.J. Sutherland:** 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; Litebook Company Ltd. **J.M. Sutherland:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a

PRESENTATION NUMBER	STATEMENT
	PI for a drug study, report that research relationship even if those funds come to an institution; Litebook Company Ltd. **R.J. McDonald:** 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; Litebook Company Ltd.
182.29	**C. Myrum:** A. Employment/Salary (full or part-time); National Institutes of Health. **S.L. Rossi:** A. Employment/Salary (full or part-time); National Institutes of Health. **E. Perez:** A. Employment/Salary (full or part-time); National Institutes of Health. **A.M. Morrow:** A. Employment/Salary (full or part-time); National Institutes of Health. **K.H. Schulze:** A. Employment/Salary (full or part-time); National Institutes of Health. **J.M. Long:** A. Employment/Salary (full or part-time); National Institutes of Health. **P.R. Rapp:** A. Employment/Salary (full or part-time); National Institutes of Health.
185.01	**A. Marblestone:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); A.B. is a co-inventor on multiple patents (assigned to MIT) on ExM and related technologies. **E. Boyden:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); E.S.B. is a co-inventor on multiple patents (assigned to MIT) on ExM and related technologies. E.S.B. is co-founder of a company, Expansion Technologies, aimed at helping to disseminate ExM..
185.02	**J. Chang:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Jae-Byum Chang, Fei Chen, Paul Tillberg, and Edward S. Boyden are co-inventors on a patent (assigned to MIT) on next-generation expansion microscopy. **F. Chen:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Jae-Byum Chang, Fei Chen, Paul Tillberg, and Edward S. Boyden are co-inventors on a patent (assigned to MIT) on next-generation expansion microscopy. **P. Tillberg:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Jae-Byum Chang, Fei Chen, Paul Tillberg, and Edward S. Boyden are co-inventors on a patent (assigned to MIT) on next-generation expansion microscopy. **E.S. Boyden:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Jae-Byum Chang, Fei Chen, Paul Tillberg, and Edward S. Boyden are co-inventors on a patent (assigned to MIT) on next-generation expansion microscopy., Edward S. Boyden is co-founder of a company, Expansion Technologies, aimed at helping disseminate ExM to the scientific community..
185.03	**A.T. Wassie:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); A.T.W is co-inventor on multiple patents (assigned to MIT) on ExM and related technologies. **J. Chang:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); J.-B.C. is co-inventor on multiple patents (assigned to MIT) on ExM and related technologies. **E.S. Boyden:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); E.S.B. is co-inventor on multiple patents (assigned to MIT) on ExM and related technologies., He is co-founder of a company, Expansion Technologies, aimed at helping disseminate ExM to the scientific community..
185.05	**A. Wassie:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); A.W is a co-inventor on a patent (assigned to MIT) on ExFISH. **F. Chen:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); F.C. is a co-inventor on a patent (assigned to MIT) on ExFISH. **S. Alon:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); S.A. is a co-inventor on a patent (assigned to MIT) on ExFISH. **E.S. Boyden:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); E.S.B. is a co-inventor on a patent (assigned to MIT) on ExFISH. E.S.B. is a co-founder of a company, Expansion Technologies, aimed at helping disseminate ExM to the scientific community..
185.06	**J. Chang:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Co-inventor on patents (assigned to MIT) on ExM and related technologies. **A. Marblestone:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Co-inventor on patents (assigned to MIT) on ExM and related technologies. **E.S. Boyden:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Co-inventor on patents (assigned to MIT) on ExM and related technologies., Co-founder of a company, Expansion Technologies, aimed at helping disseminate ExM to the scientific community..
186.03	**J.H. Price:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Owner, Hudson Price Designs, LLC.
186.10	**R.L. McIntyre:** A. Employment/Salary (full or part-time); 21st Century Medicine, Nectome Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Nectome Inc.
187.02	**A. Etkin:** F. Consulting Fees (e.g., advisory boards); Otsuka.
187.03	**G. Lisi:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ATR Institute International. **J. Morimoto:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ATR Institute International. **N. Yahata:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ATR Institute International. **R. Hashimoto:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ATR Institute International. **N. Kato:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ATR Institute International. **K. Kasai:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ATR Institute International. **M. Kawato:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ATR Institute International.
187.04	**J.A. Sweeney:** 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; Janssen. F. Consulting Fees (e.g., advisory boards); Bristol-Myers Squibb, Eli Lilly, Pfizer, Roche, Takeda. **M.S. Keshavan:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Sunovion, GlaxoSmithKline. **C.A. Tamminga:** F. Consulting Fees (e.g., advisory boards); Intra-Cellular Therapies, Eli Lilly, Sunovion, Astellas, Pfizer, Merck.
187.10	**H. Yamagata:** 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; Integrated Research on Neuropsychiatric Disorders" conducted under the Strategic

PRESENTATION NUMBER	STATEMENT
	Research Program for Brain Sciences from the MEXT and AMED, GSK Japan Research Grant, This study is not for the effect or the side-effect of antidepressants, therefore the authors declare that there are no financial conflicts of interest associated with this s, JSPS KAKENHI 16K10189.
187.11	**G.A. Light:** F. Consulting Fees (e.g., advisory boards); Forum, Boehringer-Ingelheim, Merck, Astellas.
187.12	**B. Pouyatos:** A. Employment/Salary (full or part-time); synapcell S.A.S. 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; COinside project (BPI France, La Metro Grenoble). **C. Touller:** A. Employment/Salary (full or part-time); synapcell, S.A.S. 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; COinside project (BPI France, La Metro Grenoble). **R. Maury:** A. Employment/Salary (full or part-time); synapcell, S.A.S. 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; COinside project (BPI France, La Metro Grenoble). **C. Dumont:** A. Employment/Salary (full or part-time); synapcell, S.A.S. 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; COinside project (BPI France, La Metro Grenoble). **C. Roucard:** A. Employment/Salary (full or part-time); synapcell, S.A.S. 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; COinside project (BPI France, La Metro Grenoble). **Y. Roche:** A. Employment/Salary (full or part-time); synapcell, S.AS. 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; COinside project (BPI France, La Metro Grenoble). **V. Duveau:** A. Employment/Salary (full or part-time); synapcell, S.A.S. 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; COinside project (BPI France, La Metro Grenoble).
187.13	**P. Danjou:** A. Employment/Salary (full or part-time); Biotrial. **G. Viardot:** A. Employment/Salary (full or part-time); Biotrial. **P. L'hostis:** A. Employment/Salary (full or part-time); Biotrial. **N. Fauchoux:** A. Employment/Salary (full or part-time); Biotrial. **E. Cayre:** A. Employment/Salary (full or part-time); Biotrial. **C. Macsweeney:** A. Employment/Salary (full or part-time); Biotrial. **S.C. Leiser:** A. Employment/Salary (full or part-time); Lundbeck. **L. Breuning Sluth:** A. Employment/Salary (full or part-time); Lundbeck. **S. Rahn Christensen:** A. Employment/Salary (full or part-time); Lundbeck.
188.01	**B. Mota:** A. Employment/Salary (full or part-time); UFRJ. **P. Mattos:** A. Employment/Salary (full or part-time); IDOR. **F. Tovar-Moll:** A. Employment/Salary (full or part-time); UFRJ.
188.07	**J.K. Mai:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); MR-X-BRAIN GmbH Duesseldorf. **M. Majtanik:** 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; Mr-X-Brain GmbH, Duesseldorf.
188.24	**R. Madhavan:** A. Employment/Salary (full or part-time); General Electric. **B.R. Sundar:** A. Employment/Salary (full or part-time); General Electric. **S.E. Joel:** A. Employment/Salary (full or part-time); General Electric.
190	**G. Petzinger:** F. Consulting Fees (e.g., advisory boards); US World Meds.
190.04	**G. Petzinger:** F. Consulting Fees (e.g., advisory boards); US World Meds.
193	**E. Wang:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending grants already received.) If you are a **principal investigator** for a drug study, you must report that research relationship here e; Biogen Idec. F. Consulting Fees (e.g., advisory boards); Pfizer, Metastat, 5AM Ventures.
193.02	**E. Wang:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending grants already received.) If you are a **principal investigator** for a drug study, you must report that research relationship here e; Biogen Idec. F. Consulting Fees (e.g., advisory boards); Pfizer, Metastat, 5AM Ventures.
195	**J.G. Parker:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Jones Parker receives research support from Pfizer R&D. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Jones Parker owns Pfizer stocks..
195.02	**J.G. Parker:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Jones Parker receives research support from Pfizer R&D. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Jones Parker owns Pfizer stocks..
198.02	**M. Apostolopoulou:** A. Employment/Salary (full or part-time); Rensselaer Polytechnic Institute, Neural Stem Cell Institute. 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; Department of Defense, National Institute of Aging. **T. Kiehl:** A. Employment/Salary (full or part-time); Neural Stem Cell Institute. 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 of Aging. **M. Winter:** A. Employment/Salary (full or part-time); Drexel 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; National Institute of Aging. **E. Cardenas:** A. Employment/Salary (full or part-time); Drexel 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; National Institute of Aging. **S. Goderie:** A. Employment/Salary (full or part-time); Neural Stem Cell Institute. 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 of Aging. **Y. Wang:** A. Employment/Salary (full or part-time); Neural Stem Cell Institute. 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 of Aging. **A. Cohen:** A. Employment/Salary (full or part-time); Drexel University. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a

