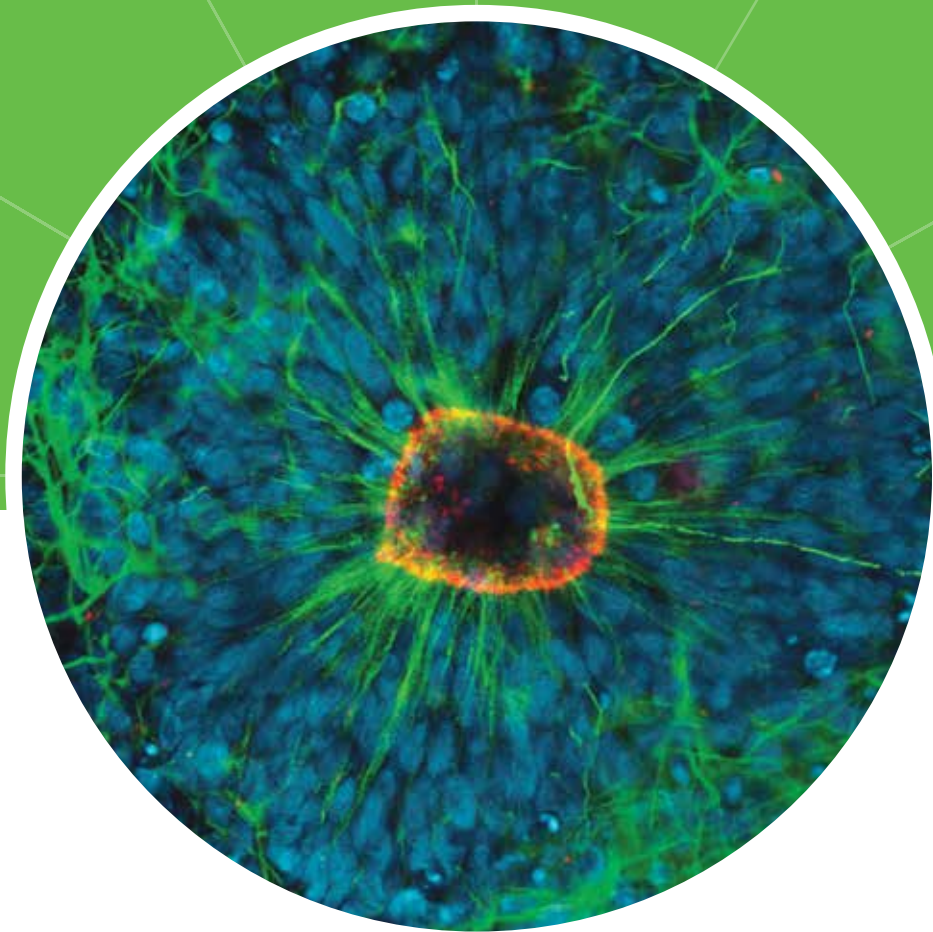


NEUROSCIENCE
2017

SUNDAY

SCIENTIFIC SESSION LISTING:094-260



Washington, DC



SOCIETY for
NEUROSCIENCE

Nov. 11-15

INFORMATION AT A GLANCE

IMPORTANT PHONE NUMBERS

Annual Meeting Headquarters Office

Logistics & Programming

Walter E. Washington Convention Center:
Room 102

Logistics, (202) 249-4200

Programming, (202) 249-4205

Volunteer Leadership Lounge

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

Annual Meeting Information Booths

Walter E. Washington Convention Center

Grand Lobby, (202) 249-4224

L Street Bridge, (202) 249-4225

L Street Concourse, (202) 249-4226

Press Office

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

Exhibit Management

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

First Aid and Hospital Numbers

First Aid Room

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

George Washington University Hospital

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

Medics USA Urgent Care Services

1700 17th Street, NW, Suite A
Washington, DC 20009
(202) 483-4400

Key to Poster Floor by Themes

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

Theme

ADevelopment

B.....Neural Excitability, Synapses, and Glia

CNeurodegenerative Disorders and Injury

DSensory Systems

E.....Motor Systems

F.....Integrative Physiology and Behavior

G.....Motivation and Emotion

HCognition

I.....Techniques

J.....History and Education

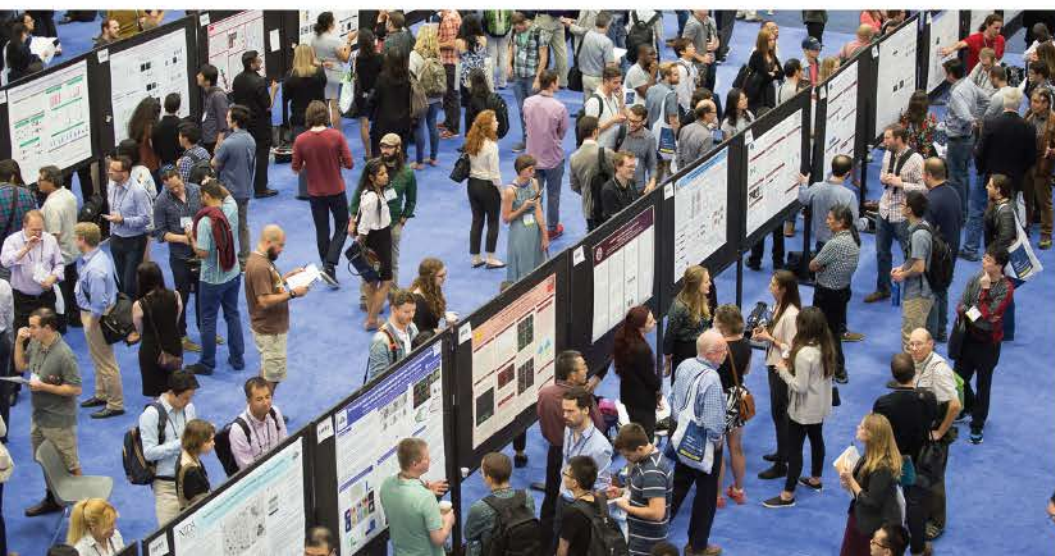
NOTE: Theme J Posters will be on display in Hall A beginning at 1 p.m. on Saturday, Nov. 11, and will remain posted until 5 p.m., Sunday, Nov. 12. One-hour presentations will occur either Saturday afternoon or Sunday morning.

Code of Conduct at SfN Events

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

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

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



Cover Image: This image shows a neural rosette derived from a pluripotent stem cell. Apical localization of N-cadherin (red) is seen, with beta III tubulin (green) showing both polarized rosette cells, and non-polarized neuronal cells outside of the rosette. Nuclei are visualized with DAPI (blue). **Courtesy, with permission:** Liam G. Coulthard, Owen A. Hawksworth, Rui Li, Anushree Balachandran, John D. Lee, Farshid Seppehrband, Nyoman Kurniawan, Angela Jeanes, David G. Simmons, Ernst Wolvetang and Trent M. Woodruff, 2017, *The Journal of Neuroscience*, 37(22): 5395-5407.

Complete Session Listing

Sunday AM

Sun. AM

LECTURE *Walter E. Washington Convention Center*

094. ● **Molecular Architecture of the Circadian Clock in Mammals** — CME

Sun. 8:30 AM - 9:40 AM — Hall D

Speaker: J. S. TAKAHASHI, *Univ. of Texas Southwestern Med. Ctr. and Howard Hughes Med. Inst.*

Circadian rhythms are an adaptation to the cyclic environment on Earth. In animals, circadian behavior can be analyzed as an integrated system, beginning with genes and ultimately leading to behavioral outputs. The mechanism of circadian clocks in mammals is cell autonomous and generated by a set of genes forming a transcriptional autoregulatory feedback loop. The cellular autonomy of clocks has raised a number of questions concerning synchronization and coherence of rhythms at the cellular level as well as circadian organization at the systems level.

SYMPOSIUM *Walter E. Washington Convention Center*

095. **The Role of RNA Biology in Neurological Disease** — CME

Sun. 8:30 AM - 11:00 AM — Ballroom A

Chair: W. DUAN

It has been increasingly recognized that RNA plays a pivotal role in the regulation of gene expression and neuronal function. This symposium will highlight advances in RNA biology and discuss the roles of RNA in neurological diseases, including repeat associated non-ATG translation, RNA metabolism, non-coding regulatory RNAs, and splicing factors. The symposium will provide new perspectives on how RNA biology impacts strategies for therapeutic development in neurological diseases.

8:30 **95.01** Introduction.

8:35 **95.02** Repeat associated non-ATG (RAN) translation: New starts and directions in neurological disease. L. P. RANUM. *Univ. of Florida.*

9:10 **95.03** Disturbance of dynamic RNA-protein assemblies in neurological diseases. J. TAYLOR. *St. Jude Children's Reseach Hosp.*

9:45 **95.04** Small regulatory RNAs in brain disorders. P. JIN. *Emory Univ. Sch. of Med.*

10:20 **95.05** Splicing factors in neurodegenerative disease. R. REED. *Harvard Med. Sch.*

10:55 **95.06** Closing Remarks.

SYMPOSIUM *Walter E. Washington Convention Center*

096. ● **Developmental Origins of Neuronal Diversity in the Cerebral Cortex** — CME

Sun. 8:30 AM - 11:00 AM — Ballroom B

Chair: O. MARIN

The function of the cerebral cortex relies on a large variety of cell types, yet the developmental origins of this diversity are largely unknown. The symposium will discuss the role of developmental mechanisms in the generation of cellular diversity in the cortex of mice and humans. The session will focus on current efforts to reveal the diversity of progenitor cells and the identity of neuron-specific transcriptional programs as they dynamically unfold during development.

8:30 **96.01** Introduction.

8:35 **96.02** ● Transcriptional regulation of MGE-derived cell fate: cortical interneurons. J. L. RUBENSTEIN. *Univ. of California San Francisco.*

9:10 **96.03** ● Molecular regulation of cortical interneuron diversity. O. MARIN. *King's Col. London.*

9:45 **96.04** ● An integrative census of cell types during human cortical neurogenesis. A. R. KRIEGSTEIN. *Univ. of California San Francisco.*

10:20 **96.05** Cortical interneuron diversity from a wiring perspective. B. RICO. *King's Col. London.*

10:55 **96.06** Closing Remarks.

MINISYMPOSIUM *Walter E. Washington Convention Center*

097. **Big News From a Little Region: Hippocampal Area CA2** — CME

Sun. 8:30 AM - 11:00 AM — Ballroom C

Chair: S. M. DUDEK

Known to be resistant to cell death, neurons in hippocampal area CA2 have only recently been appreciated as having distinct synaptic and firing properties and playing distinct roles in behavior such as social recognition and aggression. In this minisymposium, speakers will discuss how CA2 may be important in diseases such as schizophrenia and epilepsy as well as provide attendees with an overview of this small but exciting module of the hippocampus and its relation to many brain functions.

8:30 **97.01** Introduction.

8:35 **97.02** New insights into hippocampal circuitry and function from studies of synaptic plasticity. S. M. DUDEK. *Natl. Inst. of Envrn. Hlth. Sciences, NIH.*

8:55 **97.03** CA2 inhibitory network and plasticity: Significance for social memory and psychiatric disease. R. A. PISKOROWSKI. *Inserm U894, Univ. Paris Descartes.*

9:15 **97.04** How the vasopressin 1b receptor has guided investigations of the CA2 hippocampal area in males and females. S. YOUNG. *Natl. Inst. of Mental Hlth.*

9:35 **97.05** Divergent CA2 circuits for social memory and aggression. S. A. SIEGELBAUM. *Columbia Univ. Coll P & S.*

• Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 9:55 **97.06** Chronic loss of CA2 transmission leads to hyperexcitability in the CA3 network. T. J. MCHUGH. *RIKEN Brain Sci. Inst.*
- 10:15 **97.07** • Hypersynchronous events in the hippocampus: The hyperexcitable CA2. A. BERENYI. *Univ. of Szeged.*
- 10:35 **97.08** Closing Remarks.

MINISYMPOSIUM *Walter E. Washington Convention Center*

098. • Peripheral Neural Modulation of Inflammation, Immunity, and Host Defense — CME

Sun. 8:30 AM - 11:00 AM — 145B

Chair: I. MING-CHENG CHIU

Co-Chair: V. A. PAVLOV

The peripheral nervous system (PNS) and immune system actively communicate to regulate homeostasis and inflammation in health and disease. Nodose/jugular ganglia and DRG sensory neurons detect immune and bacterial mediators to signal danger, and release neuropeptides that regulate immunity. Vagal autonomic neurons potently modulate immune cell activation in sepsis, arthritis, colitis, and other inflammatory conditions. Thus, defining peripheral neuro-immune signaling can improve treatment of inflammatory diseases.

- 8:30 **98.01** Introduction.
- 8:35 **98.02** An essential role for cutaneous nerves in propagating psoriasis-like skin inflammation. N. WARD. *Case Western Reserve Univ.*
- 8:55 **98.03** • Transcriptional and functional plasticity of airway-innervating sensory neurons in pulmonary inflammation. S. E. JORDT. *Duke Univ.*
- 9:15 **98.04** Sensory mechanisms of the vagus nerve. S. D. LIBERLES. *Harvard Med. Sch.*
- 9:35 **98.05** Reflex control of inflammation. S. S. CHAVAN. *Feinstein Inst. For Med. Res.*
- 9:55 **98.06** • The treatment of rheumatoid arthritis with vagus nerve stimulation. Y. LEVINE. *SetPoint Med. Corp.*
- 10:15 **98.07** Choline acetyltransferase-expressing T cells relay neural signals. P. S. OLOFSSON. *Karolinska Inst.*
- 10:35 **98.08** Closing Remarks.

MINISYMPOSIUM *Walter E. Washington Convention Center*

099. Computational Psychiatry: Multiscale Models of Mental Illnesses — CME

Sun. 8:30 AM - 11:00 AM — 146A

Chair: M. FERRANTE

Co-Chair: X. WANG

This minisymposium will provide an in-depth introduction to the nascent and burgeoning field of computational psychiatry (CP). CP applies cutting-edge quantitative methods and theoretical models to investigate neural or cognitive phenomena relevant to psychiatric diseases. Talks will cover practical examples of theory- and data-driven computational models of cognitive deficits associated with schizophrenia, emotion regulation, anxiety, and drug addiction.

- 8:30 **99.01** Introduction.
- 8:35 **99.02** A Bayesian observer model of drug craving. X. GU. *Univ. of Texas At Dallas.*

- 8:55 **99.03** Linking behavior, neuroimaging, and pharmacology via biophysically-based computational modeling. A. ANTICEVIC. *Yale Univ.*
- 9:15 **99.04** What can machine learning and neuroimaging techniques bring to psychiatry?: The potential and the challenges. V. VOON. *Max Planck UCL.*
- 9:35 **99.05** The mathematics of regulating emotions. Q. HUYS. *ETH Zürich and Univ. of Zürich.*
- 9:55 **99.06** Computational models of excitation-inhibition disruptions in large-scale brain networks with relevance to functional dysconnectivity in schizophrenia. J. MURRAY. *Yale Univ.*
- 10:15 **99.07** Working memory contributions to learning impairments in schizophrenia. A. COLLINS. *Univ. of California Berkeley.*
- 10:35 **99.08** Closing Remarks.

MINISYMPOSIUM *Walter E. Washington Convention Center*

100. Individual or Group Patterns of Human Sensorimotor Control and Learning: When the Whole May Not Be Greater Than the Sum of Its Parts — CME

Sun. 8:30 AM - 11:00 AM — 151B

Chair: R. FLANAGAN

Co-Chair: T. CLUFF

Despite it being widely acknowledged that human sensory and motor function can vary between individuals, studies typically focus on average patterns of behaviour in groups of healthy people. Individual patterns of sensorimotor function are thus poorly understood and have only recently begun to be unraveled. This minisymposium will highlight recent behavioural, neuroimaging, and modeling work that is helping to explain individual patterns of sensory and motor function in healthy and patient groups.

- 8:30 **100.01** Introduction.
- 8:35 **100.02** Tradeoffs in optimal control capture differences in human motor control and learning strategies. T. CLUFF. *Univ. of Calgary.*
- 8:55 **100.03** The relative contribution of explicit and implicit forms of learning differ between individuals. J. A. TAYLOR. *Princeton Univ.*
- 9:15 **100.04** Quantifying inter-individual variability in stroke recovery using robotics. J. A. SEMRAU. *Univ. of Calgary.*
- 9:35 **100.05** Genetic, brain, and behavioural predictors of sensorimotor function. R. D. SEIDLER. *Univ. of Florida.*
- 9:55 **100.06** Brain networks for auditory-motor integration in the context of music training and expertise. V. PENHUNE. *Concordia Univ.*
- 10:15 **100.07** To overwrite or to recall?: Individual differences in visuomotor adaptation. N. SCHWEIGHOFER. *USC.*
- 10:35 **100.08** Closing Remarks.

LECTURE *Walter E. Washington Convention Center*

101. Using Memory to Guide Decisions — CME

Sun. 10:00 AM - 11:10 AM — Hall D

Speaker: D. SHOHAMY, Columbia Univ.

From robots to humans, the ability to learn from experience turns a rigid response system into a flexible, adaptive one. This lecture will discuss the neural and cognitive mechanisms by which learning shapes decisions. The lecture will focus on how multiple brain regions interact to support learning, what this means for how memories are built, and the consequences for how decisions are made. Results emerging from this work challenge the traditional view of separate learning systems and advance understanding of how memory biases decisions in both adaptive and maladaptive ways.

LECTURE *Walter E. Washington Convention Center*

102. Carving the World Into Useful Task Representations — CME

Sun. 11:30 AM - 12:40 PM — Hall D

Speaker: Y. NIV, Princeton Univ.

Studies in reinforcement learning have famously explained the role of dopamine in learning. However, reinforcement learning relies on representations of tasks as a sequence of "states." Where do these states come from? This lecture will first demonstrate that by learning the latent structure of a task, animals and humans form a state of space through experience. The lecture will then show that the frontoparietal attention network interacts with valuation in the basal ganglia to learn these representations. Finally, the lecture will suggest that the orbitofrontal cortex represents a cognitive map of learned states for decision-making.

NANOSYMPOSIUM

103. iPSCs: Disease Models I

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

8:00 **103.01** ● The chromatin remodeler CHD7 in human cell fate regulation: A default mechanism for neuroepithelial fate. M. CHAI*; T. SANOSAKA; H. OKUNO; Z. ZHOU; I. KOYA; S. BANNO; T. ANDOH-NODA; Y. TABATA; R. SHIMAMURA; H. OKANO; J. KOHYAMA. *Keio Univ. Sch. of Med., Eisai E-way Res. Lab.*

8:15 **103.02** ● *In vitro* and *in vivo* cell dynamics analysis of iPSC-derived neural crest cells harboring CHD7 mutations reveals defective migration of CHARGE syndrome. H. OKUNO*; F. M. RENAULT; S. OHTA; K. FUKUDA; K. KUROSAWA; W. AKAMATSU; T. SANOSAKA; J. KOHYAMA; T. TAKAHASHI; J. WYSOCKA; K. KOSAKI; H. OKANO. *Keio Univ. Sch. of Med., Tokyo Metropolitan Univ., Kanagawa Children's Med. Ctr., Juntendo Univ. Sch. of Med., Stanford Univ. Sch. of Med.*

8:30 **103.03** Differentiation of inflammation-responsive astrocytes from human induced pluripotent stem cell-derived glial progenitors. K. C. VADODARIA*; R. SANTOS; B. JAEGER; A. MEI; S. LEFCOCHILLOS-FOGELQUIST; A. MENDES; G. ERIKSON; M. MAXIM SHOKHIREV; L. MOORE; C. FREDLENDER; S. DAVE; C. FITZPATRICK; B. KERMAN; P. CHARNAY; J. KELSOE; C. MARCHETTO; F. H. GAGE. *Salk Inst. For Biol. Sci., Ecole Normale Supérieure, PSL Res. University, CNRS, Inserm, Inst. de Biologie de l'Ecole Normale Supérieure (IBENS), Univ. of Zurich, Salk Inst. for Biol. Studies, Res. Ctr. for Regenerative and Restorative Med. (REMER), Ecole Normale Supérieure, PSL Res. University, CNRS, Inserm, Inst. de Biologie de l'Ecole Normale Supérieure (IBENS), UCSD, Salk Inst., Salk Inst.*

8:45 **103.04** Identifying common as well as personalized developmental and molecular phenotypes in idiopathic autism neural precursor cells (NPCs). S. PREM*; M. WILLIAMS; P. MATTESON; J. MILLONIG; E. M. DICICCO-BLOOM. *Rutgers Robert Wood Johnson Med. Sch., Rutgers Robert Wood Johnson Med. Sch., Rutgers Robert Wood Johnson Med. Sch.*

9:00 **103.05** Elucidating the pathophysiology of the 15q13.3 micro deletion syndrome. K. K. SINGH*; B. K. UNDA; M. UDDIN; V. KWAN; L. CHALIL; S. H. WHITE; N. HOLZAPFEL; M. WOODBURY-SMITH; K. HO; N. MURTAZA; E. HARWARD; G. PELLECCCHIA; L. D'ABATE; T. NALPATHAMKALAM; S. LAMOUREUX; J. WEI; M. SPEEVAK; J. STAVROPOULOS; K. HOPE; B. DOBLE; J. NIELSON; S. SCHERER. *McMaster Univ., McMaster Univ., Hosp. for Sick Children, McMaster Univ., Lineagen Inc, Univ. of Toronto, Lundbeck.*

9:15 **103.06** Identifying critical components of Zika virus that disrupt mammalian cortical neurogenesis in mouse models and human cerebral organoids. K. YOON*; G. SONG; X. QIAN; J. PAN; D. XU; H. RHO; F. ZHANG; E. LEE; Q. WU; K. M. CHRISTIAN; H. TANG; P. JIN; Z. XU; J. QIAN; H. ZHU; H. SONG; G. MING. *Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ., Chinese Acad. of Sci., Inst. de Biomedicina de Sevilla (IBIS), Emory Univ. Sch. of Med., Florida State Univ., Johns Hopkins Univ. SOM, Florida State Univ., Emory Univ. Sch. of Med., Johns Hopkins Sch. of Med., Johns Hopkins Sch. of Med., Univ. of Pennsylvania, Johns Hopkins University, Inst. for Cell Engin.*

9:30 **103.07** Modeling idiopathic autism using pluripotent stem cells. C. MARCHETTO*; Y. KIM; S. LINKER; D. N. AMATYA; A. P. D. MENDES; R. SANTOS; F. H. GAGE. *Salk Inst., Seoul Natl. Hosp., Ecole Normale Supérieure, PSL Res. University, CNRS.*

9:45 **103.08** Single rosette-derived cortical organoids for studying human cortical development, synapses, and synaptopathies. C. RUSSELL*; Y. WANG; Y. WU; J. SPAMPANATO; L. BELL; P. TARBOTON; S. GREBENYUK; A. SHCHEGLOVITOV. *Univ. of Utah, Univ. of Utah, Univ. of Utah.*

10:00 **103.09** Disruption of ATF4-DISC1 interaction leads to transcriptional dysregulation in an iPSC model of mental disorders. X. WANG*; F. YE; Y. CHUAN; Z. WEN; Z. GUO; F. R. RINGELING; W. HUANG; C. ZHANG; M. ZHANG; H. SONG; G. MING. *Univ. of Pennsylvania, Fudan Univ., Ctr. of Systems Biol. and Human Health, Sch. of Sci. and Inst. for Advanced Study, Hong Kong Univ. of Sci. and Technol., Div. of Life Science, State Key Lab. of Mol. Neurosci., Inst. for Cell Engineering, Johns Hopkins Univ. Sch. of Medicine, Dept. of Neuroscience, Perelman Sch. of Medicine, Univ. of Pennsylvania.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 10:15 **103.10** Modeling the interplay between neurons and astrocytes in autism using iPSC. P. BELTRÃO-BRAGA*; F. B. RUSSO; B. C. G. FREITAS. *USP, Univ. of São Paulo, UCSD.*
- 10:30 **103.11** Modeling molecular changes and network response to Risperidone during neuronal differentiation in iPSC derived from Autism patients. Y. KIM*; C. MARCHETTO; R. SANTOS; D. AMATYA; S. LINKER; A. P. D. MENDES; F. H. GAGE. *Natl. Ctr. For Mental Hlth., Salk Inst.*

- 9:45 **104.08** Early pathological priming of time-critical gene networks causes neurodevelopmental acceleration in autism. S. T. SCHAFER*; A. PAQUOLA; S. STERN; M. C. MARCHETTO; J. MERTENS; F. H. GAGE. *Salk Inst. Lab. of Genet.*
- 10:00 **104.09** ● Establishment of a human induced pluripotent stem cell derived neuromuscular co-culture platform for disease modeling. E. SWARTZ*; G. SHINTANI; J. WAN; S. WANG; M. PRIBADI; Z. YANG; L. HAVTON; G. COPPOLA. *UCLA, UCLA.*

NANOSYMPOSIUM

104. iPSCs: Disease Models II

Theme A: Development

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

- 8:00 **104.01** Ectopic development of neuronal organoids via direct tissue reprogramming. D. GALLEGU-PEREZ*; S. GHATAK; N. HIGUITA-CASTRO; A. SUNYECZ; J. MOORE; R. STEWART; T. ZIEBRO; R. NORTH CUTT; V. SUNDARESAN; J. OTERO; K. SINGH; S. ROY; C. RINK; S. KHANNA; L. LEE; C. K. SEN. *The Ohio State Univ., The Ohio State Univ.*
- 8:15 **104.02** ● Generation of organoids from human neural stem cells and from patient-derived glioblastoma cells. M. E. BARISH*; A. VELAZQUEZ OJEDA; B. BREWSTER; C. E. BROWN; K. S. ABOODY; M. GUTOVA. *Beckman Res. Inst. City of Hope, Med. Ctr. City of Hope.*
- 8:30 **104.03** Accelerated derivation of functional microglia from hiPSCs for modeling neurological disorders. D. TRUDLER; A. SULTAN; K. LOPEZ; J. PARKER; S. A. LIPTON; R. AMBASUDHAN*. *Scintillon Inst., The Scripps Res. Inst., Univ. of California San Diego.*
- 8:45 **104.04** Modeling human brain development and disease at single-cell resolution with human brain organoids. G. QUADRATO*; T. NGUYEN; E. MACOSKO; J. SHERWOOD; D. BERGER; S. YANG; E. BOYDEN; J. LICHTMAN; Z. WILLIAMS; S. MCCARROLL; P. ARLOTTA. *Harvard Univ., Broad Inst. of MIT and Harvard, MIT, MGH, Harvard Med. Sch.*
- 9:00 **104.05** iPSC-derived neural progenitors for phenotypic compound screenings of mitochondrial neurological disorders due to MT-ATP6 mutations. C. LORENZ*; S. STAEGE; A. ZINK; G. INAK; B. MLODY; E. WANKER; M. SCHUELKE; A. PRIGIONE. *Max Delbrueck Ctr. For Mol. Med., Max Delbrueck Ctr. For Mol. Med., Berlin Inst. of Hlth., Charité-Universitätsmedizin.*
- 9:15 **104.06** ● Pathophysiological analysis of spinal-bulbar muscular atrophy using disease specific iPSCs. Y. OKADA*; K. ONODERA; T. ITO; D. SHIMOJO; Y. ISHIHARA; S. TANAKA; M. KATSUNO; M. DOYU; G. SOBUE; H. OKANO. *Aichi Med. Univ. Sch. of Med., Nagoya Univ. Grad. Sch. of Med., Keio Univ. Sch. of Med., Nagoya Univ. Grad. Sch. of Med., Nagoya Univ. Grad. Sch. of Med.*
- 9:30 **104.07** Human iPSC-mouse chimeras to study Huntington's disease phenotypes. A. MIGUEZ*; P. SANDERS; G. BOMBAU; C. VILA; J. M. CANALS. *Univ. of Barcelona, Production and Validation Ctr. of Advanced Therapies (Creatio), Fac. of Med. and Hlth. Sciences, Univ. of Barcelona, Neurosci. Institute, Univ. of Barcelona, August Pi i Sunyer Biomed. Res. Inst. (IDIBAPS), Lab. of Stem Cells and Regenerative Med., Networked Biomed. Res. Ctr. for Neurodegenerative Disorders (CIBERNED).*

NANOSYMPOSIUM

105. Alzheimer's Disease and Neuroinflammation

Theme C: Neurodegenerative Disorders and Injury

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

- 8:00 **105.01** The cerebrovascular and cognitive dysfunction induced by A β requires the innate immunity receptor CD36 in perivascular macrophages. K. UEKAWA*; L. PARK; Y. HATTORI; P. ZHOU; M. MURPHY; J. ANRATHER; C. IADECOLA. *Weill Cornell Med. Col.*
- 8:15 **105.02** Neuroinflammation & Alzheimer's disease. X. LIU*; Q. TAN. *1st Affiliated Hosp. of Anhui Med. Univ.*
- 8:30 **105.03** Lim kinase 1 regulates amyloid beta load in Alzheimer's mice. Y. D. KE*; L. M. ITTNER. *The Univ. of New South Wales, Univ. of New South Wales.*
- 8:45 **105.04** Microglia contain, release, and process bioactive tau seeds. S. C. HOPP*; Y. LIN; S. DEVOS; R. E. BENNETT; A. D. SHERMAN-ROE; B. T. HYMAN, MD, PhD. *Massachusetts Gen. Hosp., Northeastern Univ., Massachusetts Gen. Hosp., Massachusetts Gen. Hosp. Dept. of Neurol.*
- 9:00 **105.05** Normal brain APOE4 structure and functions are altered by ibuprofen. G. W. REBECK*; S. FLOWERS. *Georgetown Univer.*
- 9:15 **105.06** Effects of substrate stiffness on NOX-mediated superoxide production in A β -stimulated microglia. X. GENG*; T. TENG; G. Y. SUN; J. W. SHIN; M. J. LADU; O. LAZAROV; J. C. LEE. *Univ. of Illinois at Chicago, Univ. Missouri.*
- 9:30 **105.07** Single cell RNA-seq identifies a unique microglia type associated with Alzheimer's disease. O. MATCOVITCH-NATAN*; H. KEREN-SHAUL; A. SPINRAD; A. WEINER; R. DVIR SZTERNFELD; T. K. ULLAND; E. DAVID; K. BARUCH; D. LARA-ASTAISO; B. TOTH; S. ITZKOVITZ; M. COLONNA; M. SCHWARTZ; I. AMIT. *Weizmann Inst. of Sci., Weizmann Inst. of Sci., Washington Univ. Sch. of Med., Weizmann Inst. of Sci.*
- 9:45 **105.08** ● Trem2 knockout attenuates neuroinflammation and protects against neurodegeneration in a mouse model of tauopathy. C. E. LEYNS*; J. D. ULRICH; M. B. FINN; F. R. STEWART; L. J. KOSCAL; J. REMOLINA SERRANO; G. O. ROBINSON; E. ANDERSON; D. M. HOLTZMAN. *Washington University-St. Louis.*
- 10:00 **105.09** Triggering receptor expressed on myeloid cells 2: Functional characteristics and therapeutic implications of a novel immune receptor in microglia for the treatment of Alzheimer's disease. K. CLAYTON*; M. M. VARNUM; A. YOSHII-KITAHARA; G. YONEMOTO; L. KORO; S. IKEZU; T. IKEZU. *Boston Univ. Sch. of Med., Boston Univ. Sch. of Med.*

10:15 **105.10** Bacteroidetes fragilis of the human GI tract microbiome secretes a noxious mixture of lipopolysaccharides (BF-LPSs), amyloids, endotoxins and small non-coding (microRNA-like) RNAs, that drives inflammatory signaling in sporadic Alzheimer's disease (AD) tissues. W. J. LUKIW*; V. JABER; L. CONG; Y. ZHAO. *Louisiana State Univ. Neurosci. Ctr. of Excellence, LSU Sch. of Med., LSU Sch. of Med., LSUHSC-NO Neurosci.*

NANOSYMPOSIUM

106. Stroke Rehab and Imaging: Novel Approaches

Theme C: Neurodegenerative Disorders and Injury

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

- 8:00 **106.01** ● Application of neuroimaging in early stroke for motor recovery prediction. J. M. CASSIDY*; S. C. CRAMER. *Univ. of California Irvine Dept. of Neurol., Univ. of California, Irvine, Univ. of California, Irvine, Univ. of California, Irvine.*
- 8:15 **106.02** How does iReadMore therapy change the reading network of patients with central alexia? S. KERRY*; Z. V. J. WOODHEAD; O. M. AGUILAR; J. CRINION; W. PENNY; Y. HOON; A. P. LEFF. *Univ. Col. London, Univ. Col. London, Univ. Col. London, UCL.*
- 8:30 **106.03** Lesion site dependent treatment responses to speech and language therapy in stroke patients. T. HOPE; O. AGUILAR; S. KERRY; Y. ONG; M. CALLAGHAN; J. CRINION; Z. WOODHEAD; A. P. LEFF*. *Univ. Col. London, Univ. of Oxford, Univ. Col. London.*
- 8:45 **106.04** Predicting recovery of acute post-stroke aphasia. A. E. HILLIS*; R. SEBASTIAN; B. BREINING; A. WRIGHT; S. SAXENA. *Johns Hopkins Univ. Sch. Med., Sadhvi Saxena.*
- 9:00 **106.05** Targeted treatment for cognitive impairments following traumatic brain injury with methylphenidate. P. O. JENKINS*; N. BOURKE; S. DE SIMONI; J. H. COLE; D. J. SHARP. *Imperial Col.*
- 9:15 **106.06** Sox9 knockout mice have improved recovery and increased reparative sprouting following stroke. A. BROWN*; X. XU; B. BASS; W. M. MCKILLOP; J. MAILLOUX; T. LIU; N. M. GEREMIA; T. HRYCIW. *Robarts Res. Inst.*
- 9:30 **106.07** Glial enriched progenitors : A novel cell-based therapeutic for white matter stroke. I. L. LLORENTE*; W. E. LOWRY; S. T. CARMICHAEL. *Univ. of California , Los Angeles, UCLA, UCLA.*
- 9:45 **106.08** ECM hydrogel injection for the treatment of stroke. M. M. MODO*; H. GHUMAN; M. GERWIG; F. NICHOLLS; J. LIU; J. DONNELLI; B. WAHLBERG; S. BADYLAK. *Univ. of Pittsburgh, Univ. of Pittsburgh.*
- 10:00 **106.09** Emerging potential of exosomes for treatment of neurological diseases. M. GUTIERREZ FERNANDEZ*; L. OTERO ORTEGA; F. LASO GARCÍA; M. GOMEZ DE FRUTOS; A. MARTINEZ ARROYO; E. DIEZ TEJEDOR. *LA PAZ UNIVERSITY HOSPITAL.*
- 10:15 **106.10** ● ESC-derived oligodendrocyte progenitor cells (AST-OPC1): Clinical update and preclinical progress in cervical spinal cord injury. N. C. MANLEY*; C. C. CASE; E. D. WIRTH, III; J. S. LEBKOWSKI. *Asterias Biotherapeutics, Asterias Biotherapeutics.*

10:30 **106.11** ▲ Human iPS-derived interneurons enhance functional recovery after cortical stroke. J. A. MAZZITELLI*; I. L. LLORENTE; E. SIDERIS; T. SEGURA; W. E. LOWRY; S. T. CARMICHAEL. *UCLA, UCLA, UCLA.*

10:45 **106.12** Human embryonic stem cell-derived oligodendrocyte progenitors remyelinate the brain and rescue behavioral deficits following radiation. J. PIAO*; T. MAJOR; G. AUYEUNG; E. POLICARPIO; J. MENON; L. DROMS; P. GUTIN; K. URYU; J. TCHIEU; D. SOULET; V. TABAR. *Sloan Kettering Cancer Ctr., The Rockefeller Univ., Sloan Kettering Inst., Ctr. de recherche du CHU de Quebec.*

NANOSYMPOSIUM

107. Brain Injury: Cellular and Molecular Mechanisms

Theme C: Neurodegenerative Disorders and Injury

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

- 8:00 **107.01** Hippocampal network changes during spatial object recognition task performance after mild traumatic brain injury. A. S. COHEN*; B. JOHNSON; H. METHENY; J. F. BURKE; G. XIONG; R. PATERNO. *Children's Hosp Philadelphia Univ. of Pennsy, UCSF, Epilepsy Res. Lab. and Weill Inst. for Neuroscience, Dept. of Neurolog. Surgery, Univ. of California, San Francisco.*
- 8:15 **107.02** Electrophysiological properties of parvalbumin-expressing interneurons in the dentate gyrus after mild traumatic brain injury. K. A. FOLWEILER*; H. E. METHENY; A. S. COHEN. *Univ. of Pennsylvania, Children's Hosp. of Philadelphia, Univ. of Pennsylvania Perelman Sch. of Med.*
- 8:30 **107.03** ▲ The dynamics of structural changes after repeated mild TBI. A. KAMNAKSH; A. BADEA; R. J. ANDERSON; E. CALABRESE; J. LONG; D. V. AGOSTON*. *The Uniformed Services Univ., Duke Univ. Hosp., Duke Univ. Med. Ctr., Duke Univ., WRAIR, USUHS, B2036.*
- 8:45 **107.04** Mechanisms of recovery after targeted injury in neuronal islands. M. F. ADEGOKE*; D. F. MEANEY. *Univ. of Pennsylvania, Univ. Pennsylvania.*
- 9:00 **107.05** Activation of PERK elicits memory impairment following TBI. N. SEN*; T. SEN. *Univ. of Pittsburgh.*
- 9:15 **107.06** Glycyrrhizin reduces neuroinflammation acutely after paediatric traumatic brain injury. K. M. WEBSTER; M. SUN; T. J. O'BRIEN; S. R. SHULTZ*; B. D. SEMPLE. *Univ. of Melbourne, The Univ. of Melbourne, Dept. of Medicine, RMH, Univ. of Melbourne, The Univ. of Melbourne.*
- 9:30 **107.07** Intracortical blood-vessel and MRI alterations after juvenile closed head injury. J. BADAUT*; A. ICHKOVA, Ms; G. COUTRAND; S. S. BERTRAND; B. RODRIGUEZ-GRANDE; A. OBENAUUS. *CNRS- Bordeaux Univ., Loma Linda Univ., Loma Linda Univ., Univ. of California Irvine.*
- 9:45 **107.08** Traumatic brain injury impairs central metabolic function and increases the vulnerability to ischemic cell death. Z. M. WEIL*; S. NICHOLSON; N. ZHANG; K. KARELINA; A. C. DEVRIES. *Ohio State Univ. Med. Ctr.*
- 10:00 **107.09** Natural History and rescue of astrocyte glutamate transporter GLT-1 expression after traumatic brain injury. M. Q. HAMEED*; H. H. LEE; P. A. ROSENBERG; T. K. HENSCH; A. ROTENBERG. *Boston Children's Hosp.*

• Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 10:15 **107.10** Characterization of vessel-associated cells expressing nestin and platelet-derived growth factor receptor- β in response to 3-nitropropionic acid intoxication. T. RIEW*; J. CHOI; H. KIM; X. JIN; M. LEE. *Dept. of Anatomy, Col. of Medicine, The Catholic Univ. of Korea, Catholic Neurosci. Inst., Cell Death Dis. Res. Ctr., Integrative Res. Support Center, Lab. of Electron Microscopy, Col. of Medicine, The Catholic Univ. of Korea.*
- 10:30 **107.11** Lethal giant larvae 1 (Igl1) promotes asymmetric cell division and differentiation of oligodendrocyte precursor cells. M. DAYNAC*; H. COLLINS; I. MEYERS; N. MURPHY; B. KADHKODAEI; N. TRUFFAUX; J. NIU; S. FANCY; C. PETRITSCH. *UCSF, UCSF, UCSF.*

NANOSYMPOSIUM

108. Somatosensory Cortex

Theme D: Sensory Systems

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

- 8:00 **108.01** Molecular changes induced by environmental enrichment in adult rat somatosensory cortex. S. MANCINI*; K. M. MURPHY. *McMaster Univ., McMaster Univ.*
- 8:15 **108.02** GABAergic postsynaptic compartment regulates neuronal activity in principal cells in mouse barrel cortex. Y. TSAI*; J. STOBART; K. D. FERRARI; M. BARRETT; B. WEBER; S. K. TYAGARAJAN. *Inst. of Pharmacol. and Toxicology, UZH.*
- 8:30 **108.03** The mechanisms of the intrinsic optical signal in the barrel cortex of the neonatal rats. M. MINLEBAEV*; M. SINTSOV; D. SUCHKOV; R. KHAZIPOV. *INMED INSERM U901, Kazan Federal Univ.*
- 8:45 **108.04** Multiphoton holographic silencing of neural population codes in behaving animals. I. A. OLDENBURG*; H. ADESNIK. *Univ. of California Berkeley.*
- 9:00 **108.05** Externally induced arousal state modifies spontaneous and evoked synaptic activities in the somatosensory cortex. A. N. RAPPAPORT*; I. LAMPL. *Weizmann Inst. of Sci.*
- 9:15 **108.06** Transient, but not chronic, manipulations of somatosensory cortex disrupt sensory detection. Y. HONG*; C. O. LACEFIELD; C. C. RODGERS; B. C. PIL; A. KASE; R. M. BRUNO. *Columbia Univ.*
- 9:30 **108.07** Interindividual variability of somatosensory representations - comparison of TMS and fMRI mapping in healthy subjects. J. D. GOGULSKI*; R. ZETTER; M. NYRHINEN; H. LIN; A. PERTOVAARA; S. CARLSON. *Fac Med. Univ. Helsinki, Aalto Univ. Sch. of Sci., Aalto Univ.*
- 9:45 **108.08** Bilateral modulation of insular activity observed after peripheral electrical stimulation in healthy adults. P. HAUTASAARI; H. SALORANTA; A. M. SAVIC; K. KORNILOFF; U. M. KUJALA; I. M. TARKKA*. *Univ. of Jyväskylä, Univ. of Belgrade.*
- 10:00 **108.09** Cortical reorganization following lower limb amputation. S. N. TOMSON*; L. WANG; J. M. YAU. *Baylor Col. of Med., Baylor Col. of Med., Baylor Col. of Med.*
- 10:15 **108.10** Probing the origins of resting state functional connectivity. S. J. BRICAULT*; J. LEE; M. DESAI; E. DETIENNE; A. JASANOFF. *MIT, Wellesley, MIT, MIT.*

NANOSYMPOSIUM

109. Cellular Mechanisms Underlying Cerebellum Plasticity

Theme E: Motor Systems

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

- 8:00 **109.01** Clustered complex spike activity rescues long-term depression in cerebellar slices under near-physiological conditions. H. K. TITLEY*; M. KISLIN; D. H. SIMMONS; S. S. WANG; C. HANSEL. *Univ. of Chicago, Princeton Univ.*
- 8:15 **109.02** Inferior olivary TMEM16B mediates cerebellar motor learning. Y. ZHANG*; Z. ZHANG; S. XIAO; J. TIEN; L. Y. JAN; H. YANG. *Duke Univ., Univ. of California, San Francisco, Univ. of California San Francisco Dept. of Physiol., Duke Univ.*
- 8:30 **109.03** Climbing fibers predict movement kinematics and performance errors. M. L. STRENG*; L. S. POPA; T. J. EBNER. *Univ. of Minnesota.*
- 8:45 **109.04** Kinetic analysis of constitutive and activity-dependent receptor-trafficking in cerebellar Purkinje cell. K. YAMAGUCHI*. *RIKEN BSI.*
- 9:00 **109.05** The capacity of perturbation-based cerebellar learning. J. ALJADEFF*; V. HAKIM; B. BARBOUR; N. BRUNEL. *Univ. of Chicago, CNRS & Ecole Normale Supérieure, Ecole Normale Supérieure, Univ. of Chicago.*
- 9:15 **109.06** Human predictive optokinetic eye movement is correlated with the presence of velocity storage: Demonstration in a virtual reality environment. Y. MATSUZAWA; R. BAKER; Y. HIRATA*. *Chubu Univ. Col. of Engin., New York Univ. Langone Med. Ctr.*
- 9:30 **109.07** Optogenetic manipulation of eyelid conditioned responses in rabbits. A. KHILKEVICH*; J. ZAMBRANO; M. RICHARDS; F. RIUSECH; B. V. ZEMELMAN; M. D. MAUK. *Univ. of Texas At Austin, Univ. of Texas at Austin.*