PRESENTATION NUMBER	STATEMENT
	PI for a drug study, report that research relationship even if those funds come to an institution; National Institute of Aging. **S. Temple:** A. Employment/Salary (full or part-time); Neural Stem Cell Institute. 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 of Aging.
199.09	**E. Sigurdsson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); H. Lundbeck.
199.10	**E.M. Sigurdsson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); inventor of patented technology.
200.07	**J.K. Virdee:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **Y. Sinha:** A. Employment/Salary (full or part-time); Eli lilly and Company. **A. Fouillet:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **S. Eversden:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **M. O'Neill:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **J. Wolak:** A. Employment/Salary (full or part-time); Eli lilly and Company. **D. Ursu:** A. Employment/Salary (full or part-time); Eli lilly and Company.
200.08	**E.L. Mead:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **Y. Sinha:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **S. Eversden:** A. Employment/Salary (full or part-time); Eli Lilly. **J. Virdee:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **D. Ursu:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **M. O'Neill:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **M. Hutton:** A. Employment/Salary (full or part-time); Eli Lilly and Company. **J. Wolak:** A. Employment/Salary (full or part-time); Eli Lilly and Company.
200.13	**A. Blockeel:** A. Employment/Salary (full or part-time); Eli Lilly. **M. Albasser:** A. Employment/Salary (full or part-time); Eli Lilly. **G. Ferrati:** A. Employment/Salary (full or part-time); Eli Lilly. **A. Fisher:** A. Employment/Salary (full or part-time); Eli Lilly. **S. Meftah:** A. Employment/Salary (full or part-time); Eli Lilly. **T. Murray:** A. Employment/Salary (full or part-time); Eli Lilly. **K. Phillips:** A. Employment/Salary (full or part-time); Eli Lilly.
201.05	**W.J. Meilandt:** A. Employment/Salary (full or part-time); Genentech. **S. Dominguez:** A. Employment/Salary (full or part-time); Genentech. **H. Lin:** A. Employment/Salary (full or part-time); Genentech. **H. Ngu:** A. Employment/Salary (full or part-time); Genentech. **A. Sengupta Ghosh:** A. Employment/Salary (full or part-time); Genentech. **Z. Jiang:** A. Employment/Salary (full or part-time); G. **M. Siu:** A. Employment/Salary (full or part-time); Genentech. **X. Liu:** A. Employment/Salary (full or part-time); Genentech. **Y. Rudhard:** A. Employment/Salary (full or part-time); Evotec. **M. Baca:** A. Employment/Salary (full or part-time); Genentech. **A. Gustafson:** A. Employment/Salary (full or part-time); Genentech. **O. Foreman:** A. Employment/Salary (full or part-time); Genentech.
201.11	**K.C. Roet:** F. Consulting Fees (e.g., advisory boards); Member of the Product Development Advisory Board of Thrive Bioscience.
203.03	**P. Narayanan:** A. Employment/Salary (full or part-time); Max Planck Institute of Experimental Medicine.
203.05	**Y. Moayedi:** 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; Nestec. **C. Tong:** 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; Nestec. **S. Michlig:** A. Employment/Salary (full or part-time); Nestec. **J. le Coutre:** A. Employment/Salary (full or part-time); Nestec. **B. Le Révérend:** A. Employment/Salary (full or part-time); Nestec. **E.A. Lumpkin:** 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; Nestec.
206.01	**C.K. McIntyre:** 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; Author is co-PI on an NIH small business grant (SBIR) shared with Microtransponder, Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Author holds a patent on enhancing exposure therapy using vagus nerve stimulation.
208.19	**I. Vukmanovic Nosrat:** A. Employment/Salary (full or part-time); Western University of Health Sciences, Karolinska Institutet. 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; Intramural Grant Western University on Health Sciences 12356D, R01-RDC007628 NIDCD.
209.02	**P.G. Haydon:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); GliaCure.
209.08	**A. Hadjihambi:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Funded by Grand Challenges UCL.
209.21	**J. Clark:** A. Employment/Salary (full or part-time); Salisbury University.
210.02	**D.W. Pitathomas:** A. Employment/Salary (full or part-time); Washington university.
211.12	**P.G. Haydon:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); GliaCure.
212.08	**S.J. Siegel:** 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; SJ Siegel reports grant support from Astellas, and Merck. F. Consulting Fees (e.g., advisory boards); SJ Siegel reports consulting payments from Astellas, and Zynerba. **T.P.L. Roberts:** F. Consulting Fees (e.g., advisory boards); Dr. Roberts discloses consulting arrangements with Prism Clinical Imaging, Siemens Medical Solutions, Elekta Oy, Guerbet and Johnson and Johnson (Janssen division).
212.14	**A. Jannati:** A. Employment/Salary (full or part-time); Natural Sciences and Engineering Council of Canada (NSERC) Postdoctoral Fellowship. **A. Pascual-Leone:** F. Consulting Fees (e.g., advisory boards); Neosync - Member of Scientific Advisory Board, Starlab - Member of Scientific Board, Neuroelectrics - Member of Scientific Board, Neuronix - Member of Medical and Scientific Advisory Board, Nexstim - Advisory Board Member, Magstim - Advisory Board Member, Axilum Robotics - Advisory Board Member.
213.02	**M. Vukicevic:** A. Employment/Salary (full or part-time); AC Immune SA. **R. Madani:** A. Employment/Salary (full or part-time); AC Immune SA. **L. Rey-Bellet:** A. Employment/Salary (full or part-time); AC Immune SA. **M. Pihlgren:** A. Employment/Salary (full or part-time); AC Immune SA. **A. Plassard:** A. Employment/Salary (full or part-time); AC Immune SA. **S. Vuillermot:** A. Employment/Salary (full or part-time); AC Immune SA. **A. Silva:** A. Employment/Salary (full or part-time); AC Immune SA. **V. Giriens:** A. Employment/Salary (full or part-time); AC Immune SA. **D.T. Hickman:** A. Employment/Salary (full or part-time); AC Immune SA. **P. Reis:** A. Employment/Salary (full or part-time); AC Immune SA. **A. Granet:** A. Employment/

PRESENTATION NUMBER	STATEMENT
	Salary (full or part-time); AC Immune SA. **D. Mlaki:** A. Employment/Salary (full or part-time); AC Immune SA. **M. Lopez-Deber:** A. Employment/Salary (full or part-time); AC Immune SA. **A. Pfeifer:** A. Employment/Salary (full or part-time); AC Immune SA. **A. Muhs:** A. Employment/Salary (full or part-time); AC Immune SA.
213.13	**P.A. Caviedes:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); PC declares patent protection on CNh and CTb cell lines.
214.08	**K.K. Ptaszek:** 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; This project was financed by the National Science Centre Poland on the basis of decision DEC-2014/15/N/NZ4/04844.
215.10	**Z. Wei:** A. Employment/Salary (full or part-time); HHMI Janelia Research Campus. **Y. Wan:** A. Employment/Salary (full or part-time); HHMI Janelia Research Campus. **P. Keller:** A. Employment/Salary (full or part-time); HHMI Janelia Research Campus. **S. Druckmann:** A. Employment/Salary (full or part-time); HHMI Janelia Research Campus.
215.15	**M. Buyukmumcu:** A. Employment/Salary (full or part-time); Meram Medical school. **E. Cihan:** A. Employment/Salary (full or part-time); DEHA Rehabilitation Center. **A. Aydin kabakcı:** A. Employment/Salary (full or part-time); Meram Medical School. **D. Akin:** A. Employment/Salary (full or part-time); Meram Medical school. **S. Gungorer:** A. Employment/Salary (full or part-time); Meram Education and Research Hospital.
217.11	**T.J. Stachniak:** A. Employment/Salary (full or part-time); F. Hoffman La Roche. **E.L. Sylwestrak:** A. Employment/Salary (full or part-time); F. Hoffmann La Roche. **B.J. Hall:** A. Employment/Salary (full or part-time); F. Hoffmann La Roche. **A. Ghosh:** A. Employment/Salary (full or part-time); F. Hoffmann La Roche, E-Scape Bio.
217.15	**D.P. Budac:** A. Employment/Salary (full or part-time); Lundbeck. **D. Song:** A. Employment/Salary (full or part-time); Lundbeck. **M. Cajina:** A. Employment/Salary (full or part-time); Lundbeck. **A. Lee:** A. Employment/Salary (full or part-time); Lundbeck. **B.M. Campbell:** A. Employment/Salary (full or part-time); Lundbeck. **G. Li:** A. Employment/Salary (full or part-time); Lundbeck. **C. Sánchez:** A. Employment/Salary (full or part-time); Lundbeck. **C. Forray:** A. Employment/Salary (full or part-time); Lundbeck. **V.S. Palamarchouk:** A. Employment/Salary (full or part-time); Psychogenics. **G.N. Smagin:** A. Employment/Salary (full or part-time); Lundbeck.
217.16	**G. Smagin:** A. Employment/Salary (full or part-time); Lundbeck, PsychoGenics. **D.P. Budac:** A. Employment/Salary (full or part-time); Lundbeck. **M. Cajina:** A. Employment/Salary (full or part-time); Lundbeck. **A. Lee:** A. Employment/Salary (full or part-time); Lundbeck. **B. Campbell:** A. Employment/Salary (full or part-time); Lundbeck. **G. Li:** A. Employment/Salary (full or part-time); Lundbeck. **C. Sanchez:** A. Employment/Salary (full or part-time); Lundbeck. **C. Forray:** A. Employment/Salary (full or part-time); Lundbeck. **V.S. Palamarchouk:** A. Employment/Salary (full or part-time); Psychogenics. **D. Song:** A. Employment/Salary (full or part-time); PsychoGenics.
217.24	**F. Knoflach:** A. Employment/Salary (full or part-time); F. Hoffmann-La Roche AG. **M. Hernandez:** A. Employment/Salary (full or part-time); F. Hoffmann-La Roche AG. **M. Saxe:** A. Employment/Salary (full or part-time); F. Hoffmann-La Roche AG. **S. Bertrand:** A. Employment/Salary (full or part-time); HiQScreen Sàrl. **D. Bertrand:** A. Employment/Salary (full or part-time); HiQScreen Sàrl.
219.06	**R.A. Volkmann:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Luc Therapeutics, Inc. **F.S. Menniti:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Luc Therapeutics, Inc. **K.B. Hansen:** 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; Luc Therapeutics, Inc.. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Luc Therapeutics, Inc.. F. Consulting Fees (e.g., advisory boards); Luc Therapeutics, Inc..
219.12	**M. Weber:** A. Employment/Salary (full or part-time); Genentech. **J. Elstrott:** A. Employment/Salary (full or part-time); Genentech. **Y. Chen:** Other; Employee of Genetech when experiments were conducted. **T. Wang:** A. Employment/Salary (full or part-time); Genentech. **Z. Jiang:** A. Employment/Salary (full or part-time); Genentech. **B. Liederer:** A. Employment/Salary (full or part-time); Genentech. **G. Deshmukh:** A. Employment/Salary (full or part-time); Genentech. **C. Chan:** A. Employment/Salary (full or part-time); Genentech. **B. Sellers:** A. Employment/Salary (full or part-time); Genentech. **M. Volgraf:** A. Employment/Salary (full or part-time); Genentech. **J. Schwarz:** A. Employment/Salary (full or part-time); Genentech. **D. Hackos:** A. Employment/Salary (full or part-time); Genentech. **R. Weimer:** A. Employment/Salary (full or part-time); Genentech. **M. Sheng:** A. Employment/Salary (full or part-time); Genentech. **K. Scearce-Levie:** Other; Employee of Genentech when experiments were conducted. **J. Hanson:** A. Employment/Salary (full or part-time); Genentech.
219.14	**T. Wang:** A. Employment/Salary (full or part-time); Genentech. **D.H. Hackos:** A. Employment/Salary (full or part-time); Genentech. **B.M. Brown:** A. Employment/Salary (full or part-time); Genentech. **B.D. Sellers:** A. Employment/Salary (full or part-time); Genentech. **P.J. Lupardus:** A. Employment/Salary (full or part-time); Genentech. **H.J.A. Wallweber:** A. Employment/Salary (full or part-time); Genentech. **E. Wong:** A. Employment/Salary (full or part-time); Genentech. **M. Volgraf:** A. Employment/Salary (full or part-time); Genentech. **J.B. Schwarz:** A. Employment/Salary (full or part-time); Genentech. **J.E. Hanson:** A. Employment/Salary (full or part-time); Genentech.
219.18	**O.H. Miller:** A. Employment/Salary (full or part-time); Hoffman-La Roche.
219.22	**S.F. Traynelis:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Janssen. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeurOp. F. Consulting Fees (e.g., advisory boards); NeurOp, Pfizer, Janssen.
222.07	**L.M. Savage:** A. Employment/Salary (full or part-time); Binghamton University State University of New York. 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; NIAAA (RO1AA021775) and the NINDS (R21NS085502) to LMS.
224.08	**O. Steward:** Other; co-founder of the company called “Axonis.”.
224.09	**D.G. Wheeler:** A. Employment/Salary (full or part-time); Dart NeuroScience LLC. **Y. Beaver:** A. Employment/Salary (full or part-time); Dart NeuroScience. **J. Lapira:** A. Employment/Salary (full or part-time); Dart NeuroScience. **K. Maruyama:** A. Employment/Salary (full or part-time); Dart NeuroScience. **F. Serneo:** A. Employment/Salary (full or part-time); Dart NeuroScience. **D. Elow:** A. Employment/Salary (full or part-time); Dart NeuroScience. **K. Baumgaertel:** A. Employment/Salary (full or part-time); Dart NeuroScience. **R. Scott:** A. Employment/Salary (full or part-time); Dart NeuroScience. **M. Peters:** A. Employment/Salary (full or part-time); Dart NeuroScience.