NANOSYMPOSIUM

110. Animal Models for Depression: Molecular and Genetic Approaches

Theme G: Motivation and Emotion

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

- 8:00 **110.01** FACS-RNaseq of nucleus accumbens reveals cell type-enriched mediators of stress susceptibility. H. KRONMAN*; C. PENA; E. RIBEIRO; B. LABONTÉ; E. LOH; N. STRAT; C. LARDNER; D. WALKER; E. NESTLER. *Icahn Sch. of Med. At Mount Sinai, l'Institut Universitaire en Sante Mentale de Quebec.*
- 8:15 **110.02** The role of long non-coding RNAs in depression. O. ISSLER*; Z. S. LORSCH; P. J. HAMILTON; I. PURUSHOTHAMAN; Y. E. LOH; B. J. HARTLEY; E. FLAHERTY; Y. VAN DER ZEE; D. M. WALKER; A. START; C. J. PENA; H. KRONMAN; E. S. CALIPARI; B. LABONTÉ; K. BRENNAND; L. SHEN; E. J. NESTLER. *Icahn Sch. of Med. at Mount Sinai, Maastricht Univ.*

* Indicated a real or perceived conflict of interest, see page 137 for details.
 ▲ Indicates a high school or undergraduate student presenter.
 * Indicates abstract's submitting author

- 8:30 **110.03** CREB-Zfp189 interactions regulate a resilient-specific transcriptional network in mouse models of depression. Z. S. LORSCH*; P. J. HAMILTON; Y. LOH; I. PURUSHOTHAMAN; E. M. PARISE; L. F. ALCANTARA; O. ISSLER; A. MCKENZIE; A. LEPACK; S. MONTGOMERY; M. WANG; I. MAZE; L. SHEN; B. ZHANG; R. C. BAGOT; E. J. NESTLER. *Icahn Sch. of Med. At Mount Sinai, Texas A&M Univ., Icahn Sch. of Med. At Mount Sinai, McGill Univ.*
- 8:45 **110.04** Critical role of miRNAs in mediating neural and behavioral changes in chronic social defeat stress induced mouse model of depression. N. KHANDELWAL*; S. DEY; S. CHAKRAVARTY; A. KUMAR. *CSIR- Ctr. for Cell. and Mol. Biol., CSIR-Indian Inst. of Chem. Technol.*
- 9:00 **110.05** The effects of restraint stress on reelin mRNA expression in glucocorticoid receptor-overexpressing female mice. D. M. KROLEWSKI*; E. K. HEBDA-BAUER; Q. WEI; M. SHAIKH; R. A. ILLAGAN; M. WASELUS; H. AKIL; S. J. WATSON, Jr. *Univ. of Michigan.*
- 9:15 **110.06** AOA as a modulator of corticotrophin releasing factor. L. AGUINIGA*; A. J. SCHAEFFER; D. J. KLUMPP. *Northwestern Univ., Northwestern Univ.*
- 9:30 **110.07** Food withdrawal-induced depression-like behavior by Kir2.1 upregulation in the nucleus accumbens. S. KIM*; J. SHOU; S. ABERA; E. B. ZIFF. *Colorado State Univ., New York Univ. Langone Med. Ctr.*
- 9:30 **111.07** Deficits and compensation in visual attention networks in schizophrenia. G. H. PATEL*; S. C. ARKIN; E. C. JAMERSON; R. SMITH, III; D. C. JAVITT. *Columbia Univ., Hunter Col.*
- 9:45 **111.08** The anterior prefrontal cortex represents low-level stimulus characteristics necessary for implicit attentional reallocation. N. K. HERR; M. ULLSPERGER; S. POLLMANN*. *Otto-von-Guericke Univ., Otto Von Guericke Univ., Univ. Magdeburg.*
- 10:00 **111.09** Altered connectivity of the dorsal attention network in semantic dementia. H. S. POPAL; B. C. DICKERSON; J. A. COLLINS*. *Massachusetts Gen. Hosp., Massachusetts Gen. Hosp.*
- 10:15 **111.10** Real-time neurofeedback of functional connectivity in large-scale brain networks that predict attention. M. D. ROSENBERG*; D. SCHEINOST; W. HSU; R. T. CONSTABLE; M. M. CHUN. *Yale Univ., Yale Univ., Yale Univ.*
- 10:30 **111.11** Connectome-based predictive modeling (CPM) of sustained attention: Comparing different methods for feature selection and prediction. K. R. YOO*; M. D. ROSENBERG; W. HSU; S. ZHANG; C. R. LI; D. SCHEINOST; R. T. CONSTABLE; M. M. CHUN. *Yale Univ., Yale Univ. Sch. of Med., Yale Univ., Yale Univ., Yale Univ.*

NANOSYMPOSIUM

111. Attention Networks

Theme H: Cognition

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

- 8:00 **111.01** Loneliness is reflected in the intrinsic architecture of attention and executive control networks. L. MWILAMBWE-TSHILOBO*; M. A. FERGUSON; R. SPRENG. *McGill Univ., Harvard Univ.*
- 8:15 **111.02** Conscious and unconscious brain responses to positively and negatively valenced cues. C. E. WIERS*; J. ZHAO; V. RAMIREZ; C. FREEMAN; A. ZEHRRA; S. B. DEMIRAL; P. MANZA; E. SHOKRI-KOJORI; G. WANG; D. TOMASI; N. D. VOLKOW. *Natl. Inst. on Alcohol Abuse and Alcoholism.*
- 8:30 **111.03** Inter-hemispheric brain volume asymmetries in ADHD. C. N. LARIOS; P. K. DOUGLAS*. *Univ. of Central Florida, UCLA, IST.*
- 8:45 **111.04** Dorsal attention network activation and diminished attention in cerebral visual impairment. C. M. BAUER*; E. S. BAILIN; P. J. BEX; L. B. MERABET. *Mass. Eye and Ear – Harvard Med. Sch., Northeastern Univ.*
- 9:00 **111.05** Low trait mind wandering is associated with optimized intrinsic functional connectivity. J. Z. LIM*; S. A. A. MASSAR; J. TENG; Z. HASSIRIM; K. WONG; C. WANG; M. W. CHEE. *Duke-Nus Med. Sch., Duke-NUS Med. Sch., Duke-NUS Med. Sch.*
- 9:15 **111.06** The relationship between cognitive workload and attentional reserve: An empirical investigation. K. JAQUES*; R. J. GENTILI; L. LO; H. OH; J. ZHANG; J. C. RIETSCHEL; M. W. MILLER; Y. Y. TAN; B. D. HATFIELD. *Univ. of Maryland, Col. Park, Univ. of Maryland, Col. Park, VA, Auburn Univ., Defence Sci. Organization, Univ. of Maryland Sch. of Publ. Hlth.*

NANOSYMPOSIUM

112. Mapping Language Onto Structure

Theme H: Cognition

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

- 8:00 **112.01** Mirror neurons and language acquisition through deictic, concrete and abstract concepts. M. ORKODASHVILI*. *Vanderbilt Univ.*
- 8:15 **112.02** Spatial-temporal dynamics of neural activity in Broca's area during sentence completion measured with intracranial EEG. Y. WANG*; A. VALENZUELA; A. ALHOURANI; W. J. LIPSKI; M. RICHARDSON; N. E. CRONE. *Johns Hopkins Univ., Johns Hopkins Univ., Univ. of Pittsburgh, Univ. Pittsburgh, Johns Hopkins Hosp.*
- 8:30 **112.03** Anterior-posterior gradient within ventro-occipito-temporal reading regions: Functional and structural MRI converging evidence. G. LERMA-USABIAGA*; M. CARREIRAS; P. M. PAZ-ALONSO. *BCBL, Basque Ctr. on Cognition, Brain and Language, IKERBASQUE, Basque Fndn. for Sci.*
- 8:45 **112.04** A comprehensive cartography of selective responses to letters and words in the left ventral temporal cortex with direct recordings of neural activity. J. JONAS*; A. LOCHY; C. JACQUES; S. COLNAT-COUBOIS; L. MAILLARD; B. ROSSION. *Catholic Univ. of Louvain, Univ. Hosp. of Nancy.*
- 9:00 **112.05** Semantic similarity effect for written words in left perirhinal cortex: Influence of type of property retrieved, visual versus nonvisual. A. G. LIUZZI*; P. DUPONT; R. PEETERS; S. DE DEYNE; G. STORMS; R. R. VANDENBERGHE. *KU Leuven / Lab. for Cognitive Neurol., KU LEUVEN, Univ. Hosp. Leuven, Lab. of Exptl. Psychology, Univ. Hosp. Gasthuisberg.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 9:15 **112.06** Cytoarchitectonic mapping of semantic similarity in the intraparietal sulcus. R. R. VANDENBERGHE*; V. NEYENS; R. BRUFFAERTS; R. VOGELS; P. DUPONT. *Univ. Hosp Gasthuisberg, Kuleuven, KU Leuven, KU Leuven, KU LEUVEN.*
- 9:30 **112.07** Bayesian probabilistic map to localize essential cortical language sites. P. ROLLO*; K. FORSETH; C. KADIPASAOGLU; N. TANDON. *UTHSC at Houston, UT Med. Sch. at Houston.*
- 9:45 **112.08** Chronology of activity in pre-motor articulation sites. K. FORSETH*; C. KADIPASAOGLU; N. TANDON. *UT Hlth. Sci. Ctr. In Houston, UT Med. Sch. at Houston.*
- 10:00 **112.09** Phonological and lexical streams of reading revealed by intracranial recordings. C. DONOS*; P. ROLLO; N. TANDON. *Univ. of Texas Hlth. Sci. Ctr. At Houst, Univ. of Texas Hlth. Sci. Ctr. at Houston.*
- 10:15 **112.10** Speech encoding in the human subthalamic nucleus. W. J. LIPSKI; A. ALHOURANI; T. PIRNIA; P. W. JONES; C. DASTOLFO; L. B. HELOU; D. J. CRAMMOND; S. SHAIMAN; M. W. DICKEY; L. L. HOLT; R. S. TURNER; J. A. FIEZ; M. RICHARDSON*. *Univ. of Pittsburgh, Univ. of Pittsburgh, Carnegie Mellon Univ., Univ. Pittsburgh.*
- 10:30 **112.11** The interactive brain model: An emerging theoretical framework for two-person social communication. J. HIRSCH*; X. ZHANG; J. A. NOAH; S. DRAVIDA. *Yale Sch. of Med., Yale Sch. of Med., Yale Sch. of Med., Univ. Col. London, Yale Univ.*
- 10:45 **112.12** Motor system contributions to cross-linguistic translation when deaf signers read English. L. C. QUANDT*; E. M. KUBICEK. *Gallaudet Univ., Gallaudet Univ.*

NANOSYMPOSIUM

113. Optical Methods for Connectivity

Theme I: Techniques

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

- 8:00 **113.01** Engineering hybrid genetically encoded voltage indicators incorporating Janelia Fluor dyes for *in vivo* voltage imaging. A. S. ABDELFAH*[†]; T. KAWASHIMA; J. GRIMM; A. MUTHUSAMY; M. AHRENS; L. LAVIS; E. SCHREITER. *Janelia Res. Campus.*
- 8:15 **113.02** Developing a genetically-encoded ACh indicator. M. JING*; P. ZHANG; G. WANG; H. JIANG; L. MESIK; J. FENG; L. I. ZHANG; M. LUO; J. ZHU; Y. LI. *Peking Univ., Univ. VA Sch. Med., USC, Natl. Inst. of Biol. Sci.*
- 8:30 **113.03** Ultrasonically sculpted optical patterns for light delivery and beam steering within the brain tissue. M. SCOPELLITI*[‡]; E. CONTE; A. H. GITTIS; M. CHAMANZAR. *Carnegie Mellon Univ., Polytechnic of Turin, Carnegie Mellon Univ.*
- 8:45 **113.04** Flexible Parylene waveguides monolithically integrated with vertical input/output ports for high-resolution optogenetic stimulation. J. REDDY*[‡]; M. CHAMANZAR. *Carnegie Mellon Univ., Carnegie Mellon Univ.*
- 9:00 **113.05** Pan-neuronal calcium imaging of prey capture and reward circuitry in freely swimming larval zebrafish. J. C. MARQUES*[‡]; D. KIM; I. BIANCO; D. ROBSON; J. LI. *Rowland Inst. at Harvard, Univ. Col. London.*
- 9:15 **113.06** Whole brain neural dynamics and behavior in *C. elegans*. A. LEIFER*[‡]; A. LINDER; J. NGUYEN. *Princeton Univ.*
- 9:30 **113.07** Whole-brain imaging in freely-moving *C. elegans*. V. VENKATACHALAM*[‡]; V. SUSOY; M. WU; W. HUNG; M. ZHEN; A. D. SAMUEL. *Harvard Univ., Harvard Univ., Univ. of Toronto, Mount Sinai Hospital, Lunenfeld-Tanenbaum Res. Inst., Mount Sinai Hospital, Lunenfeld-Tanenbaum Res. Inst.*
- 9:45 **113.08** Pan-neuronal calcium imaging in freely swimming larval zebrafish by high speed tracking microscopy. D. N. ROBSON; D. KIM; J. KIM; J. MARQUES; W. GU; J. LI*[‡]. *Harvard Univ.*
- 10:00 **113.09** Hemodynamic mapping of cell-specific and resting-state functional connectivity in the awake mouse brain. A. Q. BAUER*[‡]; A. KRAFT; G. BAXTER; P. WRIGHT; M. REISMAN; A. BICE; A. SNYDER; M. BRUCHAS; J. LEE; J. CULVER. *Washington Univ. In St. Louis, Washington Univ. In St. Louis, Washington Univ. In St. Louis, Washington Univ. In St. Louis.*

THEME J POSTER Walter E. Washington Convention Center

027. Neuroscience Outreach Activities II

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)—Walter E. Washington Convention Center, Halls A-C

- 8:00 WW32 **27.01SU** Mybrainandme.org: An online tool to increase education and public awareness of neuroscience while building a data repository of participant-submitted neuroimaging and phenotype data. S. P. PANTAZATOS; V. MAHAJAN; H. CAO; D. S. MARCUS. *New York State Psychiatric Inst., Columbia Univ., Columbia Univ., Columbia Univ., Washington Univ.*
- 9:00 WW33 **27.02SU** [▲] Open labs on neurosciences: Fifteen years of development in the disclosure of brain science in psychology. K. B. VALENCIA; R. L. LÓPEZ-BEJARANO; C. G. CURIEL-GUERRERO; A. B. ALCÁNTARA-QUINTERO; M. MORALES-RUVALCABA; D. C. RODRÍGUEZ-CASTAÑEDA; P. M. LUNA-DÁVILA; M. J. RAMÍREZ-FLORES; O. A. ROJAS-RAMOS. *Lab. De Neuropsicofarmacología, UNAM, Univ. Nacional Autónoma de México.*
- 10:00 WW34 **27.03SU** Neuroscience outreach through the martial arts. J. D. CARTER; K. D. MICHEVA. *Camp Carter Intl. Karate Assn., Stanford Univ. Sch. Med.*
- 11:00 WW35 **27.04SU** The Brain Awakens: Increasing neuroscience knowledge through educational outreach by FSU Neuroscience. M. TABBAA; R. VAIDYANATHAN; C. STRONG; T. SULLENBERGER; L. ELVIR; B. CHELETTE; D. SHAUGHNESSY. *Florida State Univ.*
- 8:00 WW36 **27.05SU** The modification of an open source delta RepRap 3D printer to print cells. D. FOSTER; M. CHAVEZ; P. D'HAESELEER; L. DOMPE; W. HARRIS; W. HUTTON; R. JOHNSON; L. KASPERSKY; H. KIM; W. LEE; M. LEE; T. MANZO; S. MOHANTY; A. PAN; G. ROY; B. TENG; C. TOBIN; D. WRIGHT. *The LAB, BioCurious, Counter Culture Labs, California State Univ.*
- 9:00 WW37 **27.06SU** Making neuroscience accessible to parents of children with special needs. M. TURNER; K. N. HUGGINS. *Movement Lesson, LLC, Movement Lesson, LLC.*

* Indicated a real or perceived conflict of interest, see page 137 for details.
[▲] Indicates a high school or undergraduate student presenter.
[‡] Indicates abstract's submitting author

- 10:00 WW38 **27.07SU** Neuroscience, technology advancement & the future of humanity: A collaborative approach to yield a better understanding & an improved outlook on human thought in the information age. A. SELARIU; F. O. PETROZZI; P. SCANNELL; P. DUSSAULT; C. IRENE. *Colorado State Univ., Neuro Coaching, The Emergent Brain Consortium, The Emergent Brain Consortium, Univ. of Trento.*
- 11:00 WW39 **27.08SU** Summative assessment of a high school human cadaveric and neuroanatomy dissection laboratory. I. MICHES; C. A. BEST-POPESCU. *Univ. of Illinois At Urbana-Champaign.*
- 8:00 WW40 **27.09SU** Five days travel through the brain. R. C. ZEPEDA; A. G. GUTIERREZ; C. J. JUÁREZ-PORTILLA; J. CUETO-ESCOBEDO; G. GUILLÉN-RUIZ; T. MOLINA-JIMÉNEZ; J. C. GUEVARA-LÓPEZ; M. SALDÍVAR-LARA; M. A. MELGAREJO; L. T. HERNÁNDEZ-SALAZAR; J. F. RODRÍGUEZ-LANDA; B. BERNAL; G. R. ROLDAN; F. GARCÍA-ORDUÑA; E. MEZA. *Univ. Veracruzana, Univ. Veracruzana, AV MEDICOS Y ODONTOLOGOS SN, Natl. Autonomous Univ. of Mexico, Univ. Veracr.*
- 9:00 WW41 **27.10SU** Stroke 120: An stroke educational video in China. J. ZHAO; R. LIU. *Fudan Univ., Univ. of Pennsylvania.*
- 10:00 WW42 **27.11SU** The 30th northeast under/graduate research organization for neuroscience (NEURON) conference held at Quinnipiac University in Hamden, CT. A. J. BETZ; T. AHERN; V. FRANCONI; S. A. RASKIN; J. G. TRAPANI; C. A. FRYE; D. B. MCQUADE; S. A. MASINO. *Quinnipiac Univ., Quinnipiac Univ., Trinity Col., Amherst Col., Univ. Albany, Skidmore Col., Trinity Col.*
- 11:00 WW43 **27.12SU** Formation of WISDOM at UT Health San Antonio, a women in science group dedicated to development, outreach, and mentoring. E. M. OCHOA; T. N. HOLMGREN; M. A. GUZMAN; R. KAUL; C. V. SHAFFER; T. EVANS; S. MOOBERRY. *UT Hlth. San Antonio, UT Hlth. San Antonio, UT Hlth. San Antonio, UT Hlth. San Antonio.*
- 8:00 WW44 **27.13SU** First international early research career enhancement school on BICA. A. V. SAMSONOVICH. *George Mason Univ., Natl. Res. Nuclear Univ. MEPhI.*
- 9:00 WW45 **27.14SU** University of Rhode Island brain fair. S. MAY; T. DAVIES; W. E. RENEHAN; A. N. MOSLEY. *Univ. of Rhode Island, Univ. of Rhode Island, Univ. of Rhode Island.*
- 10:00 WW46 **27.15SU** ▲ Bridging the gap: Understanding neuroscience through symbiotic learning and community outreach. C. A. WILLIAMS; A. R. KUNZ; S. RODRIGUEZ; H. A. HAMILTON; J. L. JENSEN; A. L. POOLE; A. ANAYA; J. M. HAMLIN; J. J. SCHOEN; J. L. RITCHIE. *Washington State Univ., Portland State Univ., PSU/NIH Build Exito, PSU/NIH Build Exito, Portland State Univ., Portland State Univ., Portland State Univ.*
- 11:00 WW47 **27.16SU** Inspiring young minds and building future scientists through Neuroscience outreach to the greater Los Angeles K-12 community. V. SARAVANAPANDIAN; C. YAEGER; C. J. EVANS; W. GE. *UCLA, UCLA.*
- 8:00 WW48 **27.17SU** ▲ Grey matters journal: A model for neuroscience education and outreach. T. QIU; P. BARTLETT; S. GU; K. WEIL; E. GRATE; M. LINDSTROM; G. LENZ. *Univ. of Washington, Univ. of Washington.*

THEME J POSTER *Walter E. Washington Convention Center*

028. 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)—Walter E. Washington Convention Center, Halls A-C

- 8:00 WW49 **28.01SU** Concussion policy myths and their effect on self-report of concussion. B. R. JOHNSON; M. HJALBER; T. M. RAMSEY; R. B. PECK; N. R. MOOREHEAD; T. E. HILL; C. A. FOSTER; C. J. D'LAURO. *U.S. Air Force Acad., U.S. Air Force Acad.*
- 9:00 WW50 **28.02SU** Developing a national program to promote children's cognitive and mental well being in conflict afflicted Iraq. J. M. RAJI KUBBA. *NA.*
- 10:00 WW51 **28.03SU** A Bayesian framework for disorders of consciousness research. C. NEELY; A. PETERSON. *George Mason Univ., George Mason Univ.*
- 11:00 WW52 **28.04SU** Mood disorders, suicide, and the impact of social media. A. B. VAN DERVEER; J. L. LARIMORE. *Agnes Scott Col., Agnes Scott Col.*
- 8:00 WW53 **28.05SU** Are aromatase inhibitors inadvertently influencing bi/homosexual attraction and negatively impacting physical/mental health? How incomplete interpretation may be harming children. S. GLISKE. *Univ. of Michigan.*
- 9:00 WW54 **28.06SU** Research misconduct investigations oversight at three federal agencies. E. RUNKO; R. AMBALAVANAR; B. MOZER; S. KABAK; D. BANNERMAN. *Natl. Sci. Fndn., Div. of Investigative Oversight, Office of Res. Integrity, U.S. Dept. of Hlth. and Human Services., Rockville, MD, United States, Office of Res. Oversight, U.S. Dept. of Veterans Affairs Veterans Hlth. Admin.*
- 10:00 WW55 **28.07SU** Considering sex as biological variable (sabv) in research: A primer for neuroscience investigators. C. HUNTER; J. M. WHITE. *NIH NIDCD, NIH/ORWH.*
- 11:00 WW56 **28.08SU** Behavioral and social neuroscience research at the NIH. D. M. GREENE-SCHLOESSER. *NIH.*
- 8:00 WW57 **28.09SU** Ethical considerations for gene therapy in people with Alzheimer's disease. J. M. VIANA; F. GILBERT. *Univ. of Tasmania, Univ. of Washington.*
- 9:00 WW58 **28.10SU** Anticipatory Biomedical Ethics and Policy Implications for the Use of CRISPR together with gene drive in human brains. M. W. NESTOR; R. L. WILSON. *The Hussman Inst. For Autism, The Univ. Of Maryland, Sch. of Med., Towson Univ.*
- 10:00 WW59 **28.11SU** Biotech Patents in the Modern Era. J. M. KUHN. *Marshall & Melhorn, LLC.*
- 8:00 WW60 **28.12SU** Gender bias in scholarly peer review: Neuroscience vs other sciences. D. BATTAGLIA; M. HELMER; M. SCHOTTDORF; A. NEEF. *INS, Univ. Aix-Marseille, Yale Univ., Max Planck Inst. for Dynamics and Selforganization.*
- 11:00 WW61 **28.13SU** Normative referents in neuromodulation: Global integration of self representation. D. C. LARRIVEE; A. M. SUBURO. *Intl. Assn. Catholic Bioethicists, Univ. Austral.*

• Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

POSTER

114. Neural Progenitor and Stem Cell Development

Theme A: Development

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

- 8:00 A1 **114.01** 'Gadding' about the brain: Understanding the function of GABAergic signaling during neural development in larval zebrafish. A. J. VANLEUVEN*; R. E. BALL; J. B. BYERS; Y. LIU; P. KNER; A. T. SORNBORGER; J. D. LAUDERDALE. *Univ. of Georgia, Univ. of Georgia, Univ. of California Davis.*
- 9:00 A2 **114.02** Computational modeling of layer formation in cortex using apoptosis. R. BAUER*; M. KAISER. *Newcastle Univ., Newcastle Univ.*
- 10:00 A3 **114.03** Investigating the roles of Sonic Hedgehog signaling in the establishment of postnatal neural stem cells from embryonic cortical progenitors. H. GOMEZ; J. GARCIA; D. AGUILAR; S. PLEASURE; O. R. YABUT*. *Univ. of California San Francisco Dept. of Neurol.*
- 11:00 A4 **114.04** Sox9-expressing neural stem cells in the neocortex generate neurons of all cortical layers. E. S. KAPLAN*; K. A. RAMOS-LAGUNA; A. B. MIHALAS; R. A. M. DAZA; R. F. HEVNER. *Seattle Children's Res. Inst.*
- 8:00 A5 **114.05** Post-transcriptional regulation of mir-3099 during neurogenesis. S. ZAINAL ABIDIN*; F. SZE ZHENG; N. NORDIN; S. ABDULLAH; C. PIKE SEE; L. KING HWA. *Universiti Putra Malaysia, NeuroBiology and Genet. Group, Universiti Putra Malaysia, Universiti Putra Malaysia.*
- 9:00 A6 **114.06** ARX suppresses ventral fate in the dorsal forebrain through modulation of SHH, FGF, and WNT signaling. G. CHO*; Y. LIM; I. CHO; X. SHI; J. B. GRINSPAN; J. A. GOLDEN. *Brigham and Woman's Hosp., Children's Hosp Philadelphia.*
- 10:00 A7 **114.07** Intracellular calcium dynamics in fetal neural progenitors after ethanol exposure and withdrawal. A. H. MAHNKE*; R. C. MIRANDA. *Texas A&M Univ. Hlth. Sci. Ctr.*
- 11:00 A8 **114.08** Teratogen-sensitive exosomal miRNAs control the growth and maturation of fetal neural progenitors. D. CHUNG*; A. TSENG; S. EAVES; N. A. SALEM; A. H. MAHNKE; R. C. MIRANDA. *Texas A&M Univ., Texas A&M Hlth. Sci. Ctr., Texas A&M Univ., Texas A&M Hlth. Sci. Ctr., Texas A&M Hlth. Sci. Ctr, Col. of Med.*
- 8:00 A9 **114.09** Analysis of epigenetic factors in human neural stem cells exposed to high glucose. D. KANDILYA*; A. BANIK; W. STÜNKEL; Y. S. CHONG; S. T. DHEEN. *Natl. Univ. of Singapore, Agency for Sci. and Technol. Res. (A*STAR), Natl. Univ. of Singapore.*
- 9:00 A10 **114.10** Regulation of cortical development by anaplastic lymphoma kinase. R. MAO*; G. WANG; R. DENG; Z. JIA; Z. ZHOU. *Inst. of Life Sciences, Southeast Univ., Univ. of Toronto.*
- 10:00 B1 **114.11** Novel genetic modifier of forebrain size in a ciliary mutant of Ttc21b. J. SNEDEKER*; W. GIBBONS; D. PROWS; R. W. STOTTMANN. *Cincinnati Childrens Hosp. Med. Ctr.*
- 11:00 B2 **114.12** Mass spectroscopy proteomics of neural fated cell in the Xenopus embryo. C. LOMBARD-BANEK, 20037; S. A. MOODY*; P. NEMES. *George Washington Univ., George Washington Univ.*

- 8:00 B3 **114.13** Interactions between β 1-integrin and bone morphogenetic protein signaling in neural stem cells. J. CHEN*; C. PENG; J. A. KESSLER. *Northwestern Univ., Northwestern Univ.*
- 9:00 B4 **114.14** Characterization of primary neural stem cells on elastic substrates *in vitro* as a model of the physiological cerebral milieu. M. A. RUEGER*; S. BLASCHKE; S. U. VAY; J. ABRAHAM; C. LINNARTZ; G. DREISSEN; M. HOFFMANN; N. HERSCH; R. MERKEL; G. R. FINK; B. HOFFMANN. *Univ. of Cologne, Forschungszentrum Juelich.*
- 10:00 B5 **114.15** The N-glycan branching pathway alters neural stem cell biophysical properties and shifts fate potential towards astrogenesis. A. R. YALE*; J. L. NOURSE; K. R. LEE; S. N. AHMED; J. ARULMOLI; L. P. MCDONNELL; G. A. BOTTEN; E. S. MONUKI; M. DEMETRIOU; L. A. FLANAGAN. *Univ. of California, Irvine, California State Univ., UCLA.*
- 11:00 B6 **114.16** Development of an advanced media system for improved neuronal viability and function. N. KAUR*; J. SAGAL; B. LIU; M. DERR; Y. YAN; R. JOSEPHSON; D. KUNINGER. *Thermo Fisher Scientific.*
- 8:00 B7 **114.17** Regulation of neural progenitor competence through genome architecture reorganization. M. KOHWI*; T. HAFER; N. MOLOTKOVA. *Columbia Univ., Columbia Univ.*
- 9:00 B8 **114.18** Acute effects of thyroid hormone on the developing tadpole telencephalon. J. P. KITCHEN*; C. K. THOMPSON. *Virginia Tech., Virginia Tech.*

POSTER

115. Postnatal Neurogenesis: Environmental and Pharmacological Modification

Theme A: Development

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

- 8:00 B9 **115.01** Deletion of Tlx and social isolation impairs exercise-induced neurogenesis in the adolescent hippocampus. Y. M. NOLAN*; D. A. KOZAREVA; O. F. O'LEARY; J. F. CRYAN. *Univ. Col. Cork.*
- 9:00 B10 **115.02** Differential effects of exercise during adolescence and adulthood on cognition and plasticity. J. D. O'LEARY*; A. E. HOBAN; C. BROUWERS; A. M. SULLIVAN; O. F. O'LEARY; J. F. CRYAN; Y. M. NOLAN. *Univ. Col. Cork, APC Microbiome Inst.*
- 10:00 B11 **115.03** The orphan nuclear receptor TLX regulates hippocampal transcriptome changes induced by IL-1 β . C. S. O LEIME*; A. E. HOBAN; D. A. KOZAREVA; C. M. HUESTON; R. M. STILLING; J. F. CRYAN; Y. M. NOLAN. *Univ. Col. Cork, Alimentary Pharmabiotic Ctr.*
- 11:00 B12 **115.04** Exposure to space radiation reduces neurogenesis but enhances pattern separation in both aversive and appetitive testing platforms in mature mice. R. P. REYNOLDS; C. W. WHOOLERY; M. J. LUCERO; N. ITO; R. L. REDFIELD; D. R. RICHARDSON; G. PALCHIK; S. MUKHERJEE; P. D. RIVERA; S. G. BIRNBAUM; B. P. C. CHEN; S. YUN; A. J. EISCH*. *The Children's Hosp. of Philadelphia (CHOP) Res., UT Southwestern Med. Ctr., Univ. of Pennsylvania.*
- 8:00 B13 **115.05** Investigating the role of adult hippocampal neurogenesis on cognitive affective bias. R. KARLSSON; A. S. WANG; H. A. CAMERON*. *NIH.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 9:00 B14 **115.06** Origins of age-related neurogenesis decline. M. A. BONAGUIDI*; A. IBRAYEVA; E. PU; D. JORG; G. MING; H. SONG; B. SIMONS. *USC, Cambridge Univ., Johns Hopkins University, Inst. for Cell Engin, Johns Hopkins Univ. SOM.*
- 10:00 B15 **115.07** Targeting entorhinal cortex-hippocampus circuitry as a therapeutic strategy for depression. S. YUN*; R. REYNOLDS; G. ZANNI; A. SEGEV; S. MUKHERJEE; D. RICHARDSON; M. DESALLE; S. KOURRICH; A. EISCH. *Univ. of Pennsylvania, The Children's Hosp. of Philadelphia Res. Inst., UT Southwestern Med. Ctr.*
- 11:00 B16 **115.08** Cyclin D2 is required for the establishment of the adult neural stem cell pool during postnatal development of the dentate gyrus. A. URBACH*; V. KNÖLKER; O. PASTOR; S. MARTIN; F. TETZLAFF; R. N. BADEL; J. M. ENCINAS; O. W. WITTE. *Jena Univ. Hosp., Achucarro Basque Ctr. for Neurosci.*
- 8:00 B17 **115.09** Adult hippocampal neurogenesis impacts the expression of male aggression. M. C. TSUDA*; H. A. CAMERON. *NIMH/NIH.*
- 9:00 B18 **115.10** Adult hippocampal neurogenesis following mild traumatic brain injury. K. L. CLARK*; S. YUN; H. E. METHENY; G. ZANNI; A. S. COHEN; A. J. EISCH. *Children's Hosp. of Philadelphia, Univ. of Pennsylvania, UT Southwestern Med. Ctr.*
- 10:00 B19 **115.11** The exercise hormone FNDC5 / irisin is required for the exercise-induced improvements of spatial learning and memory. C. D. WRANN*; M. F. YOUNG; M. P. JEDRYCHOWSKI; K. K. GERBER; B. J. CALDARONE; H. VAN PRAAG; B. M. SPIEGELMAN. *Massachusetts Gen. Hospital, Dana-Farber Cancer Inst. and Harvard Med. Sch., 3Harvard NeuroDiscovery Ctr. and Brigham and Women's Hosp., LNS/NIA/NIH.*
- 11:00 B20 **115.12** ▲ Low-level silver nanoparticle exposure alters adult neural stem cell physiology. K. D. BROWN; K. J. NERHOOD; M. N. MENKING-HOGGATT; K. A. HUMPHREY; B. N. FORREN; R. J. COOPER; N. SPITZER*. *Marshall Univ.*
- 8:00 B21 **115.13** Mossy cell indirect pathway is required for adult neural stem cell maintenance and subsequent hippocampal neurogenesis. C. YEHE*; B. ASRICAN; L. J. QUINTANILLA; X. MAO; T. HE; W. LU; J. SONG. *Univ. of North Carolina At Chapel Hill, Univ. of North Carolina At Chapel Hill, Natl. Inst. of Hlth., Univ. of North Carolina At Chapel Hill.*
- 9:00 B22 **115.14** ▲ Increased dopamine reduces hippocampal and striatal neurogenesis in a DAT knockdown mouse model. C. O'BRIEN*; A. TOROSSIAN; A. PEREZ; S. WODINSKY; K. NEWMAN; J. BEELER; C. PYTTE. *Queens Col. City Univ. of New York.*
- 10:00 B23 **115.15** Vitronectin induces expression of CNTF, LIF and IL-6 which have different effects on adult mouse SVZ neurogenesis. C. JIA*; M. KEASEY; C. LOVINS; H. MALONE; R. SANTE; V. RAZSKAZOVSKIY; T. HAGG. *East Tennessee State Univ.*
- 11:00 B24 **115.16** Role of antioxidant supplementation on sodium arsenite (NaAsO₂) induced developmental neurotoxicity in rat cerebellum. P. DHAR*; P. KUMAR; P. KAUSHAL. *All India Inst. of Med. Sci., AIIMS.*
- 8:00 B25 **115.17** Neurotoxic effects of acrylamide on the hippocampal neurogenesis and neuronal differentiation. S. LEE; Y. LEE; W. LEE; J. LEE*. *Pusan Natl. Univ.*
- 9:00 B26 **115.18** Cranial irradiation leads to sustained deficits in adult hippocampal neurogenesis without reducing neural stem cell count. E. BELCHER*; S. BEGOLLY; J. OLSCHOWKA; J. WILLIAMS; M. K. O'BANION. *Univ. of Rochester Sch. of Med. and Dent., Univ. of Rochester Sch. of Med. and Dent.*
- 10:00 B27 **115.19** Dormant adult-born neurons can be activated by exposure to an enriched environment. S. M. OHLIN*; R. U. HEGEMANN; K. L. WAKE; M. F. DINNUNHAN; L. SCHWEITZER; S. M. HUGHES; W. C. ABRAHAM. *Univ. of Otago, Brain Hlth. Res. Ctr., Brain Res. New Zealand, Univ. of Otago.*
- 11:00 B28 **115.20** Intrauterine growth restriction as factor in long-term neurobehavioral outcome of neonatal hypoxic ischemic injury in a rodent model. R. NARANG*; K. CARTER; C. MUNCIE; Y. PANG; L. FAN; Y. FENG†; N. OJEDA; A. J. BHATT. *Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr. / Dept of Pediatrics, Dept. of Pediatrics, Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr.*
- 8:00 B29 **115.21** ▲ Testing the limits of adult neurogenesis: Optimizing neurogenic treatments for sustained efficacy. J. COLE*; S. P. CAHILL; R. YU; J. CLEMANS-GIBBON; J. S. SNYDER. *Jason Snyder Lab., Univ. of British Columbia, The Univ. of British Columbia, Univ. of British Columbia, Univ. of British Columbia.*
- 9:00 B30 **115.22** Transient inhibition of neural stem cell proliferation during early life alters adult dentate gyrus stem cell pool and neurogenic lineage. M. YOUSSEF*; G. KIRSHENBAUM; V. KRISH; E. D. LEONARDO; A. DRANOVSKY. *Columbia Univ. Med. Ctr., Columbia Univ. Press, Columbia Univ., Columbia/New York State Psyc Inst., Columbia Univ. / NYSPI.*
- 10:00 B31 **115.23** Adult hippocampal neurogenesis buffers ventral dentate gyrus responses to chronic stress. C. ANACKER*; G. STEVENS; A. MILLETTE; R. SHORES; R. HEN. *Columbia Univ., Columbia Univ.*
- 11:00 B32 **115.24** Acute and long-term effects of early postnatal alcohol exposure on hippocampal neurogenesis in mice. K. C. GUSTUS*; V. LOPEZ; J. NEWVILLE; P. TAPIA; L. LI; C. F. VALENZUELA; L. A. CUNNINGHAM. *Univ. of New Mexico.*
- 8:00 B33 **115.25** Neurogenic, neuroendocrine, and behavioural outcomes following prenatal alcohol exposure: Modulation by oxytocin. S. BAGLOT*; C. FUNG; P. UBI; E. MORGAN; S. E. LIEBLICH; W. YU; L. A. M. GALEA; J. WEINBERG. *The Univ. of British Columbia, The Univ. of British Columbia.*
- 9:00 B34 **115.26** High levels of cell proliferation on postnatal spinal cord and hippocampus in fluoxetine hydrochloride-treated mice: An *in vivo* study. N. GHANI*; I. KEARNS; A. VAN DER SCHOOT; J. DEUCHARS; S. A. DEUCHARS. *Univ. Of Leeds, Universiti Sains Malaysia.*
- 10:00 B35 **115.27** Neurotoxic effect of cannabinoid receptor agonists in neonatal rats. M. HUIZENGA*; A. UME; P. FORCELLI. *Georgetown Univ.*
- 11:00 B36 **115.28** Developmental effect of cannabinoids exposure during gastrulation in zebrafish. M. AMIN*; K. T. AHMED; D. W. ALI. *Univ. of Alberta.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

8:00 B37 **115.29** Seasonal effects on adult neurogenesis in turtles. A. S. POWERS*; A. AYANRU; S. BOYD; M. CHANG; A. CULOSO; J. ENG; K. HANINGTON; B. HANUSCH; W. R. KOCHEN; C. LOWE; E. MCLAUGHLIN; A. THOMPSON; A. WALSH; S. WONG; C. YU. *Stony Brook Univ.*

POSTER

116. Neural Circuit Maturation and Remodeling I

Theme A: Development

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

8:00 B38 **116.01** FMRP is required for critical period sensory input plasticity in the *Drosophila* olfactory circuit. R. M. GOLOVIN*; J. VEST; K. BROADIE. *Vanderbilt Univ.*

9:00 B39 **116.02** Somatostatin-positive GABAergic interneurons contribute to neuronal network activity in the developing mouse hippocampus. T. FLOßMANN*; K. KIRMSE; O. W. WITTE; K. HOLTHOFF. *Jena Univ. Hosp.*

10:00 B40 **116.03** Developmental origins of adult prefrontal cortical PV interneuron functional dysconnectivity. S. E. CANETTA*; E. TEBOUL; A. S. BROWN; C. KELLENDONK. *Columbia Univ., New York State Psychiatric Inst.*

11:00 B41 **116.04** The metabotropic glutamate receptor subtype 1 mediates visual-experience dependent maintenance of synaptic connectivity in the dorsal lateral geniculate nucleus. M. NARUSHIMA*; M. UCHIGASHIMA; Y. YAGASAKI; T. HARADA; Y. NAGUMO; N. UESAKA; K. HASHIMOTO; A. AIBA; M. WATANABE; M. MIYATA; M. KANO. *Natl. Inst. For Physiological Sci., Dept Physiol (I), Sch. Med, Tokyo Women's Med. Univ., Dept Anatomy, Grad Sch. Med, Hokkaido Univ. Sch. of Med., Tokyo Women's Med. university, Sch. Med, Dept Physiol (I), Lab. Animal Resources, CDBIM, Grad Sch. Med, The Univ. of Tokyo, Dept Neurophysiol, Grad Sch. Med, The Univ. of Tokyo, Hiroshima Univ.*

8:00 B42 **116.05** A role for visual experience in the maturation of direction selectivity in the mammalian retina. M. Y. EL-QUESSNY*; M. B. FELLER. *Univ. of California, Berkeley, Univ. of California, Berkeley.*

9:00 B43 **116.06** Assembly of pyramidal cell and interneuron microcircuits based on subtype identity and development lineage. J. C. WESTER*; C. J. MCBAIN. *NIH, NIH.*

10:00 B44 **116.07** Early TrkB signaling maintains visual receptive field refinement in adult superior colliculus by preventing a loss of inhibition. D. B. MUDD*; T. S. BALMER; S. L. PALLAS. *Georgia State Univ., Oregon Hlth. & Sci. Univ.*

11:00 B45 **116.08** How does sensory information shape early interneuron circuits to direct the maturation of the neocortex? J. STACEY*; Z. MOLNÁR; S. J. B. BUTT. *Univ. of Oxford.*

8:00 B46 **116.09** Dual mesoscopic and two-photon imaging of neuronal activity in cortical circuits. D. BARSON*; A. S. HAMODI; G. LUR; J. A. CARDIN; M. C. CRAIR; M. J. HIGLEY. *Yale Sch. of Med.*

9:00 B47 **116.10** A role for visual experience in activity-dependent development prior to eye-opening. A. TIRIAC*; B. E. SMITH; M. B. FELLER. *Univ. of California Berkeley, Univ. of California Berkeley.*

10:00 B48 **116.11** Immune activation produces learning deficits and alters microglia function in early juvenile development. B. OSBORNE*; J. M. SCHWARZ. *Univ. of Delaware.*

11:00 B49 **116.12 ▲** Removal of perineuronal nets in visual cortices of adult murine Prmt knockout mice restores visual acuity. M. BEGUM*; P. M; K. YOKE; J. LI ZHUOAN; J. HO; S. YEN; J. C. G. SNG. *Natl. Univ. of Singapore, NUS High Sch., Natl. Univ. Singapore.*

8:00 B50 **116.13** Severe prefrontal cortex abnormalities in mice lacking ipRGC signaling. L. LAZZERINI OSPRI*; S. HATTAR. *Johns Hopkins Univ., NIH.*