PRESENTATION NUMBER	STATEMENT
224.19	**J.J. Orczyk:** A. Employment/Salary (full or part-time); Indiana University Bloomington. **P.E. Garraghty:** A. Employment/Salary (full or part-time); Indiana University Bloomington.
225.04	**P.P. Kulkarni:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ekam Imaging Inc. **M. Nedelman:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ekam Imaging Inc. **C.F. Ferris:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ekam Imaging Inc.
225.05	**P. Kulkarni:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ekam Imaging Inc. **M. Nedelman:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ekam Imaging Inc. **C.F. Ferris:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ekam Imaging Inc..
225.06	**C.F. Ferris:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Animal Imaging Research, Ekam Imaging. **P. Kulkarni:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ekam Imaging. **M. Nedelman:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ekam Imaging.
225.14	**B. Casali:** A. Employment/Salary (full or part-time); Brad Casali, Gary Landreth. Other; Gary Landreth. **G. Landreth:** A. Employment/Salary (full or part-time); Gary Landreth. Other; Gary Landreth.
225.16	**B.P. Taylor:** A. Employment/Salary (full or part-time); I am a Teacher Assistant at San Diego State University. **S. Risacher:** A. Employment/Salary (full or part-time); Researcher at IUPUI Neuroscience Center. **J. Krantz:** A. Employment/Salary (full or part-time); Professor of Psychology at Hanover College.
225.18	**W. Xia:** 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 support by American River Nutrition. **C. Shen:** 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; American River Nutrition. **H. Mo:** 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; American River Nutrition.
226.17	**J. Sanchez-Padilla:** 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; Research sponsored by CHDI Foundation. **G. Tombaugh:** 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; Research sponsored by CHDI Foundation. **S. Gelman:** 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; Research sponsored by CHDI Foundation. **K. Kretschmannova:** 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; Research sponsored by CHDI Foundation. **J. Palma:** 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; Research sponsored by CHDI Foundation. **A. Ghavami:** 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; Research sponsored by CHDI Foundation.
228.04	**W.P. Clarke:** 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; Calico Life Sciences.
228.19	**S. Bloomfield:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Equity interest in new startup company Connexin Pharmaceutics.
228.21	**M. Calkins:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); FTC and TDF were supplied by Gilead.
228.22	**B.M. Cook:** 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; Eisai. **S.J. Benbow:** 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; Eisai. **K.M. Wozniak:** 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; Eisai. **B.S. Slusher:** 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; Eisai. **Y. Wu:** 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; Eisai. **B.A. Littlefield:** 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; Eisai. **M.A. Jordan:** 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; Eisai. **L. Wilson:** 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; Eisai. **S.C. Feinstein:** 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; Eisai.
230.04	**F.J. Northington:** 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.

PRESENTATION NUMBER	STATEMENT
230.14	**H. 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. **S. Schilling:** 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.
230.17	**G. Kim:** A. Employment/Salary (full or part-time); Northwestern University Feinberg School of Medicine. **T. Gefen:** A. Employment/Salary (full or part-time); Northwestern University Feinberg School of Medicine. **Z. Parton:** A. Employment/Salary (full or part-time); Northwestern University Feinberg School of Medicine. **N. Lalehzari:** A. Employment/Salary (full or part-time); Northwestern University Feinberg School of Medicine. **S. Weintraub:** A. Employment/Salary (full or part-time); Northwestern University Feinberg School of Medicine. **E.H. Bigio:** A. Employment/Salary (full or part-time); Northwestern University Feinberg School of Medicine. **E. Rogalski:** A. Employment/Salary (full or part-time); Northwestern University Feinberg School of Medicine. **M. Mesulam:** A. Employment/Salary (full or part-time); Northwestern University Feinberg School of Medicine. **C. Geula:** A. Employment/Salary (full or part-time); Northwestern University Feinberg School of Medicine.
230.24	**P. Kumar:** A. Employment/Salary (full or part-time); AIIMS. **P. Dhar:** A. Employment/Salary (full or part-time); AIIMS.
230.25	**D. Nemeth:** A. Employment/Salary (full or part-time); The Ohio State University, College of Dentistry.
230.27	**N. Moore:** A. Employment/Salary (full or part-time); Full. **A. Rassoulpour:** A. Employment/Salary (full or part-time); fuul. **A. Aranov:** A. Employment/Salary (full or part-time); full. **H. Kooijker:** A. Employment/Salary (full or part-time); full. **Y. Chang:** A. Employment/Salary (full or part-time); full. **L. Yu:** A. Employment/Salary (full or part-time); Full. **H. Janssens:** A. Employment/Salary (full or part-time); full. **C. Ciardello:** A. Employment/Salary (full or part-time); full. **M. van der Hart:** A. Employment/Salary (full or part-time); full.
230.30	**J. Hardy:** 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; ESAI. **J. Pocock:** 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; ESAI.
231.03	**C. Zorumski:** F. Consulting Fees (e.g., advisory boards); Sage Therapeutics.
232.16	**B.D. Stemper:** A. Employment/Salary (full or part-time); Department of Neurosurgery, Medical College of Wisconsin, Zablocki VA Medical Center. **N. Letko:** A. Employment/Salary (full or part-time); Department of Neurosurgery, Medical College of Wisconsin. **A. Shah:** A. Employment/Salary (full or part-time); Department of Neurosurgery, Medical College of Wisconsin. **R. Chiariello:** A. Employment/Salary (full or part-time); Department of Neurosurgery, Medical College of Wisconsin. **A. Glavaski:** A. Employment/Salary (full or part-time); Department of Neurosurgery, Medical College of Wisconsin. **M. McCrea:** A. Employment/Salary (full or part-time); Department of Neurosurgery, Medical College of Wisconsin. **F. Pintar:** A. Employment/Salary (full or part-time); Department of Neurosurgery, Medical College of Wisconsin.
233.07	**J. Campbell:** A. Employment/Salary (full or part-time); James Campbell is an employee of the Centrexion. **M. Chung:** 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; Man-Kyo Chung conducts a research contract between the Centrexion and the University of Maryland.
233.12	**R.M. Reese:** A. Employment/Salary (full or part-time); Genentech. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Roche. **S.D. Shields:** A. Employment/Salary (full or part-time); Genentech. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Roche. **M. Dourado:** A. Employment/Salary (full or part-time); Genentech. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Roche. **X. Wu:** A. Employment/Salary (full or part-time); Genentech. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Roche. **E. Suto:** A. Employment/Salary (full or part-time); Genentech. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Roche. **W.P. Lee:** A. Employment/Salary (full or part-time); Genentech. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Roche. **A. Balestrini:** A. Employment/Salary (full or part-time); Genentech. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Roche. **L. Riol Blanco:** A. Employment/Salary (full or part-time); Genentech. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Roche. **D. Hackos:** A. Employment/Salary (full or part-time); Genentech. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Roche.
233.16	**D. Wei:** A. Employment/Salary (full or part-time); Drexel University College of Medicine. **H. Hu:** A. Employment/Salary (full or part-time); Drexel University College of Medicine.
234.07	**M. Gosnell:** A. Employment/Salary (full or part-time); Quantitative (Biotechnology) Pty Ltd.
234.08	**J.A. Rogers:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroLux. **R.W. Gereau:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroLux.
236.26	**J. Dimidschstein:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NYU. **G. Fishell:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NYU.
237.10	**C. Graversen:** A. Employment/Salary (full or part-time); Oticon A/S. **T. Lunner:** A. Employment/Salary (full or part-time); Oticon A/S.
237.13	**A. Ikeda:** Other; Endowed department by UCB, GSK, NihonKoden, Otsuka.
237.14	**H. Willis:** 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; Action On Hearing Loss, Cochlear UK. **S. Rosen:** 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; Action On Hearing Loss, Cochlear UK. **D. Vickers:** 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; Action On Hearing Loss, Cochlear UK.
242.01	**K. Han:** A. Employment/Salary (full or part-time); MIT.