9:00 B51 **116.14** Roles of delta-protocadherins in neural circuit assembly. S. LIGHT*; M. EMOND; J. JONTES. *The Ohio State Univ.*

10:00 B52 **116.15** Development of adult-born granule cell connectivity with different interneuron networks. A. I. GROISMAN*; S. M. YANG; S. G. TEMPRANA; A. F. SCHINDER. *Leloir Inst. (IIBBA-CONICET).*

11:00 B53 **116.16** LRRTM1 contributes to the assembly of complex retinogeniculate synapses in mouse visual thalamus. A. MONAVARFESHANI*; G. STANTON; J. SU; K. SU; K. SWILLING; M. A. FOX. *Virginia Tech. Carilion Res. Inst., Virginia Tech.*

8:00 B54 **116.17** Eye opening selectively modulates inhibitory synaptic transmission in the developing visual cortex. Y. YU*; W. GUAN; J. CAO; Y. FU. *Fudan Univ., Fudan Univ.*

9:00 B55 **116.18** Refinement of presynaptic axons in the absence of synaptic activity. Y. CHONG*; N. SAVIUK; B. PIE; N. SONENBERG; P. HAGHIGHI; E. COOPER. *McGill Univ., Buck Inst. for Res. on Aging.*

10:00 B56 **116.19** Rats with neonatal corticospinal injury exhibit motor control from both hemispheres but anatomical plasticity only from the uninjured hemisphere. S. LALL*; T. WEN; C. PAGNOTTA; S. RATNADURAI GIRIDHARAN; J. B. CARMEL. *Burke Med. Res. Inst.*

11:00 B57 **116.20** Three-day-long *in vivo* imaging of dendritic reorganization in barrel cortex layer 4 in neonates. S. NAKAZAWA*; H. MIZUNO; T. IWASATO. *Natl. Inst. of Genet., SOKENDAI (The Grad. Univ. for Advanced Studies).*

8:00 B58 **116.21** Single cell RNA-sequencing of a developing neural system. A. BRANDEBURA*; D. KOLSON; P. STOILOV; P. MATHERS; G. SPIROU. *West Virginia Univ., West Virginia Univ.*

9:00 B59 **116.22** Impaired perineuronal nets in neprilysin- and Chst15-deficient mice. H. BAE*; G. G. MILLER; H. HUANG; L. C. HSIEH-WILSON; T. K. HENSCH. *Harvard Univ., Caltech.*

10:00 B60 **116.23** *In vivo* imaging of GABAergic microcircuits during postnatal development. L. MODOL VIDAL*; Y. BOLLMANN; V. VILLETTE; S. REICHINNECK; T. TRESSARD; A. BAUDE; R. COSSART. *INMED, INSERM U901, INSERM, INMED inserm U901.*

11:00 B61 **116.24** Brain-derived neurotrophic factor (BDNF)-TrkB signaling in cortistatin interneurons is crucial for the maintenance of excitatory-inhibitory balance. K. MARTINOWICH*; Y. MAI; J. L. HILL; D. V. JIMENEZ; H. L. HALLOCK; M. REN; K. R. MAYNARD; H. CHEN; N. HARDY; B. J. MAHER; R. SCHLOESSER; F. YANG. *Lieber Inst. For Brain Develop., Lieber Inst. for Brain Develop., Johns Hopkins Univ., The Lieber Inst. for Brain Develop., Lieber Inst., Lieber Inst. For Brain Develop., UCLA, Sheppard Pratt Lieber Res. Inst., Lieber Inst. For Brain Develop.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 8:00 B62 **116.25** The clustered Protocadherins promote the wiring and survival of inhibitory interneurons (in the developing brain). C. H. CARRIERE*; J. L. LEFEBVRE. *The Hosp. For Sick Children, Univ. of Toronto.*
- 9:00 B63 **116.26** Cholinergic modulation of spontaneous activity in the mouse neonatal cortex. G. HOUWEN*; N. ZABOURI; C. LOHMANN. *Netherlands Inst. For Neurosci.*
- 10:00 B64 **116.27** From emitted to elicited neuronal activity in the neonatal piriform cortex. E. ORURO; G. PARDO; I. ESPÍNDULA; M. E. CALCAGNOTTO*; M. IDIART. *UFRGS, UFRGS, UFRGS.*
- 11:00 DP01/B65 **116.28** (Dynamic Poster) Whole brain distribution of fate mapped glutamatergic neurons. Y. BOLLMANN*; L. CAGNACCI; R. COSSART; A. BAUDE. *Inst. De Neurobiologie De La Mediterranee, Inst. de Neurobiologie de la Mediterranee (INMED), Inst. de Neurobiologie de la Mediterranee (INMED).*
- 8:00 C1 **116.29** ▲ Structure and function of early born GABA neurons in the CA1 region of the hippocampus. C. GOUNY*; D. ANGULO-GARCIA; T. TOULAT; A. BAUDE; R. COSSART. *Inst. de Neurobiologie de la Méditerranée INMED, Inst. de Neurosciences des Système INS, Ctr. de Physique Théorique CPT.*
- 9:00 C2 **116.30** Computational simulation of the maternal odor on neonatal learning in the nest. G. PARDO*; I. ESPÍNDULA; E. ORURO. *UFRGS.*
- 9:00 C8 **117.06** Prostaglandin E2 regulates phosphorylation of spinophilin and growth cone morphology via PKA. A. KISSOONDOYAL*; D. A. CRAWFORD. *York Univ.*
- 10:00 C9 **117.07** Ubiquitination and degradation of adenylosuccinate synthetase, ADSS, is specified by the autism and schizophrenia associated CUL3 adaptor, KCTD13. J. M. MADISON*; K. DUONG; E. F. VIEUX; N. UDESHI; S. FERESHIAN; K. PIERCE; C. CLISH; R. PLATT; F. ZHANG; S. CARR; E. M. SCOLNICK; J. R. COTTRELL. *Broad Inst., Broad Inst.*
- 11:00 C10 **117.08** Comparative expression analysis of autism-associated cadherin superfamily members. J. A. FREI*; G. J. BLATT; Y. LIN. *Hussman Inst. For Autism, Hussman Inst. For Autism.*
- 8:00 C11 **117.09** Modelling SHANK2-related autism using human induced pluripotent stem cells and derived neurons. A. LUTZ*; M. DEMESTRE; T. M. BOECKERS. *Inst. for Anat. and Cell Biol.*
- 9:00 C12 **117.10** Input-response dynamics of an autism-linked synaptic signalosome. S. E. SMITH*; E. A. BROWN. *Seattle Childrens Res. Inst., Seattle Children's.*
- 10:00 C13 **117.11** Modelling synaptic mechanisms of autism-associated neuroligin-3 mutations using human neurons. V. R. MIRABELLA*; A. HAMOD; J. FANTUZZO; C. PAK; T. C. SUDHOF; D. COMOLETTI; Z. P. PANG. *Child Hlth. Inst. of NJ, Rutgers-Rwjms, Stanford Univ.*
- 11:00 C14 **117.12** An autism-associated mutation in CEP290 disrupts Shh-signaling, impairs regulation of ciliary protein mobility and affects cell proliferation. M. B. KILANDER*; Y. LIN. *Hussman Inst. For Autism.*
- 8:00 C15 **117.13** Functional screen of autism-associated single nucleotide variants in genes encoding translational machinery. A. G. VOROBYEVA*; I. IOSSIFOV; T. E. DEVER; E. KLANN. *New York Univ., Cold Spring Harbor, Natl. Institute of Child Hlth. and Human Develop., New York Univ. Ctr. for Neural Sci.*

POSTER

117. Cellular and Molecular Mechanisms of Autism

Theme A: Development

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

- 8:00 C3 **117.01** Ethanol exposure disrupts the growth of the cortical dendrite and aberrantly activates Src-family kinases. D. WANG*; J. ENCK; B. W. HOWELL; E. C. OLSON. *SUNY Upstate Med. Univ., Developmental Exposure Alcohol Res. Ctr.*
- 9:00 C4 **117.02** HPC-1/syntaxin1A regulates reciprocal feedforward interactions between DA and OXT systems, which, in turn, affect social behavior. T. FUJIWARA*; T. KOFUJI; T. MISHIMA; Y. TERAQ; K. AKAGAWA. *Kyorin Univ. Sch. of Med., Kyorin Univ. Sch. of Med.*
- 10:00 C5 **117.03** Disturbance of HPC-1/syntaxin1A gene expression and variation of its gene number are highly associated with autism spectrum disorder. T. KOFUJI*; T. FUJIWARA; T. MISHIMA; Y. HAYASHI; M. TAMARU; Y. TERAQ; K. AKAGAWA. *Kyorin Univ. Sch. of Med., Kyorin Univ. Sch. of Med., Prefectural Univ. of Hiroshima, Hiroshima Cosmopolitan Univ.*
- 11:00 C6 **117.04** Effects of missense variations on the processing and function of synaptic adhesion molecule Neuroligin 4X. M. KIMURA*; T. YUMOTO; R. NAGATOMO; Y. NAO; T. TOMITA. *The Univ. of Tokyo.*
- 8:00 C7 **117.05** Decoding the impacts of autism-associated *de novo* mutations, SAM and PDZ binding motif of EphB2 in neural development. Y. CAI*; T. LIGHT; J. WAN. *Peking Univ., Shenzhen PKU-HKUST Med. Ctr., Univ. of Connecticut Hlth. Ctr., Johns Hopkins Univ., The Hong Kong Univ. of Sci. and Technol.*

POSTER

118. Fragile X: Mechanisms of Pathophysiology

Theme A: Development

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

- 8:00 C16 **118.01** Fragile X circuits show differential developmental delays of spontaneous and evoked network activity but normal homeostatic plasticity. H. MOTANIS*; D. V. BUONOMANO. *UCLA, UCLA.*
- 9:00 C17 **118.02** Regulation of Kv4 potassium control of granule cell excitability by FMRP and ERK1/2. X. ZHAN*; G. SAHU; H. ASMARA; C. SZALAY; G. ZAMPONI; R. W. TURNER. *Univ. of Calgary, Univ. of Calgary.*
- 10:00 C18 **118.03** Neonatal stimulation of PKC epsilon signaling normalizes Fragile X-associated deficits in PVN oxytocin expression and later-life social and anxiety behavior. A. E. MARSILLO*; B. GERGES; S. MENKES; A. CHATTERJEE; R. SADEK; A. MANCUSO; C. DOBKIN; K. K. CHADMAN; P. BANERJEE. *The Col. of Staten Island, The Col. of Staten Island, The Grad. Ctr. (City Univ. of New York), The Inst. for Basic Res. in Developmental Disabilities, The Col. of Staten Island.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 11:00 C19 **118.04** Experimental manipulation of astroglial FMRP levels alters synaptic activity and behavior phenotypes in FXS mouse models. Y. YANG*; H. HIGASHIMORI; C. SCHIN; M. CHIANG. *Tufts Univ. Sch. of Med., Tufts Univ.*
- 8:00 C20 **118.05** Glial-mediated synaptic refinement in a mouse model of Fragile X syndrome. M. A. LEE*; C. A. MASON; M. M. SHIRASU-HIZA. *Columbia Univ., Columbia Univ., Columbia Univ.*
- 9:00 C21 **118.06** Altered structure-function relationship of dendritic spines in the developing somatosensory cortex in a mouse model of Fragile X Syndrome. S. A. BOOKER*; O. R. DANDO; A. P. F. DOMANSKI; J. T. R. ISAAC; G. E. HARDINGHAM; D. J. A. WYLLIE; P. C. KIND. *Univ. of Edinburgh, Univ. of Edinburgh, Univ. of Edinburgh, Univ. of Bristol, Univ. Col. London.*
- 10:00 C22 **118.07** Impaired synaptic scaling but intact homeostatic intrinsic plasticity in cortical neurons from FMR1 KO mice. P. BUELOW*; G. J. BASSELL; P. A. WENNER. *Emory Univ., Emory Univ., Emory Univ.*
- 11:00 C23 **118.08** ▲ Transcriptome interrogation in the dysregulated central amygdala of juvenile Fmr1 KO mice. M. H. DAVENPORT*; R. A. BECKER; S. E. FITZPATRICK; C. K. ROBINSON; T. L. SCHAEFFER; C. A. ERICKSON. *Cincinnati Children's Hosp. Med. Ctr.*
- 8:00 C24 **118.09** Widespread conservation of axonal fragile X granules in the adult mammalian hippocampus. K. A. SHEPARD; L. I. T. KORSAK; D. LE; M. R. AKINS*. *Drexel Univ.*
- 9:00 C25 **118.10** Dysregulation of mTOR -p70-S6K1 signaling in fragile X syndrome hiPSC-derived neural cells. M. KALINOWSKA*; N. RAJ; G. J. BASSELL; E. KLANN. *New York Univ., Emory Univ.*
- 10:00 C26 **118.11** Fragile X Granules localize to nociceptive and motor axons in the mouse spinal cord. M. MITCHELL*; S. SINGH; C. MCMILLAN; M. R. AKINS. *Drexel Univ., Drexel Univ., Drexel Univ.*
- 11:00 C27 **118.12** Mitochondrial alterations in a mouse model of Fragile X syndrome. S. D'ANTONI; L. DE BARI; M. BORRO; D. VALENTI; C. M. BONACCORSO; M. SPATUZZA; M. SIMMACO; R. A. VACCA; M. CATANIA*. *Inst. of Neurolog. Sciences, Natl. Res. Council (CNR), Inst. of Biomembranes, Bioenergetics and Mol. Biotechnology, Natl. Council of Res., Dept. of Neurosciences, Mental Hlth. and Sensory Organs (NESMOS), Sapienza Univ. of Rome, Lab. of Neurobiology, IRCCS Oasi Maria Santissima.*
- 8:00 C28 **118.13** Neuromodulation of inhibitory transmission by group I mGluRs in mouse MNTB neurons. R. J. CURRY; Y. WANG; Y. LU*. *Northeast Ohio Med. Univ., Kent State Univ., Florida State Univ., Northeast Ohio Med. Univ.*
- 9:00 C29 **118.14** Large-conductance potassium (BK) channels as potential therapeutic targets in fragile X syndrome. E. J. SAWYER*; A. R. ZINGALE; L. SCRADER. *Tulane Univ., Tulane Univ.*
- 10:00 C30 **118.15** ● Upregulation of glial markers in the FMR1-knockout human neuronal progenitor cells is reversed by LIM domain kinase 2 inhibition. N. SUNAMURA; S. IWASHITA; K. ENOMOTO; T. KADOSHIMA; A. OKAMOTO; F. ISONO*. *ASUBIO PHARMA Co., Ltd.*
- 11:00 C31 **118.16** Examining the impact of Fragile X Mental Retardation Protein on adult neurogenesis in a novel insect disease model. M. SORRELL*; C. WORNER; K. A. KILLIAN. *Miami Univ.*
- 8:00 C32 **118.17** Morphological changes of hippocampal CA1 pyramidal neurons in Fragile X mice during development. N. N. UMAR*; T. G. BANKE. *Aarhus Univ. Hosp., Inst. of Physiol.*
- 9:00 C33 **118.18** Impaired long-term plasticity of temporoammonic inputs to hippocampal CA1 neurons in a mouse model of Fragile X syndrome. G. ORDEMANN*; D. H. BRAGER. *The Univ. of Texas At Austin, Univ. of Texas at Austin, Univ. of Texas at Austin.*
- 10:00 C34 **118.19** ● The *de novo* proteome in FXS reveals multi-tiered flaws in homeostatic and mGluR-stimulated translation. H. L. BOWLING*; A. BHATTACHARYA; G. ZHANG; D. A. ALAM; J. Z. LEBOWITZ; S. ARYAL; S. GHOSH-DASTIDAR; N. BOHM-LEVINE; D. LIN; P. ANAND; R. PUCKETT; L. ZHOU; K. SHARP; R. S. MUDDASHETTY; K. KIRSHENBAUM; E. BERRY-KRAVIS; T. A. NEUBERT; E. KLANN. *New York Univ., Instem-Ncbs, Weill Cornell Med. CLC and MCC, New York Univ., Inst. for Stem Cell Biol. and Regenerative Med., Oberlin Col., Rush Univ. Med. Ctr., Inst. For Stem Cell Biol. and Regenerative M, New York Univ., New York Univ. Sch. of Med., New York Univ. Ctr. for Neural Sci.*
- 11:00 C35 **118.20** Purinergic signaling in the cortex is significantly altered in the Fragile X syndrome model. A. L. SCOTT; A. POXON; C. R. WONG; A. CHEN; L. C. DOERING*. *McMaster Univ., McMaster Univ.*
- 8:00 C36 **118.21** Alterations in astrocyte thrombospondin-1 expression in Fragile X syndrome. K. E. REYNOLDS*; A. L. SCOTT; L. C. DOERING. *McMaster Univ., McMaster Univ.*
- 9:00 C37 **118.22** Activation of tenascin C and IL-6 in fragile X syndrome. V. KRASOVSKA*; L. C. DOERING. *McMaster Univ.*
- 10:00 C38 **118.23** Altered poly(ADP-ribose) polymerase-1 levels in Fragile X syndrome. S. S. JHALA*. *McMaster Univ.*
- 11:00 C39 **118.24** Mdm2 mediates FMRP- and Gp1 mGluR-induced protein translation and neural network activity. D. LIU*; J. SEIMETZ; A. KALSOTRA; N. TSAI. *Univ. of Illinois Urbana-Champaign, Univ. of Illinois Urbana-Champaign, 3Department of Biochemistry, Sch. of Mol. and Cell. Biology, Univ. of Illinois at Urbana-Champaign, Carl R. Woese Inst. of Genomic Biology, Univ. of Illinois, 1Department of Mol. and Integrative Physiology, Sch. of Mol. and Cell. Biology, Univ. of Illinois at Urbana-Champaign.*
- 8:00 C40 **118.25** Loss and restoration of Fmr1 in component cell types of neural microcircuits reveals distinct requirements for FMRP in the developing nervous system. D. CONNOLLY*; S. SORIANO; C. M. MCGRAW; B. E. O'NEILL; H. L. VANDERPOOL; A. CHAHROUR; A. J. LIANG; B. P. VICARI; S. VEERARAGAVAN; C. S. WARD; D. L. NELSON; R. C. SAMACO. *Baylor Col. of Med., Jan and Dan Duncan Neurolog. Res. Inst., Univ. of California, San Francisco, Tulane University, Sch. of Med., Virginia Polytechnic Inst. and State Univ., Baylor Col. of Med.*
- 9:00 C41 **118.26** The effect of genetic interactions between Cyfip1 and Fmr1 on synaptic and behavioral phenotypes. G. BARBAYANNIS; S. ABDELMAJED; T. KUMAR; A. KAMALI TAFRESHI; K. L. SZABLA; D. L. BENSON; O. BOZDAGI*. *Rutgers Univ., Icahn Sch. of Med. At Mount Sinai.*

POSTER

119. Neurodevelopmental Disorders: Behavioral Studies

Theme A: Development

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

- 8:00 C42 **119.01** Neuroanatomical correlates of social behaviour. D. J. FERNANDES*; L. QIU; J. P. LERCH. *Mouse Imaging Ctr., Hosp. For Sick Children, Hosp. for Sick Children.*
- 9:00 C43 **119.02** Statal ablation of Neuroligin-1 affects motor learning/memory and expeditious decision-making. F. ESPINOSA*; I. FILONOVA; C. M. POWELL. *U.T. Southwestern Med. Ctr., U.T. Southwestern Med. Ctr.*
- 10:00 C44 **119.03** Social behavior deficits in a SPRED1 knockout mouse model of Legius syndrome. S. C. BORRIE*; E. PLASSCHAERT; Y. ELGERSMA; S. A. KUSHNER; E. LEGIUS; H. BREMS. *KU Leuven, Erasmus MC.*
- 11:00 C45 **119.04** ▲ GABA A alpha 2 receptor subunit agonism improves sociability and object recognition memory in BTRT+ tf/J mice. S. NAGUIB; H. G. MCFARLANE*. *Kenyon Col., Kenyon Col.*
- 8:00 C46 **119.05** Sex differences in extinction of conditioned fear in juvenile rats. C. PARK*; D. E. GANELLA; J. H. KIM. *The Florey Inst., Florey Inst. of Neurosci. and Mental Hlth., The Florey Inst. of Neurosci. and Mental He.*
- 9:00 C47 **119.06** Early postnatal treatment with valproic acid results in regression and perseveration. S. A. NORTON*; S. PAREKH; J. GIFFORD; A. W. KUSNECOV; G. C. WAGNER. *Rutgers Univ.*
- 10:00 C48 **119.07** The effects of MPEP on learning, sensorimotor, and emotional behavior in Plexin-A3-deficient mice. T. S. TRAN; A. KOSC; S. PACELLI; S. YANG; M. W. SHIFLETT*. *Rutgers Univ. Newark, Rutgers Univ. Newark, Univ. of Pittsburgh.*
- 11:00 C49 **119.08** Peers can rescue autism-related behaviours after prenatal exposure to valproic acid: Role of the piriform cortex. A. M. DEPINO*; M. CAMPOLONGO; N. KAZLAUSKAS; G. FALASCO; L. URRUTIA; N. SALGUEIRO. *Inst. For Physiology, Mol. Biol. and Ne, Inst. For Physiology, Mol. Biol. and Neuroscience, UBA-CONICET, Lab. de Imágenes Preclínicas, Ctr. de Imágenes Moleculares, FLENI.*
- 8:00 C50 **119.09** Role of dopamine 1 and dopamine 2 receptors across adolescence in addiction-related behaviours. E. R. CULLITY*; J. H. KIM; H. MADSEN. *Florey Inst. of Neurosci. and Mental Hlth.*
- 9:00 C51 **119.10** A non-invasive eye tracking study using rhesus macaques. T. MURAI*; C. PHI; M. D. BAUMAN. *Univ. of California-Davis, Sumitomo Dainippon Pharma Co., Ltd., Univ. of California-Davis, Univ. of California-Davis.*
- 10:00 C52 **119.11** Distress vocalization deficit as an early postnatal marker of abnormal neurodevelopment in the *fmr1* KO mouse model of autism. B. ZUPAN*; A. KASHNAVIS; M. MOROCHNIK. *Vassar Col., Vassar Col.*
- 11:00 C53 **119.12** Early-life inflammation affects adolescent risk seeking and alcohol consumption. V. M. DOENNI*; Q. J. PITTMAN. *Univ. of Calgary, Univ. of Calgary.*
- 8:00 C54 **119.13** Inconsistent behavioral phenotypes in a mouse model of Fragile X Syndrome. J. TUDOR*; E. DAVIS; C. C. ANGELAKOS; T. A. JONGENS; T. ABEL. *St. Joseph's Univ., Univ. of Pennsylvania, UCSF, Univ. of Pennsylvania Perelman Sch. of Med., Univ. of Iowa.*
- 9:00 C55 **119.14** Postnatal critical period for social dominance plasticity in mice. M. S. PENG*; L. K. BICKS*; S. AKBARIAN; H. MORISHITA. *Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. at Mount Sinai.*
- 10:00 C56 **119.15** Adolescent rewiring of frontal-sensory cortical projection neurons establishes adult attentional behavior. E. NABEL*; H. KOIKE; G. TACCHERI; Y. GARKUN; M. DEMARS; S. LOPEZ; H. MORISHITA. *Icahn Sch. of Med. At Mount Sinai, Taisho Pharmaceuticals, Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Mount Sinai Sch. of Med.*
- 11:00 C57 **119.16** Parvalbumin interneurons in the prefrontal cortex control social behavior in mice. L. BICKS*; E. K. LUCAS; H. KOIKE; M. S. PENG; R. L. CLEM; S. AKBARIAN; H. MORISHITA. *Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. At Mount Sinai, Taisho Pharmaceut., Icahn Sch. of Med. At Mount Sinai, Mount Sinai Sch. of Med., Icahn Sch. of Med. At Mount Sinai, Mount Sinai Sch. of Med.*
- 8:00 C58 **119.17** Frontal-sensory cortical projection neurons mediate top-down control of attentional behavior. H. KOIKE; K. J. NORMAN; S. LOPEZ; E. NABEL; M. FLANIGAN; Y. GARKUN; Z. DONG; M. DEMARS; M. G. BAXTER; S. J. RUSSO; H. MORISHITA*. *Icahn Sch. of Med. at Mount Sinai, Mount Sinai Sch. of Med.*
- 9:00 C59 **119.18** Behavioral characterization of Shank3b knockout mice. A. R. RENDALL*; P. A. PERRINO; R. H. FITCH. *Univ. of Connecticut.*
- 10:00 C60 **119.19** Behavioral assessment of Ush2a knockout mice. P. A. PERRINO*; A. R. RENDALL; D. NEWBURY; J. J. LOTURCO; A. BUSCARELLO; R. H. FITCH. *Univ. of Connecticut, Univ. of Oxford, Univ. of Connecticut.*
- 11:00 C61 **119.20** Altered early life DNA methylation within the amygdala of rats predisposed to high vs. low anxiety-like behavior. C. R. MCCOY*; M. E. GLOVER; N. L. JACKSON; T. PTACEK; E. J. LEFKOWITZ; S. M. CLINTON. *Virginia Polytechnic Inst. and State Universit, Virginia Polytechnic Inst. and State Univ., Univ. of Alabama at Birmingham.*
- 8:00 C62 **119.21** Chronic behavioral deficits, HPA axis abnormalities and altered synaptic plasticity (after 6months) in a mouse model of post-traumatic stress disorder. M. ALGAMAL*; J. O. OJO; C. LUNGUMUS; P. MUZA; J. OWENS; B. C. MOUZON; D. M. DIAMOND; M. J. MULLAN; F. C. CRAWFORD. *Roskamp Inst., The Roskamp Inst., Univ. of South Florida Dept. of Psychology.*
- 9:00 C63 **119.22** Unique neurobehavioral signature of maternal presence during trauma. M. OPENDAK*; R. E. PERRY; C. RAINEKI; T. L. ROTH; R. M. SULLIVAN. *New York Univ., Nathan S Kline Inst., Univ. of British Columbia, Univ. of Delaware, NKI & NYU Sch. of Med.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

POSTER

120. Neurodevelopmental Disorders: Human Studies

Theme A: Development

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

- 8:00 D1 **120.01** New evidence of the role of hippocampal volume in fetal alcohol-related deficits in learning and memory. S. C. BIFFEN*; C. WARTON; N. M. LINDINGER; C. D. MOLTENO; J. L. JACOBSON; S. W. JACOBSON; E. M. MEINTJES. *Univ. of Cape Town, Univ. of Cape Town, Wayne State Univ. Sch. of Med., MRC/UCT Med. Imaging Res. Unit.*
- 9:00 D2 **120.02** Multimodal magnetic resonance imaging in Down syndrome with full and partial trisomy 21. L. DAI*; O. ABDULLAH; J. S. ANDERSON; M. PRIGGE; M. C. BURBACK; A. RAMIREZ; J. O. EDGIN; J. R. KORENBERG. *Univ. of Utah Brain Inst., Univ. of Utah, Univ. of Utah, Univ. of Utah, Univ. of Utah, Univ. of Arizona, Univ. of Utah.*
- 10:00 D3 **120.03** Patterns of functional connectivity predict maturity and diagnostic status of individuals with Tourette syndrome. A. NIELSEN*; J. A. CHURCH-LANG; N. U. F. DOSENBAH; K. J. BLACK; B. L. SCHLAGGAR; D. J. GREENE. *Washington Univ., Univ. of Texas, Washington Univ.*
- 11:00 D4 **120.04** Neural correlates of abstract social cognition in Williams syndrome and 7q11.23 Duplication syndrome. D. CURRIN*; T. NASH; M. JABBI; D. P. EISENBERG; M. GREGORY; K. V. ROE; R. PRABHAKARAN; J. CARRASCO; O. RAVINDRANATH; S. GROGANS; M. O'BRIEN; J. S. KIPPENHAN; P. KOHN; A. MARTIN; C. MERVIS; K. F. BERMAN. *Natl. Inst. of Mental Hlth., Univ. of Louisville.*
- 8:00 D5 **120.05** Copy-number variation in the Williams syndrome critical chromosomal region 7q11.23 impacts resting-state functional connectivity and associated structural connectivity measured with DTI tractography. J. S. KIPPENHAN*; M. GREGORY; T. NASH; R. PRABHAKARAN; C. MERVIS; D. EISENBERG; O. RAVINDRANATH; D. CURRIN; S. GROGANS; M. O'BRIEN; P. KOHN; K. F. BERMAN. *NIH, Univ. of Louisville.*
- 9:00 D6 **120.06** Brain alterations in ADHD and their link to genetics. M. HOOGMAN*; M. KLEIN; J. BRALTEN; E. SHUMSKAYA; J. L. STEIN; R. K. WALTERS; H. ADAMS; T. ENIGMA-ADHD WORKING GROUP; T. ENIGMA CONSORTIUM; T. CHARGE CONSORTIUM; T. ADHD WORKING GROUP PGC; T. IPSYCH CONSORTIUM; A. BORGLUM; S. MEDLAND; J. K. BUITELAAR; A. ARIAS-VASQUEZ; S. V. FARAONE; P. SHAW; P. THOMPSON; B. FRANKE. *Radboudumc, Radboud university medical center, Donders Inst. for Brain, Cognition and Behaviour, Dept. of Human Genet., Dept. of Genet. & Neurosci. Center, Univ. of North Carolina, Analytic and Translational Genet. Unit, Dept. of Medicine, Massachusetts Gen. Hosp. and Harvard Med. Sch., Dept. of Epidemiology, Erasmus Med. Center, Rotterdam, Imaging Genet. Center, Dept. of Neurology, Keck Sch. of Medicine, Univ. of Southern California, Dept. of Epidemiology, Erasmus Med. Ctr., UNC school of medicine, Dept. of Biomedicine, Aarhus University, Aarhus, Denmark; Ctr. for Integrative Sequencing (iSEQ), Aarhus Univ., Quantitative Genet. Laboratory, QIMR Berghofer Med. Res. Inst., Radboud university medical center, Donders Inst. for Brain, Cognition and Behaviour, Dept. of Cognitive Neurosciences, Radboud university medical center, Donders Inst. for Brain, Cognition and Behaviour, Dept. of Psychiatry, Departments of Psychiatry and of Neurosci. and Physiology, SUNY Upstate Med. University, Syracuse, NY, USA; Natl. Inst. of Mental Health, Bethesda, MD, USA, Imaging Genet. Center, Dept. of Neurology, Keck Sch. of Medicine, Univ. of Southern California, Marina del Rey, CA, USA.*
- 10:00 D7 **120.07** ● Prediction of therapeutic efficacy of methylphenidate in ADHD patients using electroencephalogram. Y. TAKAHARA; T. OTA; Y. NAKANISHI; S. UEDA; P. JURICA; Z. R. STRUZIK; K. NISHITOMI; J. IIDA; T. KISHIMOTO; A. CICHOCKI; M. HASEGAWA; K. OGAWA*. *SHIONOGI & CO., LTD., Nara Med. Univ., RIKEN Brain Sci. Inst.*
- 11:00 D8 **120.08** Impaired attention-related connectivity in children with ADHD: An fNIRS study for potential diagnostic predictor. S. SUTOKO; T. FUNANE; T. KATURA; H. SATO*; M. KIGUCHI; A. MAKI; Y. MONDEN; M. NAGASHIMA; M. UGA; T. TOKUDA; T. YAMAGATA; I. DAN. *Ctr. for Exploratory Research, Hitachi, Ltd., Jichi Med. Univ., Res. and Develop. Initiatives, Chuo Univ., Hlth. Sci. Univ., Jichi Med. Univ.*
- 8:00 D9 **120.09** Impact of comorbid autism spectrum disorder on event-related potentials in attention-deficit/hyperactivity disorder. T. OTA*; K. YAMAMURO; J. IIDA; K. OKAZAKI; N. KISHIMOTO; T. KISHIMOTO. *Nara Med. Univ., Dept. of Psychiatry, Icahn Sch. of Med. at Mount Sinai, Fac. of Nursing, Nara Med. Univ. Sch. of Med.*
- 9:00 D10 **120.10** The white matter connectivity in Chinese children with developmental dyslexia. X. HU*; J. CHU; J. WU; X. ZHAO; M. FAN; X. LI. *Sun Yat-Sen Univ., Dept. of Radiology, The First Affiliated Hosp. of Sun Yat-sen Univ.*
- 10:00 D11 **120.11** Alterations in the large-scale brain functional network in Chinese dyslexic children in reading tasks. H. JIALI*; X. LIU; Y. GAO; Q. DI; L. LIU. *Beijing Normal Univ.*
- 11:00 D12 **120.12** Dual task on postural sway and eye movement in dyslexic children. J. A. BARELA*; M. RAZUK; H. PEYRE; C. L. GERARD; M. P. BUCCI. *Univ. Cruzeiro Do Sul, Univ. Estadual Paulista, Univ. Paris Diderot, Robert Debré Hosp.*

- 8:00 D13 **120.13** ● Impact of orthography and dyslexia on virtual maze performance. L. A. GABEL*; C. GOERNER; A. BATTISON; S. HORNDASCH. *Lafayette Col., Universitätsklinikum Erlangen, Friedrich-Alexander Univ. Erlangen-Nuernberg, Univ. of Connecticut.*
- 9:00 D14 **120.14** Detecting cortical facets of developmental disorders using multivariate random forest classification: The case of dyslexia. U. KUHL*; A. D. FRIEDERICI; M. A. SKEIDE. *Max Planck Inst. Cognitive and Brain Sci.*
- 10:00 D15 **120.15** Synergistic adverse fetal neurodevelopmental effects of maternal depression and obesity. N. MERABOVA*; G. TATEVOSIAN; N. DARBINIAN; L. GOETZL. *Lewis Katz Sch. of Med. at Temple Univ., Dept. of Obstetrics, Gynecology and Reproductive Sci.*
- 11:00 D16 **120.16** Sex specific effects of maternal cortisol concentrations during pregnancy on the functional connectivity of the newborn limbic system. A. GRAHAM*; J. RASMUSSEN; S. ENTRINGER; M. G. RUDOLPH, 97215; M. STYNER; J. H. GILMORE; S. G. POTKIN; P. WADHWA; D. A. FAIR; C. BUSS. *Oregon Hlth. & Sci. Univ., Univ. of California, Irvine, Charité Univ. of Med., OHSU, UNC, Univ. of North Carolina at Chapel Hill Dept. of Psychiatry, Univ. California, Irvine, UCI, Oregon Hlth. Sci. Univ., Charité Univ. Med. Berlin.*
- 8:00 D17 **120.17** ● Maternal prenatal stress is associated with reduced fetal global neural efficiency. M. E. THOMASON*; M. I. VAN DEN HEUVEL; R. WALLER; E. TURK; M. P. VAN DEN HEUVEL; J. H. MANNING; J. L. HECT; E. HERNANDEZ-ANDRADE; S. HASSAN; R. ROMERO. *Wayne State Univ., Univ. of Michigan, Utrecht, Rudolf Magnus Inst. of Neuroscience, Univ. Med. Ctr. Utrecht, NICHD / NIH / DHHS.*
- 9:00 D18 **120.18** Experimental manipulation of prefrontal cortex differentially affects amygdala reactivity following early-life stress. D. G. GEE*; B. GOFF; L. GABARD-DURNAM; C. CALDERA; D. S. FARERI; D. LUMIAN; J. FLANNERY; N. TOTTENHAM. *Yale Univ., UCLA, Boston Children's Hosp., Adelphi Univ., Univ. of Denver, Univ. of Oregon, Columbia Univ.*
- 10:00 D19 **120.19** ▲ Environmental Influences on early childhood hippocampal growth. T. NICHOLS*; L. M. BETANCOURT; P. A. YUSHKEVICH; L. E. M. WISSE; B. B. AVANTS; M. ASHTARI; H. HURT; M. J. FARAH. *Univ. of Pennsylvania, The Children's Hosp. of Philadelphia, Univ. of Pennsylvania, The Children's Hosp. of Philadelphia.*
- 11:00 D20 **120.20** Maternal Immune Activation by C-reactive protein and neonatal connectivity of the salience network. D. SCHEINOST*; M. SPANN; C. MONK; B. PETERSON. *Yale Univ., Columbia, Keck Sch. of Medicine, Univ. of Southern California.*
- 8:00 D21 **120.21** Prenatal and early childhood exposure to neurotoxic metals and internalizing behaviors. M. HORTON*; L. HSU; B. CLAUS HENN; A. MARGOLIS; C. AUSTIN; K. SVENSSON; M. TÉLLEZ ROJO; L. SCHNAAS; C. GENNINGS; R. WRIGHT; H. HU; M. ARORA. *Icahn Sch. of Med. At Mount Sinai, Boston Univ., Columbia Univ. Med. Ctr., Icahn Sch. of Med. at Mount Sinai, Natl. Inst. of Publ. Hlth., Univ. of Toronto.*
- 9:00 D22 **120.22** Childhood family relationships, development of neural reward systems, and adolescent depression. E. E. FORBES*; A. GUYER; A. HIPWELL; K. KEENAN. *Univ. of Pittsburgh, Univ. of California, Davis, Univ. of Pittsburgh, Univ. of Chicago.*
- 10:00 D23 **120.23** Early-life manganese exposure and intrinsic functional connectivity of the developing brain. E. DE WATER*; E. PROAL; V. WANG; S. MARTÍNEZ MEDINA; L. SCHNAAS; M. TÉLLEZ-ROJO; R. O. WRIGHT; C. Y. TANG; M. K. HORTON. *Icahn Sch. of Med. at Mount Sinai, Natl. Inst. of Perinatology (INPer), Icahn Sch. of Med. at Mount Sinai, Natl. Inst. of Publ. Hlth. (INSP).*
- 11:00 D24 **120.24** Quantitative analysis of cerebral cortex in patients with brain malformations. L. VASUNG*; J. LEVMAN; A. C. EVANS; E. TAKAHASHI. *Harvard Med. School, Boston Children's Hosp., Boston Childrens Hospital, Harvard Med. Sch., Montreal Neurolog. Inst., Harvard Med. School, Boston Children's Hosp.*
- 8:00 D25 **120.25** Two patients showed junctional neural tube defect. K. WANG*; J. LEE; S. CHONG; J. LEE; S. KIM. *Seoul Natl. Univ. Hosp, Seoul Natl. Univ. Hosp, Seoul Natl. Univ. Hosp.*

POSTER

121. Animal Models: Impact of Environment on the Brain

Theme A: Development

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

- 8:00 D26 **121.01** Intravenous anesthetic-induced neurotoxic shift with age in the developing periods. S. SHIBUTA*; T. MORITA; J. KOSAKA. *Intl. Univ. of Hlth. and Welfare, Osaka Univ. Grad. Sch. of Med., Sch. Med. Int. Univ. Hlth. & Welfare.*
- 9:00 D27 **121.02** ▲ Sex-differences in, and neural correlates of, social preference behavior in older adolescent rats. H. C. SKINNER; S. L. SANTIAGO; M. PAVELKA; L. B. BUCHANAN; D. I. ALEWEL; R. C. PIERCE-MESSICK; B. A. BARKER; M. C. ZRULL*. *Appalachian State Univ., Appalachian State Univ.*
- 10:00 D28 **121.03** ● Effects of early antipsychotic drugs exposure on binding density of NMDA and GABAA receptors in juvenile rats. J. LIAN*; C. DENG. *Univ. of Wollongong.*
- 11:00 D29 **121.04** Effects of bisphenol-A and estrogen exposure during adolescent development on behaviors and dendritic spine density in adulthood. R. E. BOWMAN*; J. HAGEDORN; E. MADDEN; M. FRANKFURT. *Sacred Heart Univ., Hofstra Northwell Sch. of Med.*
- 8:00 D30 **121.05** Changes of hippocampal oxidative status in immature rats exposed to noise: influence of elapsed time after exposure and environmental stimulation. S. J. MOLINA*; F. CAPANI; L. R. GUELMAN. *CEFYBO (UBA-CONICET), Inst. Inv. Cardiológicas, UBA-CONICET, Fac Med, UBA-CEFYO-CONICET.*
- 9:00 D31 **121.06** Kappa opioid receptor activation dose-dependently increases anxiety-like behavior in male adolescent and adult Sprague-Dawley rats. K. PRZYBYSZ*; Y. VALENTINE; M. DIAZ. *Binghamton Univ.*
- 10:00 D32 **121.07** ▲ Effects of neonatal caffeine exposure on locomotor activity in adolescent rats: Role of methylphenidate pretreatment. R. MEHTA*; T. SANVICTORES; A. R. ZAVALA. *California State University, Long Beach, California State University, Long Beach.*
- 11:00 D33 **121.08** Juvenile exposure to fluoxetine induces an enduring anxiogenic-like behavioral profile in female c57bl/6 mice. F. J. FLORES RAMIREZ*; I. GARCIA; S. A. CASTILLO; T. G. MIRAMONTES; M. ARENIVAR; J. PRECIADO-PINA; S. D. INIGUEZ. *Univ. of Texas At El Paso.*

• Indicated a real or perceived conflict of interest, see page 137 for details.
 ▲ Indicates a high school or undergraduate student presenter.
 * Indicates abstract's submitting author

- 8:00 D34 **121.09** Effects of ketamine and chlordiazepoxide on social behavior after vicarious defeat stress exposure in female c57BL/6 mice. S. D. INIGUEZ*; I. GARCIA; S. A. CASTILLO; D. O. SANCHEZ; F. J. FLORES-RAMIREZ. *Univ. of Texas at El Paso*.
- 9:00 D35 **121.10** Mutually experienced stress during adolescence buffers against social defeat-induced avoidance in physically stressed mice. L. F. ALCANTARA*; J. ROZOFISKY; O. K. SIAL; C. A. BOLANOS-GUZMAN. *Texas A&M: Psychology, Texas A&M Univ.*
- 10:00 D36 **121.11** ▲ Sex differences in oxycodone-induced conditioned place preference in early adolescent male and female rats. A. T. MANOOGIAN*; Y. C. BROWN; A. R. ZAVALA. *California State University Long Beach, California State University, Long Beach, California State Univ.*
- 11:00 D37 **121.12** SB224289, a 5-HT_{1B} receptor antagonist, decreases the aversion of nicotine in male, but not female adolescent rats. D. FRANCO; B. SALINAS; K. HERNANDEZ; N. S. PENTKOWSKI; R. A. CABRERA; A. R. ZAVALA*. *California State Univ., Univ. of New Mexico*.
- 8:00 D38 **121.13** ▲ Task novelty influences an enrichment by sex effect on object in place task performance in adolescent rats. H. JOHNSON*; M. PAVELKA; S. L. SANTIAGO; D. I. ALEWEL; C. A. PEGGS; D. E. COBB; M. C. ZRULL. *Appalachian State Univ., Appalachian State Univ., Appalachian State Univ., Univ. of Maryland-Baltimore*.
- 9:00 D39 **121.14** Adolescent binge ethanol exposure alters specific forebrain cholinergic cell populations and results in cognitive flexibility deficits. G. M. FERNANDEZ*; L. M. SAVAGE. *Binghamton Univ.*
- 10:00 D40 **121.15** Different types of environmental enrichment produces distinctive synaptic profiles in adolescent rats. R. A. JEFFREY*; P. GABRIEL. *Southern Connecticut State Univ.*
- 11:00 D41 **121.16** ▲ Enrichment reduces hippocampal activity evoked by an object in place task in adolescent rats. M. PAVELKA*; R. SALINAS; M. C. ZRULL. *Appalachian State Univ., Appalachian State Univ.*
- 8:00 D42 **121.17** Testosterone enhances survival of pubertally born cells in the mouse posterodorsal medial amygdala. J. L. KIM*; S. M. BREEDLOVE; C. L. JORDAN; C. L. SISK. *Michigan State Univ., Michigan State Univ., Michigan State Univ.*
- 9:00 D43 **121.18** Social shuffling during adolescence and its impact on pubertal cytochrome and resulting behavior in adulthood. K. T. WILKS*; J. L. KIM; C. L. SISK. *Michigan State Univ., Michigan State Univ., Michigan State Univ.*
- 10:00 D44 **121.19** ▲ Effects of weaning time-point and sex on separation anxiety during development. C. R. FIGIEL*; C. J. GIBSON. *Washington Col.*
- 11:00 D45 **121.20** Tracing the developmental trajectories of neural circuit using resting-state functional connectivity in awake rats. Z. MA*; Y. MA; N. ZHANG. *The Penn State Univ., The Penn State Univ.*
- 8:00 D46 **121.21** Voluntary exercise restores adolescent binge ethanol-induced loss of basal forebrain cholinergic neurons in adulthood. R. P. VETRENO*; F. T. CREWS. *Univ. of North Carolina At Chapel Hill, Skipper Bowles Ctr. Alcohol*.