PRESENTATION NUMBER	STATEMENT
242.18	**Y. Gao:** A. Employment/Salary (full or part-time); McGill 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; China-Canada Joint Health Research Initiative.
242.21	**G. St-Yves:** A. Employment/Salary (full or part-time); medical university of south carolina. **T. Naselaris:** A. Employment/Salary (full or part-time); medical university of south carolina.
244.04	**L. Desban:** A. Employment/Salary (full or part-time); Inserm U 1127, CNRS UMR 7225, Sorbonne Universités, UPMC Univ Paris 06 UMR S 1127, ICM, F-75013.
244.25	**S. Lee:** 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 Research Foundation of Korea, Korea Health Industry Development Institute.
247.15	**S.H. Scott:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BKIN technologies.
249.21	**K. Kesavan:** A. Employment/Salary (full or part-time); University of California, Los Angeles. **D.M. Cordero:** A. Employment/Salary (full or part-time); University of California, Los Angeles. **R.M. Harper:** A. Employment/Salary (full or part-time); University of California, Los Angeles.
250.02	**A. Pascual-Leone:** F. Consulting Fees (e.g., advisory boards); Neosync- Member of Scientific Advisory Board, Company developing an EEG-guided transcranial current stimulation system, Company developing an improved method for transcranial current stimulation, Company developing a system for treatment of cognitive decline in Alzheimer's disease combining cognitive training and transcranial magnetic stimulation, Company in the transcranial magnetic stimulation field developing improved neuronavigated TMS systems, Company that manufacturers and commercializes transcranial magnetic stimulation equipment, Company that manufacturers and commercializes a robot for targeting of transcranial magnetic stimulation.
250.07	**W. Arnold:** 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; NICHD/NIH.
250.08	**C.J. De Luca:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Delsys, inc.
250.09	**C. De Luca:** Other; Delsys Inc..
250.19	**D. Dinsmoor:** A. Employment/Salary (full or part-time); Medtronic. **M. Cutinella:** A. Employment/Salary (full or part-time); Medtronic. **J. Agran:** A. Employment/Salary (full or part-time); Medtronic. **X. Su:** A. Employment/Salary (full or part-time); Medtronic.
254.15	**M. Sethi:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Signal Solutions LLC. **L. Guerriero:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Equipment from Signal Solutions LLC. **C. Wang:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Equipment from Signal Solutions LLC. **R. Bernat:** A. Employment/Salary (full or part-time); Employee at Signal Solutions LLC. **A.M. Helman:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Equipment from Signal Solutions LLC. **T. Macheda:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Equipment from Signal Solutions LLC. **A. Agarwal:** A. Employment/Salary (full or part-time); Employee at Signal Solutions LLC. **M.P. Murphy:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Equipment from Signal Solutions LLC. **M.J. Duncan:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Equipment from Signal Solutions LLC. **B.F. O'Hara:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Signal Solutions, LLC.
257.11	**K. Hajdukiewicz:** Other; Nencki Institute of Experimental Biology in Warsaw,Ooland.
257.26	**P.M. Douglas:** A. Employment/Salary (full or part-time); Part-time employment.
260.13	**M. Achterberg:** A. Employment/Salary (full or part-time); Utrecht Univerisity. **V. Trezza:** A. Employment/Salary (full or part-time); University Roma "Tre". **L.J.M.J. Vanderschuren:** A. Employment/Salary (full or part-time); Utrecht University.
264.07	**R. Abraham:** A. Employment/Salary (full or part-time); Suven Life Sciences. **R. Medapati:** A. Employment/Salary (full or part-time); Suven Life Sciences. **R. Badange:** A. Employment/Salary (full or part-time); Suven Life Sciences. **V. Reballi:** A. Employment/Salary (full or part-time); Suven Life Sciences. **A. Shinde:** A. Employment/Salary (full or part-time); Suven Life Sciences. **V. Goyal:** A. Employment/Salary (full or part-time); Suven Life Sciences. **S. Pandey:** A. Employment/Salary (full or part-time); Suven Life Sciences. **S. Yathavakilla:** A. Employment/Salary (full or part-time); Suven Life Sciences. **V. Goura:** A. Employment/Salary (full or part-time); Suven Life Sciences. **S. Edula:** A. Employment/Salary (full or part-time); Suven Life Sciences. **R. Subramanian:** A. Employment/Salary (full or part-time); Suven Life Sciences. **V. Mekala:** A. Employment/Salary (full or part-time); Suven Life Sciences. **N. Muddana:** A. Employment/Salary (full or part-time); Suven Life Sciences. **V. Uthukam:** A. Employment/Salary (full or part-time); Suven Life Sciences. **S. Daripelli:** A. Employment/Salary (full or part-time); Suven Life Sciences. **B. Devarapalli:** A. Employment/Salary (full or part-time); Suven Life Sciences. **R. Eeda:** A. Employment/Salary (full or part-time); Suven Life Sciences. **R. Nirogi:** A. Employment/Salary (full or part-time); Suven Life Sciences.
264.11	**J.Z. Magalhães:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); FAPESP. **D.P. Figueiredo:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); PIBIC. **G.R. Abreu:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); PIBIC. **E.L. Ricci:** A. Employment/Salary (full or part-time); Mackenzie Presbiterian University. **M.S.B. Udo:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); FAPESP. **H.S. Spinosa:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); CAPES.
264.18	**Y. Liu:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Neuralstem, Inc. **M.P. Hefferan:** A. Employment/Salary (full or part-time); Neuralstem, Inc. **K. Johe:** A. Employment/Salary (full or part-time); Neuralstem, Inc.
266.22	**T.A. Lawton:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Perception Dynamics Institute.
267.03	**J. Erlich:** A. Employment/Salary (full or part-time); NYU-ECNU Institute of Brain and Cognitive Science, New York University Shanghai, Shanghai, China.
269.01	**N. Muddana:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD., Hyderabad, India. **R. Subramanian:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD., Hyderabad, India. **S. Edula:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD., Hyderabad, India. **S. Petlu:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD., Hyderabad, India. **S. Yathavakilla:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD., Hyderabad, India. **R. Abraham:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD., Hyderabad, India. **P. Jayarajan:** A.

PRESENTATION NUMBER	STATEMENT
	Employment/Salary (full or part-time); Suven Life Sciences LTD., Hyderabad, India. **R. Palacharla:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD., Hyderabad, India. **J. Thentu:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD., Hyderabad, India. **R. Dyavarashetty:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD., Hyderabad, India. **H. Kalyani:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD., Hyderabad, India. **A. Mohammed:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD., Hyderabad, India. **S. Ravella:** 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.
269.02	**S. Vinogradov:** 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; serves as a site PI on an SBIR grant to Positscience. **G.A. Light:** F. Consulting Fees (e.g., advisory boards); Astellas, Forum Pharmaceuticals, Boehringer Ingelheim, Neuroverse.
269.03	**M. Miyashita:** 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; renascience.
269.08	**J.A. Apud:** A. Employment/Salary (full or part-time); OCD-NIMH-NIH. 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; NIMH funded. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); No. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); No. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); No. F. Consulting Fees (e.g., advisory boards); No. **Y. Tong:** A. Employment/Salary (full or part-time); CTNB-NIMH-NIH. 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; No. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); No. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); No. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); No. F. Consulting Fees (e.g., advisory boards); No. **T. Vargas:** A. Employment/Salary (full or part-time); NIMH employee. **J.H. Callicott:** A. Employment/Salary (full or part-time); NIMH employee. **B. Kolachana:** A. Employment/Salary (full or part-time); NIMH employee. **D.R. Weinberger:** A. Employment/Salary (full or part-time); Lieber Institute, Johns Hopkins University. **V.S. Mattay:** A. Employment/Salary (full or part-time); Lieber Institute for Brain Development. **K.F. Berman:** A. Employment/Salary (full or part-time); NIMH employee.
270.23	**T. Bifano:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Dr. Bifano acknowledges a financial interest in Boston Micromachines Corporation.
271.13	**J. Harezlak:** A. Employment/Salary (full or part-time); Indiana University.
271.15	**A.J. Worth:** A. Employment/Salary (full or part-time); Neuromorphometrics, Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neuromorphometrics, Inc. **J.A. Tourville:** F. Consulting Fees (e.g., advisory boards); Neuromorphometrics, Inc..
271.18	**L. Nie:** A. Employment/Salary (full or part-time); Imperial College London. **P.M. Matthews:** A. Employment/Salary (full or part-time); Imperial College London. **Y. Guo:** A. Employment/Salary (full or part-time); Imperial College London.

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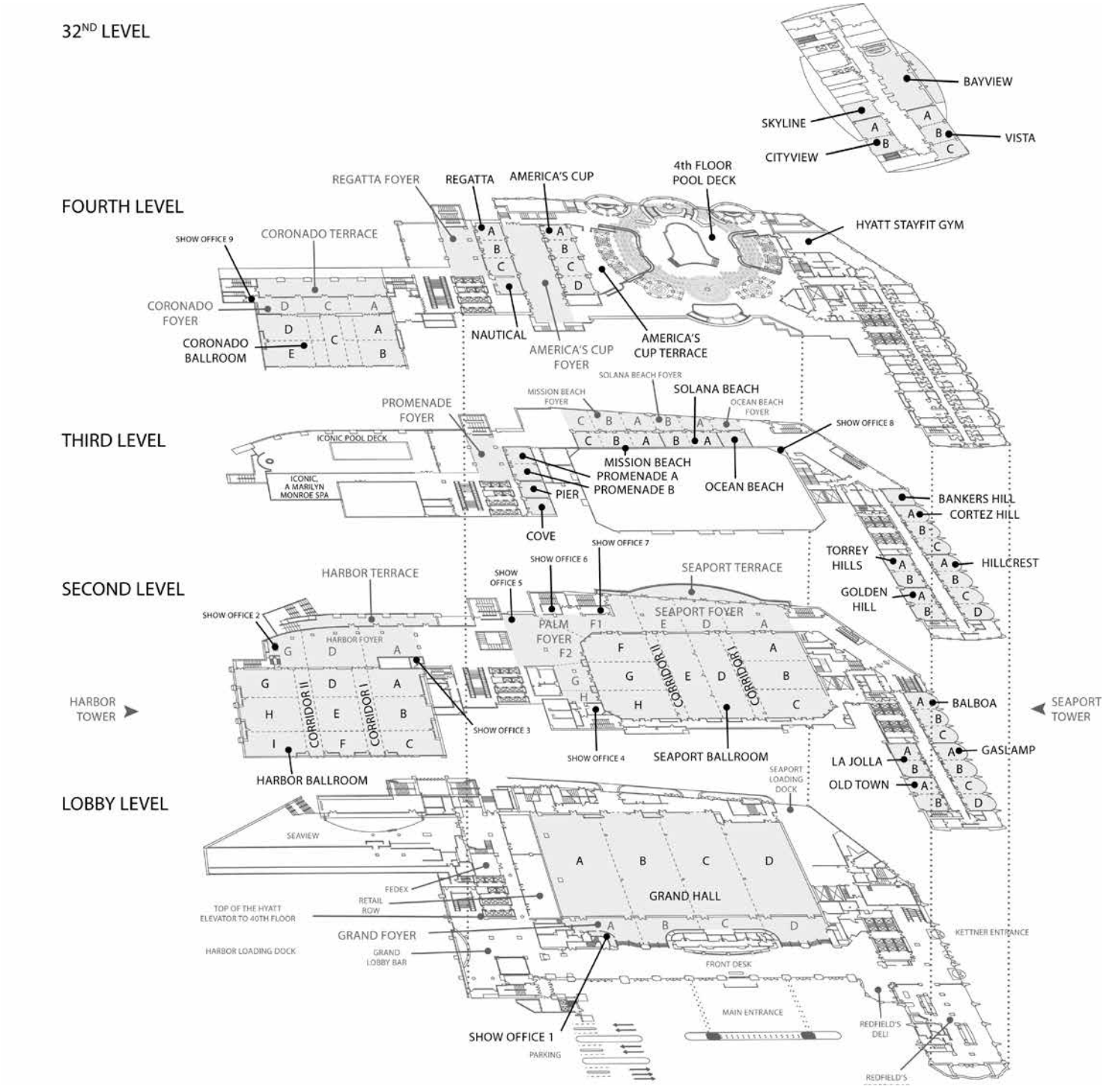
Hotel Floor Plans

MANCHESTER GRAND HYATT

1 Market Pl
San Diego, CA 92101

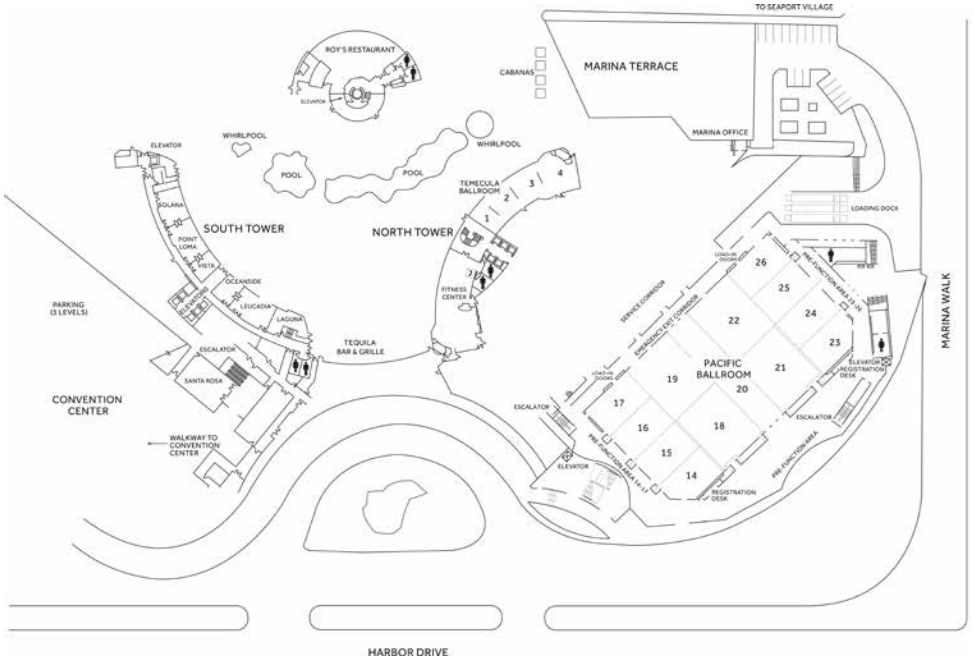


MARRIOTT MARQUIS SAN DIEGO MARINA

333 W Harbor Dr
San Diego, CA 92101

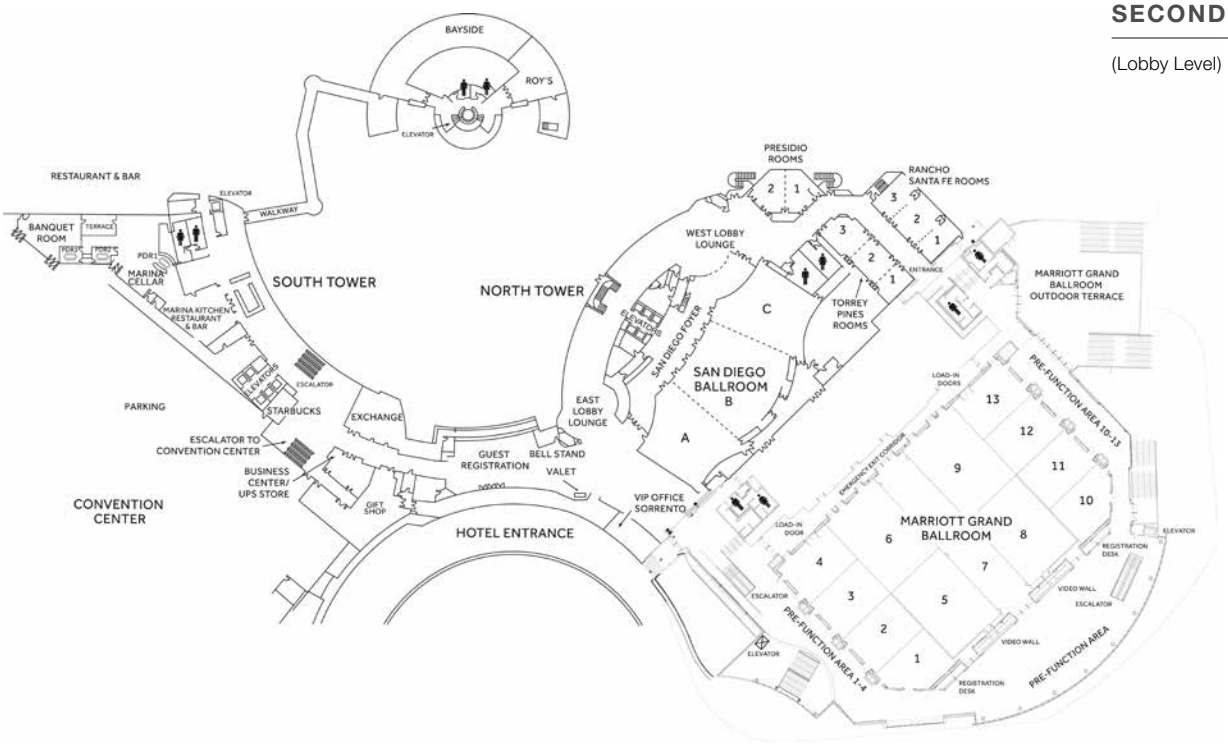
FIRST FLOOR

(Ground Level)



SECOND FLOOR

(Lobby Level)



SOUTH TOWER

Second Floor
Bayside
1st Floor
Laguna
Leucadia
Oceanside
Point Loma
Santa Rosa
Solana
Vista

3rd Floor
Balboa
Cardiff
Carlsbad
Del Mar
Encinitas
Marina Ballroom D–G
Miramar
Mission Hills
Palomar

4th Floor
Catalina
Coronado
Dana Point
La Costa
La Jolla
La Mesa
Malibu
Newport Beach

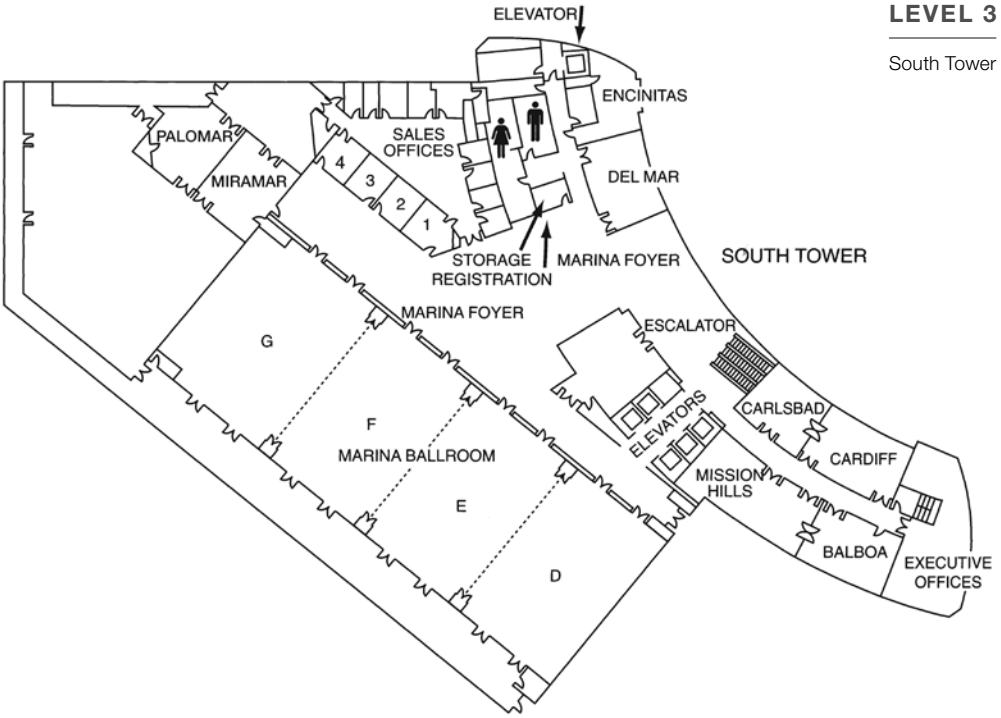
NORTH TOWER

Lobby Level
Presidio 1–2
Rancho Santa Fe 1–3
Marriott Ballroom 1–13
San Diego Ballrooms A–C
Torrey Pines 1–3