POSTER

122. HCN, TRP, and Other Ion Channels

Theme B: Neural Excitability, Synapses, and Glia

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

- 8:00 D47 **122.01** The elusive channel driving ischemic spreading depolarization. P. J. GAGOLEWICZ; R. D. ANDREW*. *Queen's Univ., Queen's Univ.*
- 9:00 D48 **122.02** Optimizing a TrpV1 system for the remote regulation of cells. J. NAM*; S. A. STANLEY. *Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. At Mount Sinai*.
- 10:00 D49 **122.03** *Drosophila*-inspired molecular thermosensors. B. R. BERIGAN*; M. AMIRSHENAVA; A. SALARI; A. MISHRA; K. MIGUEL; B. C. ZARS; J. L. LIN; T. ZARS; M. MILESCU; L. S. MILESCU. *Univ. of Missouri, Univ. of California Berkeley, Northwestern Univ.*
- 11:00 D50 **122.04** Pharmacological effects of 4-isopropylcyclohexanol on TRP channel and ANO1/TMEM16A. Y. TAKAYAMA*; H. FURUE; M. TOMINAGA. *Okazaki Inst. For Integrative Biosci., Hyogo Col. of Med., Okazaki Inst. Integrative Biosci.*
- 8:00 D51 **122.05** TRPM4 in CA1 hippocampal physiology. B. FEAREY*; D. MENSCHING; L. BINKLE; T. G. OERTNER; M. A. FRIESE; C. E. GEE. *Ctr. For Mol. Neurobio., Ctr. for Mol. Neurobio.*
- 9:00 D52 **122.06** ● Characterization of HC-070: A potent and selective antagonist of TRPC4 and TRPC5 containing channels. J. A. CHONG*; T. T. STRASSMAIER; R. J. GALLASCHUN; S. JUST; C. EICKMEIER; A. SAUER; N. T. BLAIR; C. FANGER; J. WITEK; D. DEL CAMINO; M. M. MORAN; B. L. CHENARD. *Hydra Biosci., Boehringer Ingelheim Pharma GmbH & Co KG*.
- 10:00 D53 **122.07** ● Pharmacological inhibition of TRPC4 and TRPC5 with HC-070 in rodents mimics the effects on behavior associated with anxiety and depression previously seen with corresponding gene deletion models. S. JUST; A. CECI; A. SAUER; C. EICKMEIER; K. BAUM-KROKER; S. CANTIN; M. D'AMOURS; R. J. GALLASCHUN; B. HENGERER; S. MALEKIANI; H. MARTIN; R. MIHALEK; J. MCLAUGHLIN; H. SCHAUERTE; E. SEIFRITZ; H. SIGIRST; C. R. PRYCE; B. CHENARD; M. M. MORAN*. *Boehringer Ingelheim Pharma GmbH & Co KG, Hydra Biosci., Psychiatric Univ. Hosp. Zurich (PLaTRAD)*.
- 11:00 D54 **122.08** Activity-dependent regulation of tonic firing by type 1 metabotropic glutamate receptors via TRPC3 in substantia nigra dopamine neurons. K. UM*; L. BIRNBAUMER; H. KIM; M. PARK. *Sch. of Medicine, Sungkyunkwan Univ., IIB-INTECH, Univ. Nacional de San Martin*.
- 8:00 D55 **122.09** ● Chemical Neuro Stimulation of TRPV1 and TRPA1 by FLX-787 elicits synergistic signaling to promote human efficacy in conditions with high-prevalence muscle cramping. G. SHORT*; B. HEGARTY; J. SZEGDA; D. CABRAL-LILLY; J. CERMAK; C. WESTPHAL; T. WESSEL. *Flex Pharma Inc.*
- 9:00 D56 **122.10** Characterization of background Na⁺ channel important for pacemaking in Substantia nigra dopamine neurons. S. HAHN*; S. KIM; H. KIM; M. PARK. *Sungkyunkwan Univ. Sch. Of Med.*

- 10:00 D57 **122.11** The essential roles of GluA1 phosphorylation and presynaptic HCN channels in fast-acting antidepressant responses of ketamine. X. CAI*; K. ZHANG; T. XU; Z. WEI; V. N. YAMAKI; R. L. HUGANIR; M. HUANG. *Southern Illinois Univ. Sch. of Med., Guangzhou Med. Univ., Johns Hopkins Univ.*
- 11:00 D58 **122.12** ANO9 is a cation channel activated by the cAMP/PKA pathway. H. KIM*; U. OH. *KIST, Seoul Natl. Univ.*
- 8:00 D59 **122.13** Ca_v3.2 T-type calcium channels are responsible for hyperexcitability of nociceptors in a post-surgical pain model. S. JOKSIMOVIC*; S. M. JOKSIMOVIC; V. TESIC; A. GARCIA CABALLERO; V. JEVTOVIC-TODOROVIC; G. W. ZAMPONI; S. M. TODOROVIC. *Univ. of Colorado, Anschutz Med. Campus, Univ. of Calgary, Cumming Sch. of Med.*
- 9:00 D60 **122.14** The role of TRPV1 channels in the lateral habenula in pain, anxiety and depressive-like behaviors in rats withdrawn from chronic alcohol consumption. J. YE*; D. GREGOR; W. ZUO; R. FU. *Rutgers, New Jersey Med. Sch., Rutgers, New Jersey Med. Sch., Rutgers New Jersey Med. Sch., Rutgers, The State Univ. of New Jersey.*
- 10:00 D61 **122.15** Dual adrenergic modulation of HCN channels in hippocampal and neocortical pyramidal neurons. J. F. STORM*; C. KLAUS; N. HAGGER-VAUGHAN; H. HU. *Univ. of Oslo.*
- 11:00 D62 **122.16** Modulation of *Aplysia* neuroendocrine cell cation channels by phosphoinositide signalling. R. M. STURGEON*; N. S. MAGOSKI. *Queen's Univ., Queen's Univ.*
- 8:00 D63 **122.17** Modeling cellular noxious cold sensation in *Drosophila* sensory neurons. N. MAKSYMCHUK*; A. A. PATEL; N. J. HIMMEL; D. N. COX; G. CYMBALYUK. *GSU.*
- 9:00 E1 **122.18** • Structure function characterization of TRPA1 reveals inter-domain interactions critical for channel gating and residues essential for compound binding. W. TSENG*; K. M. PADILLA; S. HAN; V. SHANMUGASUNDARAM; K. E. YOGER; B. M. ANTONIO; D. C. PRYDE; A. C. GERLACH. *Pfizer, Icagen, Pfizer, Curadev.*
- 10:00 E2 **122.19** Ca_v3.2 channel regulation by cyclin-dependent kinase 5 in neuropathic pain. K. GOMEZ*; A. VARGAS-PARADA; V. GRANADOS-SOTO; R. FELIX; R. DELGADO-LEZAMA. *Cinvestav, Cinvestav, Sede Sur, Cinvestav.*
- 11:00 E3 **122.20** 5-HT₃ activation enhances spontaneous but not evoked glutamate release from solitary tract afferents. J. A. FAWLEY*; M. W. DOYLE; M. C. ANDRESEN. *Oregon Hlth. & Sci. Univ.*
- 8:00 E4 **122.21** Withdrawn
- 9:00 E5 **122.22** STIM1 plays a role in nociception and peripheral sensitization. D. WEI*; Y. MEI; Y. TIAN; H. HU. *Drexel Univ. Col. of Med., Drexel Univ. Col. of Med.*
- 10:00 E6 **122.23** Critical role of Orai1 in modulation of nociception. H. HU*; Y. DOU; Y. TIAN. *Drexel Univ. Col. of Med., Drexel Univ. Col. of Med.*

POSTER

123. Structural Plasticity: Spines**Theme B: Neural Excitability, Synapses, and Glia**

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

- 8:00 E7 **123.01** Super-resolution imaging of synaptic proteins. N. KOGANEZAWA*; T. SHIRAO. *Gunma Univ. Grad. Sch. of Med.*
- 9:00 DP02/E8 **123.02** (Dynamic Poster) A synaptic role of FKBP5, a genetic risk factor for stress-related psychiatric disorders. K. MYCZEK*; H. YAMAZAKI; I. OZSAN; M. MARTIN-DE-SAAVEDRA; C. R. ZACCARD; P. PENZES. *Northwestern Univ., Gunma Univ. Grad. Sch. of Med.*
- 10:00 E9 **123.03** Asef1 regulates dendritic plasticity through Staufien interaction. H. KIM*; J. OH; K. YOO. *Chungbuk Natl. Univ.*
- 11:00 E10 **123.04** NMDA receptor signaling mechanisms in activity-dependent spine shrinkage. I. S. STEIN*; J. N. JAHNCKE; K. M. ZITO. *UC Davis, UC Davis, Univ. of California Davis.*
- 8:00 E11 **123.05** Long-term integration of plasticity and activity at identified Schaffer collateral synapses. M. PULIN*; T. G. OERTNER; J. S. WIEGERT. *Ctr. For Mol. Neurobio. Hamburg (ZMNH).*
- 9:00 E12 **123.06** Postsynaptic endophilin A1 regulates synaptic plasticity and long-term memory. Y. YANG; Z. GUO; S. DENG; X. DU; S. ZHU; J. LIU*. *IGDB, CAS.*
- 10:00 F1 **123.07** Caskin scaffold protein regulates dendritic spine morphology, learning and memory. K. SCHLETT*; N. BENCSIK; S. PUSZTAI; A. FEKETE; S. BORBÉLY; V. KIS; A. SZUCS; L. BUDAY. *Eötvös Lorand Univ., MTA-ELTE NAP B Neuronal Cell Biol. Res. Group, Res. Ctr. of Natural Sciences, Hungarian Acad. of Sci., Eötvös Lorand Univ.*
- 11:00 F2 **123.08** BDNF Met prodomain eliminates spines and alters fear extinction circuitry. J. GIZA*; F. LEE; B. HEMSPTEAD; J. KIM; A. ANASTASIA. *Weill Cornell Med. Col., Weill Cornell Med. Col., Inst. Ferreyra (inimec-conicet-Universidad Nac.*
- 8:00 F3 **123.09** Bundled whisker stimulation causes age-dependent bidirectional structural plasticity of L5 apical tuft dendritic spines. R. L. VOGLEWEDE*; K. M. VANDEMARK; A. R. DEWITT; M. D. HEFFLER; E. H. TRIMMER; R. MOSTANY. *Tulane Univ. Sch. of Med., Tulane Brain Inst., Tulane Sch. of Sci. & Engin., Tulane Univ. Sch. of Med.*
- 9:00 F4 **123.10** Dendritic spine density, dynamics, and morphology of layer 5 pyramidal neurons in the young and aged forepaw area of primary motor cortex. A. M. DAVIDSON*; H. MEJÍA-GÓMEZ; M. JACOBOWITZ; R. MOSTANY. *Tulane Univ., Tulane Univ., Tulane Univ. Sch. of Med.*
- 10:00 F5 **123.11** Diazepam impairs structural plasticity of dendritic spines in somatosensory cortex independent of GABA_A receptor activation. Y. SHI*; M. M. DOROSTKAR; G. RAMMES; J. HERMS. *Ludwig Maximilian Univ. of Munich, Ludwig Maximilian Univ. of Munich, German Ctr. for Neurodegenerative Dis., Munich Cluster for Systems Neurol., Tech. Univ. of Munich.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 11:00 F6 **123.12** ▲ Age-related changes in dendritic spine volume and morphology in the primary somatosensory cortex after sensory stimulation. K. VANDEMARK*; R. L. VOGLEWEDE; R. MOSTANY. *Tulane Univ., Tulane Brain Inst., Tulane Univ. Sch. of Med.*
- 8:00 F7 **123.13** Effects of response learning on medium spiny neurons and immature neurons in the dorsal striatum. B. A. BRIONES*; V. D. TANG; A. E. HAYE; E. GOULD. *Princeton Univ.*
- 9:00 F8 **123.14** A super-sensitivity of dopamine D2 receptor signaling for structural plasticity of dendritic spines. S. YAGISHITA*; Y. IINO; R. NAKAZATO; H. KASAI. *The Univ. of Tokyo.*
- POSTER**
- 124. Epilepsy: Anticonvulsant Therapies: Novel interventions, strategies, and mechanisms**
- Theme B: Neural Excitability, Synapses, and Glia**
- Sun. 8:00 AM – *Walter E. Washington Convention Center, Halls A-C*
- 8:00 F9 **124.01** ● Cannabidiol (CBD) interrupts a novel positive feedback loop involving LPI-GPR55 signaling to restore excitatory-to-inhibitory coordination. E. C. ROSENBERG*; M. BAZELOT; A. SALAH; B. WHALLEY; O. DEVINSKY; R. W. TSIEN. *NYU Sch. of Med., Univ. of Reading, NYU Sch. of Med.*
- 9:00 F10 **124.02** ● Involvement of GABA_AR and NMDAR in the anticonvulsant actions of cannabidiol - studies in human cortex and rodent entorhinal cortex *in vitro*. B. HENLEY*; R. A. GRAY; S. GREENHILL; I. M. STANFORD; G. L. WOODHALL. *Aston Univ., GW Pharmaceuticals.*
- 10:00 F11 **124.03** Anti-seizure and biophysical effects of microRNA-134 knockdown. G. MORRIS*; S. SCHORGE. *Univ. Col. London.*
- 11:00 F12 **124.04** Bumetanide enhances the pharmacological effect of phenobarbital on behavioral level, in an animal model of temporal lobe epilepsy. C. A. MANTELLERO*; J. AMARO; M. BORQUEZ; A. OCAMPO; J. VALDES; P. ROJAS. *Univ. De Santiago De Chile, Univ. de Chile.*
- 8:00 G1 **124.05** Indigenous bacteria of the gut microbiota mediate antiseizure effects of the ketogenic diet. C. OLSON*; H. E. VUONG; J. M. YANO; Q. Y. LIANG; D. J. NUSBAUM; E. HSIAO. *UCLA.*
- 9:00 G2 **124.06** Effects of nerve agent antidote treatment in tetramethylenedisulfotetramine-induced status epilepticus. D. ZOLKOWSKA*; A. DHIR; M. A. ROGAWSKI. *Univ. of California, Davis, Univ. of California, Davis.*
- 10:00 G3 **124.07** Long-term evolution of absence epilepsy in Long-Evans rats and their closed loop interruption using transcranial electric stimulation. G. KOZAK*; A. BERENYI. *Univ. of Szeged, New York Univ.*
- 11:00 G4 **124.08** The purinergic P2Y1 receptor as a new target to treat status epilepticus and prevent seizure-induced brain damage. M. ALVES*; A. SANZ-RODRIGUEZ; E. LANGA; D. HENSHALL; T. ENGEL. *Royal Col. of Surgeons In Ireland.*
- 8:00 G5 **124.09** ● Harnessing genome scale metabolic modeling for the prediction of novel drug-targets for the treatment of hyperactivity associated with neurological disorders. N. GONEN*; B. STYR; I. VERTKIN; I. SHAPIRA; I. SLUTSKY; E. RUPPIN. *Tel-Aviv University, Sagol Sch. of Neurosci., Tel-Aviv Univ., Univ. of Maryland.*
- 9:00 G6 **124.10** ● Ventral Pallidum deep brain stimulation has potent efficacy for various seizure phenotypes. E. MAHONEY*; A. ZENG; W. J. YU; M. ROWE; S. SAHAI; P. J. FEUSTEL; E. MOLHO; J. G. PILITSIS; A. RAMIREZ-ZAMORA; D. S. SHIN. *Albany Med. Col., Albany Med. Col., Univ. of Minnesota, Northeastern Univ., Vorheesville High Sch., Albany Med. Col., Albany Med. Ctr., Albany Med. Col., Univ. of Florida, Albany Med. Col.*
- 10:00 G7 **124.11** Static magnetic fields reduce epileptic activity in the anaesthetized rat and monkey. C. RIVADULLA*; M. COLETTI; S. Y. PRIETO; J. AGUILA; J. R. AGUILAR; J. CUDEIRO. *Univ. of A Coruna, Biomed. institute of Coruña-INIBIC, Ctr. for Advanced Research-CICA, Hosp. Nacional Paraplejicos, Cerebral Stimulation Ctr. of Galicia.*
- 11:00 G8 **124.12** Activity clamp is a new tool to study epileptic mechanisms. G. LIGNANI*; G. MORRIS; M. LEITE; D. KULLMANN; I. PAVLOV; S. SCHORGE. *UCL Inst. of Neurology.*
- 8:00 G9 **124.13** ● Unilateral encapsulated cell biodelivery of GDNF into the hippocampus inhibits epileptic seizures in rats. E. MELIN*; A. NANOBASHVILI; D. EMERICH; J. TORNØE; M. SIMONATO; L. U. WAHLBERG; M. KOKAIA. *Epilepsy Ctr., NsGene, Inc., Univ. Ferrara, Epilepsy Ctr.*
- 9:00 G10 **124.14** ● Comprehensive high-throughput drug screening in a cellular model of KCNQ2 epileptic encephalopathy. G. R. STEWART*; C. M. MAHER; B. C. GAY; J. M. ANDRESEN; A. C. GERLACH; S. PETROU; D. GOLDSTEIN. *Painomix, Icagen, Univ. of Melbourne, Columbia Univ.*
- 10:00 H1 **124.15** Cox2 inhibition ameliorate seizure susceptibility in a mouse model of autosomal dominant lateral temporal epilepsy. Y. SHEN*; L. ZHOU; L. ZHOU. *Zhejiang Univ. Sch. Med., Zhejiang Univ. Sch. of Med., Zhejiang Univ.*
- 11:00 H2 **124.16** Beyond SV2A: novel insights into levetiracetam's effects. D. MARCOTULLI*; G. FATTORINI; L. BRAGINA; J. PERUGINI; F. CONTI. *Univ. Politecnica Delle Marche.*
- 8:00 H3 **124.17** ● The MTLE mouse model, a predictive model of partial epilepsy for drug discovery. C. ROUCARD*; B. POUYATOS; C. BOUYSSIÈRES; C. DUMONT; B. MANDÉ-NIEDERGAN; Y. ROCHE; V. DUVEAU. *SYNAPCELL, Synapcell, SynapCell SAS, SynapCell.*

POSTER

125. Molecular and Cellular Mechanisms of Demyelination and Remyelination**Theme B: Neural Excitability, Synapses, and Glia**

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

- 8:00 H4 **125.01** Betaine regulates neuronal mitochondrial activity by modulating methionine metabolites in the cuprizone mouse model of multiple sclerosis. N. K. SINGHAL*; K. ALKHAYER; J. SHELESTEK; R. CLEMENTS; T. G. BOTTIGLIERI; E. FREEMAN; J. MCDONOUGH. *Kent State Univ., Baylor Res. Institute, Metabolic Dis.*
- 9:00 H5 **125.02** Characterization of iron loading on myelin; studies in a double mutant mouse model of haemochromatosis. M. HEIDARI*; D. M. JOHNSTONE; B. BASSETT; R. M. GRAHAM; C. BETTENCOURT; J. F. COLLINGWOOD; S. GERAMI; M. HOUSE; K. MARTIN; A. C. G. CHUA; M. RYTEN; H. HOULDEN; J. K. OLYNYK; D. TRINDER; E. A. MILWARD. *Univ. of Wisconsin Madison, The Univ. of Newcastle, Bosch Inst. and Discipline of Physiology, Univ. of Sydney, Curtin Univ. of Technol., UCL Inst. of Neurol., Univ. of Warwick, Univ. of Western Australia, Univ. of Western Australia, Fiona Stanley Hosp., King's Col. London, Fiona Stanley Hosp.*
- 10:00 H6 **125.03** Myelin, oligodendrocytes and axons in the aged taiep mutant rat. D. Z. RADECKI*; A. B. RADCLIFF; M. HEIDARI; D. SEBO; B. REDFEARN; I. D. DUNCAN. *Univ. of Wisconsin-Madison, Univ. Wisconsin Sch. Vet Med.*
- 11:00 H7 **125.04** ATF6 α activation protects oligodendrocytes against inflammation. W. LIN*; S. STONE; S. JAMISON; K. MORI. *Univ. of Minnesota Dept. of Neurosci., Univ. of Minnesota, Kyoto Univ.*
- 8:00 H8 **125.05** Neuronal hemoglobin beta regulates levels of H3K4me3. K. ALKHAYER*; J. MCDONOUGH; E. FREEMAN; N. SINGHAL. *Kent State Univ., Kent State Univ.*
- 9:00 H9 **125.06** Cytokine responses to EAE are enhanced in Cx47KO as compared to Cx32KO and WT mice. M. FREIDIN*; E. GEORGIU; K. A. KLEOPA; C. K. ABRAMS. *Univ. of Illinois At Chicago, Cyprus Inst. of Neurol. & Genet.*
- 10:00 H10 **125.07** Class iv semaphorin sema4a induces oligodendrocyte cell death and contributes to multiple sclerosis pathogenesis. B. CHIOU*; E. LUCASSEN; J. R. CONNOR. *Penn State Hershey Col. of Med., Penn State Col. of Med., Penn State Col. of Med.*
- 11:00 DP03/H11 **125.08** (Dynamic Poster) Remyelination of specific axonal domains in the somatosensory cortex. J. L. ORTHMANN-MURPHY*; C. CALL; E. G. HUGHES; P. A. CALABRESI; D. E. BERGLES. *Johns Hopkins Sch. of Med., Johns Hopkins Sch. of Med., Univ. of Colorado Sch. of Med., Johns Hopkins Univ., Johns Hopkins Univ. Sch. Med.*
- 8:00 H12 **125.09** Myelin in monkey and Down syndrome: Ballooned myelin is tethered at radial components and may reflect decreased conduction velocity and cognitive disabilities. A. VAN HOEK*; A. RAMIREZ; M. SAUER; L. DAI; J. R. KORENBERG. *Univ. of Utah, Univ. of Utah, Univ. of Utah Brain Inst., Univ. of Utah.*
- 9:00 I1 **125.10** ● The synthetic microneurotrophin BNN27 protects mature oligodendrocytes against cuprizone-induced death through the NGF receptor TrkA. D. KARAGOGEOS*; G. BONETTO; I. CHARALAMPOPOULOS; A. G. GRAVANIS. *IMBB-FORTH, Univ. of Crete, Dept. of Basic Science, Fac. of Medicine, Univ. of Crete, Dept. of Pharmacology, Fac. of Medicine, Univ. of Crete, IMBB-FORTH and Dept. of Pharmacology, Fac. of Medicine, Univ. of Crete.*
- 10:00 I2 **125.11** Temporal association between molecular, electrophysiological, and behavioral changes in the OBiden mouse model of MS pathology. C. R. RICHARDSON*; D. Z. RADECKI; A. GOW. *Wayne State Univ. Sch. of Med., Univ. of Wisconsin Madison, Wayne State Univ. Sch. Med., Wayne State Univ., Wayne State Univ.*
- 11:00 I3 **125.12** Effect of neuronal activity on remyelination. C. HABERMACHER*; F. C. ORTIZ; P. HOURY; M. GRACIARENA; B. NAIT-OUMESMAR; M. ANGULO. *Inserm U1128, Paris Descartes Univ., Inserm U1127, Brain and Spine Inst. (ICM).*
- 8:00 I4 **125.13** The Egr2-AS-RNA participates in transcriptional regulatory network following peripheral nerve injury. M. MARTINEZ MORENO*; C. GUETTA; N. TAPINOS. *Brown University/Rhode Island Hosp.*
- 9:00 I5 **125.14** LPA receptors modulate oligodendrocyte differentiation and maturation. K. I. LORRAIN*; M. M. POON; B. STEARNS; J. BACCEI; A. BROADHEAD; A. DEARIE; A. GREENFIELD; J. R. CHAN; D. LORRAIN. *Inception Sciences, Inc., Inception Sciences, Inc, Inception Sci., Univ. California, San Francisco, UCSF.*
- 10:00 I6 **125.15** Mtmr2 loss increases mTOR signaling in Schwann cells. J. KIM; A. PATEL; A. ELIAS; F. L. ROBINSON; R. DOBROWOLSKI; H. A. KIM*. *Rutgers Univ., Oregon Hlth. & Sci. Univ., Rutgers Univ. Newark.*
- 11:00 I7 **125.16** Understanding the role of calcineurin in a mouse model of CMT1B neuropathy. C. REED; M. SIDOLI; M. L. FELTRI; L. WRABETZ*. *Univ. at Buffalo - The State Univ. of New York.*
- 8:00 I8 **125.17** Monocarboxylate transporter (MCT1) in Schwann cells is a metabolic mediator of sensory axon myelination during aging. M. K. JHA*; K. RUSSELL; Y. LEE; A. HOKE; J. D. ROTHSTEIN; B. M. MORRISON. *Johns Hopkins Univ.*
- 9:00 I9 **125.18** PI4KA controls the levels of key lipids important for myelination in Schwann cells independently from the PI3K/Akt/mTOR pathway. A. ALVAREZ-PRATS*; Y. KIM; T. BALLA. *Eunice Kennedy Shriver NICHD, NIH.*

• Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

POSTER

126. Alzheimer's Disease: Neuroinflammation and Immune Action

Theme C: Neurodegenerative Disorders and Injury

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

- 8:00 I10 **126.01** Long-term, sex-specific effects of ⁵⁶Fe on cerebral A-beta and neuroinflammation in WT and Alzheimer's disease mice. K. S. KOPACZ*; B. LIU; K. X. LE; M. PARK; S. WANG; A. BELANGER; S. DUBEY; P. HOLTON; V. REISER; W. TRIGG; M. DICARLI; C. A. LEMERE. *Ann Romney Ctr. For Neurologic Diseases, Brigham, Ann Romney Ctr. For Neurologic Dis., Ann Romney Ctr. For Neurologic Diseases, BWH, Brigham and Women's Hosp., Brigham and Women's Hosp., GE Healthcare, GE Healthcare, Brigham & Women's Hosp; Harvard Med. Sch.*
- 9:00 J1 **126.02** Long-term, sex-specific neurobehavioural effects of ⁵⁶Fe radiation on WT and Alzheimer's disease mice. G. G. LIU*; B. LIU; P. J. LORELLO; P. A. MCKINNEY; B. CALDARONE; C. A. LEMERE. *Brigham and Women's Hosp., Harvard Med. Sch., Harvard Neurodiscovery Ctr. and Dept of Neurology, BWH.*
- 10:00 J2 **126.03** ▲ Can curcumin protect retinal cells from nitric oxide-mediated cell death? D. GRAY*; A. DENNIS. *Simmons Col., Simmons Col.*
- 11:00 J3 **126.04** Resolvin E1 reduces inflammation and enhances memory in the Ts65Dn mouse model of Down syndrome. E. D. HAMLETT*; E. HJORTH; A. LEDREUX; A. GRANHOLM; M. SCHULTZBERG. *MUSC, Karolinska Inst., Univ. of Denver.*
- 8:00 J4 **126.05** CX₃CR1 mediated microglial control of TREM2 macrophage responses in Alzheimer's disease pathogenesis. S. PUNTAMBEKAR*; D. TUMBLESON-BRINK; A. OBLAK; G. E. LANDRETH; B. T. LAMB. *Indiana University-Purdue University, Indianapolis, Indiana University-Purdue Univ., Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., Stark Neurosciences Res. Inst.*
- 9:00 J5 **126.06** Mesenchymal stem cell-conditioned medium induces microglia into M2a phenotype and promotes amyloid beta-phagocytosis. N. IWAHARA*. *Sapporo Med. Univ.*
- 10:00 J6 **126.07** The association of rod shaped microglia with aging and neurodegenerative disease. A. D. BACHSTETTER*; E. T. IGHODARO; E. L. ABNER; P. T. NELSON. *Univ. of Kentucky, Univ. of Kentucky.*
- 11:00 J7 **126.08** Immunomodulation: The path to brain homeostasis in old late-stage Alzheimer's mouse models. J. DOUSTAR*; T. TORBATI; D. FUCHS; Y. KORONYO; J. SHEYN; A. RENTSENDORJ; P. K. SHAH; K. L. BLACK; S. LI; M. KORONYO-HAMAOUI. *Cedars Sinai Med. Ctr., Univ. of California-Los Angeles, Cedars Sinai Med. Ctr., Cedars Sinai Med. Ctr., Cedars Sinai Med. Ctr., Wenzhou University.*
- 8:00 J8 **126.09** Potency of ACE-overexpressing macrophages to resist Alzheimer's disease pathology. Y. KORONYO*; A. RENTSENDORJ; J. SHEYN; D. FUCHS; E. Y. HAYDEN; S. LI; K. L. BLACK; K. E. BERNSTEIN; D. B. TEPLow; S. FUCHS; M. KORONYO-HAMAOUI. *Dept. Neurosurgery, Cedars-Sinai Med. Ctr., David Geffen Sch. of Medicine, UCLA, Cedars-Sinai Med. Ctr., Cedars-Sinai Med. Ctr., Western Univ. of Hlth. Sci.*
- 9:00 J9 **126.10** Amyloid beta vaccination in conjunction with bvPLA2 ameliorates Alzheimer's disease pathology in murin model. H. BAE*; H. BAEK; N. KIM; C. LEE. *Col. of Korean Med.*
- 10:00 J10 **126.11** ▲ Identification of Enterococcus Faecalis in the human Alzheimer's brain. Z. BOWERS*; T. SIVY; M. SONG; N. KOLLI; P. MAITI; G. L. DUNBAR; C. L. WEAVER. *Saginaw Valley State Univ., Saginaw Valley State Univ., Dankook, Central Michigan Univ., Field Neurosciences Institute, St. Mary's of Michigan, Central Michigan Univ., Saginaw Valley State Univ.*
- 11:00 J11 **126.12** Treatments of the anti-diabetic drugs promotes microglial Aβ phagocytosis. F. SHIE*; Y. HSU; J. LIANG; H. TSAY. *Ctr. For Neuropsychiatric Research, Natl. Hlth. Res. Inst., Natl. Yang-Ming Univ.*
- 8:00 J12 **126.13** ● Systemic autoimmunity: A sex-specific factor in Alzheimer's-like disease. M. FAHNESTOCK*; M. KAPADIA; F. MIAN; D. MA; E. ROSA; B. MICHALSKI; P. FORSYTHE; B. SAKIC. *McMaster Univ., McMaster Univ., McMaster Univ., McMaster Univ.*
- 9:00 K1 **126.14** Early changes in hippocampus gliovascular unit and spatial memory in different aging APP/PS1 transgenic mouse model for Alzheimer's disease. N. WANG*; R. MAO; L. XU. *Kunming Inst. of Zoology, Chinese Acad. of S.*
- 10:00 K2 **126.15** The effects of lipopolysaccharide-induced TNF-α and NO production following alcohol exposure in rat mixed glial cultures. J. WANG*; C. CNEN. *Dept Nursing (Basic Med. Sci), Hungkuang Univ., Li-Shin Hosp.*
- 11:00 K3 **126.16** Chronic neuroinflammation and demyelination in Alzheimer disease and parkinson disease. F. HAN; N. J. CAIRNS; J. S. PERLMUTTER; J. XU*. *Washington Univ. Sch. of Med., Washington Univ. Sch. of Med., Washington Univ. Sch. of Med.*
- 8:00 K4 **126.17** ● Similar patterns of altered innate immunity and hematopoietic cell recruitment develop in Aβ-depositing (APP/PS1) and tauopathy (Tg4510) transgenic models of Alzheimer pathology. R. B. NELSON*; I. KADIU; L. K. ISAAC; M. J. DENBLEYKER; S. KRZYZANOWSKI; N. BREYSSE; J. A. TAMM; A. ABDOURAHMAN; P. D. WES; P. LARSEN; J. GU; S. H. ZORN. *MindImmune Therapeutics, Inc., UCB Biopharma, Regeneron, Biogen, Van Andel Inst., Lundbeck A/S, AbbVie FNC, Lundbeck Res. USA, Pfizer, Janssen, New York Univ. Sch. of Med., MindImmune Therapeutics, Inc.*
- 9:00 K5 **126.18** Combined administration of resolvin E1 and lipoxin A4 resolves inflammation and prevents neurodegeneration in a murine model of Alzheimer's disease. A. KANTARCI*; I. CARRERAS; N. AYATAN; I. PALASKA; L. CRABTREE; B. G. JENKINS; A. DEDEOGLU. *Forsyth Inst., VA Boston Healthcare Syst., Boston Univ. Sch. of Med., Boston Univ. Sch. of Med., Massachusetts Gen. Hosp. and Harvard Med. Sch., Univ. of Exeter Med. Sch.*
- 10:00 K6 **126.19** Adiponectin suppresses amyloid-β(Aβ)-induced neuroinflammation in Alzheimer's disease via AMPK-NF-κB signaling pathway. M. JIAN*; R. C. NG; K. CHAN. *The Univ. of Hong Kong.*
- 11:00 K7 **126.20** Glia maturation factor colocalizes with NLRP3 inflammasome and inflammatory cytokines at the vicinity of amyloid plaques and neurofibrillary tangles in human Alzheimer's disease brain. A. ZAHEER*; M. AHMED; S. P. GOVINDHASAMY; R. THANGAVEL; K. DURAISAMY; S. RAIKWAR; S. ZAHEER; S. IYER. *Univ. of Missouri, Harry S. Truman Mem. Veterans Hosp.*

* Indicated a real or perceived conflict of interest, see page 137 for details.
 ▲ Indicates a high school or undergraduate student presenter.
 * Indicates abstract's submitting author

- 8:00 K8 **126.21** Characterization of monocyte phenotypes and gene expression profiles in Alzheimer's disease. A. D. THOME*, B. PASCUAL; D. R. BEERS; W. ZHAO; J. C. MASDEU; S. H. APPEL. *Houston Methodist, Houston Methodist Neurolog. Inst., Houston Methodist Hosp., Houston Methodist.*
- 9:00 K9 **126.22** Dual dose-dependent effects of fingolimod in a mouse model of Alzheimer's disease. A. DEDEOGLU*; N. AY TAN; J. CHOI; V. BRINKMANN; J. K. BLUSZTAJN; L. CRABTREE; B. NGUYEN; N. KOWALL; B. JENKINS; I. CARRERAS. *VA Boston Healthcare Syst. / Boston Univ., Boston Univ. Sch. of Med., Massachusetts Gen. Hosp. and Harvard Med. Sch., volker.brinkmann@novartis.com, Crabtree, Northeastern Univ., VA Boston Healthcare System, Boston.*
- 10:00 K10 **126.23** Probiotic supplementation improved cognitive and intestinal function in a mouse model of Alzheimer's disease. H. KAUR*; K. NAGAMOTO-COMBS; J. CLARK; C. K. COMBS. *Univ. of North Dakota, Univ. of North Dakota.*
- 11:00 K11 **126.24** ABCA7 haploinsufficiency compromises immune responses in mouse brains. T. AIKAWA*; Y. YAMAZAKI; M. TACHIBANA; M. R. JOHNSON; Y. A. MARTENS; M. HOLM; C. ANDERSON; K. ISHIGURO; H. OUE; L. FELTON; B. GUOJUN; T. KANEKIYO. *Mayo Clin., Osaka Univ. Grad Sch. of Med.*
- 8:00 K12 **126.25** • Dysregulation of blood glucose levels by the hypothalamic-pituitary-adrenal axis in a model of Alzheimer's disease. R. D. HENDRIX*; S. W. BARGER. *Univ. of Arkansas For Med. Sci., Univ. of Arkansas for Med. Sci., Central Arkansas Veterans Healthcare Syst.*

POSTER

127. Preclinical Therapeutic Strategies for Neurodegenerative Disease I

Theme C: Neurodegenerative Disorders and Injury

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

- 8:00 L1 **127.01** Apomorphine as a novel drug for Alzheimer's disease targeting brain diabetes. Y. OHYAGI*; N. NAKAMURA; T. IMAMURA; A. WATANABE; N. FUJII. *Ehime Univ. Sch. of Med., Kyushu University, Natl. Hosp. Organization Omuta Hosp., Kyushu Univ.*
- 9:00 L2 **127.02** Neuroprotective effect of tramadol in ICV-STZ induced sporadic dementia of Alzheimers type in rats. D. K. DHULL*; A. KUMAR. *Panjab Univ.*
- 10:00 L3 **127.03** Protective effects of 7,8-dihydroxyflavone on neuropathological and neurochemical changes in a mouse model of Alzheimer's disease. N. AY TAN; J. CHOI; I. CARRERAS; L. CRABTREE; B. NGUYEN; M. LEHAR; J. K. BLUSZTAJN*; B. G. JENKINS; A. DEDEOGLU. *Boston Univ. Sch. of Med., Massachusetts Gen. Hosp. and Harvard Med. Sch., VA Boston Healthcare Syst., Univ. of Exeter Med. Sch., Boston Univ. Sch. of Med., Boston Univ. Sch. Med., Massachusetts Gen. Hosp. and Harvard Med. Sch.*
- 11:00 L4 **127.04** • Prophylactic active tau immunization prevents both tau and amyloid-beta pathology in 3xTg mice. Y. LIN; H. B. RAJAMOHAMEDSAIT; S. RASOOL; W. J. RAJAMOHAMEDSAIT; E. M. SIGURDSSON*. *New York Univ. Sch. of Med., New York Univ. Sch. of Med.*
- 8:00 L5 **127.05** • Chronic administration of the spingosine-1-phosphate receptor 5 agonist A-971432 improves cognition and reduces soluble a β in the SAMP8 mouse model of Alzheimer's disease. E. VAN DER KAM*; S. A. FARR; J. W. BROWN; J. VAN BERGEIJK; M. L. NIEHOFF; J. E. MORLEY. *AbbVie Deutschland Gmbh & CO KG, St Louis Univ/VA Med. Ctr., Abbvie, AbbVie Deutschland Gmbh & CO KG, 2 St. Louis, Univ. Sch. of Medicine, Div. of Geriatrics, St. Louis, Univ. Sch. of Medicine, Div. of Geriatrics.*
- 9:00 L6 **127.06** Reconstructing and strengthening networks affected by oxidative damage with EEG-triggered-TMS: Inducing very small, long-range electric signals in macromolecular prenetworks. J. F. GOMEZ-MOLINA*; U. M. RICOY; C. VELEZ-PARDO; M. JIMENEZ DEL RIO; M. CORREDOR; G. PERRY. *Intl. Group of Neurosci. (IGN), Northern New Mexico Col., Univ. of Antioquia, University of Antioquia, Univ. of Antioquia, Univ. of Texas at San Antonio.*
- 10:00 L7 **127.07** A novel phosphinolactone compound, OZP002, positive modulator of sigma-1 receptor, is neuroprotective in non-transgenic and transgenic mouse models of Alzheimer's disease. T. MAURICE*; J. VOLLE; M. STREHAIANO; C. PEREIRA; C. LABORDE; D. VIRIEUX; J. PIRAT. *INSERM UMR-S1198, ENSCM.*
- 11:00 L8 **127.08** Combination therapy with (-) epigallocatechin-3-gallate and ferulic acid effectively modifies Alzheimer-like pathology. T. MORI*; N. KOYAMA; J. TAN; T. SEGAWA; M. MAEDA; T. C. TOWN. *Dept. of Biomed. Sci., Saitama Med. Ctr. and Univ., Univ. of South Florida, Immuno-Biological Labs. Co., Ltd., USC.*
- 8:00 L9 **127.09** • TAK-071, a positive allosteric modulator of M₁ muscarinic acetylcholine receptor, induces a c-Fos expression pattern similar to that by xanomeline in mouse brain. T. MANDAI*; M. KASAHARA; E. KURIMOTO; M. TANAKA; M. SUZUKI; A. NAKATANI; H. KIMURA. *Takeda Pharmaceut. Co. Limited.*
- 9:00 L10 **127.10** • An approach to discover BDNF-inducible AMPA receptor potentiators with lower agonistic effects based on the *in vitro* characterization of three AMPA receptor potentiators, LY451395, HBT1, and OXP1. A. KUNUGI*; Y. TAJIMA; H. KUNO; S. SOGABE; H. KIMURA. *Takeda pharmaceutical company.*
- 10:00 M1 **127.11** • TAK-071, a novel muscarinic M₁ receptor positive allosteric modulator, regulates quantitative EEG power spectra in a scopolamine challenge paradigm in monkeys. E. KURIMOTO*; M. NAKASHIMA; H. KIMURA; M. SUZUKI. *Takeda Pharmaceutical Co. Limited.*
- 11:00 M2 **127.12** • *In vivo* characterization of TAK-071, a novel muscarinic M₁ receptor positive allosteric modulator. H. KIMURA*; E. KURIMOTO; T. MANDAI; Y. SHIMIZU; A. SUZUKI; M. SUZUKI; M. TANAKA; M. YAMADA; H. SAKAMOTO; Y. SAKO. *Takeda Pharmaceut. Co. Limited.*
- 8:00 M3 **127.13** Neuroprotective effects of liraglutide on streptozotocin induced neurodegeneration in Alzheimer's disease mouse model. L. PALADUGU*; A. AL-GHARAIBEH; N. KOLLI; C. LEARMAN; T. C. HALL; R. L. CULVER; L. LI; J. ROSSIGNOL; P. MAITI; G. L. DUNBAR. *Central Michigan Univ., Field Neurosciences Inst., Central Michigan Univ., Central Michigan Univ., Central Michigan Univ.*

• Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 9:00 M4 **127.14** • Different neurotherapeutic actions of the weak cathepsin B inhibitors N-carbobenzyloxy-L-phenylalanyl-L-alanyl-diazomethylketone (PADK) and 2S,3S-trans-epoxysuccinyl-L-leucylamido-3-methylbutane ethyl ester (E64d; aloxistatin) may be due to their dissimilar potencies for blocking the calcium-activated protease calpain that has been linked to both Alzheimer's disease and traumatic brain injury. H. W. ROMINE*; M. C. PAIT; K. RENTSCHLER; K. SMITH; A. EDWARDS; C. COLVIN; B. SIFFORD; Y. ABUMOHSAN; R. MASTERS; D. BUTLER; B. A. BAHR. *UNC At Pembroke, UNC at Pembroke, UNC at Pembroke, Northeastern Univ., Biotech Ctr. / William C. Friday Lab.*
- 10:00 M5 **127.15** HDL subclass and inflammation marker in AD and MCI: STOP-Dementia project. R. OHTANI*; S. NIRENGI; K. TSUZAKI; K. KOTANI; N. MURASE; M. SAINOUCHI; Y. KUWATA; M. TATATA; Y. MASUDA; M. NAKAMURA; N. SAKANE. *Kyoto Med. Ctr., Kyoto medical Ctr., Kyoto medical Ctr.*
- 11:00 M6 **127.16** • A new treatment paradigm for neurodegeneration: isotope-reinforced polyunsaturated fatty acids mitigate cognitive impairment in a mouse model of sporadic Alzheimer's disease. A. ELHARRAM*; N. CZEGLÉDY; M. GOLOD; G. L. MILNE; E. POLLOCK; M. S. SHCHEPINOV; B. BENNETT. *Queen's Univ., Queen's Univ., Vanderbilt Univ., Univ. of Arkansas, Retrotope Inc.*
- 8:00 M7 **127.17** • Antibody-mediated inhibition of Tau aggregation *in vitro*, in neuronal cell models, and in transgenic mice. S. KANIYAPPAN*; R. R. CHANDUPATLA; R. FEEDERLE; E. KREMMER; E. MANDELKOW; E. M. MANDELKOW. *German Ctr. For Neurodegenerative Dis., Max-Planck Inst. for Metabolism Research, Hamburg Outstation, German Res. Ctr. for Envrn. Hlth., CAESAR Res. Ctr.*
- 9:00 M8 **127.18** Extra virgin olive oil diet attenuates amyloid and tau pathology and improves cognitive function in Alzheimer's disease mice. E. LAURETTI*; L. IULIANO; D. PRATICO. *TEMPLE UNIVERSITY, Sapienza Univ. of Rome.*
- 10:00 M9 **127.19** LISPRO, an ionic cocrystal of lithium, mitigates Alzheimer-like pathological changes in the mice. A. HABIB; D. SAWMILLER; S. LI; Y. XIANG; D. RONGO; J. TIAN; H. HOU; J. ZENG; A. SMITH; S. FAN; B. GIUNTA; T. MORI; G. CURRIER; D. R. SHYTLÉ; J. TAN*. *Univ. of South Florida, Univ. of South Florida, Saitama Med. Ctr. and Saitama Med. Univ., Univ. of South Florida.*
- 11:00 M10 **127.20** Levetiracetam prevents age-related cognitive impairment in a sex-specific manner in mice lacking synaptic zinc. M. MAHAVONGTRAKUL*; E. VOGLER; A. TRAN; R. NAMEKI; C. CHINN; C. COX; J. BUSCIGLIO. *Univ. of California, Irvine, California State University, Long Beach.*
- 8:00 N1 **127.21** Using ATM deficiency as a model for drug discovery with application to neurodegenerative disease. B. ZHU*; K. HERRUP. *Hong Kong Univ. of Sci. and Technol.*

POSTER

128. Biomarkers for Alzheimer's Disease and Related Dementias

Theme C: Neurodegenerative Disorders and Injury

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

- 8:00 N2 **128.01** Functional imaging signatures of pathological spread across TDP-43 proteinopathies. P. M. FERRARO*; C. A. JESTER, III; C. A. OLM; K. PLACEK; F. AGOSTA; L. ELMAN; L. MCCLUSKEY; D. J. IRWIN; M. FILIPPI; M. GROSSMAN; C. MCMILLAN. *Univ. of Pennsylvania, San Raffaele Scientific Institute, Vita-Salute San Raffaele Univ., Univ. of Pennsylvania.*
- 9:00 N3 **128.02** Diagnostic and therapeutic potential of antibody fragments selective for human AD brain derived tau variants. L. VENKATARAMAN*; P. HE; T. G. BEACH; C. PELTZ; K. YAFFE; M. R. SIERKS. *Arizona State Univ., Banner Sun Hlth. Res. Inst., Univ. of California at San Francisco.*
- 10:00 N4 **128.03** • Quantifying effects of Alzheimer's disease on the human hippocampus using an *ex vivo* atlas combining MRI and histology. L. WISSE*; D. ADLER; R. ITTYERAH; J. B. PLUTA; S. DING; L. XIE; J. WANG; S. KADIVAR; J. L. ROBINSON; T. SCHUCK; J. Q. TROJANOWSKI; M. GROSSMAN; J. A. DETRE; M. A. ELLIOTT; J. B. TOLEDO; W. LIU; S. PICKUP; S. R. DAS; D. A. WOLK; P. A. YUSHKEVICH. *Univ. of Pennsylvania, Allen Inst. For Brain Sci., Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania.*
- 11:00 N5 **128.04** Extracellular vesicle biomarkers predict response to intranasal insulin treatment in Alzheimer's disease. M. MUSTAPIC*; J. TRAN; S. GULYANI; S. CRAFT; D. KAPOGIANNIS. *Natl. Institutes of Hlth., Wake Forest Sch. of Med.*
- 8:00 N6 **128.05** • B-lymphocytes imbalances of PKCe and cellular aggregation in Alzheimer's disease patients. F. V. CHIRILA*; J. WALLACE; W. MACTURK; G. XU; D. ALKON. *NeuroDiagnostics LLC.*
- 9:00 N7 **128.06** Circulating exosomal miRNA as a biomarker for age-related cognitive decline and decreased hippocampal volume. A. RANI*; A. O'SHEA; L. IANOV; R. COHEN; A. J. WOODS; T. C. FOSTER. *Univ. of Florida Med. Col., Genet. and Genomics Program, Genet. Institute, Univ. of Florida, Univ. of Florida, Evelyn F. and William L. McKnight Brain Inst. Univ. Florida.*
- 10:00 N8 **128.07** ▲ Functional biomarker of rare and familial diseases: NPC1 knockout neuronal networks phenotyped with HTS micro electrode arrays and artificial intelligence machine learning methods. X. FENG*; B. M. BADER. *Albrecht-kossel-Institut Für Neuroregeneration, NeuroProof GmbH.*
- 11:00 N9 **128.08** Fitness and lifestyle affect neural and cognitive risk factors for Alzheimer's disease in older African Americans. N. SINHA*; M. A. GLUCK. *Rutgers, Rutgers Univ. Newark.*
- 8:00 N10 **128.09** Proteomics identification of oxidized brain proteins in early stages of neurodegeneration. Z. EL HAJJ*; M. FOURNIER; I. RIEDERER; K. Q. DO; B. RIEDERER. *Ctr. De Neurosciences Psychiatriques.*

- 9:00 N11 **128.10** Extracellular vesicle biomarkers in Alzheimer's disease, mild cognitive impairment, and non-cognitively impaired older adults. J. TRAN*; M. MUSTAPIC; B. B. BENDLIN; D. KAPOGIANNIS. *NIH, Natl. Inst. on Aging (NIH/NIA), Univ. of Wisconsin-Madison, Natl. Inst. on Aging (NIA/NIH).*
- 10:00 N12 **128.11** Withdrawn
- 11:00 O1 **128.12** ▲ Expression profiling and gene regulatory analysis of Synaptosomal-associated protein 25, a biomarker for Alzheimer's disease. Y. FENG*; P. WANG. *Conestoga High Sch., Columbia Univ.*
- 8:00 O2 **128.13** ● Neurogranin in human Alzheimer's disease brain is associated with tau. Y. DING*; E. ZHEN; C. RUBLE; B. GHETTI; H. VANDERSTICHELE; E. STOOPS; J. L. DAGE. *Eli Lilly and Co., Indiana Univ., ADx NeuroSciences NV.*
- 9:00 O3 **128.14** ● Highly sensitive single molecular array immunoassay quantitation of neuronal proteins t-Tau, pTau231, Abeta42, and NF-L in CSF and Alzheimer's disease plasma. A. CHENNA; C. J. PETROPOULOS; J. W. WINSLOW*. *Monogram Biosciences, Lab. Corp. of America Holdings, Monogram Bioscience/Labcorp Specialty Testing.*
- 10:00 O4 **128.15** Neurovascular dysfunction precedes cognitive impairment independent of A β and tau CSF biomarkers. B. V. ZLOKOVIC*; M. D. SWEENEY; D. A. NATION; A. MONTAGNE; A. P. SAGARE; M. G. HARRINGTON; D. BUENNAGEL; H. C. CHUI; C. Y. LIU; J. PA; M. LAW; T. L. S. BENZINGER; A. M. FAGAN; J. C. MORRIS. *Keck Sch. of Med. of the Univ. of Southern California, Huntington Med. Res. Inst., Keck Sch. of Med. of the Univ. of Southern California, Washington Univ. Sch. of Med.*
- 11:00 O5 **128.16** Characterization of biofluid sTrem2 using a novel sTrem2 assay. J. W. RYDER*; N. PROCTOR; R. SPENCER; C. HERSLEY; F. TINGLEY; S. RAINES; S. KUHOSTOSS; A. MCCONNELL; M. HAYASHI; Y. WANG; M. O'NEILL; H. WANG. *Eli Lilly & Co., Eli Lilly & Co.*
- 8:00 O6 **128.17** TDP-43 co-pathology in Alzheimer's disease is associated with cortical thinning. C. A. JESTER*, III; D. WOLK; M. GROSSMAN; J. Q. TROJANOWSKI; C. MCMILLAN. *Univ. of Pennsylvania, Univ. of Pennsylvania.*
- 9:00 O7 **128.18** ● A CSF proteomic screen links retromer to Alzheimer's pathogenic pathways and suggests endosomal-trafficking biomarkers. J. NEUFELD*; E. CHEN; S. SMALL. *Columbia Univ.*
- 10:00 O8 **128.19** ● A novel multiplex technology for the simultaneous quantification of inflammation markers, and β -amyloid and tau proteins in biological samples. S. MATYSIAK; D. MINCZAKIEWICZ; S. PERESON; L. DEMEYER; H. VANDERSTICHELE; B. OLSSON; K. BLENNOW; J. SHE*. *Mycartis, ADx Neurosciences, Biomarkable, UNIVERSITY OF GOTHENBURG.*
- 11:00 O9 **128.20** Low methylation rates of SNCA gene intron 1 in dementia with Lewy bodies patients. J. IGA*; Y. YOSHINO; Y. FUNAHASHI; K. YAMAZAKI; Y. MORI; T. MORI; S. UENO. *Ehime Univ.*
- 8:00 O10 **128.21** DNA methylation of tau phosphorylation pathway genes in Alzheimer's disease. J. A. ZHRATKA*; M. SHAW; M. KHRESTIAN; J. PILLAI; J. B. LEVERENZ; L. M. BEKRIS. *Cleveland Clin. Lerner Res. Inst., Cleveland Clin.*
- 9:00 P1 **128.22** Evaluation of cognition, smell and miRNA biomarkers in Alzheimer's disease (AD). V. VALDIVIA*; C. J. HAMMOND; K. E. GALLUZZI; S. LEVIN ALLEN; B. J. BALIN. *Philadelphia Col. of Osteo. Med., Philadelphia Col. of Osteo. Med., Philadelphia Col. of Osteo. Med., Philadelphia Col. of Osteo. Med., Philadelphia Col. of Osteo. Med.*
- 10:00 P2 **128.23** ● ▲ Sex differences in proteomics of early Alzheimer's disease. S. SRIVATSA*; J. LUCAS; M. DORAISWAMY. *Duke Univ.*
- 11:00 P3 **128.24** ● Cytokines as peripheral biomarkers in neurodegenerative disorders: Plasma and CSF analysis of patients with mild cognitive impairment. C. W. MCDONNELL*; T. BURKE; J. A. PRENDERVILLE; M. BIANCHI. *Transpharmation Ireland Ltd.*
- 8:00 P4 **128.25** Ventricular volume in Frontotemporal Dementia and genetically at-risk family members: Results from the GENFI study. T. P. TAVARES*; D. G. V. MITCHELL; R. BARTHA; J. VAN SWIETEN; D. GALIMBERTI; C. GRAFF; M. TARTAGLIA; F. TAGLIAVINI; J. B. ROWE; R. LAFORCE, Jr; G. B. FRISONI; A. DE MENDONCA; S. SORBI; B. BORRONI; M. MASELLIS; J. ROHRER; E. FINGER. *Univ. of Western Ontario, Univ. of Western Ontario, Erasmus Med. Ctr., Univ. of Milan, Karolinska Institutet, Univ. of Toronto, Fondazione IRCCS Inst. Neurologico Carlo Besta, Univ. of Cambridge, Univ. Laval, IRCCS Fatebenefratelli, Univ. of Lisbon, Univ. of Florence, Univ. of Brescia, Sunnybrook Res. Inst., Univ. Col. London.*
- 9:00 P5 **128.26** Resting-state functional connectivity in large-scale brain networks predicts Alzheimer's disease symptom severity in novel individuals. Q. LIN*; M. D. ROSENBERG; K. R. YOO; W. HSU; T. P. O'CONNELL; M. M. CHUN. *Yale Univ.*
- 10:00 P6 **128.27** A novel method to collect cerebrospinal fluid in the free-moving mice as a preclinical model for biomarker research. T. NAKAJIMA*; S. TAKEDA; A. OYAMA; Y. ITO; H. RAKUGI; R. MORISHITA. *Osaka Univ. Sch. of Med., Osaka Univ. Sch. of Med.*
- 11:00 P7 **128.28** ● Multiplex immunoassay detection of Alzheimer's disease biomarkers in cerebrospinal fluid, plasma, and serum. A. J. SAPORITA*; C. KORNMEIER; J. HWANG. *MilliporeSigma.*

POSTER

129. Cognitive Dysfunction in Alzheimer's Disease

Theme C: Neurodegenerative Disorders and Injury

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

- 8:00 P8 **129.01** ● NYX-2925, a novel NMDA receptor modulator, reversed cognitive impairment induced by either aging or scopolamine. A. L. GROSS*; J. DUNNING; E. COLECHIO; A. MOGHADAM; X. ZHANG; P. K. STANTON; M. A. KHAN; C. CEARLEY; J. R. MOSKAL. *Aptinyx Inc, New York Med. Col., New York Med. Col., Northwestern Univ.*
- 9:00 P9 **129.02** ● Longitudinal cognitive testing in mouse models of A β and Tau toxicity using an automated CognitionWall task. M. LOOS*; C. M. HELDRING; B. KOOPMANS; E. REMMELINK; M. VERHAGE; R. E. VAN KESTEREN; A. B. SMIT. *Sylics, VU Univ. Amsterdam, CNCR, Vrije Univ. (VU) and VU Med. Cente, VU Univ. Amsterdam, Ctr. For Neurogenomics & Cognitive Research, VU Univ.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 10:00 P10 **129.03** Deciphering the role of the lymphatic-lymphatic connection in aging and in Alzheimer's disease. S. DÁ MESQUITA*; A. LOUVEAU; I. SMIRNOV; R. C. CORNELISON; K. VIAR; J. M. MUNSON; J. KIPNIS. *Univ. of Virginia, Univ. of Virginia.*
- 11:00 Q1 **129.04** Fine pattern discrimination deficits have different origins in mouse models of normal aging and Alzheimer's disease. C. HÉRAUD*; K. HERBEAUX; C. MURSCH; C. MATHIS. *Univ. De Strasbourg, Univ. De Strasbourg.*
- 8:00 Q2 **129.05** Bone marrow-derived mesenchymal stem cells improve memory in mouse models of Alzheimer's disease by intracerebroventricular administration. M. NAKANO*; K. NAGAISHI; Y. MIZUE; T. CHIKENJI; M. OTANI; M. FUJIMIYA. *Sapporo Med. Univ. Dept. of Anat.*
- 9:00 Q3 **129.06** Markers of inflammation and cognitive impairment in a sample of the oldest old (80+ years) in Panama. A. E. VILLARREAL*; S. E. O'BRYANT; M. EDWARDS; S. GRAJALES; D. C. OVIEDO; M. B. CARREIRA; A. R. PEREZ LAO; G. B. BRITTON. *INDICASAT AIP, Univ. of North Texas, INDICASAT AIP, INDICASAT, INDICASAT, INDICASAT.*
- 10:00 Q4 **129.07** Brain aryl hydrocarbon receptor mediates the glutamate transporter reduction and cognitive impairment in chronic kidney disease mouse model. Y. HUANG*; C. LIN; C. LU; H. LIN; P. HSU; D. TARNG; Y. LEE. *Natl. Yang-Ming Univ., Kang-Ning Junior Col. of Med. Care and Mgmt., Taipei Tzu Chi Hosp., Veterans Gen. Hosp.*
- 11:00 Q5 **129.08** ▲ Association between depressive symptoms and neuropsychological performance in elderly Hispanic adults with normal cognition and mild cognitive impairment. A. R. PEREZ LAO*; D. C. OVIEDO; M. B. CARREIRA; A. E. VILLARREAL; S. GRAJALES; R. SOLÍS; N. TERTUSIO; G. B. BRITTON. *Univ. Católica Santa María La Antigua, Univ. Complutense de Madrid, INDICASAT AIP.*
- 8:00 Q6 **129.09** Association between cognitive function, vascular biomarkers and ApoE4 in a Panamanian sample of healthy controls, mild cognitive impairment and Alzheimer's disease. D. C. OVIEDO*; A. E. VILLARREAL; S. A. GRAJALES; M. B. CARREIRA; A. R. PEREZ; R. SOLÍS; N. TERTUSIO; G. B. BRITTON. *Univ. Católica Santa María La Antigua, Univ. Complutense Madrid, INDICASAT.*
- 9:00 Q7 **129.10** Molecular markers of cognitive deterioration in elderly hispanics. M. B. CARREIRA*; D. OVIEDO; A. E. VILLARREAL; S. GRAJALES; M. EDWARDS; S. O'BRYANT; G. B. BRITTON. *INDICASAT, Univ. Católica Santa María La Antigua, Univ. Complutense Madrid, Univ. of North Texas, Univ. of North Texas Hlth. Sci. Ctr.*
- 10:00 Q8 **129.11** Emotion processing deficits and behaviour impairment in neurodegenerative disorders. I. D. POPIVANOV*; S. MEHRABIAN; K. STOYANOVA; M. RAYCHEVA; A. JANYAN; G. TODOROVA; H. THONBERG; C. GRAFF; B. WINBLAD; L. TRAYKOV. *New Bulgarian Univ., UH "Alexandrovská", Med. Univ. Sofia, Natl. Res. Tomsk State Univ., Karolinska Institutet, Dept. NVS.*
- 11:00 Q9 **129.12** Lowering luteinizing hormone increases spatial memory and decreases neuron loss in an Alzheimer's disease model. J. E. THORNTON*; E. CURLEY; J. CHANG-WEINBERG; R. NATOWICZ; M. MARIANI. *Oberlin Col.*
- 8:00 Q10 **129.13** Prefrontal cortex volume predicts the rate of improvement of non-pharmacological treatment in dementia: Mihama-Kiho Scan Project 2. K. TABELI*; M. SATOH; J. OGAWA; T. TOKITA; N. NAKAGUCHI; K. NAKAO; H. KIDA; H. TOMIMOTO. *Mie Univ., YAMAHA Music Fndn., Mihama Town Hall, Kiho Town Hall, Kinan Hosp.*
- 9:00 Q11 **129.14** Neural correlates of lexical-semantic knowledge of food. M. VIGNANDO*; M. AIELLO; R. ELEOPRA; P. MANGANOTTI; R. RUMIATI. *SISSA, SOC di Neurologia - Ospedale S. Maria della Misericordia, Azienda Sanitaria Universitaria Integrata di Trieste, ANVUR.*
- 10:00 Q12 **129.15** ● The effect of ovariectomy on spatial learning and memory performance in APP and APP-PS1 rat models of Alzheimer's disease. D. KLAKOTSKAIA*; R. A. RICHARDSON; P. KANCHANAKASET; C. HOWE; M. TRATCHEL; V. WEISE; C. AGCA; T. R. SCHACHTMAN; Y. AGCA. *Univ. of Missouri, Univ. of Missouri.*
- 11:00 R1 **129.16** ▲ Intermittent versus continuous assessment of attention in APPswe/PS1dE9 mice using a serial reaction time procedure. G. DIMARCO*; B. N. HARRIS; A. V. SAVONENKO; P. SOTO. *Texas Tech. Univ. Col. of Arts and Sci., Johns Hopkins Univ., Texas Tech. Univ. Col. of Educ.*
- 8:00 R2 **129.17** ▲ Assessment of short-term memory in the APPswe/PS1dE9 mouse model of Alzheimer's disease-associated amyloidosis. T. H. WRIGHT; B. N. HARRIS; A. V. SAVONENKO; P. L. SOTO*. *Texas Tech. Univ., Johns Hopkins Univ., Texas Tech. Univ.*
- 9:00 R3 **129.18** Assessing the cyclooxygenase pathway in Alzheimer's disease using the transgenic rat (TgF344-AD) in the development of spatial memory deficits. A. ALLIGER*; P. A. SERRANO; P. ROCKWELL; M. FIGUEIREDO PEREIRA. *Hunter Col., Hunter Col. and City Univ. of New York, Hunter Col. of the City Univ. of New York.*
- 10:00 R4 **129.19** ▲ Metabolic syndrome implications on spatial memory and glial cell immunoreactivity induced by injection of amyloid- β 25-35 peptide. O. REYES*; A. PATRICIO-MARTÍNEZ; G. MORALES; J. PANTLE; S. ZARATE; F. LUNA; I. D. LIMÓN. *Benemérita Univ. Autónoma de Puebla, Benemérita Univ. Autónoma de Puebla.*

POSTER

130. Dopamine and Non-Dopamine Pathways in Parkinson's Disease

Theme C: Neurodegenerative Disorders and Injury

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

- 8:00 R5 **130.01** Differences in the redox coenzyme, NAD(P)H, in nigrostriatal and mesolimbic dopamine neurons. K. R. TUCKER*; E. S. LEVITAN. *Penn State Greater Allegheny, Univ. of Pittsburgh Sch. of Med.*
- 9:00 R6 **130.02** The effects of uptake-2 blockers on stimulated dopamine release in the nigro-striatal pathway after L-DOPA loading. J. LLOYD*; A. MCDOUALL; M. R. MICHAEL; G. R. LOKE; B. FORBES; P. S. FREESTONE; J. LIPSKI*. *Univ. Auckland.*
- 10:00 R7 **130.03** The rostral pedunculopontine nucleus contributes to M₄R modulation of L-DOPA-induced dyskinesia. N. E. CHAMBERS*; C. SAITO; S. LEFKOWITZ; A. TAYLOR; S. MEADOWS; K. CHEMAKIN; E. SHEENA; C. BISHOP. *Binghamton Univ.*

- 11:00 R8 **130.04** α -Synuclein preformed fibrils (α Syn-PFFs) differentially shape the intrinsic and synaptic plasticity of midbrain dopaminergic neurons. G. MADEO*; X. MAO; Y. YASUI; R. A. M. MARINO; N. B. MERCURI; A. PISANI; V. L. DAWSON; T. M. DAWSON; A. BONCI. *NIH/NIDA, IRCCS Fondazione Santa Lucia, Univ. of Rome Tor Vergata, Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med.*
- 8:00 R9 **130.05** Investigate the neurotoxic effects of the designer drug Tri-Fluoro-Methyl-Phenyl-Piperazine derivatives. M. A. MAJRASHI*; M. ALMAGHRABI; S. RAMESH; D. DESAI; M. GOVINDARAJULU; V. SUPPIRAMANIAM; J. DERUITER; C. CLARK; M. DHANASEKARAN. *Harrison Sch. of Pharm. /auburn Univ., Fac. of Med. / Jeddah Univ.*
- 9:00 R10 **130.06** Cell-specific spinophilin function following exposure to drugs of abuse. D. S. WATKINS*; A. J. BAUCUM II. *Indiana Univ. Sch. of Med., Indiana University-Purdue Univ. Indianapolis.*
- 10:00 S1 **130.07** ▲ Apoptosis signaling activation following 6-hydroxydopamine-induced locus coeruleus lesion promotes olfactory, memory and emotional impairments in rats. T. B. SAMPAIO*; K. ROVERSI; R. N. TAKAHASHI; R. D. PREDIGER. *Univ. Federal De Santa Catarina.*
- 11:00 S2 **130.08** Proteasome degradation of tyrosine hydroxylase triggered by its phosphorylation: A question on the intracellular location and the degradation. A. NAKASHIMA*; Y. KODANI; Y. KANEKO; H. NAGASAKI; A. OTA. *Fujita Hlth. Univ. Sch. of Med., Fujita Hlth. Univ. Sch. of Med.*
- 8:00 S3 **130.09** ● Implementation of neural networks to quantify substantia nigra dopamine neurons. M. T. AIRAVAARA*; A. PENTTINEN; P. CHMIELARZ; K. ALBERT; I. PARKKINEN; J. ANDRESSOO; J. KOPRA; S. BLOM; K. PITKÄNEN; A. DOMANSKYI; M. H. VOUTILAINEN; M. SAARMA. *Inst. of Biotechnology, Room 6028B, Inst. of Biotechnology, Univ. of Helsinki, Div. of Pharmacol. and Pharmacotherapy, Fac. of Pharmacy, Univ. of Helsinki, Fimmic.*
- 9:00 S4 **130.10** Biased signaling of dopamine D3 receptor agonists influences compulsive behaviors in neurological disorders. K. M. KING*; W. XU; R. ESPAÑA; S. KORTAGERE. *Drexel Univ. Col. of Med., Drexel Univ. Col. of Med.*
- 10:00 T1 **130.11** The analysis of midbrain dopamine system of MANF-deficient mice reveals increased ER stress without phenotypic behavior defects. E. PAKARINEN*; V. VÖIKAR; M. SAARMA; M. LINDAHL. *Univ. of Helsinki, Univ. of Helsinki.*
- 9:00 T3 **131.02** ● Bidirectional gut-to-brain and brain-to-gut propagation of alpha-synuclein pathology in non-human primates. S. DOVERO*; A. PRIGENT; M. AROTCARENA; M. BOURDENX; P. AUBERT; I. TRIGO DAMAS; G. PORRAS; M. THIOLAT; M. TASSELLI; F. FERNANDEZ-GOMEZ; C. ESTRADA; A. RECASENS; J. BLESA; M. HERRERO; M. VILA; J. OBESO; P. DERKINDEREN; B. DEHAY; E. BEZARD. *Inst. of Neurodegenerative Dis., Inserm U913, CINAC-HM Puerta Del Sur, Univ. de Murcia, Univ. of Murcia, Vall d'Hebron Res. Inst.*
- 10:00 T4 **131.03** Variable selection using machine learning to identify new signatures of patient-derived aggregated a-synuclein-induced neurodegeneration in non-human primates. M. BOURDENX*; S. DOVÉRO; A. NIOCHE; M. AROTCARENA; S. CAMUS; G. PORRAS; M. THIOLAT; N. P. ROUGIER; A. PRIGENT; P. AUBERT; S. BOHIC; N. KRUSE; B. MOLLENHAUER; S. NOVELLO; M. MORARI; I. TRIGO DAMAS; M. GOILLANDEAU; M. TASSELLI; C. PERIER; N. GARCIA CARILLO; C. ESTRADA; A. RECASENS; J. BLESA; M. T. HERRERO EZQUERRO; P. DERKINDEREN; M. VILA; J. A. OBESO; B. DEHAY; E. BEZARD. *Inst. Des Maladies Neurodegeneratives, Inserm U913, Inserm U836, Univ. Med. Ctr. Gottingen, Univ. Ferrara, CINAC-HM Puerta Del Sur, Vall D'Hebron Res. Inst., Ctr. Exptl. en Investigaciones Biomédica, Biomed. Res. Inst. of Murcia, Vall d'Hebron Res. Inst., CINAC.*
- 11:00 T5 **131.04** Optimization of the alpha-synuclein preformed fibril model of synucleinopathy in rats. J. PATTERSON*; C. J. KEMP; T. J. COLLIER; M. F. DUFFY; A. ALLEN; K. C. LUK; N. M. KANAAN; K. L. PAUMIER; C. E. SORTWELL. *Michigan State Univ., Michigan State Univ. CHM, Michigan State Univ., Univ. Pennsylvania, Michigan State Univ., Washington Univ.*
- 8:00 T6 **131.05** Neuroinflammation precedes nigral degeneration in the alpha-synuclein preformed fibril model of Parkinson's disease. M. F. DUFFY*; T. J. COLLIER; K. C. LUK; M. G. TANSEY; K. L. PAUMIER; D. FISCHER; N. POLINSKI; C. J. KEMP; C. E. SORTWELL. *Michigan State Univ., Michigan State Univ., Univ. Pennsylvania, Emory Univ. Sch. of Med., Washington Univ., Michael J Fox FDTN.*
- 9:00 T7 **131.06** The Michael J. Fox Foundation's strategy to generate, characterize, and distribute preclinical antibody tools for investigating Parkin/PINK1 and LRRK2- and PINK1-related Rab molecular biology. N. POLINSKI*; T. N. MARTINEZ; L. GOTTLER; S. MARSHALL; K. C. LUK; C. E. SORTWELL; K. DAKIN; K. D. DAVE. *Michael J Fox FDTN, The Michael J. Fox Fndn. For Parkinson's Res., Proteos, Inc, GeneDetect, Univ. Pennsylvania, Michigan State Univ., Alzforum, The Michael J. Fox Fndn. For Parkinson's Res.*
- 10:00 T8 **131.07** Aggregated alpha-synuclein induces cell death via a lysosome-dependent mechanism. S. J. GUINEY*; P. A. ADLARD; A. I. BUSH; D. I. FINKELSTEIN; S. AYTON. *Florey Inst. Of Neurosci. and Mental Hlth.*
- 11:00 T9 **131.08** Peripheral monocyte entry is required for alpha-synuclein induced inflammation and neurodegeneration in a model of Parkinson disease. A. S. HARMS*; A. D. THOME; A. M. SCHONHOFF; G. WILLIAMS; Z. YAN; H. QIN; E. N. BENVENISTE; D. G. STANDAERT. *Univ. of Alabama At Birmingham, Houston Methodist, UAB, Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham.*

POSTER

131. Alpha-Synuclein Aggregation and Transmission

Theme C: Neurodegenerative Disorders and Injury

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

- 8:00 T2 **131.01** Ultrasound promotes microglial cell ingestion of alpha synuclein and reduces their production of pro-inflammatory substances. J. D. LOIKE; V. R. JACKSON-LEWIS*; S. PRZEDBORSKI. *Columbia Univ., Columbia Univ.*

* Indicated a real or perceived conflict of interest, see page 137 for details.
 ▲ Indicates a high school or undergraduate student presenter.
 * Indicates abstract's submitting author

- 8:00 T10 **131.09** Activin-A mediated suppression of inflammatory responses protects against fibrillar α -Synuclein-induced pathology in the CNS *in vivo*. M. KARAMPETSOU; M. SEMITEKOLOU; E. EMMANOUILIDOU; J. MORIANOS; E. KAPAKI; O. EL AGNAF; K. VEKRELLIS*; G. XANTHOU. *Foundation For Biomedical Research Academy Of Athens, Foundation For Biomedical Research Academy Of Athens, National And Kapodistrian University Of Athens, Hamad Bin Khalifa University, Foundation For Biomedical Research Academy Of Athens.*
- 9:00 T11 **131.10** Gastrointestinal dysfunction and alpha-synuclein inclusions in enteric neurons precede neurodegeneration in the central nervous system in a mouse model of alpha-synucleinopathies. L. ROTA*; C. RIZZI; S. CAPSONI; G. TESTA; A. CATTANEO; E. COLLA. *Scuola Normale Superiore.*
- 10:00 T12 **131.11** Biophysical characteristics of α -synuclein fibrils that dictate inclusion formation and neurodegeneration. N. BRYANT*; H. ABDELMOTILIB; T. MALTBIE; V. DELIC; A. B. WEST. *Univ. of Alabama Birmingham.*
- 11:00 U1 **131.12** Oxidative modification of α -synuclein by dopamine induces cellular vulnerability and secretion of α -synuclein. K. NAKASO*; S. ITO; T. MATSURA. *Tottori Univ, Fac. of Medicine, Div. Med. Biochem., Tottori Univ, Fac. of Med., Tottori Univ, Fac. of Med.*
- 8:00 U2 **131.13** Dopamine-treated α -synuclein disturbs mitochondrial membrane potential. J. B. WATSON*; G. SEROBYAN; A. YACOUB; A. KUNZ; J. P. WHITELEGGE; T. A. SARAFIAN. *David Geffen Sch. Med. UCLA.*
- 9:00 U3 **131.14** Relevance of different alpha-Synuclein species in Parkinson's disease. T. CHAKROUN*; T. W. RÖSLER; M. HÖLLERHAGE; G. U. HÖGLINGER. *German Ctr. for Neurodegenerative Dis., Tech. Univ. of Munich.*
- 10:00 U4 **131.15** Trehalose acts as autophagic flux inhibitor and promotes α -synuclein aggregation and secretion. Y. YOON*. *Konkuk Univ.*
- 11:00 U5 **131.16** Striatal seeding of protofibrillar alpha-synuclein leads to neuronal hyperactivity and coincide with a reduction of GAD67-positive cells in the somatosensory mouse cortex. C. SGOBIO; S. BLUMENSTOCK; F. SUN; M. M. DOROSTKAR; J. HERMS. *German Ctr. For Neurodegenerative Dis. -DZNE, Ctr. for Neuropathology and Prion Research, Ludwig-Maximilians-University, Munich Cluster of Systems Neurol. (SyNergy), Ludwig-Maximilians-University.*
- 8:00 U6 **131.17** On the mechanism of internalization, trafficking and release of alpha synuclein in cellular models of Parkinson's disease. L. RODRIGUEZ*; M. MARANO; M. S. FRASER; J. WATTS; A. TANDON. *Univ. of Toronto.*
- 9:00 U7 **131.18** *In vitro* compartmentalization accelerates the formation of toxic alpha synuclein protein aggregates. D. L. CASTILLO; S. TATE; K. INGRAM; L. RICKS-SANTI; M. J. GUERRERO*. *Hampton Univ., Hampton Univ.*
- 10:00 U8 **131.19** Specific protein sequestration effect of alpha-synuclein aggregates leads neurovascular unit impairment. W. OH*; D. KIM; M. KIM; R. YU; M. CHOI. *Korea Brain Res. Inst.*
- 11:00 U9 **131.20** *In vitro* and *ex vivo* assesment of the role of astrocytes in alpha-synuclein spreading. F. LORIA*; J. Y. VARGAS; S. SYAN; L. BOUSSET; R. MELKI; C. ZURZOLO. *Inst. Pasteur, Paris-Saclay Inst. of Neuroscience, CNRS.*
- 8:00 U10 **131.21** Analysis of neuropathology in Pink1 knockout rats induced by Alpha-synuclein preformed fibrils. R. B. CREED*; M. S. GOLDBERG. *Univ. of Alabama At Birmingham, Univ. of Alabama At Birmingham.*
- 9:00 U11 **131.22** Development of Visual Assay for Detection of α -synuclein Spreading; a rat model of α -synuclein pathology. F. ØSTERGAARD*; A. WADE; K. CHRISTENSEN; B. LAURSEN; H. SIEBNER; T. DYRBY. *H. Lundbeck A/S, Univ. of York, Hvidovre Hosp., H. Lundbeck A/S.*
- 10:00 U12 **131.23** Single-molecule pull-down assay of alpha-synuclein in dopaminergic neurons of postmortem brain tissue. G. JE; B. CROOP; K. HAN*; Y. KIM. *Col. of Medicine, Univ. of Central Florida, Univ. of Central Florida.*
- 11:00 V1 **131.24** Effects of A53E substitution on alpha-synuclein aggregation and neurotoxicity in Parkinson's disease models. P. C. MONTENEGRO*; D. YSSELSTEIN; N. DUTHEIL; S. AGIM; B. DEHAY; E. BEZARD; J. R. CANNON; J. ROCHET. *Purdue Univ., Purdue Univ., Univ. de Bordeaux, Inst. des Maladies Neurodégénératives., Purdue Univ.*
- 8:00 V2 **131.25** Dopamine inhibits glutamate release evoked by alpha-Synuclein aggregates in microglial cells. P. P. MICHEL*; M. DOS SANTOS PEREIRA; L. ACUÑA; S. HAMADAT; J. ROCCA; F. GONZÁLEZ; R. CHEHÍN; J. SEPULVEDA-DIAZ; E. DEL BEL; R. RAISMAN-VOZARI. *Inst. du Cerveau et de la Moelle Epinière, Faculdade de Medicina de Ribeirão Preto, Univ. de São Paulo, Inst. de Patologia Exptl. (CONICET-UNSa), Inst. Superior de Investigaciones Biológicas (CONICET-UNT).*
- 9:00 V3 **131.26** Protective effects of endosulfine-alpha (ENSA) against alpha-synuclein aggregation and neurotoxicity in Parkinson's disease models. A. CHANDRAN*; D. YSSELSTEIN; P. C. MONTENEGRO; I. COSTANTINO; N. DUTHEIL; G. P. MCCABE; M. P. FROSCH; J. M. GEORGE; B. DEHAY; E. BEZARD; J. ROCHET. *Purdue Univ., Purdue Inst. for Integrative Neuroscience, Purdue Univ., Purdue Univ., Massachusetts Alzheimer's Dis. Res. Center, Massachusetts Gen. Hospital, Univ. de Bordeaux, Inst. des Maladies Neurodégénératives, CNRS, Inst. des Maladies Neurodégénératives, Purdue Univ., Queen Mary Univ. of London.*
- 10:00 V4 **131.27** Chronic stimulation of adenosine A1 receptor promotes alpha-synuclein aggregation in hippocampal and substantia nigral neurons. E. JAKOVA*; J. STOCKWELL; S. NOSIB; J. S. LEE; F. S. CAYABYAB. *Univ. of Saskatchewan, Univ. of Saskatchewan.*
- 11:00 V5 **131.28** Characterization of 4L/PS-NA mice as alpha-synuclein aggregation model. E. AUER*; M. FARCHER; R. RABL; V. SCHIFFER; S. FLUNKERT; M. POSCH; B. HUTTER-PAIER. *QPS Austria GmbH.*
- 8:00 V6 **131.29** Spread of synuclein pathology following synuclein fibril injection in murine models. L. STOYKA*; H. ABDELMOTILIB; D. STANDAERT; L. VOLPICELLI-DALEY. *Univ. of Alabama-Birmingham.*
- 9:00 V7 **131.30** Apoptosis signal-regulating kinase 1 modulates the phenotype induced by α -Synuclein fibrils in mice. J. ZHANG*; E. PARK; H. PARK; R. YAN; E. JUNN; M. M. MOURADIAN. *Rutgers.*

POSTER

132. Parkinson's Disease: Models, Mechanisms, and Targets

Theme C: Neurodegenerative Disorders and Injury

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

- 8:00 V8 **132.01** Neuronal degeneration in non-dopaminergic brain regions and neurochemical alterations in the DJ-1 knockout rat model of Parkinson's disease. T. L. KYSER*; A. J. DOURSON; K. H. LUNDGREN; R. GULATI; A. GUTIERREZ; C. V. VORHEES; K. B. SEROOGY. *Univ. of Cincinnati, Cincinnati Children's Hosp. Med. Ctr., Cincinnati Children's Hosp & Univ. of Cincinnati.*
- 9:00 V9 **132.02** Protein translation factor eIF4G1 mutation exhibit alter protein synthesis and selective neurodegeneration of dopamine neurons. S. S. KARUPPAGOUNDER*; H. JIA; Y. LEE; S. M. EACKER; J. KIM; E. NORDQUIST; N. LONGSON; Z. ROCCAFORTE; S. BRAHMACHARI; M. KUMAR; X. MAO; S. A. ANDRABI; D. SWING; L. TESSAROLLO; H. JIANG; I. MARTIN; T. M. DAWSON; V. DAWSON. *Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Adrienne Helis Malvin Med. Res. Fndn., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Diana Helis Henry Med. Res. Fndn., Sungkyunkwan Univ. Sch. of Medicine, Samsung Biomed. Res. Inst., Zanvyl Krieger Sch. of Arts and Sciences. Johns Hopkins Univ., The Ohio State Univ., Univ. of Alabama at Birmingham, Natl. Cancer Inst., Oregon Hlth. and Sci. Univ., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med.*
- 10:00 V10 **132.03** A novel model of alphavirus induced Parkinsonism in outbred CD-1 mice. C. BANTLE*. *Colorado State Univ.*
- 11:00 V11 **132.04** • Retinal biomarkers in a seeded mouse model of Parkinson's disease: Pathological α -synuclein induces accumulation of phosphorylated α -synuclein (p129S) and tau (pThr231), inflammation, metabolic dysregulation and cell death. N. MAMMADOVA*; C. M. SUMMERS; R. D. KOKEMULLER; T. BARON; R. J. VALENTINE; D. S. SAKAGUCHI; A. G. KANTHASAMY; J. J. GREENLEE; M. H. W. GREENLEE. *Iowa State Univ., Iowa State Univ., Iowa State Univ., Natl. Animal Dis. Center, USDA, Agr. Res. Service, Agence Française de Sécurité Sanitaire des Aliments, Iowa State Univ.*
- 8:00 V12 **132.05** Following the neuropathology of Parkinson's disease with magnetic resonance imaging: alterations in resting state functional connectivity and gray matter microarchitecture in PINK1 $-/-$ rats. X. CAI*; T. MORRISON; J. QIAO; S. MALMBERG; J. SABRICK; S. IRIAH; J. C. HARTNER; M. TRIVEDI; P. KULKARNI; C. F. FERRIS. *Northeastern University, Ctr. For Translational, Northeastern Univ., Horizon Discovery, NOVA Southeastern Univ., Northeastern Univ.*
- 9:00 V13 **132.06** Behavioral, histological and electrophysiological analysis of PINK1 knockout rats. L. J. MCMEEKIN; E. E. UBOGU; G. C. ROWE; Y. TANG; A. M. SCHONHOFF; A. F. MANUEL; A. LONG; N. BRYANT; N. K. MOKHA; A. M. RIZWAN; M. V. KING; R. B. CREED; S. M. WILSON; M. S. GOLDBERG*. *Univ. Alabama At Birmingham, Univ. Alabama At Birmingham.*
- 10:00 V14 **132.07** Withdrawn

- 11:00 V15 **132.08** Partial loss of ATP13A2 causes gliosis independent of robust lipofuscinosis. S. RAYAPROLU*; Y. SEVEN; J. HOWARD; C. DUFFY; L. ROUSSEAU; M. CASTANEDES; E. RODRIGUEZ; P. SCHULTHEIS; G. MITCHELL; J. LEWIS. *UF Col. of Med., UF Col. of Med., Mayo Clin., UF Col. of Med., North Kentucky Univ.*
- 8:00 V16 **132.09** *In vivo* PET quantification of CRISPR/Cas9 conditional gene knockdown in rats. S. MARCIANO*; K. HERFERT; L. KUEBLER; A. MAURER; B. J. PICHLER. *Werner Siemens Imaging Ctr.*
- 9:00 V17 **132.10** ▲ Pesticides interactions in a *Drosophila* model of Parkinson's disease. K. PATEL; M. HEREDIA; Y. MARTINEZ; H. O. LAWAL*. *Delaware State Univ., Delaware State Univ.*
- 10:00 V18 **132.11** The possible involvement of the TRPM7 channel and of miR-22 in a model of Parkinson's disease in mice. P. C. G. GARCIA; C. C. REAL; L. R. BRITTO*. *Univ. of São Paulo, Univ. of São Paulo.*
- 11:00 V19 **132.12** ▲ LRRK2 mutations impair autophagic clearance of aggregate-prone proteins by suppressing dynein. Y. BANG*; H. CHOI. *CHA Univ., Col. of pharmacy, CHA Univ.*
- 8:00 V20 **132.13** ▲ The role of the noradrenergic system and the effects of β -blockers in L-DOPA-induced dyskinesia in an animal model of Parkinson's disease. S. C. LOPES*; P. A. DE OLIVEIRA; M. W. LOPES; B. LEAL; R. N. TAKAHASHI; R. D. S. PREDIGER. *Federal Univ. of Santa Catarina, Federal Univ. of Santa Catarina.*