1st Floor
Temecula

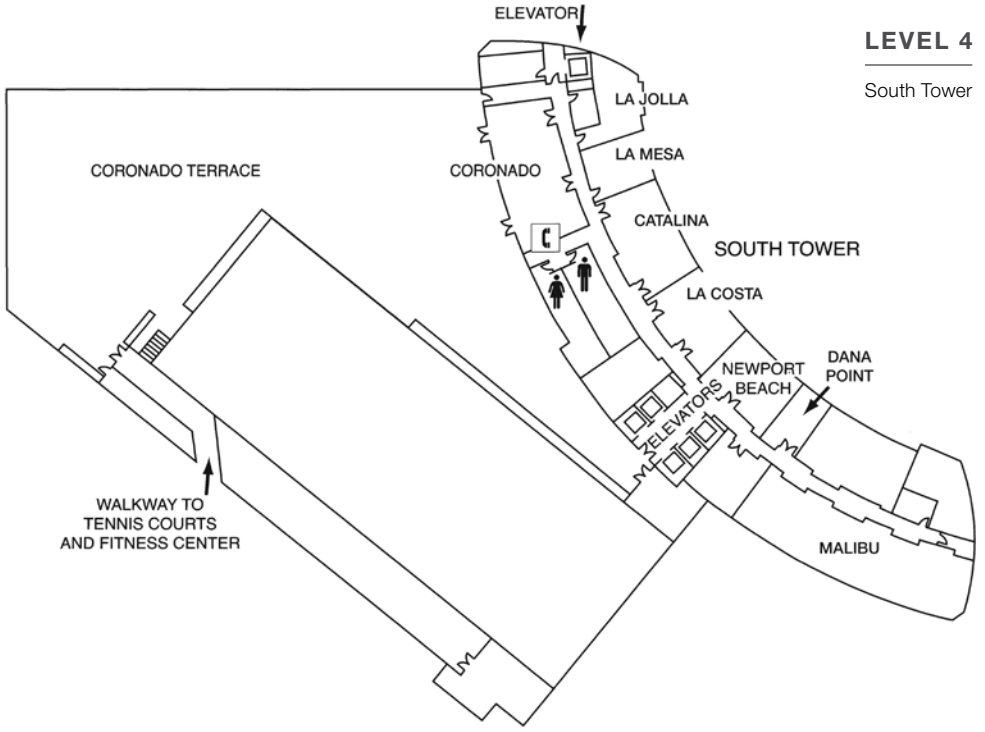
LEVEL 3

South Tower



LEVEL 4

South Tower

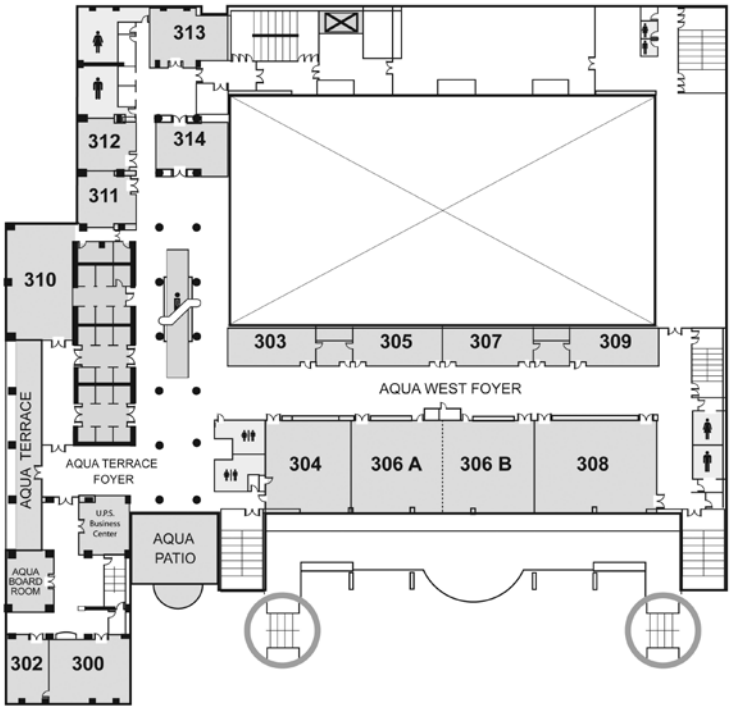


HILTON SAN DIEGO BAYFRONT

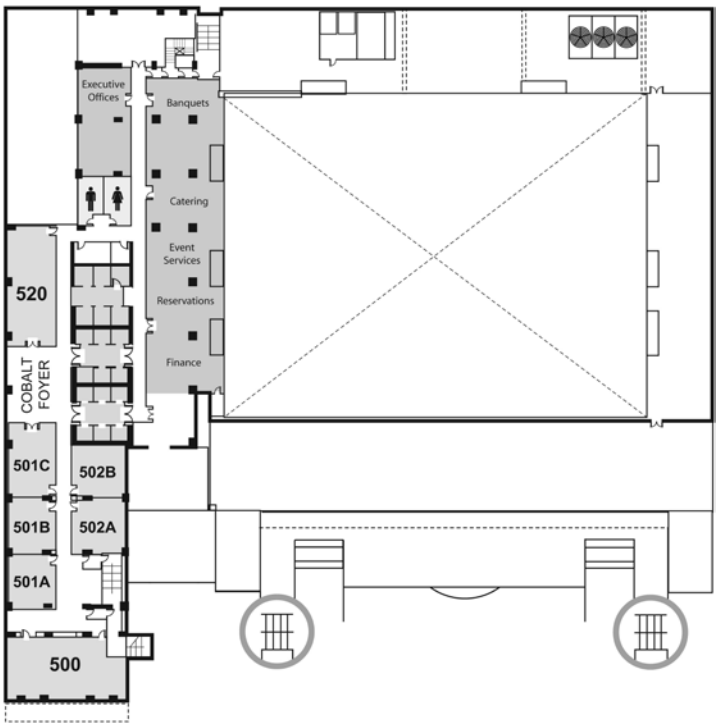
1 Park Blvd
San Diego, CA 92101

= Function Space
= Elevators and Escalators
= Restrooms
= Stairs

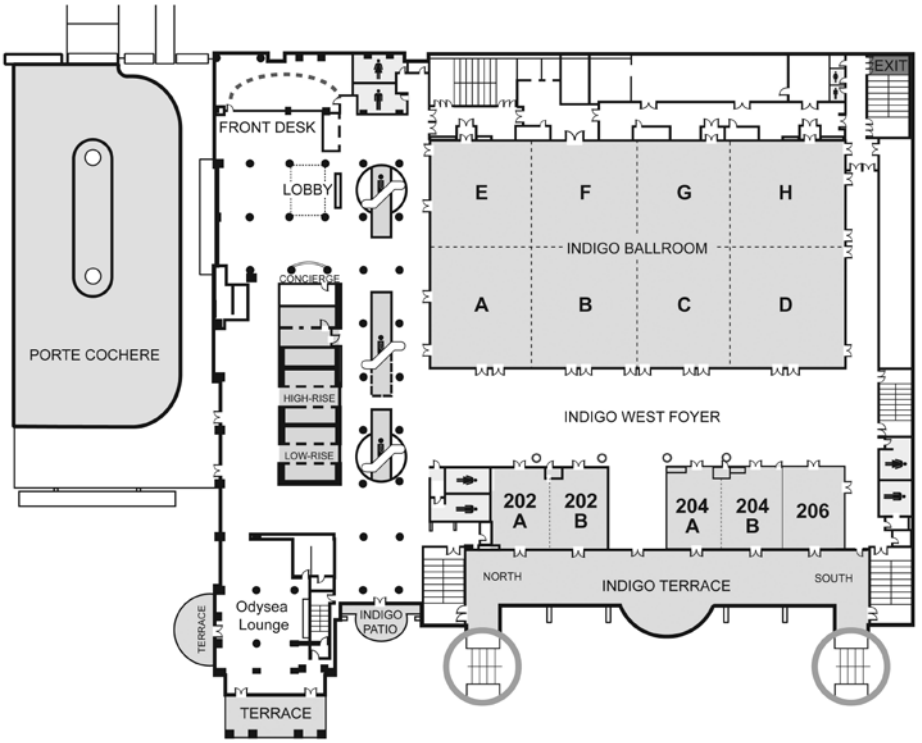
AQUA LEVEL



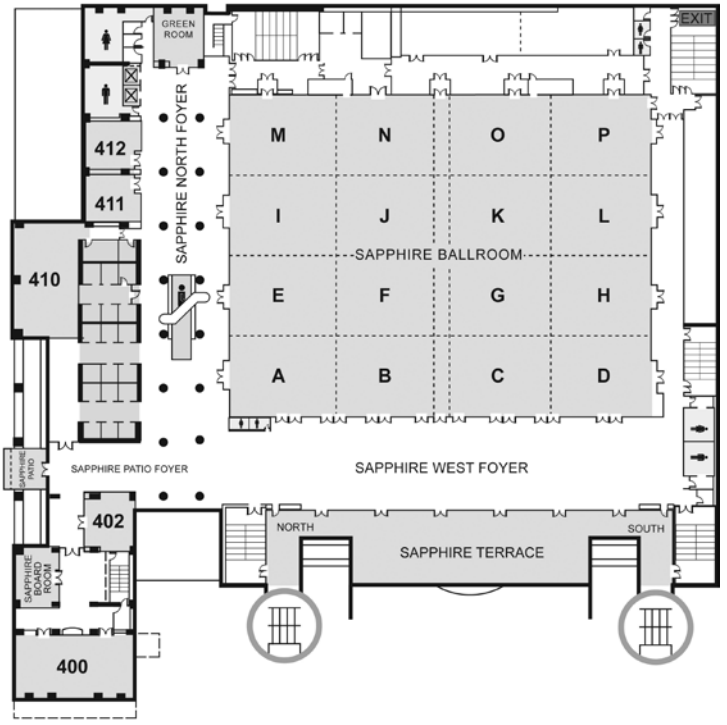
COBALT LEVEL



INDIGO LEVEL

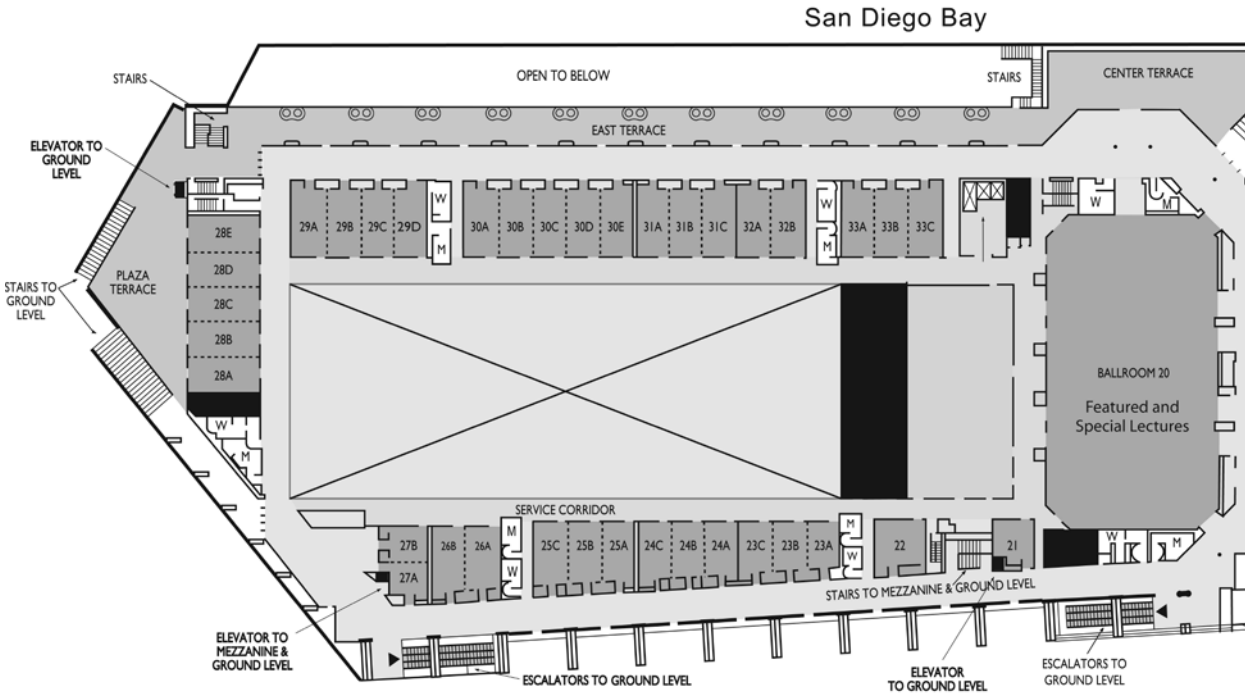


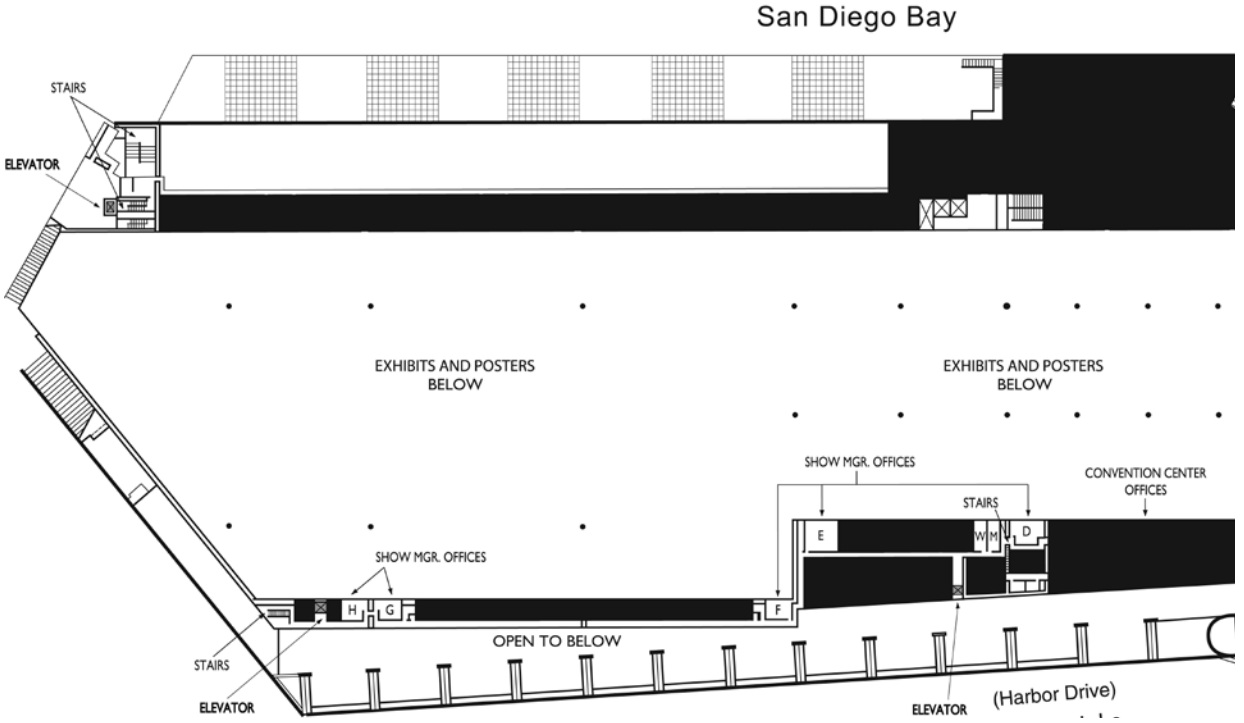
SAPPHIRE LEVEL



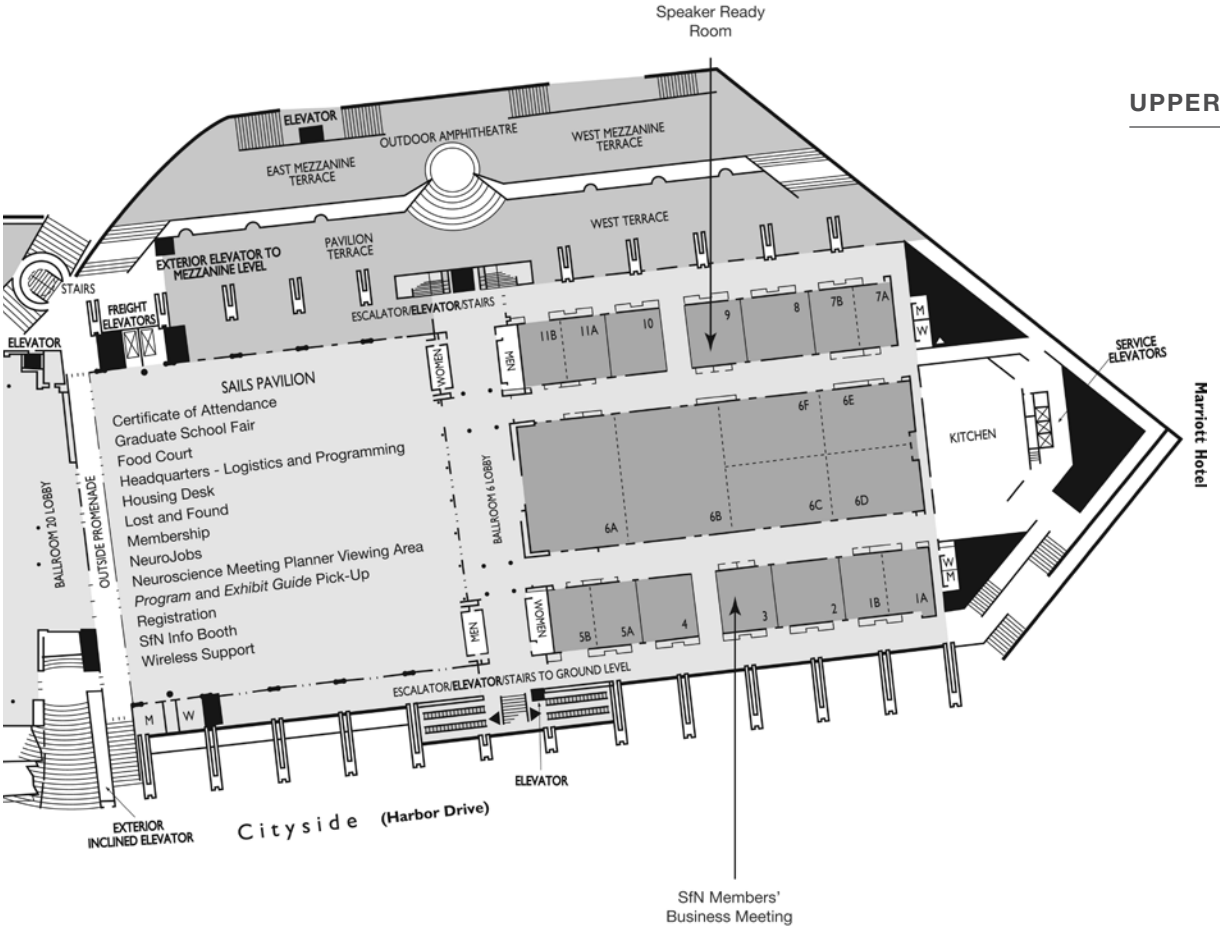
SAN DIEGO CONVENTION CENTER

111 W Harbor Dr
San Diego, CA 92101

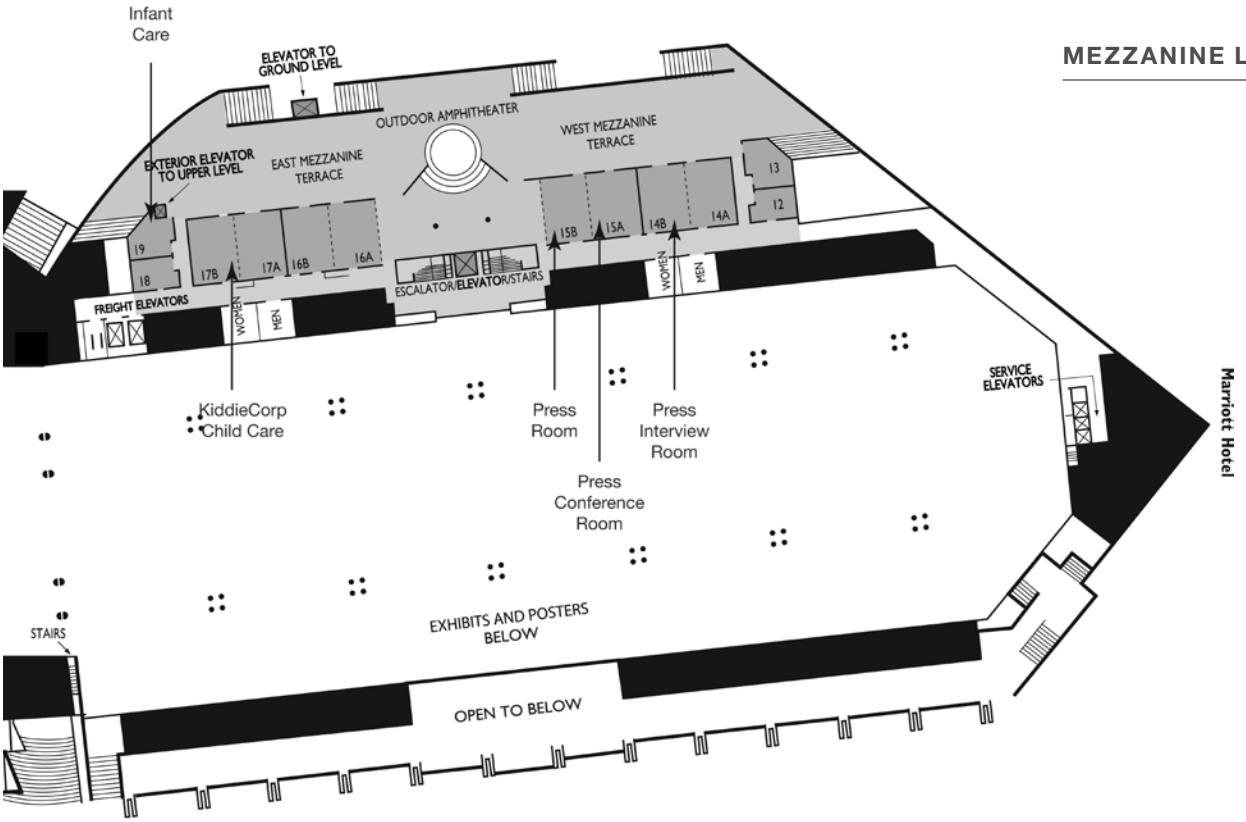




UPPER LEVEL



MEZZANINE LEVEL



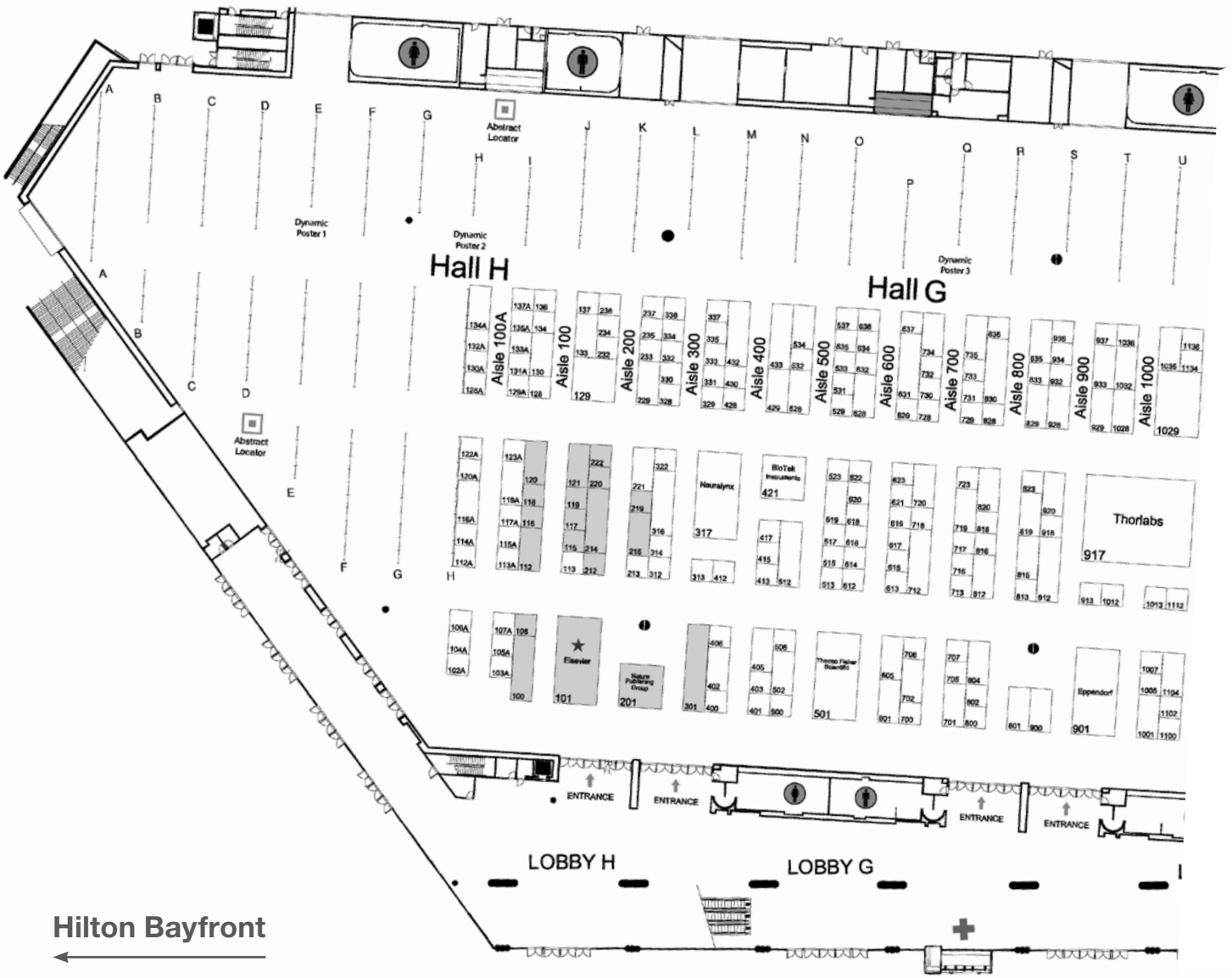
Exhibits and Poster Sessions

SAN DIEGO CONVENTION CENTER

Meeting Dates: November 12–16

Exhibit Dates: November 13–16

Note: 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. Pending fire marshal approval. Floor plans subject to change. For current floor plan, visit **SfN.org/exhibits.**



Hilton Bayfront

KEY

- Publishers Row
- SfN Booth
- Nonprofits/ U.S. Government Agencies
- Sustaining Associate Members
- Abstract Locator
- Concession Area
- Women's Restroom
- Men's Restroom
- Entrance