POSTER

133. Parkinson's Disease: Rodent Toxin and Behavior Models

Theme C: Neurodegenerative Disorders and Injury

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

- 8:00 V21 **133.01** Increased serotonin transporter-mediated dopamine uptake in the dyskinetic striatum of L-DOPA-treated, hemi-parkinsonian rats. M. CONTI*; D. F. WERNER; C. R. BISHOP. *NIH, Binghamton Univ., Binghamton Univ.*
- 9:00 V22 **133.02** Co-treatment of the C-terminal domain fragment of tetanus toxin and pramipexole improves motor behavior and ameliorate oxidative stress against a dopaminergic lesion with 6-hydroxydopamine in rats. F. PATRICIO MARTÍNEZ*; F. PEREZ; S. MONTES; I. MARTINEZ GARCIA; F. LUNA; J. AGUILERA; L. MARTINEZ MENDIETA; I. D. LIMON. *Meritorious Autonomous Univ. of Puebla, Inst. Nacional De Neurología Y Neurocirugía. D, Meritorious Autonomous Univ. of Puebla, Meritorious Autonomous Univ. of Puebla, Inst. de Neurociencias, Univ. Autònoma de Barcelona, Meritorious Autonomous Univ. of Puebla.*
- 10:00 V23 **133.03** Behavioral assessment of Ldopa induced dyskinesia in rat: A new scoring scale. S. LOIODICE*; A. DENIBAUD; W. DEFFAINS; M. ALIX; P. MONTAGNE; M. SEFFALS; C. DRIEU LA ROCHELLE. *Biotrial Pharmacol., Plate-Forme H2P2.*
- 11:00 V24 **133.04** Can a rat model of early, cognitive deficits in Parkinson's disease and an open field task of visually cued home base formation help uncover the neurobiology of paradoxical kinesia? S. J. PERROTTA*; Y. KIM; A. RODERICK; H. SODAWALLA; M. F. KRITZER. *Stony Brook Univ.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 8:00 V25 **133.05** Zolpidem alters L-DOPA-induced behavioral asymmetry in unilaterally 6-OHDA-lesioned rats. R. ASSINI*; E. D. ABERCROMBIE. *Rutgers Univ. - Newark, Rutgers The State Univ. of New Jersey.*
- 9:00 V26 **133.06** Ketamine reversed depressive-like behaviour and memory impairment but did affect vocal impairment in a rat model of Parkinson's disease. R. ANDREATINI*; D. D. VECCHIA; L. K. S. KANAZAWA; E. M. WENDLER; P. A. S. HOCAYEN; M. A. B. F. VITAL; R. N. TAKAHASHI; E. MIYOSHI; M. WÖHR; R. K. SCHWARTING. *Univ. Federal Do Paraná, Federal Univ. of Paraná, Federal Univ. of Santa Catarina, State Univ. of Ponta Grossa, Philipps-University of Marburg.*
- 10:00 W1 **133.07** • ▲ Changes in the cyclooxygenase pathway relevant to PGD2/J2 in a rat model of neuroinflammation exhibiting Parkinsonian-like pathology. J. ARA*; C. CORWIN; M. E. FIGUEIREDO-PEREIRA. *CUNY Hunter Col., CUNY Grad. Ctr., Hunter Col.*
- 11:00 W2 **133.08** The effect of hfe genotype on the progression of Parkinson's disease in a mouse paraquat model. A. M. NIXON; E. NEELY; M. MEADOWCROFT; W. NANDAR; J. R. CONNOR*. *Penn State Col. of Med., Univ. of Pittsburgh.*
- 8:00 W3 **133.09** Transient impairment of *in vivo* burst firing in surviving dopamine neurons is associated with a temporary motor deficit after partial lesion. L. KOVACHEVA*; J. ROEPER. *Inst. of Neurophysiol.*
- 9:00 W4 **133.10** Chronic nicotine administration improves L-DOPA-induced dyskinesia in rats and reduces the expression of FosB in the dorsal striatum. A. GOMEZ*; M. PALOMERO-RIVERO; D. MILLÁN-ALDACO; M. GUERRA-CRESPO; Y. TIZABI; R. DRUCKER-COLÍN. *Univ. Nacional Autonoma De Mexico, Howard Univ. Col. of Med.*
- 10:00 W5 **133.11** MitoPark mouse recapitulates depression and anxiety behaviors underlying Parkinson's disease. A. G. KANTHASAMY*; M. R. LANGLEY; S. GHASAS; M. AY; H. JIN; V. ANANTHARAM; A. KANTHASAMY. *Iowa State Univ.*
- 11:00 W6 **133.12** Mfn2 overexpression attenuates MPTP neurotoxicity *in vivo*. F. ZHAO*; X. ZHU. *Case Western Reserve Univ.*
- 8:00 W7 **133.13** • ▲ Inflammation in the gut of a new progressive rat model of PD. G. CHING; Y. OBAYASHI; M. MEJIAS; R. KORNELSEN; J. VANKAMPEN; J. O'KUSKY; D. J. DOUDET*. *Univ. of British Columbia, Univ. British Columbia, Univ. of Prince Edward Island, Neurodyn Life Sci. Inc.*
- 9:00 W8 **133.14** Postnatal developmental apoptosis in mice strains and its differential susceptibility to MPTP in adulthood. Y. HAOREI*; D. J. VIDYADHARA; C. SAGAR; T. R. RAJU; P. A. ALLADI. *Natl. Inst. of Mental Hlth. and Neuro Scie, Natl. Inst. of Mental Hlth. and Neuro Scie.*
- 10:00 W9 **133.15** Oscillatory signatures of L-DOPA-induced dyskinesia are not reduced by ketamine. T. YE*; M. J. BARTLETT; T. FALK; S. L. COWEN. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*
- 11:00 W10 **133.16** Allosteric modulation of NMDA receptors rescues impaired synaptic plasticity and behavioural impairment in experimental Parkinsonism. M. NOUHI*. *Karolinska Inst.*
- 8:00 W11 **133.17** • The potent and selective A_{2A} receptor antagonist, preladenant, produces a robust effect in L-dopa induced turning, but only modest efficacy in the cylinder assay in unilaterally 6-OHDA lesioned rats. A. C. MORSE; R. HODGSON*; R. O. PUSSINEN; J. KORKALAINEN; M. SUHONEN; A. J. NURMI; J. A. VIVIAN. *Dart NeuroScience, Charles River Discovery, Dart Neurosci.*
- 9:00 W12 **133.18** Late aging influences on L-DOPA-induced dyskinesia in the hemi-parkinsonian rat. K. E. LANZA*; A. PERKINS; T. DEAK; C. BISHOP. *Binghamton Univ.*
- 10:00 W13 **133.19** Behavioral adaptations in parkin knockout rats support the role of parkin in Parkinson's disease pathology. A. SHARMA*; S. P. CALLAN; A. HARUTYUNYAN; T. A. GORE; S. A. PERRINE; A. MOSZCZYNSKA. *Wayne State Univ., Ellipse Analytics, Wayne State Univ. Sch. of Med.*
- 11:00 W14 **133.20** Role of tetrahydrobiopterin pathway in nociceptive responses in rats following intranasal MPTP administration, an animal model of Parkinson's disease. K. ROVERSI*; R. TONELLO; A. LATINI; S. J. MACEDO-JÚNIOR; J. FERREIRA; R. D. S. PREDIGER. *Univ. Federal De Santa Catarina, Univ. of Cincinnati, Univ. Federal de Santa Catarina.*
- 8:00 W15 **133.21** Multiscale network analysis reveals novel targets in Parkinson's disease. Q. WANG*; M. WANG; W. SONG; P. PAN; Y. ZHANG; B. ZHANG; Z. YUE. *Icahn Sch. of Med. At Mount Sinai.*
- 9:00 W16 **133.22** Behavioral and electrophysiological assessment of gradual dopamine depletion in the rat. H. Y. FEBINGER*; C. M. HENRY; A. D. DORVAL. *Univ. of Utah, Univ. of Utah, Univ. of Utah.*
- 10:00 W17 **133.23** Quantifying gait asymmetries in mouse models of Parkinson's. L. BROOM*; A. WORLEY; V. VANDERHORST. *Beth Israel Deaconess Med. Ctr., Harvard Med. Sch.*
- 11:00 W18 **133.24** Progression of SNr pathophysiology depends on mouse model of dopamine depletion. A. M. WILLARD*; K. J. MASTRO; A. H. GITTIS. *Carnegie Mellon Univ., Univ. of Pittsburgh.*
- 8:00 W19 **133.25** Evaluation of constipation endpoints in MPTP-treated mice. R. O. PUSSINEN*; A. J. NURMI; R. HODGSON. *Charles River Discovery.*
- 9:00 W20 **133.26** Activation of the CB1 receptor in the Globus Pallidus externus modulates the fine motor skills of hemiparkinsonian rats. I. LIMON PEREZ DE LEON*; A. PATRICIO-MARTÍNEZ; A. S. BÁEZ-CORDERO. *Benemerita Univ. Autonoma De Puebla FCQ Lab. Neurofarma.*
- 10:00 W21 **133.27** Sirtuins expression and olfactory dysfunction after NMDA-induced olfactory bulb excitotoxicity. C. A. MARIN*; M. BONASTRE; C. LANGDON; B. CALLEJAS; I. ALOBID; J. MULLOL. *IDIBAPS NIF: Q-5856414G, Hosp. Clin.*
- 11:00 W22 **133.28** Ultrastructural and neurochemical changes in a model of Parkinsonism induced by Reserpine. P. C. LEAL; J. M. BISPO; L. C. R. F. LINS; M. F. SOUZA; C. MOORE; M. MARCHIORO; A. M. RIBEIRO; R. H. SILVA; A. M. GOIS; M. A. FREIRE*; C. K. MESHUL; J. SANTOS. *Federal Univ. of Sergipe, Brazil, Federal Univ. of Sergipe, Oregon Hlth. & Sci. Univ., Federal University of Sao Paulo, Federal University of Sao Paulo, Federal Univ. of Sergipe, State Univ. of Rio Grande Do Norte, Portland VA Med. Ctr., Federal Univ. of Sergipe.*

- 8:00 W23 **133.29** Increasing axonal arborization size of dopamine neurons to produce a better mouse model of Parkinson's disease. P. CASSIDY*; N. BÉLANGER; W. TANGUAY; L. TRUDEAU. *Univ. de Montréal.*
- 9:00 W24 **133.30** Exercise in an animal model of Parkinson's disease: motor recovery but not disease modification. C. K. MESHUL*; M. CHURCHILL; L. PFLIBSEN; M. D. SCONCE; C. MOORE; K. KIM. *VA Med. Ctr., OHSU.*

POSTER

134. Dystonia

Theme C: Neurodegenerative Disorders and Injury

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

- 8:00 W25 **134.01** Improved survival and lack of overt dystonia in torsinA conditional knockout mice. Y. LI*; F. YOKOI; F. JIANG; K. DEXTER; B. SALVATO. *Univ. of Florida.*
- 9:00 W26 **134.02** TorsinA loss of function causes perinuclear proteostatic abnormalities and nuclear pore complex defects. S. S. PAPPAS*; C. LIANG; C. O. RIVERA; W. T. DAUER. *Univ. of Michigan.*
- 10:00 W27 **134.03** Common physiological and neurochemical alterations of striatal cholinergic function in DYT-TOR1A and DYT-THAP1 knock-in mouse models of dystonia. K. L. ESKOW JAUNARAJIS*; M. SCARDUZIO; M. E. EHRLICH; L. MCMAHON; D. STANDAERT. *Univ. of Alabama at Birmingham, Mt. Sinai Sch. Med., Univ. of Alabama at Birmingham.*
- 11:00 W28 **134.04** Forebrain knock-out of torsinA reduces striatal free-water and impairs whole-brain connectivity in a symptomatic mouse model of DYT1 dystonia. J. C. DESIMONE*; S. S. PAPPAS; M. FEBO; R. G. BURCIU; P. SHUKLA; L. M. COLON-PEREZ; W. T. DAUER; D. E. VAILLANCOURT. *Univ. of Florida, Univ. of Michigan, Univ. of Florida, Univ. of Florida, Univ. of Michigan, Univ. of Florida.*
- 8:00 W29 **134.05** Exploring the interaction between eIF2 α dysregulation, acute endoplasmic reticulum stress and DYT1 dystonia. G. BEAUVAIS*; N. RODRIGUEZ-LOSADA; L. YING; Z. ZAKIROVA.; J. L. WATSON; B. READHEAD; P. GADUE; D. L. FRENCH; M. E. EHRLICH; P. GONZALEZ-ALEGRE. *The Children's Hosp. of Philadelphia, Univ. of Malaga, Icahn Sch. of Med. at Mount Sinai.*
- 9:00 W30 **134.06** ● Serotonin mediates stress induced dystonia through 5HT2A receptor in tottering mice. J. KIM*; S. CHAE; S. KIM; G. PARK; D. KIM. *KAIST, KAIST, IBS/KAIST, KAIST.*
- 10:00 W31 **134.07** Do dystonia mutations in hippocalcin change the slow afterhyperpolarization? C. L. DIXON*; D. M. KULLMANN. *Univ. Col. London.*
- 11:00 W32 **134.08** Perturbed Ca²⁺-dependent signaling of DYT2 hippocalcin mutants as mechanism of autosomal recessive dystonia. N. I. KONONENKO*; D. S. OSIPENKO; A. V. DOVGAN; O. A. RYBACHUK; J. ZHANG; V. VENKATARAMAN; P. BELAN. *Inst. Physiol, Rowan Univ.*
- 8:00 W33 **134.09** Expression of the novel DYT5 peptide DRDp73 downregulates the dopamine biosynthesis pathway in neuroblastoma cells. L. JONES*; I. A. ARMATA; D. M. MC CARTHY; N. SHARMA; P. G. BHIDE. *Florida State Univ., Florida State Univ., Florida State Univ. Col. of Med., Massachusetts Gen. Hosp., Florida State Univ. Col. of Med.*

- 9:00 W34 **134.10** Impairment of neuronal differentiation of human induced neural stem cells by TOR1A overexpression. P. CAPETIAN*; F. STENGEL; F. VULINOVIC; C. KLEIN. *Univ. of Wuerzburg, Univ. of Luebeck.*
- 10:00 W35 **134.11** Quantitative measurements of deficit type and severity in focal emouchure dystonia. A. E. MORRIS*; S. A. NORRIS; A. Z. SNYDER; J. S. PERLMUTTER; J. W. MINK. *Univ. of Rochester Med. Ctr., Washington Univ. Sch. Med.*
- 11:00 W36 **134.12** Assessing epigenetic marks in X-linked Dystonia-Parkinsonism. A. DIOS*; K. MUELLER; C. VAINE; K. MANGKALAPHIBAN; K. GLAJCH; N. SHARMA; L. OZELIUS; D. C. BRAGG; G. SADRI-VAKILI. *Massachusetts Gen. Hosp., Massachusetts Gen. Hosp.*
- 8:00 X1 **134.13** Longterm multi-channel micro-electrode recording from basal ganglia and thalamus in children with acquired dystonia. T. D. SANGER*; M. LIKER; A. ROBISON; E. ARGUELLES; A. MASKOOKI. *USC, Keck Med. Ctr. at USC, Childrens Hosp. Los Angeles, USC.*
- 9:00 X2 **134.14** Simultaneous recordings from implanted electrodes in basal ganglia and thalamus in children with secondary dystonia. E. ARGUELLES*; A. MASKOOKI; M. ABOLFATH-BEYGI; D. FERMAN; T. SANGER. *USC.*
- 10:00 X3 **134.15** A functionally diverse network kernel shapes task specificity in focal dystonia. S. FUERTINGER; K. SIMONYAN*. *Ernst Strüngmann Inst. (ESI) for Neurosci. in Cooperation with Max Planck Society, Icahn Sch. of Med. at Mount Sinai.*

POSTER

135. Motor Neuron Disease: In Vitro Studies

Theme C: Neurodegenerative Disorders and Injury

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

- 8:00 X4 **135.01** Pre-symptomatic abnormalities and associated channelopathies in spindle afferent trigeminal mesencephalic V neurons in a SOD1G93A mouse model for amyotrophic lateral sclerosis. S. SEKI*; S. H. CHANDLER; R. MAHESHWARY; H. NISLY; A. P. SAMPATH; R. OLCESE; M. W. PAZOS; S. VENUGOPAL. *Univ. of California Los Angeles, UCLA, UCLA, UCLA, UCLA.*
- 9:00 X5 **135.02** Urate mitigates motor neuron toxicity of astrocytes derived from ALS linked SOD1 G93A mutant mice. R. BAKSHI*; K. TSIORAS; Y. XU; X. CHEN; E. GRANUCCI; K. A. MUELLER; A. DIOS; S. PAGANONI; G. SADRI-VAKILI; E. KISKINIS; M. A. SCHWARZSCHILD. *Massachusetts Gen. Hosp., Northwestern Univ. Feinberg Sch. of Med.*
- 10:00 X6 **135.03** Role of connexin 43 in disease progression and motor neuron toxicity in a rodent model and human iPSC astrocytes in Amyotrophic Lateral Sclerosis. A. A. ALMAD*; C. WELSH; Y. HAO; A. PATANKAR; J. RICHARD; S. GROSS; N. J. MARAGAKIS. *Johns Hopkins Univ., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ., Johns Hopkins Univ. Dept. of Neurol. and Neurosurg.*
- 11:00 X7 **135.04** FUS regulates the expression of snRNP70 by binding to its conserved intron in neuron. T. NAKAYA*. *Hokkaido Univ.*

• Indicated a real or perceived conflict of interest, see page 137 for details.
 ▲ Indicates a high school or undergraduate student presenter.
 * Indicates abstract's submitting author

- 8:00 X8 **135.05** Identification of domains required for aggregation of FUS in neuron. D. KAWAHARA*; T. SUZUKI; T. NAKAYA. *Hokkaido University, Hokkaido Univ., Hokkaido Univ.*
- 9:00 X9 **135.06** Inhibition of arfaptin 2 improves cell survival in Amyotrophic lateral sclerosis (ALS). K. NING*; A. MOHAMMEDEID; S. KONG; A. J. GRIERSON; P. J. SHAW; M. AZZOZ. *Sheffield Univ.*
- 10:00 X10 **135.07** C9ORF72-associated pathological characteristics in skeletal muscle cells derived from ALS patient iPSC cells. E. LYNCH; V. BELSITO; T. SAITO; T. J. HIRANO; J. JEFFREY; M. SUZUKI*. *Univ. of Wisconsin-Madison, Yamaguchi University, Fac. of Med. and Hlth. Sci., Univ. of Wisconsin Madison.*
- 11:00 X11 **135.08** Mechanistic insights into C9orf72 mediated disruptions in nucleocytoplasmic transport and the nuclear pore complex. A. N. COYNE*; J. G. DAIGLE; J. GRIMA; L. R. HAYES; J. D. ROTHSTEIN. *Johns Hopkins Univ. Sch. of Med., Johns Hopkins University, Sch. of Med., Johns Hopkins Univ.*
- 8:00 X12 **135.09** Cell targeted phenotyping: Understanding molecular genetic mechanisms of C9ORF72 ALS in motor neurons. S. BURLEY*; O. CORDERO LLANA; D. BECCANO-KELLY; S. COWLEY; R. WADE-MARTINS. *Univ. of Oxford, Univ. of Bristol, Univ. of Oxford.*
- 9:00 X13 **135.10** Distinct dynamics and cellular properties of dipeptide repeats derived from the C9orf72 nucleotide repeat expansion. A. R. HAEUSLER*; X. WEI; T. WESTERGARD; K. RUSSELL; M. MARKS; K. OZCAN; Y. PANG; C. J. DONNELLY; P. PASINELLI; D. TROTTI. *Thomas Jefferson Univ., Univ. of Pittsburgh.*
- 10:00 X14 **135.11** Cell-to-cell transmission of c9orf72 linked dipeptide repeat proteins. T. R. WESTERGARD*; B. K. JENSEN; X. WEN; J. CAI; E. KROPF; L. M. IACOVITTI; P. PASINELLI; D. TROTTI. *Thomas Jefferson Univ., Thomas Jefferson Univ., Farber Inst. For Neurosciences, Thomas Jefferson Univ., Thomas Jefferson Univ., Thomas Jefferson Univ., Farber Inst. Neurosci, Dept. of Neurosci.*
- 11:00 X15 **135.12** C9orf72 RAN-translated poly-GA peptides result in perturbed neuronal signaling and delayed cell death in mature primary neurons. B. K. JENSEN*; X. WEN; K. KRISHNAMURTHY; B. CURRAN; T. WESTERGARD; L. MA; A. HAEUSLER; P. PASINELLI; D. TROTTI. *Thomas Jefferson Univ., Thomas Jefferson Univ.*
- 8:00 X16 **135.13** Understanding TDP-43 oligomers and dipeptide repeats in neurodegenerative diseases. Y. CHEN*. *Genomics Res. Center/Academia Sinica.*
- 9:00 X17 **135.14** Role of USP7 in the pathogenicity of spinal and bulbar muscular atrophy. A. PLUCIENNIK*; T. BERGER; D. MERRY. *Thomas Jefferson Univ.*
- 10:00 X18 **135.15** USP15 regulates RNA splicing through deubiquitination of TUT1. J. KIM*; F. TSURUTA; T. CHIBA. *Univ. of Tsukuba, Univ. of Tsukuba, Univ. of Tsukuba.*
- 11:00 X19 **135.16** Modeling ALS with stem-cell-derived spinal and cranial motor neurons possessing differential vulnerability. D. AN*; D. E. IANNITELLI; M. AL-SAYEGH; I. YAGUDAYEVA; E. MAZZONI. *New York Univ., New York Univ., New York Univ., New York Univ. Abu Dhabi, Columbia Univ., New York Univ.*
- 8:00 X20 **135.17** Retromer complex deficiency in amyotrophic lateral sclerosis astrocytes. E. J. PEREZ-TORRES*; V. MISHRA; D. E. BERMAN; S. A. SMALL; F. LOTTI; S. PRZEDBORSKI. *Columbia Univ., Columbia Univ.*
- 9:00 X21 **135.18** Stress granules formation upon condition of chronic stress in human ALS disease models. C. COLOMBRITA; V. GUMINA; A. MARASCHI; A. DORETTI; F. SASSONE; P. BOSSOLASCO; A. RATTI; V. SILANI*. *Dept. of Neurol. and Lab. of Neuroscience, IRCCS Inst. Auxologico Italiano, Doctorate Sch. of Mol. Medicine, Universita' degli Studi di Milano, Univ. Milan Med. Sch. IRCCS Inst. Auxologico Italiano.*
- 10:00 X22 **135.19** Impairment of the serotonergic pathway in a mouse model of spinal muscular atrophy. N. DELESTRÉE*; E. SEMIZOGLU; E. DROBAC; G. Z. MENTIS. *Columbia Univ.*
- 11:00 X23 **135.20** Modelling FUS associated ALS pathology with human induced pluripotent stem cells and patient derived spinal motoneurons. J. HIGELIN*; M. DEMESTRE; A. LUTZ; A. HERMANN; A. LUDOLPH; T. BOECKERS. *Inst. for Anat. and Cell Biol., Dept. of Neurol., Dept. of Neurol.*
- 8:00 X24 **135.21** ▲ Monitoring physiology of individual ALS ipsc-derived motor neurons through longitudinal imaging analysis. E. BEREZOVSKI*; J. PEREIRA; A. DEVLIN; J. KOH; D. F. MOAKLEY; B. WAINGER. *Massachusetts Gen. Hosp., Univ. of St. Andrews, Massachusetts Gen. Hosp.*
- 9:00 X25 **135.22** Homocysteine suppresses evoked neurotransmission and sensitizes the mouse neuromuscular junction to mild oxidative stress, as observed by a decrease in spontaneous neurotransmitter release, by activating NMDA receptors. Y. CHEN; C. A. LINDGREN*. *Grinnell Col., Grinnell Col.*
- 10:00 X26 **135.23** Nerve-On-A-Chip for modelling motor neuron diseases and preclinical neurotoxicity testing. A. D. SHARMA*; J. Q. BEHN; L. A. PACE; J. L. CURLEY; M. MOORE. *Axosim Technologies LLC, AxoSim Technologies LLC, AxoSim Technologies, Tulane Univ.*
- 11:00 X27 **135.24** ALS and ubiquilin-2: Biophysical insights into ubiquilin-2 structure and function. C. CASTANEDA*; T. DAO. *Syracuse Univ., Syracuse Univ.*
- 8:00 X28 **135.25** Deficient nuclear export of polyglutamine-expanded androgen receptor contributes to toxicity in spinal and bulbar muscular atrophy. F. ARNOLD*; D. E. MERRY. *Thomas Jefferson Univ.*

POSTER

136. Mechanisms of Neurodegeneration I

Theme C: Neurodegenerative Disorders and Injury

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

- 8:00 X29 **136.01** Elevated MeCP2 in mice causes neurodegeneration involving Tau dysregulation and excitotoxicity. J. M. FRANKLIN*; K. R. MONTGOMERY; A. LOUIS SAM TITUS; L. WANG; S. R. D'MELLO. *Southern Methodist Univ., Univ. of Texas at Dallas.*
- 9:00 X30 **136.02** Involvement of Charcot-Marie-Tooth disease genes expression in anticancer agent-induced peripheral neuropathy in rats. Y. YAMASHITA*; K. IRIE; A. KOCHI; N. KIMURA; K. MATSUO; T. HAYASHI; T. MYOSE; K. SANO; T. NAKANO; Y. TAKASE; Y. NAKAMURA; T. SATHO; K. MISHIMA. *Fukuoka Univ., Fukuoka Univ., Natl. Kyushu Med. Ctr., Fukuoka Univ., Fukuoka Univ. Hosp., Fukuoka Univ., Fukuoka Univ.*
- 10:00 X31 **136.03** Withdrawn

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 11:00 X32 **136.04** Neurodegeneration of the inner retina and corneal nerve fiber morphology in experimentally diabetic rats. A. J. BARBER*; S. D. KIM; P. NGUYEN; B. BACCOUCHE; W. WANG; J. M. SUNDSTROM. *Penn State Hershey Col. of Med., Penn State Hershey Col. of Med., Univ. de la Manouba.*
- 8:00 X33 **136.05** Effects of early life manganese exposure on markers of glutamatergic and dopaminergic neurotransmission in motor cortex. C. E. MOYER*; A. GILMORE; S. A. BEAUDIN; D. R. SMITH; Y. ZUO. *Univ. of California Santa Cruz, Univ. of California Santa Cruz.*
- 9:00 Y1 **136.06** Lipid signaling during neuronal degeneration in KA-treated mice. F. CHALI*; S. MARTY; G. MILIOR; M. MORIN-BRUREAU; C. LE DUIGOU; E. SAVARY; R. MILES. *ICM - HOPITAL PITIE SALPETRIERE, ICM - HOPITAL PITIE SALPETRIERE.*
- 10:00 Y2 **136.07** Neuronal-specific PICALM deficiency causes cognitive impairment and brain atrophy. D. LAZIC*; A. MONTAGNE; Z. ZHAO; T. MAEDA; M. MAEDA; B. V. ZLOKOVIC. *USC, Univ. of Belgrade, Harvard Med. Sch.*
- 11:00 Y3 **136.08** Overexpression of sigma-1 receptor rescues G4C2 RNA repeats-mediated defect in the nucleocytoplasmic transport of Ran GTPase: Implication in ALS. P. LEE*; T. SU. *IRP/NIDA/NIH, IRP/NIDA/NIH.*
- 8:00 Y4 **136.09** The role of tubulin post-translational modifications in HIV gp120-mediated neurotoxicity. E. WENZEL*; F. TARABELLI; I. MOCCHETTI; V. AVDOSHINA. *Georgetown Univ., Houston Methodist Res. Inst.*
- 9:00 Y5 **136.10** Intracranial vascular calcification in an autopsy case of pseudopseudohypoparathyroidism. T. IWASE*; M. YOSHIDA; Y. HASHIZUME; I. YAZAWA. *Nagoya City Koseiin Med. Welfare Ctr., Aichi Med. Univ., Fukushima Hosp., Natl. Ctr. for Geriatrics and Gerontology.*
- 10:00 Y6 **136.11** Evaluation of mouse strain differences in esterase and nerve agent-induced toxicity. L. M. MATSON*; J. CHANDLER; C. ARDINGER; C. CADIEUX; H. CRAIG; J. KOENIG; H. MCCARREN; Z. CANTER; H. HOARD-FRUCHEY; T. SHIH; E. JOHNSON; D. CERASOLI; J. MCDONOUGH. *US Army Med. Res. Inst. of Chem. Def.*
- 11:00 Y7 **136.12** Soluble epoxide hydrolase inhibition attenuates excitotoxicity via upregulating glutamate transporter in rat brain. Y. KUO*; P. HSU; Y. HU; Y. LEE. *Natl. Yang-Ming Univ., Taipei Veterans Gen. Hosp. and Natl. Yang-Ming Univ. Sch. of Med., Natl. Yang-Ming Univ.*
- 8:00 Y8 **136.13** Modifying chondroitin sulfation enhances retinal ganglion cell axon regeneration in the mouse optic nerve. C. S. PEARSON*; K. R. MARTIN; H. M. GELLER. *NIH, Univ. of Cambridge.*
- 9:00 DP04/Y9 **136.14** (Dynamic Poster) A two-part model of neuropsychiatric systemic lupus erythematosus involving acute autoantibody mediated neuronal death and chronic pruning by microglia. J. NESTOR*; Y. ARINUMA; C. KOWAL; T. S. HUERTA; P. T. HUERTA; T. R. HAMMOND; B. A. STEVENS; B. T. VOLPE; B. DIAMOND. *Feinstein Inst. For Med. Res., Hofstra-Northwell Sch. of Med., Kitasato Univ. Sch. of Med., Boston's Children's Hosp. and Harvard Med. Sch., Broad Inst. of MIT and Harvard.*
- 10:00 Y10 **136.15** The effects of an active core sequence of beta amyloid on ER stress and the MAPK linked toxicity pathway. K. FOREST*; R. M. TAKETA; R. A. NICHOLS. *Univ. of Hawaii, Manoa, JABSOM.*
- 11:00 Y11 **136.16** Variations in the metabolism and aggregation of TDP43 fragments. Y. T. KASU*; C. S. BROWER. *Texas Woman's Univ.*
- 8:00 Y12 **136.17** Smokeless tobacco: A threat for neuronal cell death modulating AKT/GSK3 β signalling axis. S. BISWAS*; H. DAS; U. DAS; K. MANNA; A. SENGUPTA; S. C. BISWAS; R. S. DEY; S. DEY. *UNIVERSITY OF CALCUTTA, CSIR-Indian Inst. of Chem. Biol., Barrackpore Rastraguru Surendranath Col.*
- 9:00 Y13 **136.18** Altered spine dynamics and dendritic damage in a mouse model of neuroprotective thermal torpor. J. BRILL*; R. H. CUDMORE; D. J. LINDEN. *Johns Hopkins Univ.*
- 10:00 Y14 **136.19** ● Metabolic syndrome is related to accelerated amyloid accumulation and cortical thinning in the older brain. L. L. BEASON-HELD*; G. GOMEZ; N. DIPROSPERO; M. BILGEL; Y. AN; A. SHAFER; D. F. WONG; S. STUDENSKI; S. M. RESNICK. *NIA, NIH, Johns Hopkins Med. Insts.*
- 11:00 Y15 **136.20** Dynamics of extracellular vesicle release in the CNS of the Twitcher mouse model of Krabbe Disease. C. R. REITER*; G. SCESA; A. KWAK; D. WOZNIAK; I. GIVOGRI; E. BONGARZONE. *Univ. of Illinois At Chicago, Univ. of Illinois At Chicago, Aurora Univ.*
- 8:00 Y16 **136.21** Inflammation of the taste system: Cyclophosphamide and Amifostine. A. ALI SARKAR; D. ALLYN; E. R. DELAY*. *Univ. of Vermont.*
- 9:00 Y17 **136.22** ▲ Differential cyclophosphamide induced disruptions of salt taste preference and detection. B. C. JEWKES*; M. G. GOMELLA; E. R. DELAY. *Univ. of Vermont, Univ. of Vermont, Univ. of Vermont.*
- 10:00 Y18 **136.23** Organophosphate-induced alterations in plasticity at the hippocampal ca1-schaffer collateral synapse following acute exposure. M. EISEN*; K. HOFFMAN; E. GLOTFELTY; D. NGUYEN; M. NELSON; P. MCNUTT. *USAMRICD.*
- 11:00 Z1 **136.24** Evaluation of the involvement of forebrain cholinergic projections to the basolateral amygdala in the initiation of nerve agent-induced seizure. D. D. PALMER*; C. E. KAROLENKO; D. L. SPRIGGS; J. W. SKOVIRA. *US Army Med. Res. Inst. of Chem. Def.*
- 8:00 Z2 **136.25** Histone variants and their turnover in developing rat brain: Effect of Postnatal alcohol exposure. N. RACHDAOUI*; T. KASUMOV; D. K. SARKAR. *Rutgers, The State Univ. of New Jersey, NEOMED.*
- 9:00 Z3 **136.26** Disappearance of tdp-43 inclusions following prolonged transgene expression is associated with cortical atrophy in a conditional transgenic mouse model of ftd. R. SHAHIDEHPOUR; L. KUKREJA; G. KIM; K. R. SADLEIR; H. DONG; J. G. CSERNANSKY; M. MESULAM*; R. J. VASSAR; C. GEULA. *Cognitive Neurol. and Alzheimer's Dis. Ctr., Northwestern Univ., Northwestern Univ. Feinberg Sch. of Med., Northwestern Univ., Northwestern Univ. Feinberg Sch. of Med.*
- 10:00 Z4 **136.27** Neuronal network dysfunction in juvenile neuronal ceroid lipofuscinosis. R. AHRENS-NICKLAS; L. TECEDOR; E. BANWELL; E. LYSENKO; B. L. DAVIDSON; E. MARSH*. *Children's Hosp. of Philadelphia, Children's Hosp. of Philadelphia, Childrens Hosp. of Philadelphia.*
- 11:00 Z5 **136.28** Evaluation of the kinetic properties of cholinesterases from multiple species for nerve agent medical countermeasure model development. K. G. MCGARRY*, JR; K. E. SCHILL; T. P. WINTERS; J. A. HARVILCHUCK; C. L. SABOURIN; R. A. MOYER. *Battelle Mem. Inst.*

* Indicated a real or perceived conflict of interest, see page 137 for details.
 ▲ Indicates a high school or undergraduate student presenter.
 * Indicates abstract's submitting author

- 8:00 Z6 **136.29** Glycation turns mature NGF into a toxic factor for motor neurons. M. PEHAR*; M. KIM; B. A. HARLAN; K. M. KILLOY; J. S. BECKMAN; L. BARBEITO; M. R. VARGAS. *Med. Univ. of South Carolina, Oregon State Univ., Inst. Pasteur de Montevideo.*
- 9:00 Z7 **136.30** KDEL receptors - Novel ER stress response genes. S. BÄCK*; K. A. TRYCHTA; C. T. RICHIE; B. K. HARVEY; M. J. HENDERSON. *Natl. Inst. on Drug Abuse, Natl. Inst. on Drug Abuse, NIH, Natl. Ctr. for Advancing Translational Sci.*

POSTER

137. Perinatal Ischemia

Theme C: Neurodegenerative Disorders and Injury

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

- 8:00 Z8 **137.01** Behavioral outcomes following altered serotonin expression and HI-injury in a preterm rat model. S. CASAVANT*; J. M. MCGRATH; T. ROSENKRANTZ; R. H. FITCH. *Univ. of Connecticut, Univ. of Connecticut, Univ. of Connecticut Hlth. Ctr.*
- 9:00 Z9 **137.02** Neural precursor cell (NPC) transplantation in the corpus callosum, as well as constraint-induced movement therapy (CIMT), lead to recovery in the hypoxic-ischemic hemiplegic mouse model. P. RUMAJOGEE*; S. ALTAMENOVVA; J. LI; L. LI; R. S. MENON; D. J. VAN DER KOOY; M. G. FEHLINGS. *Univ. Hlth. Network, Univ. Hlth. Network, Robarts Res. Inst., Univ. Toronto, Toronto Western Hosp.*
- 10:00 Z10 **137.03** CXCL1/CXCR2 dysregulation as a biomarker of central nervous system injury following *in utero* insult. T. R. YELLOWHAIR; S. NOOR; J. R. MAXWELL; S. ROBINSON; E. D. MILLIGAN; L. L. JANTZIE*. *Univ. of New Mexico Sch. of Med., Univ. of New Mexico, Univ. of New Mexico Departments of Pediatrics and Neurosciences, Johns Hopkins Univ., Univ. of New Mexico Dept. of Neurosciences, Univ. of New Mexico Dept. of Pediatrics.*
- 11:00 Z11 **137.04** Neuronal activity during acute seizures associated with hypoxic-ischemic injury in neonatal mice. J. BURNSD*; M. DARLING; P. WAGLEY; J. KAPUR. *Univ. of Virginia, Univ. of Virginia, Univ. of Virginia, Univ. of Virginia Hlth. Sci. Ctr.*
- 8:00 Z12 **137.05** Maternal immune activation sensitizes the neuroinflammatory responses to neonatal hypoxia-ischemia in offspring brains. H. CHEN*; N. MANDHANI; Y. SUN; C. KUAN. *Emory Univ. Sch. of Med.*
- 9:00 Z13 **137.06** Quantification of the flexion synergy and reach kinematics in pediatric hemiplegia. N. M. HILL*; J. P. A. DEWALD. *Northwestern Univ., Northwestern Univ., Northwestern Univ.*
- 10:00 Z14 **137.07** Intrauterine growth restriction is associated with long-lasting brain impairments and behavioral dysfunction. N. B. OJEDA; J. W. LEE; S. LU; E. C. TURBEVILLE; C. B. MUNCIE; L. TIEN; Y. PANG*; L. FAN. *Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr., Fu Jen Catholic Univ., Univ. of Mississippi Dept. of Med.*
- 11:00 Z15 **137.08** Oxytocin exerts neuroprotective effects on neonatal rat hippocampal CA1 pyramidal neurons after hypoxic-ischemic injury by enhancing the inhibitory synaptic transmission. C. XIE*; J. WU; T. LIU; S. PENG; J. WU; L. XIAO. *Nanchang Univ., The First Affiliated Hosp. of Nanchang Univ.*
- 8:00 Z16 **137.09** ▲ Loss of neurons at retina ganglion cell layer in rats under prenatal hypoxia-ischemia. L. S. FONSECA*; G. M. DINIZ-TAVEIRA; F. TENORIO; P. C. BARRADAS; T. E. KRAHE. *Univ. Estadual Do Rio De Janeiro, Univ. Estadual do Rio de Janeiro.*
- 9:00 Z17 **137.10** Astrocyte activation in the hypoxic newborn piglet brain. S. N. MALAEB*; A. R. GARCIA; M. DELIVORIA-PAPADOPOULOS; R. RAGHUPATHI. *Drexel Univ. Col. of Med., Drexel Univ., Drexel Univ. Col. of Med.*
- 10:00 Z18 **137.11** ● Effects of dendrimer-conjugated N-acetyl-L-cysteine in combination with hypothermia in a mouse model of neonatal hypoxic-ischemic encephalopathy. M. S. GARCIA; R. REDDY; P. CARR; S. DOMAN; L. GOMPERTZ; A. FATEMI; M. V. JOHNSTON; R. M. KANNAN; S. KANNAN; M. WILSON*. *Kennedy Krieger Inst., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med.*
- 11:00 Z19 **137.12** Regional modulation of tetrahydrobiopterin determines predilection for hypertonia following antenatal hypoxia-ischemia. M. BAJAJ*; S. TAN; G. NATARAJAN; A. SHARMA; M. MAHASETH; K. LUO; Z. SHI; A. DROBYSHEVSKY; J. VASQUEZ-VIVAR; K. THIRUGNANAM. *Wayne State Univ., Northshore Univ. Hlth. Syst. Res. Inst., Med. Col. of Wisconsin.*

POSTER

138. Therapeutic, Interventional, and Translational Studies in Ischemia

Theme C: Neurodegenerative Disorders and Injury

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

- 8:00 Z20 **138.01** BDNF mRNA delivery using biocompatible nanomicellar carrier treats delayed neuronal death via enhanced neuroprotective effects of astrocytes. Y. FUKUSHIMA*; K. ITAKA; H. IMAI; S. UCHIDA; K. KATAOKA; N. SAITO. *The Univ. of Tokyo Hosp., Inst. of Biomaterial and Bioengineering, Tokyo Med. and Dent. Univ., Innovation Ctr. of NanoMedicine, Kawasaki Inst. of Industrial Promotion.*
- 9:00 Z21 **138.02** Vascular endothelial caspase-9 activity drives edema, neuronal death, and vision loss following retinal vein occlusion. M. I. AVRUTSKY*; Y. Y. JEAN; A. J. WHITE; S. SNIPAS; G. S. SALVESEN; C. M. TROY. *Columbia Univ., Sanford Burnham Prebys Med. Discovery Inst.*
- 10:00 Z22 **138.03** Roflumilast, a phosphodiesterase 4 inhibitor, promotes memory recovery and attenuates white matter injury of aged rats with chronic cerebral hypoperfusion. R. M. OLIVEIRA*; A. N. SANTIAGO; L. M. SOARES; J. PRICKAERTS; H. MILANI. *State Univ. of Maringá, State Univ. of Maringá, Univ. of Maastricht.*
- 11:00 Z23 **138.04** Buyang Huanwu decoction prevents infiltration of natural killer cells and improves ischemic outcomes in a rat model of transient focal cerebral ischemia. Z. WANG*; B. DOU; W. ZHOU; S. LI; L. WANG; S. ZHU. *Shanghai Univ. of Traditional Chinese Med.*
- 8:00 Z24 **138.05** Delayed post-treatment with adult-sourced adipose-derived MSCs is neurorestorative of striatal DARPP-32 neurons after neonatal rat HI. B. E. AGHOGHOVWIA*; D. E. OORSCHOT. *Univ. of Otago.*