Express Badge Pick-Up

Shuttle Information

Info Booth

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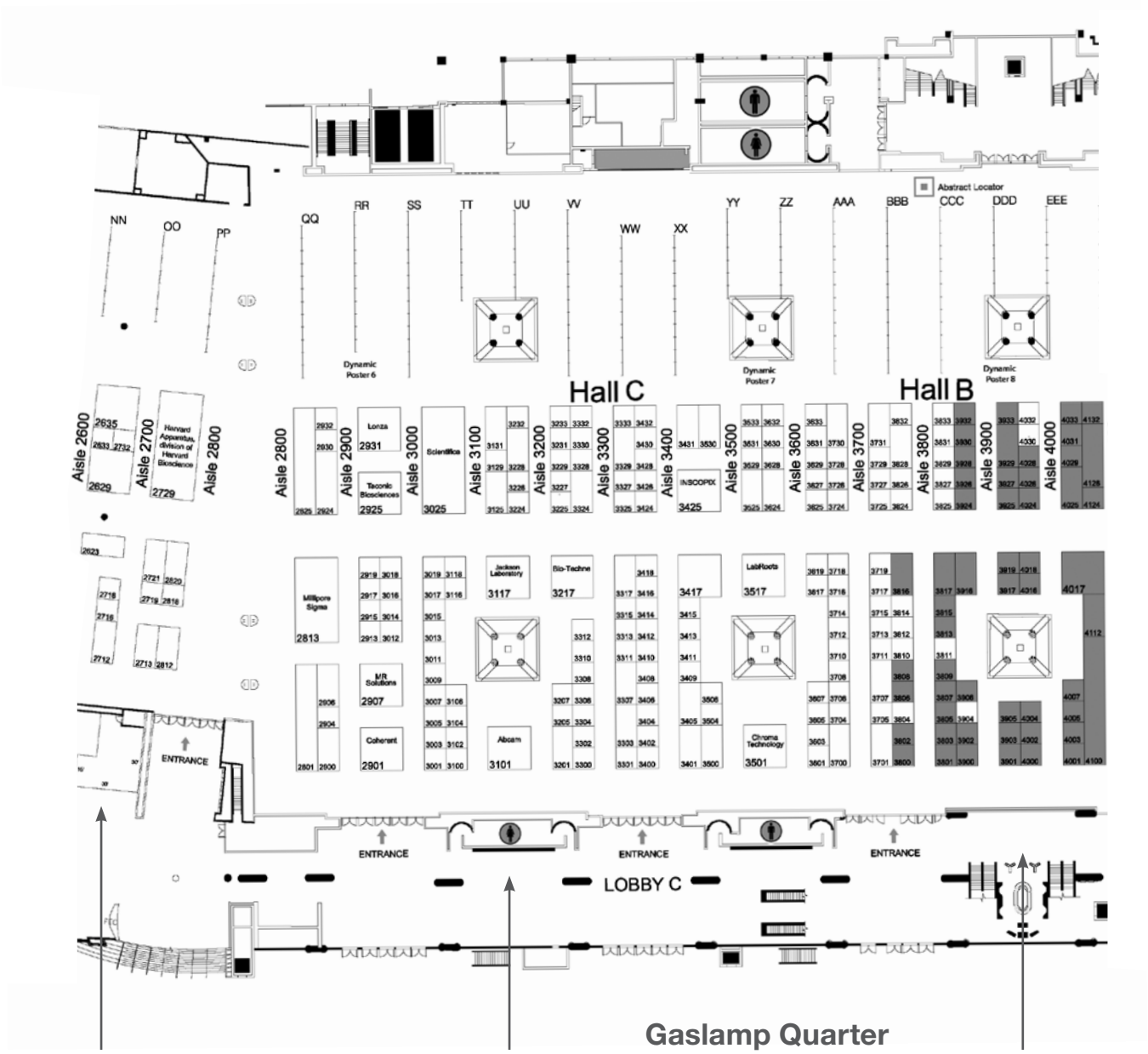
SAN DIEGO CONVENTION CENTER



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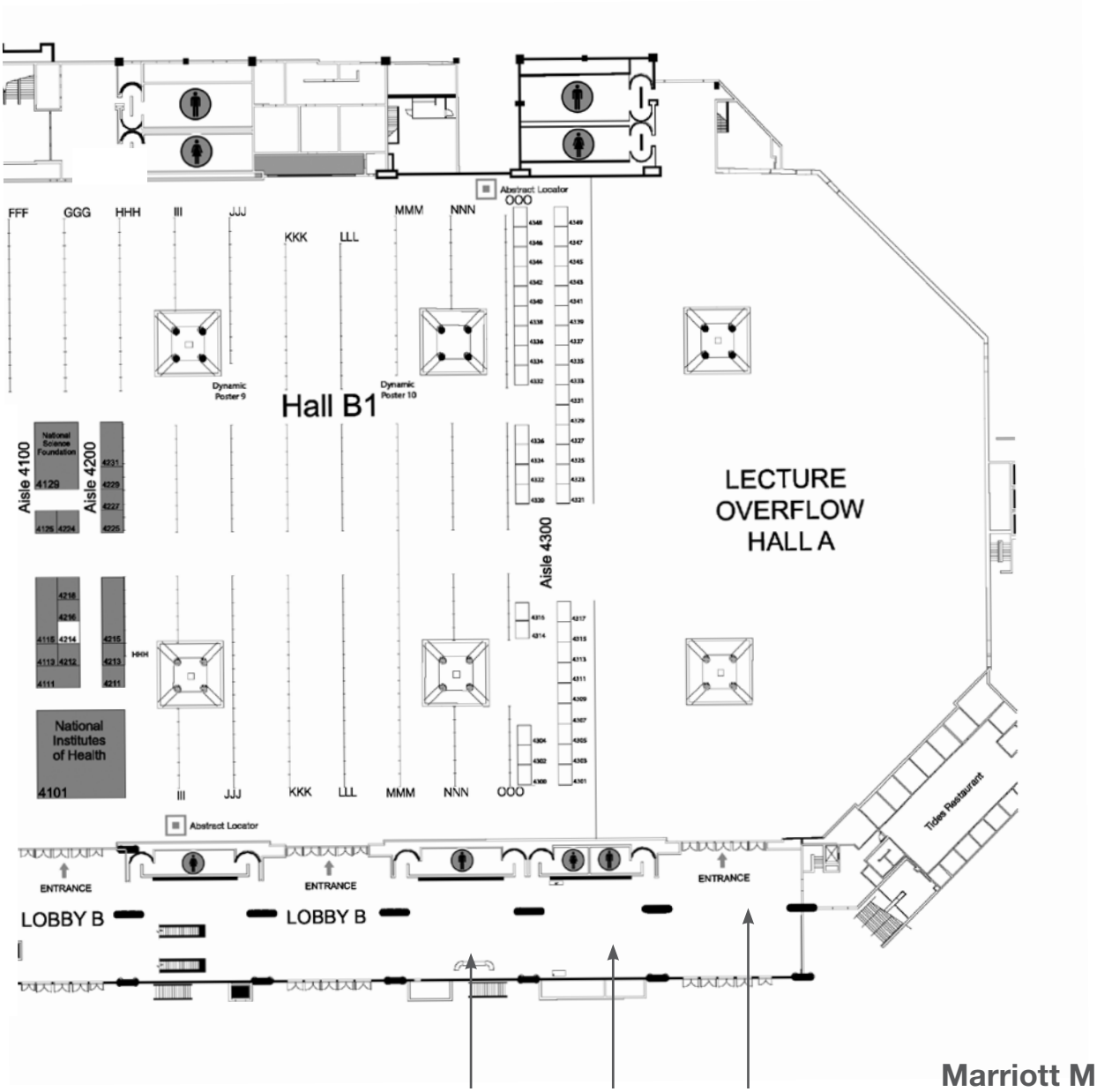

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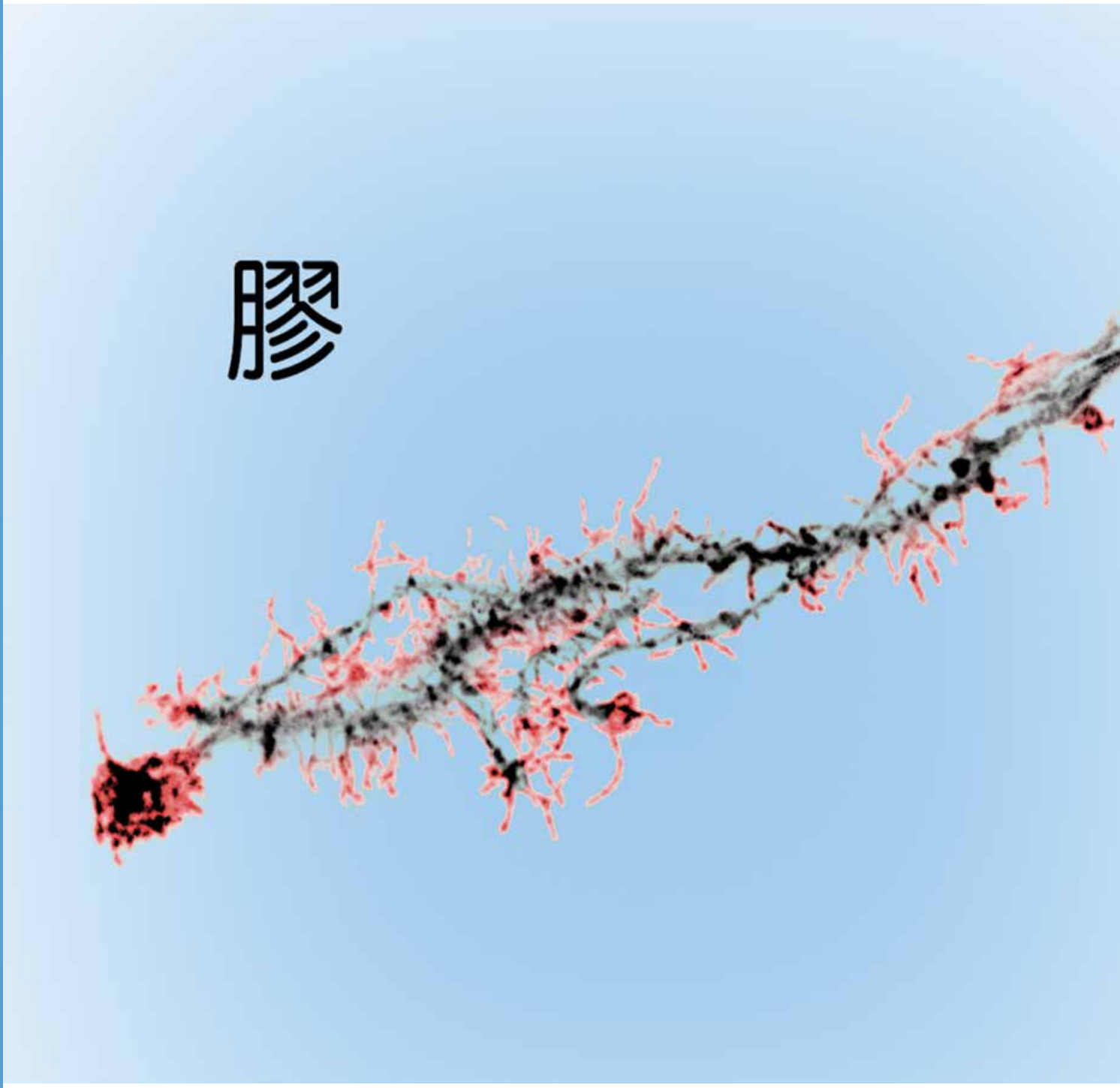

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