- 9:00 Z25 **138.06** Quantification of S-allylcysteine (SAC) in different regions of rat brain. Hippocampus as the main site of SAC accumulation. R. AVALOS-CHACON*; S. ROJAS; P. MALDONADO. *Inst. Nacional De Neurología.*
- 10:00 Z26 **138.07** Therapeutic potential of Clinacanthus nutans against ischemia-reperfusion injury through the PPAR- γ signaling pathway. J. WU*; M. KAO; H. TSAI; W. CHEUNG; T. LIN. *Neurosci. Division, IBMS Academia Sinica.*
- 11:00 Z27 **138.08** Impact of mesenchymal stem/stromal cell administration on microglial activation during cardiopulmonary bypass surgery. K. SARKISLALI; F. A. SOMAA; G. R. STINETT; P. D. MORTON; B. LEWIS; M. M. NUSZKOWSKI; E. K. MONTAGUE; L. ROESCH; P. J. HANLEY; J. A. FRANK; R. A. JONAS; N. ISHIBASHI*. *Children's Natl. Hlth. Syst., NIH, Children's Natl. Hlth. Syst., Children's Natl. Hlth. Syst., Children's Natl. Med. Ctr.*
- 8:00 Z28 **138.09** A role of microglia in the progression of ischemic brain edema. M. TANAKA*; Y. ISHIIHARA; K. ITOH; A. ISHIDA; T. YAMAZAKI. *Hiroshima Univ., Univ. of California, Tokushima Bunri Univ.*
- 9:00 Z29 **138.10** Dendrimer-based N-acetyl-L-cysteine therapy improves long term outcomes after cardiac arrest in a rat model. H. R. MODI*; Q. WANG; S. J. BERTRAND; S. KANNAN; R. KANNAN, 21210; N. V. THAKOR. *Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins University Sch. of Med., Johns Hopkins Univ.*
- 10:00 Z30 **138.11** Anti-oxidant response in cerebral cortex and hippocampus in an oxygen and glucose deprivation (OGD) *ex vivo* model. The effect of BDNF. P. GONZALEZ-RODRIGUEZ*; I. F. UGIDOS; D. PEREZ-RODRIGUEZ; B. ANUNCIBAY-SOTO; E. FONT BELMONTE; C. PEREZ-GARCIA; J. M. GONZALO-ORDEN. *Univ. de Leon, Inst. de Biomedicina, Univ. de Leon.*
- 11:00 Z31 **138.12** AT1 receptor antagonism related modulation of stroke induced motor dysfunction and neuronal damage. V. GUPTA*; A. KUMAR. *Panjab Univ.*
- 8:00 Z32 **138.13** • Translational studies on treatment of stroke with a selective ROCK2 inhibitor, BA-1049. M. D. ABBINANTI*; J. RUSCHEL; F. YANG; K. M. ROSEN; L. J. MCKERRACHER. *BioAxone BioSciences.*
- 9:00 AA1 **138.14** • The novel ROCK2-selective inhibitor BA-1049 restores barrier function of human brain endothelial cells depleted of cerebral cavernous malformation (CCM) proteins. K. M. ROSEN*; J. RUSCHEL; T. S. SHISHOIAN; M. D. ABBINANTI; M. S. MORITZ; R. STOCKTON; L. J. MCKERRACHER. *BioAxone BioSciences, Inc., Harbor-UCLA Med. Center, Dept. of Pediatrics.*
- 10:00 AA2 **138.15** Anti-inflammatory effect by regulation of lipid species in brain and serum: Linalool neuroprotection in a cerebral ischemia model. A. M. SABOGAL*; N. C. CORTES; J. A. GUTIERREZ; R. A. POSADA; G. P. CARDONA. *Univ. of Antioquia.*
- 11:00 AA3 **138.16** Neuroprotective effects of SPAK inhibition in ischemic stroke and malignant cerebral edema. M. I. BHUIYAN*; H. HUANG; M. N. HASSAN; V. M. PIGOTT; B. J. MOLYNEAUX; T. ZHANG; X. DENG; J. ZHANG; K. T. KAHLE; D. SUN. *UNIVERSITY OF PITTSBURGH, 1st affiliate Hospital, Harbin Med. Univ., Univ. of Pittsburgh, Xiamen University, Univ. of Exeter Med. Sch., Yale Sch. of Med., Geriatric Research, Educational and Clin. Ctr.*

POSTER

139. Brain Injury: Cellular Mechanisms**Theme C: Neurodegenerative Disorders and Injury**

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

- 8:00 AA4 **139.01** Fear extinction learning and glial function changes after mild traumatic brain injury (mTBI) from blast. M. NONAKA*; O. BUKALO; W. TAYLOR; A. POSTLE; L. B. TUCKER; A. H. FU; Y. KIM; J. T. MCCABE; A. HOLMES. *NIH/NIAAA, Dept. of Anatomy, Physiol. & Genetics, Uniformed Services Univ.*
- 9:00 AA5 **139.02** The dopamine D1 receptor antagonist, SCH 23390, reverses cognitive deficits following mild traumatic brain injury in the adolescent female rat. L. L. KRAFJACK*; J. W. HUH; R. RAGHUPATHI. *Drexel Univ. Col. of Med., Children's Hosp. of Philadelphia.*
- 10:00 AA6 **139.03** Detonations of military explosives aimed at hippocampal slice cultures lead to distinct changes in synaptophysin, GluR1, and NCAM-180 staining in dendritic fields. M. F. ALMEIDA; T. PIEHLER; M. C. PAIT; R. BENJAMIN; H. W. ROMINE; B. A. BAHR*. *Biotech Ctr. / William C. Friday Lab., US Army Res. Lab.*
- 11:00 AA7 **139.04** • PTEN Inhibition improves white matter reparation after traumatic brain injury via activating Akt/mTOR pathway. X. JIANG; Y. GAO*; G. WANG; X. GAO; W. CAI; W. ZHANG; J. CHEN. *Fudan Univ., Univ. of Pittsburgh Sch. of Med., Fudan Univ.*
- 8:00 AA8 **139.05** Decreased synaptosomal insulin responsiveness in the hippocampus of traumatic brain injured rats. W. FRANKLIN*; G. TAGLIALATELA. *UTMB At Galveston, Univ. of Texas Med. Br., Univ. of Texas Med. Br.*
- 9:00 AA9 **139.06** Blocking hypocretin receptor 1 reverses acute cognitive deficits and chronic depression-like behavior following mild TBI in adolescent female rats. D. LENGEL*; L. L. KRAFJACK; R. A. ESPAÑA; R. RAGHUPATHI. *Drexel Univ., Drexel Univ. Col. of Med., Drexel Univ. Col. of Med.*
- 10:00 AA10 **139.07** Elucidating the molecular crosstalk between autophagy and neuroinflammation following traumatic brain injury. N. U. HEGDEKAR*; C. SARKAR; P. RAVISHANKAR; D. PHILKANA; M. M. LIPINSKI. *Univ. of Maryland Baltimore.*
- 11:00 AA11 **139.08** ▲ Branched chain amino acids do not recovered diminished behavioral threat response following mild traumatic brain injury. J. REGER*; A. S. COHEN; H. METHENY. *Univ. of Pennsylvania, Children's Hosp. of Philadelphia, Children's Hosp Philadelphia Univ. of Pennsy, Children's Hosp. of Philadelphia.*
- 8:00 AA12 **139.09** Post-traumatic neurodegeneration detected by Fluoro-Jade C staining with parallel comparison to APP immunostaining and silver impregnation staining. G. XIONG*; H. METHENY; A. S. COHEN. *Children's Hosp Philadelphia, Perelman Sch. of Medicine, Univ. of Pennsylvania.*
- 9:00 AA13 **139.10** ▲ Dietary branched chain amino acids improve dentate gyrus-mediated spatial pattern separation behavior after mild traumatic brain injury. S. SAMUEL*; H. METHENY; A. S. COHEN. *Univ. of Pennsylvania, Children's Hosp. of Philadelphia, Children's Hosp Philadelphia Univ. of Pennsy.*
- 10:00 AA14 **139.11** Response of neurons following mechanical stretch *in vitro*: Effect of strain rate. A. DILEONARDI*; C. A. GUNNARSSON. *Army Res. Lab.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 11:00 AA15 **139.12** Nicotine-induced conditional place preference (CPP) is affected by head injury; correlation with dopamine release in nucleus accumbens shell. Y. CHEN*; B. J. HOFFER. *Tri-Service Gen. Hospital/National Def. Med. NIDA/NIH.*
- 8:00 AA16 **139.13** Apolipoprotein-E4 (APOE4) impairs BBB stabilization and closure following traumatic brain injury. B. MAIN*; S. VILLAPOL; S. SLOLEY; D. BARTON; K. STEFOS; M. BURNS. *Georgetown Univ.*
- 9:00 AA17 **139.14** Autophagy is dispensable for normal axonal maintenance but required in Wallerian degeneration. Y. FANG*; H. WANG; X. CAO; Z. WANG; Q. WANG. *IRCBC, SIOC, Chinese Acad. of Sci.*
- 10:00 AA18 **139.15** Changes in molecular mediators of synaptic excitation and inhibition following traumatic brain injury in rats. R. DUGUE; R. ZANCA; W. STEWART; H. B. MICHELSON; J. H. GOODMAN; P. A. SERRANO; D. S. LING*. *SUNY Downstate Med. Ctr. Col. of Med., Hunter Col. and City Univ. of New York, The New York State Inst. for Basic Res. in Developmental Disabilities.*
- 11:00 AA19 **139.16** Acrolein following mild-blast traumatic brain injury contributes to Parkinson's disease-like neuropathology. G. G. ACOSTA*; N. RACE; R. SHI. *Purdue Univ., Purdue Univ., Indiana Univ., Purdue Univ.*
- 8:00 AA20 **139.17** Fatty acid oxidation is increased following TBI in immature rat model of pediatric TBI. S. SCAFIDI*; C. BOWMAN; M. POUDEL; M. WOLFGANG. *Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. SOM.*
- 9:00 AA21 **139.18** Effects of mild traumatic brain injury on GABA-A receptors and serotonin transporters differ between male and naturally-cycling female rats. L. C. FOX*; G. L. FORSTER. *Univ. of South Dakota.*
- 10:00 AA22 **139.19** Modulation of adult neurogenesis by Nano-Pulsed Laser Therapy in a rat model of traumatic brain injury. E. MOCCCIARO*; R. ESENALIEV; I. PETROV; Y. PETROV; M. O. PARSLEY; K. M. JOHNSON; I. J. BOLDING; A. UNTEREINER; C. SZABO; D. S. PROUGH; M. MICCI. *Univ. of Texas Med. Br., Univ. of Palermo, Univ. of Texas Med. Br., Univ. of Texas Med. Br.*
- 11:00 AA23 **139.20** Traumatic brain injury induces cell death and alters IGF signaling in human primary dopaminergic neuronal precursor cells. H. ROSAS-HERNANDEZ*; S. M. LANTZ; E. CUEVAS; M. G. PAULE; S. Z. IMAM; S. F. ALI. *Univ. Autonoma De San Luis Potosi, Natl. Ctr. for Toxicological Res.*
- 8:00 AA24 **139.21** Changes in neuroplasticity responses following penetrating ballistic-like brain injury in adult rats. S. KIZHAKKE MADATHIL*; Y. DENG-BRYANT; B. WILFRED; S. URANKAR; T. LALA; X. YANG; J. GILSDORF; S. DEBORAH. *WRAIR.*
- 9:00 AA25 **139.22** Nuclear rotations in nerve cells after tangential impact trauma *in vitro* are associated with large, long lasting changes in network electrophysiological activity. E. A. ROGERS*; G. GROSS. *Ctr. For Network Neurosci.*
- 10:00 AA26 **139.23** • Treatment of repetitive, mild traumatic brain injury (rmTBI) with a highly selective, orally active arginine vasopressin V1a receptor antagonist. N. G. SIMON*; P. KULKARNI; T. MORRISON; S. LU; A. SIDWELL; S. O'NEAL; C. F. FERRIS. *Lehigh Univ., Northeastern University, Ctr. for Translational Neuroimaging, Azevan Pharmaceuticals, Inc., Lehigh Univ., Lehigh Univ., Northeastern University, Ctr. for Translational Neuroimaging.*
- 11:00 AA27 **139.24** • Life without a brain and the wonders of neuroplasticity: Rat 222. C. F. FERRIS*; X. CAI; P. KULKARNI; T. MORRISON; J. QIAO; S. IRIAH; S. MALMBERG; L. TIMMS; K. SINKEVICIUS; J. BAUN; J. BALLARD; T. YORK; B. SWITZER. *Northeastern University, Ctr. for Translational Neuroimaging, Alexion Pharmaceuticals, Neurosci. Associates.*
- 8:00 AA28 **139.25** Real-time analysis of axonal swellings development. V. M. POZO DEVOTO*; V. LACOVICH; M. CARNA; M. FEOLE; K. TEXLOVA; G. B. STOKIN. *Fakultni Nemocnice U Sv. Anny V Brne.*
- 9:00 DP05/AA29 **139.26** • (Dynamic Poster) The long-term neurobiological and behavioral consequences of repetitive, mild traumatic brain injury (rmTBI): A multimodal MRI study in rats. P. P. KULKARNI*; T. MORRISON; X. CAI; J. QIAO; S. IRIAH; L. NEUROTH; C. F. FERRIS. *Northeastern Univ. Dept. of Psychology, Northeastern Univ., Northeastern Univ., Northeastern University, Ctr. for Translational Neuroimaging.*
- 10:00 AA30 **139.27** The effect of sub-concussion impacts on post-exercise memory performance. D. D. LEEDS*; B. R. JOHNSON; D. DEFONTES; C. J. D'LAURO. *Fordham Univ., U.S. Air Force Acad., Univ. of Notre Dame, US Air Force Acad.*
- 11:00 AA31 **139.28** Extracellular matrix control of the TBI pathology: The role of fmod gene. S. D. REGE*; Z. YING; X. YANG; F. GOMEZ-PINILLA. *UCLA, UCLA, UCLA, UCLA.*

POSTER

140. Animal Models of Brain Injury: Anatomy, Physiology, and Pathology

Theme C: Neurodegenerative Disorders and Injury

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

- 8:00 AA32 **140.01** Interhemispheric neuroanatomical connectivity following unilateral cortical injury. H. M. HUDSON*; E. T. URBAN, III; S. BARBAY; R. J. NUDO. *Univ. of Kansas Med. Ctr., Univ. of Kansas Med. Ctr., Univ. of Kansas Med. Ctr.*
- 9:00 AA33 **140.02** Model of co-occurring mild traumatic brain injury and conditioned fear in mice that produces cognitive, behavioral and neuroinflammatory impacts. G. B. KAPLAN*; S. C. HEINRICHS; L. WANG; T. GLASER; K. A. LEITE-MORRIS; K. RUMBIKA; O. NGUYEN; Y. D. TENG. *VA Boston Healthcare System/Boston Univ. Sch. Med., VA Boston Healthcare Syst., VA Boston Healthcare/Harvard Med. Sch.*
- 10:00 AA34 **140.03** Genetic polymorphisms in ApoE and BDNF; the effect on recovery after repeated mild traumatic brain injury and personalized treatment approaches in a mouse model. A. O. GIARRATANA*; L. FISH; R. SCHLOSS; S. THAKKER-VARIA; M. YARMUSH; J. ALDER. *Rutgers Robert Wood Johnson Med. Sch., Brown Univ., Rutgers Univ., Rutgers University-Robert Wood Johnson Med. Sch., Rutgers The State Univ. of New Jersey.*
- 11:00 AA35 **140.04** A rat model of coma pathogenesis and recovery. P. PAIS*; B. EDLOW; Y. JIANG; M. ZOU; X. YU. *Max Planck Inst. For Biol. Cybernetics, Grad. Sch. of Neurosci., Massachusetts Gen. Hosp., The Second Affiliated Hosp.*

- 8:00 AA36 **140.05** Assessment of corona radiata following injury to primary motor cortex (M1) in a translational model of traumatic brain injury. H. ZHANG; S. BARBAY*; S. B. FROST; D. J. GUGGENMOS; H. M. HUDSON; D. T. BUNDY; J. C. PETERSON; S. L. DEJONG; R. J. NUDO. *Univ. Kansas Med. Ctr., Univ. Kansas Med. Ctr., Univ. Iowa, Univ. Kansas Med. Ctr.*
- 9:00 BB1 **140.06** Lamina and single unit recordings of the hippocampus in behaving rodents after traumatic brain injury reveal field and neuronal coding disruptions. R. J. RUSSO*; P. F. KOCH; C. D. ADAM; M. T. WEBER; V. E. JOHNSON; J. A. WOLF. *Univ. of Pennsylvania, Corporal Michael J. Crescenz Veterans Affairs Med. Ctr.*
- 10:00 BB2 **140.07** ● 2DG following brain injury reduces late posttraumatic epilepsy in a unique model of TBI with frequent generalized posttraumatic seizures in "fast" kindling-susceptible PPKS rats. P. A. RUTECKI*; R. KOTLSOKI; M. HANSON; T. SUTULA. *Univ. of Wisconsin, William S. Middleton Mem. VA Hosp.*
- 11:00 BB3 **140.08** ▲ Behavioral and protein changes in an adult zebrafish mTBI model. R. SPENCE*; V. GILL; A. IBRAHIM; J. SUN; A. BOOKER; H. THOMASON. *Claremont McKenna Col., Scripps Col.*
- 8:00 BB4 **140.09** ▲ Paternal epigenetic legacy - mechanisms influencing susceptibility to post-concussion symptomology. H. HEHAR*; I. MA; R. M. MYCHASIUK. *Univ. of Calgary, Univ. of Calgary, Univ. of Calgary.*
- 9:00 BB5 **140.10** Advanced MR imaging of repetitive TBI in adolescent male rats. J. CHRISTENSEN*; G. R. YAMAKAWA; D. WRIGHT; S. R. SHULTZ; R. M. MYCHASIUK. *Univ. of Calgary, Univ. of Calgary, Melbourne Univ., Univ. of Melbourne, Univ. of Calgary.*
- 10:00 BB6 **140.11** Circadian rhythms in adolescent rats sustaining repetitive mild traumatic brain injuries. G. R. YAMAKAWA*; R. M. MYCHASIUK. *Univ. of Calgary, Univ. of Calgary.*
- 11:00 BB7 **140.12** Diffusion tensor imaging detects acute and chronic changes due to traumatic brain injury in a blast injured rat model. P. N. VENKATASUBRAMANIAN*; L. LI; D. AKSENOV; P. KENI; S. A. SHERMAN; B. SINDELAR; J. FINAN; J. E. BAILES, Jr; A. M. WYRWICZ. *Northshore Univ. Healthsystem, Northshore Univ. Healthsystem.*
- 8:00 BB8 **140.13** ● Neural responses to sounds in noise and speech-like sounds following blast exposure. E. X. HAN*; J. LAI; N. RACE; R. SHI; E. L. BARTLETT. *Purdue Univ., Purdue Univ., Purdue Univ., Purdue Univ.*
- 9:00 BB9 **140.14** Repeat mild TBI causes functional changes in the absence of synapse loss, neuron cell death and neuroinflammation. S. S. SLOLEY*; E. W. WICKER; C. WINSTON; B. S. MAIN; S. VILLAPOL; M. P. BURNS. *Georgetown Univ.*
- 10:00 BB10 **140.15** Contributions of glia, neuron, and synapse density to abnormal DTI metrics following mild TBI. S. G. KING*; E. B. HUTCHINSON; S. C. SCHWERIN; M. HABER; S. L. JULIANO. *Henry Jackson Fndn., NIH, NIH, Henry Jackson Fndn., Uniformed Services Univ., Univ. of Pennsylvania, USUHS.*
- 11:00 BB11 **140.16** Changes in blood pressure, heart rate and baroreflex after severe, moderate and mild fluid percussion injury in Wistar rats. V. C. CHITRAVANSHI*; Y. UMEMOTO; H. N. SAPRU. *Rutgers The State Univ. of New Jersey, Rutgers-New Jersey Med. Sch., New Jersey Med. Sch.*
- 8:00 BB12 **140.17** ● Characterization of traumatic brain injury utilizing non-invasive magnetic resonance imaging and histological assessment in a piglet model. M. N. WENDZIK*; E. W. BAKER; H. A. KINDER; S. L. WANG; H. MAO; F. D. WEST. *Univ. of Georgia, Univ. of Georgia, Emory Univ., Univ. of Georgia.*
- 9:00 BB13 **140.18** The behaviors and neuropathology linked with biophysics in a murine model of open-field blast-induced mild traumatic brain injury. H. SONG*; L. KONAN; J. CUI; T. A. NDAM; A. SIMONYI; C. E. JOHNSON; I. CERNAK; U. DEMIRCI; G. HUBLER; R. G. DEPALMA; Z. GU. *Univ. of Missouri, Columbia, Univ. of Missouri, Columbia, Univ. of Missouri, Columbia, Missouri Univ. of Sci. and Technol., Univ. of Alberta, Stanford Univ. Sch. of Med., Univ. of Missouri, Columbia, DVA.*
- 10:00 BB14 **140.19** Effects of blast shockwave exposure on ears and auditory signal processing centers in rodents. Y. WANG*; R. URIOSTE; Y. WEI; Y. SU; K. HOLLINGSWORTH; W. DRIWECH; D. WILDER; V. SAJJA; P. ARUN; T. FITZGERALD; M. WISE; S. VAN ALBERT; W. CHANG; I. GIST; M. KELLEY; J. LONG. *Walter Reed Army Inst. of Res., Natl. Inst. on Deafness and Other Communication Disorders.*
- 11:00 BB15 **140.20** Novel model of accelerated cognitive deficits incorporating oxidative stress and traumatic brain injury with exacerbated neuropathology. S. H. LEE*; M. BEN AISSA; Y. WANG; E. NEPOMUCENO; D. GONZALEZ; G. R. J. THATCHER. *Univ. of Illinois At Chicago.*
- 8:00 BB16 **140.21** Chronic behavioral deficits following traumatic brain injury combined with hypoxemic and hypotensive insults. L. LEUNG*; K. CARDIFF; X. YANG; S. BUTTLES; F. YANG; W. YANG; J. GILSDORF; D. SHEAR. *Walter Reed Army Inst. of Res.*
- 9:00 BB17 **140.22** Repeated mild traumatic brain injury impairs both spatial working memory and hippocampal synaptic plasticity. C. PINAR-CABEZA*; J. TRIVINO-PAREDES; C. J. FONTAINE; B. R. CHRISTIE. *Univ. of Victoria.*
- 10:00 BB18 **140.23** Neurons in oculomotor nuclei are preferentially vulnerable following diffuse brain injury in swine. C. KEATING*; J. P. HARRIS; K. D. BROWNE; D. P. BROWN; J. E. DUDA; D. K. CULLEN. *Univ. of Pennsylvania, Corporal Michael J Crescenz Veterans Affairs Med. Ctr., Univ. of Pennsylvania.*
- 11:00 BB19 **140.24** Controlled mild traumatic brain injury in a macaque animal model: Effects on contrast sensitivity and local cortical oscillations. P. S. KHAYAT*; R. FARIVAR-MOHSENI. *McGill Univ.*
- 8:00 BB20 **140.25** Persistent upregulation of hippocampal synaptic transmission following repeated closed-head concussive impacts. J. MCDAID*; C. A. BRIGGS; A. LITTLEFIELD; N. KAPECKI; D. A. PETERSON; D. A. KOZLOWSKI; G. E. STUTZMANN. *Rosalind Franklin Univ., DePaul Univ.*
- 9:00 BB21 **140.26** Longitudinal electrophysiological signatures of mild brain injury in a mouse model. M. YE*; K. SOLARANA; S. PATEL; M. NABILI; S. HUANG; H. RAFI; J. A. FISHER; V. KRAUTHAMER; M. MYERS; C. WELLE. *FDA, New York Med. Col., Univ. of Colorado, Denver.*

• Indicated a real or perceived conflict of interest, see page 137 for details.
 ▲ Indicates a high school or undergraduate student presenter.
 * Indicates abstract's submitting author

- 10:00 BB22 **140.27** Linear mixed effects modeling of longitudinal *in vivo* diffusion MRI in the ferret brain following mild injury. L. D. REYES*; E. B. HUTCHINSON; N. SADEGHI; S. C. SCHWERIN; K. RADOMSKI; M. O. IRFANOGLU; S. L. JULIANO; C. PIERPAOLI. *NIH, Henry M. Jackson Fndn. for Military Med., NIH, Uniformed Services Univ., Henry M. Jackson Fndn., USUHS.*
- 11:00 BB23 **140.28** Detection of brain abnormalities following blast injury in the ferret by non-Gaussian diffusion MRI. E. B. HUTCHINSON*; S. C. SCHWERIN; A. V. AVRAM; M. O. IRFANOGLU; M. E. KOMLOSH; S. L. JULIANO; C. PIERPAOLI. *NIH, The Henry M. Jackson Foundation, Inc., Uniformed Services Univ., NIH.*
- 8:00 BB24 **140.29** Random forests analysis of DTI metrics and histology measures in a mouse model of traumatic brain injury. N. SADEGHI*; E. B. HUTCHINSON; M. HABER; M. IRFANOGLU; L. D. REYES; C. PIERPAOLI. *NIH, NIH, Univ. of Pennsylvania.*
- 9:00 BB25 **140.30** Acute and chronic *in vivo* electrophysiological changes following diffuse and focal traumatic brain injury in a large animal model of post traumatic epileptogenesis. A. ULYANOVA*; P. F. KOCH; C. D. ADAM; M. T. WEBER; D. K. CULLEN; B. LITT; D. H. SMITH; V. E. JOHNSON; H. I. CHEN; J. A. WOLF. *Univ. of Pennsylvania, Corporal Michael J. Crescenz Veterans Affairs Med. Ctr.*
- 9:00 CC4 **141.06** Effects of TBI on the limbic system in translational fear conditioning models of PTSD. C. D. ADAM*; R. J. RUSSO; J. C. ALAMAR; R. J. ROSS; V. E. JOHNSON; J. A. WOLF. *Univ. of Pennsylvania, Corporal Michael J. Crescenz VA Med. Ctr., Univ. of Pennsylvania.*
- 10:00 CC5 **141.07** Environmental Enrichment and Exercise affects memory and epigenetic events post severe traumatic brain injury. H. J. DARWISH*; N. RAMADAN; F. H. KOBEISSY. *American Univ. of Beirut.*
- 11:00 CC6 **141.08** Histological and behavioral characterization of a high-intensity focused ultrasound murine model of mild traumatic brain injury. K. SOLARANA*; S. PATEL; H. RAFI; S. MEHSUT; S. HUANG; M. NABILI; V. KRAUTHAMER; M. R. MYERS; C. G. WELLE; M. YE. *FDA, FDA, Univ. of Colorado.*
- 8:00 CC7 **141.09** Axotomized adult retinal ganglion cells stimulated by extrinsic cues in a permissive environment survive and regenerate axons. B. A. RHEAUME; M. S. SAJID; E. F. TRAKHTENBERG*. *Univ. of Connecticut Hlth. Ctr.*
- 9:00 CC8 **141.10** Differences in single and repetitive mild traumatic brain injury using different weights in a closed-skull weight drop model. J. ALLENDE LABASTIDA*; S. ALI; T. J. DUNN; J. GAO; D. S. DEWITT; D. S. PROUGH; P. WU. *Univ. of Texas Med. Br., Univ. of Texas Med. Br., Univ. of Texas Med. Br.*
- 10:00 CC9 **141.11** ▲ Effects of repeated closed head brain injury on attention and motor impulsivity. H. BHATIA*; C. E. CABRAL; C. W. IAMES; T. K. SHAVER; K. M. MARTENS; C. VONDER HAAR. *West Virginia Univ., West Virginia Univ.*
- 11:00 CC10 **141.12** ▲ Frontal traumatic brain injury reduces optimal decision making on a probabilistic reward task in rats. B. ZHU*; N. N. BERDAR; L. M. VELTRI; R. B. DALIDA; T. L. SCOTT; T. K. SHAVER; K. M. MARTENS; C. VONDER HAAR. *West Virginia Univ., West Virginia Univ., West Virginia Univ.*
- 8:00 CC11 **141.13** Combining force and rotation in TBI: The creation of a novel device for translational traumatic brain injuries. W. R. KOCHEN*; K. M. CRAVEN; D. D. CERRI; J. M. FLINN. *George Mason Univ.*
- 9:00 CC12 **141.14** Social isolation after repetitive mild traumatic brain injuries. K. M. CRAVEN*; W. R. KOCHEN; D. D. CERRI; J. M. FLINN. *George Mason Univ.*
- 10:00 CC13 **141.15** Development of a preclinical rodent model for closed-head non-fatal work-related traumatic brain injury. J. V. MILLER*; B. M. WIMER; K. A. KELLY; L. T. MICHALOVICZ; C. S. PAN; J. P. O'CALLAGHAN; D. B. MILLER. *CDC-NIOSH, CDC-NIOSH.*
- 11:00 CC14 **141.16** Alterations to the central nucleus of the amygdala following traumatic brain injury coincide with late-onset affective symptoms. J. A. BEITCHMAN*; D. R. GRIFFITHS; Y. HUR; P. D. ADELSON; J. LIFSHITZ; T. C. THOMAS. *Univ. of Arizona Col. of Medicine-Phoenix, Barrow Neurolog. Inst. at Phoenix Children's Hosp., Midwestern Univ., Arizona State Univ., VA Healthcare Syst.*
- 8:00 CC15 **141.17** Stereotypical-like behavior following traumatic brain injury in mice. J. POPOVITZ*; H. ADWANIKAR. *Johns Hopkins Univ.*

POSTER

141. Brain: Animal Models of Brain Injury and Behaviors

Theme C: Neurodegenerative Disorders and Injury

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

- 8:00 BB26 **141.01** Synergistic interactions between TBI mechanisms and high altitude exposure. N. P. CRAMER*; A. KOROC TOV; A. BOSOMTWI; S. JAISWAL; X. XU; C. MEYER; K. WHITING; S. SHIVELY; D. IACONO; A. HOY; D. P. PERL; B. DARDZINSKI; Z. GALDZICKI. *Uniformed Services Univ. of the Hlth. Sci., Uniformed Services Univ. of the Hlth. Sci., Uniformed Services Univ. of the Hlth. Sci.*
- 9:00 BB27 **141.02** Role of the gut brain axis, traumatic brain injury, and enteric infection on long-term behavioral and physiological outcomes in an animal model. M. L. MEHALICK*; F. POLY; M. PROUTY; R. MCCARRON; S. AHLERS. *Naval Med. Res. Ctr., Naval Med. Res. Ctr., Uniformed Services Univ. of the Hlth. Sci.*
- 10:00 CC1 **141.03** Characterization of a combined model of blast and blunt injury. A. ARVIND; B. J. PFISTER*; R. KAKULAVARAPU; M. LONG; N. CHANDRA. *New Jersey Inst. Technol.*
- 11:00 CC2 **141.04** Characterization of a mouse model of repetitive mild closed head injury. N. C. SHANBHAG*; Z. PAPAPOPOULOS; A. J. SYMES. *Uniformed Services Univ.*
- 8:00 CC3 **141.05** Identification of brain regions activated during early coma recovery after resuscitation from cardiac arrest. H. ABBASI*; A. BAZRAFKAN; B. E. SHAMAOUN; T. WAIS; A. A. KHAN; Y. SURI; M. AZADIAN; S. M. ZAHER; F. AGUIRRE; G. TIAN; Y. AKBARI. *Univ. of California, Irvine.*

POSTER

142. Spinal Cord Injury: Stimulation and Rehabilitation

Theme C: Neurodegenerative Disorders and Injury

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

- 8:00 CC16 **142.01** Longitudinal electrical stimulation training of the lower limbs: Changes in neural control of postural stability. K. MOMENI^{*}; A. RAMANUJAM; E. L. GARBARINI; G. F. FORREST. *Kessler Fndn., Rutgers, New Jersey Med. Sch.*
- 9:00 CC17 **142.02** Assessing the muscle activations during volitional effort with and without electrical stimulation through surface electromyograms. R. PILKAR^{*}; A. RAMANUJAM; E. GARBARINI; G. F. FORREST. *Kessler Fndn.*
- 10:00 CC18 **142.03** Patterns of stimulation effect on muscle volume. G. F. FORREST^{*}; E. REJC; A. RAMANUJAM; E. GARBARINI; S. J. HARKEMA. *Kessler Fndn., Univ. of Louisville, Univ. Louisville, Frazier Rehab Inst, KSCIRC.*
- 11:00 CC19 **142.04** Taking strides towards recovery: Silencing long ascending propriospinal neurons improves locomotor outcomes after spinal cord injury. C. T. SHEPARD^{*}; M. A. VAN RIJSWIJCK; A. M. POGRATSKY; N. D. SPICER; A. S. REIGLER; S. R. WHITTEMORE; D. S. MAGNUSON. *Univ. of Louisville, Univ. of Louisville, Univ. of Louisville, Univ. of Louisville, Univ. of Louisville.*
- 8:00 CC20 **142.05** Voluntary movement control under deep brain stimulation of the mesencephalic locomotor region in rats is dependent on stimulation intensity. A. HOFER^{*}; J. MAEDER; A. M. SARTORI; A. K. ENGMANN; N. RUSSI; M. E. SCHWAB. *Univ. and ETH Zurich.*
- 9:00 CC21 **142.06** Controlled release of growth factors from functional self-assembling peptide nanofiber hydrogels for endogenous neural regeneration in spinal cord. X. XU^{*}; L. HE; H. LIU; C. LI. *Guangdong-hongkong-Macau Inst. Of Cns Regenera, Key Lab. of Biomaterials of Guangdong Higher Educ. Institutes, Dept. of Biomed. Engineering, Col. of Life Sci. and Technolog.*
- 10:00 CC22 **142.07** Chronic M1 optical iTBS produces axonal outgrowth and strengthens connections in the corticospinal system. L. YANG^{*}; J. H. MARTIN. *CUNY Sch. of Med., The Grad. Ctr. of CUNY.*
- 11:00 CC23 **142.08** The cortical origin of extensive corticospinal tract terminal sprouting following cervical spinal cord injury in macaques. K. M. FISHER^{*}; A. LILAK; C. DARIAN-SMITH. *Stanford Univ.*
- 8:00 CC24 **142.09** A small molecule screen identifies novel compounds that re-activate functionally dormant connections within incomplete spinal cord injury circuits. N. SALAH^{*}; B. CHEN. *Boston Childrens Hospital-Harvard Med. Sch., Ecole Polytechnique Federale de Lausanne.*
- 9:00 CC25 **142.10** Enteral pharmaconutrient effects on intestinal epithelial function following acute experimental spinal cord injury. G. M. HOLMES^{*}; A. R. WHITE; E. N. BLANKE. *Penn State Univ. Col. of Med.*

- 10:00 CC26 **142.11** Leveraging activity and guidance to promote sprouting of direct connections between corticospinal tract axons and spinal motoneurons in PlexinA1^{fl} mice. J. KALAMBOGIAS^{*}; Z. GU; Y. YOSHIDA; J. H. MARTIN; S. LAU; A. SHAMULZAI; A. JAMMAL. *The Grad. Center, CUNY, CUNY Sch. of Med., Cincinnati Children's Hosp. Med. Ctr., The City Col. of New York, CUNY.*
- 11:00 CC27 **142.12** Boosting corticospinal transmission to upper-limb muscles with cervical spinal stimulation. A. JACKSON^{*}; J. KERSEY; C. TERRY; M. BAKER. *Newcastle Univ.*
- 8:00 CC28 **142.13** Rapid and robust recovery of breathing 1.5 years after cervical spinal cord injury. P. M. WARREN^{*}; S. C. STEIGER; T. E. DICK; P. M. MACFARLANE; W. J. ALILAIN; J. SILVER. *Univ. of Leeds, Case Western Reserve Univ., Case Western Reserve Univ., Case Western Res. Univ., RB&C, CWRU, Univ. of Kentucky.*
- 9:00 CC29 **142.14** Multi-cellular foreign body response determines the efficacy and duration of drug delivery from hydrogels in the central nervous system. T. M. O'SHEA^{*}; A. L. WOLLENBERG; A. M. BERNSTEIN; Y. AO; T. DEMING; M. V. SOFRONIEW. *UCLA, UCLA.*
- 10:00 CC30 **142.15** Voluntary exercise contributes to behavioral improvement and its potential mechanisms in mice with the genetic absence of the corticospinal tract. W. ZHANG^{*}; L. ZHOU. *Guangdong-hongkong-Macau Inst. of CNS Regenera.*
- 11:00 CC31 **142.16** Molecular targets of trans-spinal direct current stimulation (tsdcs). S. SAMADDAR; S. BEGUM; P. TORUNO; M. SALEH; W. MEKHAEL; Z. AHMED^{*}. *Col. of Staten Island / CUNY, Col. of Staten Island.*
- 8:00 CC32 **142.17** Modularity and spinal adaptation in leg-based robot locomotion rehabilitation after complete SCI. D. LOGAN^{*}; S. F. GISZTER. *Drexel Univ. Col. of Med., Drexel Univ. Col. of Med.*
- 9:00 CC33 **142.18** Augmenting corticospinal output with patterned motor cortex stimulation (iTBS) alone or combined trans-spinal direct current stimulation (tsDC) in a large animal model. J. R. BRANDENBURG^{*}; P. T. WILLIAMS; D. Q. TRUONG; A. C. SEIFERT; A. SARKAR; J. XU; M. BIKSON; J. H. MARTIN. *CUNY Sch. of Med., City Col. of New York, Icahn Sch. of Med. at Mount Sinai, City Univ. of New York.*

POSTER

143. Spinal Cord Injury: Animal Models and Human Studies

Theme C: Neurodegenerative Disorders and Injury

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

- 8:00 DD1 **143.01** Role and expression of CCL3 and its receptors after spinal cord injury. A. KRONER-MILSCH^{*}. *Med. Col. of Wisconsin.*
- 9:00 DD2 **143.02** Gains from robotic gait training are reduced with the addition of skilled forelimb training in a rat model of spinal cord injury. N. D. NECKEL^{*}. *Georgetown Univ.*
- 10:00 DD3 **143.03** Non-invasive electromagnetic stimulation of neuro-muscular circuitry: translating from animal research to clinic. V. L. ARVANIAN^{*}; H. PETROSYAN; S. SISTO; M. KAUFMAN. *VA Med. Ctr., Stony Brook Univ.*

^{*} Indicated a real or perceived conflict of interest, see page 137 for details.

[▲] Indicates a high school or undergraduate student presenter.

^{*} Indicates abstract's submitting author

- 11:00 DD4 **143.04** Comparison of the efficacy and safety of enoxaparin and heparin use in neurointensive care patients. S. HUANG*; Y. AL-KHALILI; M. BINNING; E. VEZNEAROGU; K. LIEBMAN; C. MAXWELL. *Drexel Univ. Col. of Med., Drexel Neurosciences Inst.*
- 8:00 DD5 **143.05** ▲ Kynurenine pathway metabolites during the acute and chronic phases of injury in a spinal cord injury model in rats. F. C. ESTRELLA*; D. RAMIREZ ORTEGA; V. PEREZ DE LA CRUZ; C. RIOS; A. DIAZ RUIZ. *Natl. Inst. of Neurol. and Neurosurg.*
- 9:00 DD6 **143.06** Spinal cord injured mice develop a long-lasting aversive memory of at-level tactile stimulation. D. J. NOBLE*; R. DONGMO; S. M. GARRAWAY. *Emory Univ.*
- 10:00 DD7 **143.07** Development of an intraneural peripheral stimulation paradigm for reversing hand paralysis in non-human primates. M. BADI*; S. WURTH; M. KAESER; M. CAPOGROSSO; S. DURAND; W. RAFFOUL; G. COURTINE; E. ROUILLER; S. MICERA. *Swiss Federal Inst. of Technol. (EPFL), Univ. of Fribourg, Ctr. Hospitalier Universitaire de Lausanne, CNP BMI EPFL.*
- 11:00 DD8 **143.08** Longitudinal ¹H-MRI analysis and histological characterisation after spinal cord injury in two mouse strains with different functional recovery. G. P. SAINT-MARTIN*; H. N. NORISTANI; M. CARDOSO; M. CATTEAU; C. COILLOT; C. GOZE-BAC; F. E. PERRIN. *Univ. of Montpellier.*
- 8:00 DD9 **143.09** A novel translational mod of spinal cord injury in non-human primate : From behavior to magnetic resonance imaging. F. E. PERRIN*; H. N. NORISTANI; M. LE CORRE; N. MESTRE-FRANCES; G. P. SAINT-MARTIN; C. COILLOT; C. GOZE-BAC; N. LONJON. *INSERM U 1198, Univ. of Montpellier, Univ. of Montpellier, INSERM U1198, CHRU Montpellier. Gui de Chauliac Hospita, Univ. of Montpellier, Univ. of Montpellier.*
- 9:00 DD10 **143.10** Design of electrical stimulation protocol based on spatiotemporal activation of cervical spinal segments during a reaching and grasping task in primates. B. BARRA*; C. ROUX; N. GREINER; E. M. ROUILLER; E. SCHMIDLIN; M. CAPOGROSSO. *Univ. of Fribourg, Ecole Polytechnique Federale de Lausanne.*
- 10:00 DD11 **143.11** Chronic inactivation of the contralesional motor cortex after unilateral thoracic spinal cord injury impedes hindlimb motor recovery. A. R. BROWN*; M. MARTINEZ. *Univ. de Montréal, Ctr. de recherche de L'Hôpital du Sacré-Coeur de Montréal.*
- 11:00 DD12 **143.12** Eccentric-focused downhill training increases myelin along motor tracts after spinal cord injury. T. D. FAW*; B. LAKHANI; L. WORTHEN-CHAUDHARI; T. T. THAXTON; R. J. DEIBERT; L. C. FISHER; M. A. BJELAC; H. T. NGUYEN; P. SCHMALBROCK; J. P. SCHMIEDELER; D. M. MCTIGUE; L. A. BOYD; D. BASSO. *Ohio State Univ., The Ohio State Univ., The Ohio State Univ., Univ. of British Columbia, The Ohio State Univ., The Ohio State Univ., The Ohio State Univ., The Ohio State Univ., The Ohio State Univ., Univ. of Notre Dame, The Ohio State Univ.*
- 8:00 DD13 **143.13** Deficits in eccentric motor control after human and rodent spinal cord injury. D. BASSO*; T. D. FAW; M. A. BJELAC; T. T. THAXTON; R. J. DEIBERT; L. C. FISHER; M. P. MCNALLY; K. J. O'BRIEN; A. OLSZEWSKI; C. N. HANSEN; J. P. SCHMIEDELER; L. WORTHEN-CHAUDHARI. *Ohio State Univ., The Ohio State Univ., The Ohio State Univ., The Ohio State Univ., The Ohio State Univ., The Ohio State Univ., Univ. of Notre Dame, The Ohio State Univ.*
- 9:00 DD14 **143.14** ● Voluntary modulation of spinally evoked motor potentials in leg muscles after motor complete paralysis. D. SAYENKO*; E. MARCACCI; M. RATH; V. EDGERTON; Y. GERASIMENKO. *Univ. of California Los Angeles, Pavlov Inst. of Physiol.*
- 10:00 DD15 **143.15** ● Combination of epidural stimulation, serotonergic agonist, and rehabilitative training promotes forelimb recovery in cervical spinal cord injured rats. B. JIN*; H. ZHONG; S. NORMAN; D. SCHWERZ DE LUCENA; R. R. ROY; Y. GERASIMENKO; D. REINKENSMEYER; D. LU; V. EDGERTON. *UCLA, UCI, UCLA, UCLA, Univ. of California Los Angeles.*
- 11:00 DD16 **143.16** ● Enabling descending motor control after spinal cord injury with noisy electrical stimulation delivered by an innovative epidural interface. G. TACCOLA*; P. GAD; S. CULACLI; W. LIU; V. R. EDGERTON. *UCLA, SISSA, UCLA, UCLA.*
- 8:00 DD17 **143.17** Use of FosTRAP mice to analyze and compare spinal motor circuit activation during two different locomotor behaviors. B. N. PHAM*, JR; H. ANAND; J. LUO; O. KOLA; H. ZHONG; N. J. TILLAKARATNE; V. EDGERTON. *UCLA, UCLA, UCLA, UCLA, Univ. of California Los Angeles.*
- 9:00 DD18 **143.18** ● Imaging stepping as a tool to modulate the physiological state of spinal locomotor networks. Y. P. GERASIMENKO*; J. KOZESNIK; P. GAD; D. SAYENKO; T. MOSHONKINA; R. GORODNICHEV; A. PUHOV; V. EDGERTON. *Pavlov Inst. of Physiol, UCLA, Univ. of California Los Angeles, Univ. of California Los Angeles, Pavlov Inst. of Physiol., Velikie Luky State Acad. of Physical Educ. and Sport, Univ. of California Los Angeles.*
- 10:00 DD19 **143.19** Behavioral and histological changes suggest possible mechanisms underlying the use of epidural stimulation for recovery of voluntary locomotion after incomplete spinal cord injury. K. A. DEPETRO*; S. ZDUNOWSKI; C. JUAN-SING; R. TRUONG; H. ZHONG; N. TILLAKARATNE; V. R. EDGERTON. *UCLA.*
- 11:00 DD20 **143.20** ● Enabling hand function in chronic spinal cord injury patients with non-invasive transcutaneous stimulation and buspirone: A double-blinded, sham controlled pilot study. L. MOORE*; S. ZDUNOWSKI; E. MORIKAWA; T. SIERRA; D. SAYENKO; P. GAD; T. HOMSEY; M. NUWER; D. REINKENSMEYER; M. SARRAFZADEH; D. MCARTHUR; Y. GERASIMENKO; V. R. EDGERTON; D. C. LU. *Univ. of California, Univ. of California, Pavlov Inst. of Physiol.*
- 8:00 DD21 **143.21** ● Noninvasive spinal cord stimulation improves arm and hand function after severe paralysis. P. GAD*; S. LEE; N. TERRAFRANCA, Jr; H. ZHONG; A. G. TURNER; Y. GERASIMENKO; V. EDGERTON. *Univ. Of California Los Angeles, Pediatric Rehab Dept, NeuroRecovery Technologies, UCLA, UCLA, Pavlov Inst. of Physiol., Univ. of California Los Angeles.*
- 9:00 DD22 **143.22** ● Trunk motor control assessment in children with spinal cord injury. G. SINGH*; S. TRIMBLE; S. ASLAN; L. ARGETSINGER; M. ROBERTS; T. FLYNN; A. OVECHKIN; A. BEHRMAN. *Univ. of Louisville, Frazier Rehab Inst., Univ. of Louisville.*
- 10:00 DD23 **143.23** Assessment of trunk motor function after spinal cord injury. D. A. ATKINSON*; J. E. WYLES; S. ASLAN; S. A. TRIMBLE; L. MENDEZ; T. FLYNN; A. L. BEHRMAN; S. J. HARKEMA. *Univ. of Louisville, Frazier Rehab Inst., Kosair Charities Ctr. for Pediatric Neurorecovery, Univ. of Louisville, Univ. of Louisville.*

POSTER

144. Descending Modulation of Pain

Theme D: Sensory Systems

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

- 8:00 DD24 **144.01** Dysfunction of potassium (SK) channels in the amygdala in a rat model of neuropathic pain. J. M. THOMPSON*; V. A. YAKHNITSA; L. MAHIMAINATHAN; G. JI; V. NEUGEBAUER. *Texas Tech. Univ. Hlth. Sci. Ctr., Texas Tech. Univ. Hlth. Sci. Ctr.*
- 9:00 DD25 **144.02** Optogenetic stimulation of amygdala CRF neurons modulates pain behaviors in an arthritis model. K. E. MARSHALL*; G. JI; V. NEUGEBAUER. *Texas Tech. Univ. Hlth. Sci. Ctr., Texas Tech. Univ. Hlth. Sci. Ctr.*
- 10:00 DD26 **144.03** Cannabinoid CB1 modulation of basolateral amygdala neuronal activity in a rodent model of arthritis pain revealed by two-photon calcium imaging. T. KIRITOSHI*; V. A. YAKHNITSA; V. NEUGEBAUER. *Texas Tech. Univ. Hlth. Sci. Ctr., Texas Tech. Univ. Hlth. Sci. Ctr.*
- 11:00 DD27 **144.04** Amygdala cannabinoid CB1 modulation of pain behaviors in a rodent model of arthritis pain. M. HEIN*; J. M. THOMPSON; V. NEUGEBAUER. *Texas Tech. Univ. Hlth. Sci. Ctr., Texas Tech. Univ. Hlth. Sci. Ctr.*
- 8:00 DD28 **144.05** Fear extinction learning ability predicts neuropathic pain behaviors and amygdala activity. G. JI*; V. NEUGEBAUER. *Texas Tech. Univ. Hlth. Sci. Ctr., Texas Tech. Univ. Hlth. Sci. Ctr.*
- 9:00 DD29 **144.06** Group II mGluRs in amygdala contribute to the systemic effects of group II agonists on spinal nociceptive processing in an arthritis pain model. V. NEUGEBAUER*; M. MAZZITELLI. *Texas Tech. Univ. Hlth. Sci. Ctr., Texas Tech. Univ. Hlth. Sci. Ctr.*
- 10:00 DD30 **144.07** Overexpression of potassium (SK) channels in the amygdala in a rat model of neuropathic pain inhibits neuronal excitability and pain behaviors. V. A. YAKHNITSA*; J. M. THOMPSON; V. NEUGEBAUER. *Texas Tech. Univ. Hlth. Sci. Ctr., Texas Tech. Univ. Hlth. Sci. Ctr.*
- 11:00 DD31 **144.08** Optogenetic stimulation of amygdala CRF neurons modulates spinal nociceptive processing in an arthritis pain model. M. MAZZITELLI*; V. NEUGEBAUER. *Texas Tech. Univ. Hlth. Sci. Ctr., Texas Tech. Univ. Hlth. Sci. Ctr.*
- 8:00 DD32 **144.09** Analysis of the role of Glutamatergic and GABAergic periaqueductal gray (PAG) neuronal subpopulations in a mouse model of persistent inflammatory pain. J. G. GRAJALES-REYES*; V. K. SAMINENI; B. A. COPITS; D. E. O'BRIEN; S. SUNDARAM; A. M. GOMEZ; M. R. BRUCHAS; R. W. GEREAU, IV. *Washington Univ. Sch. of Med., Washington Univ. Sch. of Med., Washington Univ. Sch. of Med.*
- 9:00 DD33 **144.10** Central amygdala neurons modulate pruritic processing. V. K. SAMINENI*; J. G. GRAJALES-REYES; B. A. COPITS; J. G. MCCALL; M. R. BRUCHAS; R. W. GEREAU, IV. *Washington Univ., Washington Univ. Sch. of Med., Washington Univ. Sch. of Med., Washington Univ., Washington Univ. Sch. Med.*
- 10:00 DD34 **144.11** Continuous modulation of spinal cord function in relation to the affective component of pain assessed with fMRI. P. W. STROMAN*; J. M. POWERS; G. IOACHIM. *Queen's Univ.*
- 11:00 DD35 **144.12** Opposing effects of cervical spinal cold block on spinal itch and pain transmission. E. E. CARSTENS*; M. IODI CARSTENS; A. DAVOODI; M. NAGAMINE; T. AKIYAMA. *Univ. of California Davis, U C Davis, Univ. of California, Davis, Univ. of Miami.*
- 8:00 DD36 **144.13** Vagal afferent regulation of the descending analgesia system: A novel mechanism regulating vagal and nociceptive reflexes. A. E. MCGOVERN*; N. F. KERR; M. J. FARRELL; S. B. MAZZONE. *The Univ. of Melbourne, Monash Univ.*
- 9:00 EE1 **144.14** Effects of pruritogens and algogens on rostral ventromedial medullary (RVM) ON and OFF cells. M. IODI CARSTENS*; E. E. CARSTENS; T. AKIYAMA; T. FOLLANSBEE; M. FUJII; A. DAVOODI; M. NAGAMINE. *U C Davis, Univ. of California Davis, Univ. of Miami, Univ. of California, Davis, Univ. of California Davis.*
- 10:00 EE2 **144.15** The role of descending serotonin signaling on nociceptive sensitization after mild traumatic brain injury. P. SAHBAIE*; M. TAJERIAN; D. LIANG; K. A. IRVINE; J. D. CLARK. *Stanford Univ., VAPAHCs.*
- 11:00 EE3 **144.16** Analgesic effect of electrical stimulation of the lateral habenula (LHb). A. S. PARCHURE*; H. N. HARRIS; Y. B. PENG. *Univ. of Texas At Arlington, Univ. of Texas at Arlington.*
- 8:00 EE4 **144.17** The parabrachial complex directly link pain transmission to pain modulation via a direct connection to the rostral ventromedial medulla. Q. CHEN*; Z. ROEDER; M. LI; Y. ZHANG; S. L. INGRAM; M. M. HEINRICHER. *Oregon Hlth. & Sci. Univ.*
- 9:00 EE5 **144.18** Optogenetic Dissection of descending 5HT-containing neuron function in normal and persistent pain conditions. J. YANG*; J. LEE; J. WANG; J. ASGAR; W. GUO; C. BIAN; S. ZOU; R. DUBNER; K. REN; F. WEI. *Univ. of Maryland Sch. of Dent.*
- 10:00 EE6 **144.19** Novel sensory measurement of placebo analgesia. L. K. CASE; C. M. LAUBACHER; E. A. RICHARDS; M. GROSSMAN; L. Y. ATLAS; S. PARKER; M. C. BUSHNELL*. *NCCIH/NIH, American Univ.*
- 11:00 EE7 **144.20** The modulatory effect of emotion on brainstem pain signaling pathways. J. M. POWERS*; N. TALWAR; P. W. STROMAN. *Queen's Univ., Queen's Univ.*
- 8:00 EE8 **144.21** Tropomyosin receptor kinase b receptor agonism reverses impairment of noradrenergic endogenous analgesia and enhances resolution from incisional pain in a rat model. T. SUTO*; D. KATO; S. SAITO; H. OBATA. *Gunma Univ. Grad. Sch. of Med., Fukushima Med. Univ.*
- 9:00 EE9 **144.22** Spinal D5 receptor drive the transition from acute to chronic pain. S. MEGAT*; P. BARRAGAN IGLESIAS; J. MOY; T. PRICE. *Univ. of Texas at Dallas Sch. of Behavioral and Brain Sci.*
- 10:00 EE10 **144.23** RVM GABAergic neurons command enkephalinergic spinal neurons to control mechanical pain. A. FRANCOIS*; S. LOW; E. SYPEK; A. J. CHRISTENSEN; C. SOTOUDEH; K. BEIER; C. RAMAKRISHNAN; K. RITOLA; R. SHARIF NAEINI; K. DEISSEROTH; S. L. DELP; R. C. MALENKA; L. LUO; A. HANTMAN; G. SCHERRER. *Stanford Univ., Stanford, Stanford, Stanford Univ. Dept. of Electrical Engin., Stanford Univ., Janelia Farm Res. Campus Howard Hughes Med. Inst., McGill Univ., Stanford Univ. Dept. of Psychology, Stanford Univ., Stanford Univ. Sch. of Med., Howard Hughes Med. Inst. - Stanford Univ.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

11:00 EE11 **144.24** Local field potential of the periaqueductal gray during acute inflammatory pain. H. N. HARRIS*; A. S. PARCHURE; Y. B. PENG. *Univ. of Texas At Arlington*.

POSTER

145. Pain Models: Pharmacology

Theme D: Sensory Systems

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

- 8:00 EE12 **145.01** *In vitro* glucocorticoid agonist fluticasone suppresses excitability of medium- to large-sized neurons in inflamed rat dorsal root ganglia. X. GONG; Z. SONG; J. STRONG; J. ZHANG*. *Univ. of Cincinnati Col. of Med.*
- 9:00 EE13 **145.02** Unexpected interactions between the mineralocorticoid and glucocorticoid receptors in a rat model of inflammatory low back pain. S. IBRAHIM*; W. XIE; J. A. STRONG; T. BERTA; J. ZHANG. *Univ. of Cincinnati*.
- 10:00 EE14 **145.03** Acyloxyacyl hydrolase modulates arachidonic acid metabolism and pain. W. YANG*; R. E. YAGGIE; M. JIANG; C. N. RUDICK; C. J. HECKMAN; A. J. SCHAEFFER; D. J. KLUMPP. *Northwestern Univ., Northwestern Univ.*
- 11:00 EE15 **145.04** Expression of NLRP2 in the DRG and its regulation during inflammatory hyperalgesia. Y. MATSUOKA*; F. AMAYA. *Kyoto Prefectural Univ. of Med., Kyoto Prefectural Univ. of Med.*
- 8:00 EE16 **145.05** • Endogenous cannabinoids contribute to the resolution of incisional pain. H. TAKEMURA; M. MATSUDA; F. AMAYA*. *Kyoto Prefectural Univ. of Med.*
- 9:00 EE17 **145.06** Modulation of ASIC currents by opioid analgesics in rat sensory neurons. M. ZAREMBA; K. SEDEEK; V. RUIZ-VELASCO*. *Penn State Col. of Med.*
- 10:00 EE18 **145.07** Connexin 36 protein is expressed in lumbar dorsal root ganglia. E. M. PEREZ-ARMENDARIZ*; M. NORCINI; B. HERNÁNDEZ-TELLEZ; A. CASTELL-RODRÍGUEZ; C. CORONEL-CRUZ; A. SIDERIS; E. RECIO-PINTO. *NATIONAL AUTONOMOUS UNIVERSITY OF MEXICO, NYU Langone Med. Ctr., Facultad de Medicina*.
- 11:00 EE19 **145.08** Emotional dysfunction induced by social defeat stress lead to prolongation of postsurgical pain: A possible mechanism underlying GPR40/FFAR1. F. AIZAWA*; K. NAKAMOTO; S. TOKUYAMA. *Kobegakuin Univ.*
- 8:00 EE20 **145.09** Peripherally restricted cannabinoid receptor agonist suppresses neuropathic pain symptoms in operant assays. Y. MULPURI*; H. H. SELTZMAN; B. L. SCHMIDT; I. SPIGELMAN. *UCLA Sch. of Dent., Res. Triangle Inst., New York Univ. Col. of Dent.*
- 9:00 EE21 **145.10** Development of a rat model of BDNF-induced neuropathic-like pain: A tool for drug discovery. C. DRIEU LA ROCHELLE*; D. PARACHOU; B. LE GOURIELLEC; M. ALIX; S. LOIODICE. *Biotrial Pharmacol.*

10:00 EE22 **145.11** The analgesic effects of sinomenine in peripheral nervous system: Involvement of inhibition of voltage-gated sodium channels. J. LEE*; S. YOON; J. WON; H. KIM; Y. KANG; S. OH. *Seoul Natl. Univ., Dent. Res. Inst. and Dept. of Neurobio. & Physiology, Sch. of Dentistry, Seoul Natl. Univ., Dept. of Brain and Cognitive Sciences, Col. of Natural Sciences, Seoul Natl. Univ., Osaka Univ. Grad. Sch. Dent., Sch. of Dent, Seoul Nat'l Univ.*

- 11:00 EE23 **145.12** Dopaminergic modulation of pain signaling in the dorsal horn of the spinal cord. M. PUOPOLO*; Y. LU; A. AZIM; K. YONGIL; M. REBECCHI. *Stony Brook Med., Stony Brook Med.*
- 8:00 EE24 **145.13** • Ketamine and norketamine reverse morphine tolerance more effectively than oxycodone tolerance: From behavior to drug availability. T. O. LILIUS; E. A. KALSO*; T. O. LILIUS; E. KANGAS; M. O. NIEMI; P. V. RAUHALA. *Univ. of Helsinki, Helsinki Univ. Central Hosp., Univ. of Helsinki, Helsinki Univ. Central Hosp.*
- 9:00 EE25 **145.14** ▲ Analgesic effects of *Brasica oleracea var italica* aqueous extracts form seeds, sprouts and vegetable. O. GUADARRAMA-ENRIQUEZ*; G. E. ÁNGELES-LÓPEZ; D. A. MORENO; M. E. GONZÁLEZ-TRUJANO. *INSTITUTO NACIONAL DE PSIQUIATRIA RAMON DE LA FUEN, Univ. Autónoma de México, Univ. Autónoma de México, CEBAS-CSIC.*
- 10:00 EE26 **145.15** Intrathecal administration of arachidonylcyclopropylamide, a cannabinoid type 1 receptor agonist attenuates postoperative pain in rats. M. GAUTAM*; S. GUPTA; R. KUMAR; P. PRASOON; S. B. RAY. *All India Inst. of Med. Sci. (AIIMS), All India Inst. of Med. Sci. (AIIMS).*
- 11:00 EE27 **145.16** Involvement of Ca_v3.2 T-type calcium channels in zinc deficiency-induced mechanical allodynia in mice. F. SEKIGUCHI*; S. TOMITA; S. SHIKIMI; M. TSUBOTA; A. KAWABATA. *Fac. of Pharmacy, Kindai Univ.*
- 8:00 EE28 **145.17** The cannabinoid CB₂ agonist GW405833 suppresses inflammatory and neuropathic pain through a CB₁ mechanism that is independent of CB₂ receptors in mice. A. LI*; L. M. CAREY, IV; K. MACKIE; A. G. HOHMANN. *Indiana Univ., Indiana Univ., Indiana Univ.*
- 9:00 EE29 **145.18** ▲ Natural medicines and pain: Effects of methanolic extract of *Corni fructus* in rat. T. T. JOHNSON*; B. J. LINN; J. E. MEYERS-MANOR; R. BRISBOIS; E. P. WIERTELAK. *Macalester Col., Macalester Col.*
- 10:00 FF1 **145.19** Cannabidiol is a potential therapeutic for the affective-motivational dimension of pain in rats. K. GENARO*; D. FABRIS; A. F. ARANTES; A. W. ZUARDI; J. S. CRIPPA; W. A. PRADO. *Univ. of São Paulo, Ana Luisa, Wiliam Alves do Prado.*
- 11:00 FF2 **145.20** Effects of alpha7nicotinic acetylcholine receptor positive allosteric modulator on microglial brain-derived neurotrophic factor expression in lipopolysaccharide-induced neuroinflammatory pain in mice. S. RAHMAN*; M. ABBAS. *South Dakota State Univ.*
- 8:00 FF3 **145.21** Sucrose inhibited hyperalgesia, induced by injection of CFA in hind paws of rat pups, during infancy and adulthood. K. NUSEIR*; A. ALTARIFI; A. TASSALQ. *Jordan Univ. of Sci. and Technol., Jordan Univ. of Sci. and Technol., Jordan Univ. of Sci. and Technol.*
- 9:00 FF4 **145.22** Questioning the morphine paradigm: Dose-related aggressive behavior in pigs. S. B. MEILIN*; I. SABBAG; D. CASTEL. *MD Biosci., 2. Lahav Res. Inst., 3. The Neufeld Cardiac Res. Inst. and Department of Physiol. and Pharmacology, Sackler Sch. of Med.*

- 10:00 FF5 **145.23** A dose response study on the effect of prostaglandin E2 on thermal nociceptive sensitivity. A. F. DOMENICHELLO*; B. C. WILHITE; G. S. KEYES; C. E. RAMSDEN. *NIA/NIH, NIA/NIH, NIAAA/NIH.*
- 11:00 FF6 **145.24** Inhibition of 12-lipoxygenase in spinal glia attenuates TLR4-dependent, NSAID-insensitive inflammatory hyperalgesia. A. GREGUS*; M. W. BUCZYNSKI; B. FITZSIMMONS; C. I. SVENSSON; Q. XU; E. DENNIS; T. L. YAKSH. *Virginia Tech., Ionis Pharmaceuticals, Karolinska Institutet, UCSD, Univ. of California San Diego, Univ. of California San Diego.*
- 8:00 FF7 **145.25** Baclofen and opioid synergism in mice: New insights and potential treatments. S. K. TOTSCH; R. Y. MEIR; A. R. LANDIS; T. L. QUINN; R. E. SORGE*. *Univ. of Alabama At Birmingham.*
- 9:00 FF8 **145.26** Alpha2/alpha3 GABA_A receptor subtype-selective benzodiazepines reduce not only hyperalgesia but also the aversive component of on-going neuropathic pain. E. NEUMANN*; H. U. ZEILHOFER. *Inst. of Pharmacol. and Toxicology, UZH, Inst. of Pharmaceut. Sciences, ETH.*
- 10:00 FF9 **145.27** Tolerance to WIN55,212-2 but not CP55,940 is prevented in mice expressing a 'desensitization-resistant' form of the CB₁ receptor. C. M. NEALON*; D. HALE; A. N. HENDERSON-REDMOND; M. B. YUILL; D. J. MORGAN. *Penn State Col. of Med., Penn State Col. of Med.*
- 11:00 FF10 **145.28** Analgesics assessment in rat MIA model using the Bioseb automated dynamic weight bearing system. H. RASHID; J. DOUVILLE*; R. SAMADFAM. *Charles River Labs. Montreal.*
- 8:00 FF11 **145.29** MEA recordings in rat spinal cord slices for applied pharmacological investigations. E. STEIDL*; F. GACKIERE; F. MADDALENA; B. BUISSON. *Neuroservice.*
- 9:00 FF17 **146.06** An imbalance of excitation and inhibition underlies direction selectivity in ferret visual cortex. D. E. WILSON*; B. SCHOLL; D. FITZPATRICK. *Max Planck Florida Inst. For Neurosci.*
- 10:00 FF18 **146.07** Temporal resolution of early visual processing in macaque monkeys estimated from short-latency ocular following responses. A. TAKEMURA*; K. MIURA. *AIST, Grad. Schl Med, Kyoto Univ.*
- 11:00 FF19 **146.08** Encoding of pattern motion in macaque area MT. C. QUAILA*; I. KANG; L. M. OPTICAN; B. G. CUMMING. *Natl. Eye Inst.*
- 8:00 FF20 **146.09** Development of simple and complex motion processing in ferret higher order visual area PSS. A. A. LEMPEL*; K. J. NIELSEN. *Johns Hopkins Univ.*
- 9:00 FF21 **146.10** Predictive activity in the ventral intra-parietal area of macaque monkeys. J. CHURAN*; A. KAMINIARZ; F. BREMMER. *Philipps-University.*
- 10:00 FF22 **146.11** Mapping complex receptive field visual motion preferences in primate cortical area MSTd. A. MAAMOUN; B. WILD; S. TREUE*. *German Primate Ctr., German Primate Ctr., Univ. of Goettingen, Bernstein Ctr. for Computat. Neurosci.*
- 11:00 GG1 **146.12** Stable functional networks during natural vision in the macaque brain. M. ORTIZ-RIOS*; M. HAAG; F. BALEZEAU; M. C. SCHMID. *Inst. of Neurosci.*
- 8:00 GG2 **146.13** Effects of active movements on perception of moving plaids: Integration versus segmentation. G. SEDDA*; S. P. SABATINI; V. SANGUINETI. *Univ. of Genoa.*
- 9:00 GG3 **146.14** Responses of neurons in cortical area MT to multiple stimuli moving at different depths are biased toward the stimulus component at the near disparity. J. XIAO; X. HUANG*. *Univ. of Wisconsin Madison.*
- 10:00 GG4 **146.15** Why tuning curves of neurons in cortical area MT for multiple motion directions have both symmetric and asymmetric shapes. W. HUANG; X. HUANG; K. ZHANG*. *Johns Hopkins Univ. Sch. of Med., Univ. of Wisconsin Madison, Johns Hopkins Univ.*
- 11:00 GG5 **146.16** Dynamics of heading-encoding in macaque areas MST and VIP. F. BREMMER*; M. LAPPE; J. CHURAN. *Philipps-Universität Marburg, Inst. for Psychology.*

POSTER

146. Motion: Physiology

Theme D: Sensory Systems

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

- 8:00 FF12 **146.01** Context-dependant directional suppression in visual motion processing. T. MUKHERJEE*; L. C. OSBORNE. *Univ. of Chicago.*
- 9:00 FF13 **146.02** Adaptive temporal coding of motion information in MT area and smooth pursuit. B. LIU*; L. C. OSBORNE. *Univ. of Chicago, Univ. of Chicago.*
- 10:00 FF14 **146.03** Analysis of variation in pursuit eye movements implies 2D motion vector decoding from MT population. M. V. MACELLAIO*; B. LIU; L. C. OSBORNE. *Univ. of Chicago, Univ. of Chicago, Univ. of Chicago.*
- 11:00 FF15 **146.04** Motion perception in the common marmoset. S. L. CLOHERTY*; J. L. YATES; G. C. DEANGELIS; J. F. MITCHELL. *Monash Univ., Univ. of Rochester.*
- 8:00 FF16 **146.05** Sub-threshold and spiking responses of marmoset area MT neurons to moving patterns. J. PATTADKAL*; B. SCHOLL; B. LI; N. J. PRIEBE. *The Univ. of Texas at Austin, Max Planck Florida Inst., Univ. of Texas at Austin, Univ. Texas, Austin.*

POSTER

147. Visual System: Responses During Behavior

Theme D: Sensory Systems

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

- 8:00 GG6 **147.01** Visually-cued eyeblink conditioning reveals cortical circuits underlying sensorimotor transformation. L. TANG*; G. LUR; J. A. CARDIN; M. J. HIGLEY. *Yale Univ.*
- 9:00 GG7 **147.02** ▲ Novel System for studying natural and artificial vision in behaving rats. T. ARENS-ARAD*; N. FARAH; Y. MANDEL. *Bar Ilan Univ.*
- 10:00 GG8 **147.03** Behavioural response of mice to overhead sweeping stimuli. A. TAFRESHIHA*; S. VAN DER BURG; J. A. HEIMEL. *Netherlands Inst. For Neurosci.*

• Indicated a real or perceived conflict of interest, see page 137 for details.
 ▲ Indicates a high school or undergraduate student presenter.
 * Indicates abstract's submitting author

- 11:00 GG9 **147.04** Selective optogenetic activation of inhibitory interneurons in area V1 of the Rhesus Macaque causes rapidly reversible perceptual suppression. M. AVERY*; S. BEN-HAIM; J. DIMIDSCHSTEIN; G. FISHELL; J. H. REYNOLDS. *Salk Inst., UCSD, Harvard Med. Sch., The Salk Inst. for Biol. Studies.*
- 8:00 GG10 **147.05** Distinct optimal waking states for sensory responses in primary visual cortex and visual detection performance. G. T. NESKE*; D. A. MCCORMICK. *Yale Univ., Univ. of Oregon.*
- 9:00 GG11 **147.06** Simultaneous representations in visual cortex and hippocampus. J. FOURNIER*; A. B. SALEEM; M. J. WELLS; K. D. HARRIS; M. CARANDINI. *Univ. Col. London.*
- 10:00 GG12 **147.07** Mapping navigation-related signals in mouse visual areas. E. M. DIAMANTI*; K. D. HARRIS; A. B. SALEEM; M. CARANDINI. *Univ. Col. London.*
- 11:00 GG13 **147.08** A Brain Observatory for visual behavior: Development and scaling of a change detection task in mice. M. GARRETT*; P. A. GROBLEWSKI; J. T. KIGGINS; D. R. OLLERENSHAW; S. MANAVI; S. CROSS; D. WILLIAMS; S. MIHALAS; S. R. OLSEN. *Allen Inst. for Brain Sci.*
- 8:00 GG14 **147.09** The incorporation and uses of eye tracking in a large-scale pipeline for the allen institute's brain observatory. E. K. LEE*; M. RAMADAN; J. D. LARKIN; C. WHITE; F. GRIFFIN; K. ROLL; T. NGUYEN; S. CALDEJON; S. CROSS; W. B. WAKEMAN; N. SJOQUIST; J. PERKINS; D. FENG; S. E. DEVRIES; C. SLAUGHTERBECK; D. SULLIVAN; D. WILLIAMS; D. MILLMAN; N. H. CAIN; G. K. OCKER; P. LEDOCHOWITSCH; A. STEGER; R. VALENZA; K. MACE; S. WHITESIDE; E. LIANG; L. NG; C. FARRELL; M. A. BUICE; J. LECOQ. *Allen Inst. For Brain Sci., Allen Inst. For Brain Sci.*
- 9:00 GG15 **147.10** Behavioral and neurophysiological characterization of visual crowding in macaques. C. A. HENRY*; A. KOHN. *Albert Einstein Col. of Med.*
- 10:00 GG16 **147.11** Visual psychophysics in the ferret. E. L. DUNN-WEISS; K. J. NIELSEN*. *Johns Hopkins Univ.*
- 11:00 GG17 **147.12** Modulation of behavioral performance by targeted activation of cortical ensembles in mouse primary visual cortex. L. CARRILLO-REID*; S. HAN; W. YANG; R. YUSTE. *Columbia Univ., Columbia Univ.*
- 8:00 GG18 **147.13** Neuronal computations underlying orientation change detection in the mouse visual cortex. M. JIN*; L. GLICKFELD. *Duke Neurobio. Dept.*
- 9:00 GG19 **147.14** The implications immersive virtual reality usage on the visual system. R. ESQUENAZI*; R. MOSHER; J. BUENROSTRO; S. LUNDQVIST; S. A. DREW. *California State Univ. Northridge, California State Univ. Northridge, California State University, Northridge, California State University, Northridge.*
- 10:00 GG20 **147.15** ▲ Examining accommodative changes after using head mounted virtual immersion displays. R. MOSHER*; J. MIER; N. URENDA; A. ILNICKI; B. HACKNEY; D. A. DEL CID; S. A. DREW. *California State Univ. Northridge, California State University, Northridge, California State Univ. Northridge, California State University, Northridge.*
- 11:00 GG21 **147.16** ▲ Human physiological arousal comparison: Pupillometry and galvanic skin response. S. C. DUFRESNE; L. A. BECKER*; N. A. BROOKHOUSE; A. M. MURPHY; N. R. NICHOLS. *Univ. of Evansville.*

POSTER

148. Visual Cortex: Circuits and Populations

Theme D: Sensory Systems

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

- 8:00 GG22 **148.01** Measuring cell-type specific layer 4 connectivity using high throughput conjugate array tomography and targeted multi-patch electrophysiology. F. C. COLLMAN*; B. R. LEE; A. D. BADEN; S. DAVIS; O. GLIKO; T. KARLSSON; M. M. NAUGLE; K. PARKER; E. PERLMAN; J. SCHARDT; R. SERAFIN; S. SESHAMANI; G. J. SOLER-LLAVINA; R. BURNS; S. J. SMITH. *Allen Inst. for Brain Sci., Johns Hopkins Univ., Johns Hopkins, Novartis Inst. For Biomed. Res.*
- 9:00 GG23 **148.02** Investigation of synaptic connectivity in mouse visual cortex by two-photon optogenetic stimulation. C. A. BAKER*; A. BOSMA-MOODY; T. A. HAGE; G. J. MURPHY. *Allen Inst. For Brain Sci.*
- 10:00 GG24 **148.03** Connectivity in L5 of mouse primary visual cortex using a multi-patch pipeline. P. A. DAVOUDIAN; A. HOGGARTH; L. CAMPAGNOLA; S. SEEMAN*; M. SCHROEDTER; C. FARRELL; H. ZENG; R. LARSEN; G. J. MURPHY; T. JARSKY. *Allen Inst. for Brain Sci.*
- 11:00 GG25 **148.04** Synaptic dynamics of the cortical layer 5 microcircuit. S. C. SEEMAN; L. CAMPAGNOLA; A. HOGGARTH; P. A. DAVOUDIAN*; G. J. MURPHY; T. JARSKY. *Allen Inst. for Brain Sci., Allen Inst.*
- 8:00 GG26 **148.05** Distinct functional roles of layer 2/3 Somatostatin-expressing inhibitory interneurons in mouse primary visual cortex. L. LI*; U. KNOBLICH; C. REID; H. ZENG; C. KOCH. *Allen Inst. For Brain Sci.*
- 9:00 GG27 **148.06** Cortical processing of binocular information in the mouse. H. H. HUANG*; G. J. STUART. *John Curtin Sch. of Med. Res.*
- 10:00 GG28 **148.07** Using network simulations to model intracellular membrane dynamics in V1 layer 4. M. M. TAYLOR*; D. CONTRERAS; A. DESTEXHE. *Univ. of Pennsylvania Perelman Sch. of Med., Univ. Pennsylvania Sch. of Med., CNRS.*
- 11:00 GG29 **148.08** Synaptic connectivity between neurons in the lateral geniculate nucleus and primary visual cortex by viral tools. H. CHAN*; D. C. W. CHAN; X. F. YANG; Y. KE; W. H. YUNG. *Chinese Univ. of Hong Kong, Chinese Univ. of Hong Kong.*
- 8:00 GG30 **148.09** Circuit mechanisms for correlated spontaneous activity in visual cortex. G. B. SMITH*; D. E. WHITNEY; D. FITZPATRICK. *Max Planck Florida Inst. For Neurosci.*
- 9:00 GG31 **148.10** Whole cell recording of synaptic and intrinsic conductances in V1 of behaving monkeys. B. LI*; N. PRIEBE; E. SEIDEMANN. *Univ. of Texas at Austin.*
- 10:00 GG32 **148.11** The functional synaptic architecture of the receptive field surround of layer 2/3 pyramidal neurons in of tree shrew visual cortex. K. LEE*; D. FITZPATRICK. *Max Planck Florida Inst.*
- 11:00 GG33 **148.12** Contextual modulation in visual cortex. A. KELLER*; M. S. CAUDILL; M. SCANZIANI. *UCSF, Univ. California San Diego, Univ. of California, San Francisco.*
- 8:00 HH1 **148.13** The mechanism of direction selectivity in mouse visual cortex. A. D. LIEN; M. SCANZIANI*. *Univ. of California, San Francisco.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 9:00 HH2 **148.14** Quantitative axonal synaptic ultrastructural analysis of macaque v1 from serial em sections. V. GARCIA-MARIN*; M. J. HAWKEN. *Ctr. For Neural Science. New York University.*
- 10:00 HH3 **148.15** Axonal innervation density predicts basal monoaminergic tone in macaque V1. N. J. WARD*; A. A. DISNEY. *Vanderbilt Univ., Vanderbilt Univ.*
- 11:00 HH4 **148.16** • Laminar organization of functional sub-networks in the primary visual cortex of awake mice. Q. PERRENOUD*; J. A. CARDIN. *Yale Univ. Sch. of Medicine.*
- 8:00 HH5 **148.17** Spike time reliability across populations in mouse LGN and V1. D. J. DENMAN*; G. K. OCKER; S. DURAND; Y. N. BILLEH; N. W. GOUWENS; M. A. BUICE; S. E. DEVRIES; R. REID. *Allen Inst. For Brain Sci., Allen Inst. for Brain Sci.*
- 9:00 HH6 **148.18** Diverse and dynamic global affiliations of cortical neurons. K. CLANCY*; I. ORSOLIC; T. MRSIC-FLOGEL. *Biozentrum, Univ. of Basel, Univ. of Basel.*
- 10:00 HH7 **148.19** Identification of sequential activity patterns in cortical ensembles using probabilistic graphical models. S. HAN*; L. CARRILLO-REID; J. SHOR*; T. JEBARA; R. YUSTE. *Columbia Univ., Columbia Univ.*
- 11:00 HH8 **148.20** Clustered modular organization of neuronal ensembles in mouse visual cortex. W. FANG*; R. YUSTE. *Columbia Univ.*
- 8:00 HH9 **148.21** Linking V1 spatial frequency and orientation population responses to perception. N. JU*; Y. SHAO; S. GUAN; S. TANG; L. TAO; C. YU. *Peking Univ., Peking Univ.*
- 9:00 HH10 **148.22** Perceptual learning induced changes to information content of V4 neuronal populations. A. THIELE*; X. CHEN; M. SANAYEI; D. CHICHARRO; S. PANZERI. *Newcastle Univ., Netherlands Inst. For Neurosci., Columbia Univ., ISTITUTO ITALIANO DI TECNOLOGIA.*
- 10:00 HH11 **148.23** Synchronous firing of black-dominant and white-dominant cell pairs in macaque V1. W. TAI*; H. WU; W. HUANG; Y. PEI; C. YE. *Dept. of Psychology, Taiwan Univ., Dept. of Physical Med. and Rehabilitation, Chang Gung Mem. Hosp., Neurobio. and Cognitive Sci. Center, Natl. Taiwan Univ., Grad. Inst. of Brain and Mind Sciences, Natl. Taiwan University, Col. of Med.*
- 11:00 DP06/HH12 **148.24** (Dynamic Poster) Recordings of ~10,000 excitatory and inhibitory neurons reveal high-dimensional representations of sensory stimuli and behavioral state in cortex. C. STRINGER*; M. PACHITARIU; S. SCHRÖDER; C. REDDY; M. CARANDINI; K. D. HARRIS. *Univ. Col. London, Univ. Col. London.*
- 8:00 HH13 **148.25** Sequential activation of neuronal ensembles in mouse primary visual cortex. A. AKROUH*; L. CARRILLO-REID; S. HAN; R. YUSTE. *Columbia Univ., Columbia Univ.*
- 9:00 HH14 **148.26** The relationship between pairwise correlation and dimensionality reduction. R. MORINA*; B. R. COWLEY; M. A. SMITH; B. M. YU. *Carnegie Mellon Univ., Carnegie Mellon Univ., Univ. of Pittsburgh.*
- 10:00 HH15 **148.27** Network criticality in mouse visual cortex coincides with high single-neuron response variability, but low correlated variability. J. XIA*; P. T. O'NEILL; M. J. GOARD; R. WESSEL. *Washington Univ. In St. Louis, Univ. of California, Santa Barbara.*

POSTER

149. Spatial and Feature-Based Attention

Theme D: Sensory Systems

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

- 8:00 HH16 **149.01** Long range neural inhibition during visual selection process in the archerfish. S. VOLOTSKY; E. VINEPINSKY; O. DONCHIN; R. SEGEV*. *Ben Gurion Univ., Ben Gurion Univ.*
- 9:00 HH17 **149.02** Involvement of striatum in selective visual attention in mice. L. WANG*; R. J. KRAUZZLIS. *Natl. Eye Inst., Natl. Eye Inst.*
- 10:00 HH18 **149.03** Optogenetic inhibition of projections to area MT reveal a causal role of the FEF in the attentional modulation of visual cortex in non-human primates. J. HÜER*; M. G. FORTUNA; H. GUO; L. T. SCHILLER; A. GAIL; J. GRUBER; H. SCHERBERGER; J. F. STAIGER; S. TREUE. *German Primate Ctr., German Primate Ctr., Bernstein Ctr. for Computat. Neurosci., Georg-August-University, German Primate Ctr., Georg-August-University, Ctr. for Nanoscale Microscopy and Mol. Physiol. of the Brain.*
- 11:00 HH19 **149.04** Do spike count correlations in visual cortex limit perception? Evidence from attention and perceptual learning. A. M. NI*; D. A. RUFF; J. J. ALBERTS; J. SYMMONDS; M. R. COHEN. *Univ. of Pittsburgh.*
- 8:00 HH20 **149.05** Investigating the effects of attention and adaptation on the neuronal population representation of contrast. D. A. RUFF*; J. J. ALBERTS; J. SYMMONDS; M. R. COHEN. *Univ. of Pittsburgh.*
- 9:00 HH21 **149.06** Effects of prefrontal cortex inactivation on feature and spatial attention in area V4. N. P. BICHOT*; A. GHADOOSHAYH; R. XU; M. L. WILLIAMS; R. DESIMONE. *MIT.*
- 10:00 HH22 **149.07** Interactions between top-down and bottom-up input alter noise correlations in extrastriate cortex. Y. MERRIKHI*; B. NOUDOOST. *Inst. For Res. In Fundamental Sci. (IPM), Montana State Univ.*
- 11:00 HH23 **149.08** Task dependent visual modulations in human intracranial recordings. L. ISIK*; W. LOTTER; N. E. CRONE; D. D. COX; N. G. KANWISHER; W. S. ANDERSON; G. KREIMAN. *MIT, Harvard Univ., Johns Hopkins Hosp., Harvard Univ., 46-4133 MIT, Johns Hopkins, Harvard Med. Sch.*
- 8:00 HH24 **149.09** Mapping feature-based attention in color space in the human. M. V. BARTSCH*; H. STRUMPF; S. E. DONOHUE; H. G. GARCIA-LAZARO; M. A. SCHOENFELD; J. HOPF. *Leibniz Inst. for Neurobio., Otto-von-Guericke Univ., Kliniken Schmieder.*
- 9:00 HH25 **149.10** Neural reconstructions of multi-feature objects. E. W. DOWD*; J. D. GOLOMB. *The Ohio State Univ.*
- 10:00 HH26 **149.11** Attending multiple locations: The nature of attentional oscillation. J. ZHANG*; Y. JIANG; S. HE. *Chinese Acad. of Sci., Univ. of Minnesota.*
- 11:00 HH27 **149.12** Adaptation of spatial attention. A. I. WILSON*; T. WEBB; M. S. A. GRAZIANO. *Princeton Univ.*
- 8:00 HH28 **149.13** Allocation of spatial attention reduces trial-by-trial neural variability in humans. A. ARAZI*; Y. YESHURUN; I. DINSTEIN. *Ben Gurion Univ., Univ. of Haifa, Ben Gurion Univ.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 9:00 HH29 **149.14** ▲ High-attention demand training induces plasticity of the visual system in adults with amblyopia. I. J. ÜNER*; X. LAI; C. HOU. *The Smith-Kettlewell Eye Res. Inst.*
- 10:00 HH30 **149.15** Attentional biases in vertical space with age. D. G. LAMB*; J. B. WILLIAMSON; A. R. WALKER; S. DATTA; K. M. HEILMAN. *Malcom Randall VAMC, Univ. of Florida.*
- 11:00 HH31 **149.16** Sensory motor demand and immersion in video gamers' attentional skills. P. E. MALDONADO*; C. MOENNE; R. C. VERGARA; E. LORCA; C. LARRAGUIBEL; G. LAM; A. HERNÁNDEZ-CORVALÁN. *Univ. De Chile, Pontificia Univ. Católica de Chile, Univ. de Chile.*
- 8:00 HH32 **149.17** Attenuation of visual search deficits in low luminance environments through complimentary tactile stimulation. M. HUNTER; B. OLK; B. GODDE*. *Jacobs Univ., HSD Hochschule Döpfer, Univ. of Applied Sci.*

POSTER

150. Eye Movements

Theme E: Motor Systems

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

- 8:00 HH33 **150.01** Blink associated eye movements (BARMs) complement microsaccades in correcting for fixation errors. M. F. KHAZALI*; J. POMPER; P. THIER. *Hertie Inst. for Clin. Brain Res.*
- 9:00 HH34 **150.02** Fixation in strabismus patients before and after surgery. F. F. GHASIA*; C. GALLAGHER; J. OTERO-MILLAN; A. G. SHAIKH. *Cleveland Clin., Cleveland Clin., JOHNS HOPKINS UNVIVERSITY, Case Western Reserve.*
- 10:00 HH35 **150.03** Ventral premotor cortex activity during head and eye movements. I. SMALIANCHUK*; N. J. GANDHI. *Univ. of Pittsburgh, Univ. of Pittsburgh.*
- 11:00 HH36 **150.04** Head-unrestrained eye-tracking in macaque monkeys. M. YOSHIDA*; K. TSUJIMOTO; K. MIURA; A. TAKEMURA; M. IWASE; R. HASHIMOTO. *Natl. Inst. Physiol Sci., Grad. Univ. Adv. stud., Natl. Inst. Physiol Sci., Grad. Schl Med, Kyoto Univ., AIST, Osaka Univ. Grad Sch. Med., Osaka Univ.*
- 8:00 II1 **150.05** Two midbrain premotor populations controlling lens accommodation in the primate. P. J. MAY*; I. BILLIG; J. J. QUINET; P. D. GAMLIN. *Univ. Mississippi Med. Ctr., Univ. of Pittsburgh, Univ. of Alabama At Birmingham, Univ. of Alabama at Birmingham.*
- 9:00 II2 **150.06** Are there distinct roles for SOA and cMRF premotor neurons in disconjugate eye movements in the primate? J. J. QUINET*; K. SCHULTZ; P. J. MAY; P. D. GAMLIN. *Univ. of Alabama at Birmingham, Univ. Mississippi Med. Ctr.*
- 10:00 II3 **150.07** Absence of compensatory hypertrophy of rectus extraocular muscles in monkey superior oblique palsy. A. LE*; A. FERGUSON; V. POUKENS; H. S. YING; D. S. ZEE; J. L. DEMER. *UCLA, Boston Univ., Johns Hopkins Hosp. and Hlth. Syst., UCLA.*
- 11:00 II4 **150.08** Inferior compartment of medial rectus muscle fails to relax during near fusional divergence. J. L. DEMER*; R. A. CLARK. *UCLA, UCLA.*
- 8:00 II5 **150.09** ▲ Intramuscular innervation of global and orbital layers of primate lateral rectus (LR) muscle. A. BAIG*; A. LE; A. FERGUSON; V. POUKENS; J. L. DEMER. *UCLA, UCLA, UCLA.*
- 9:00 II6 **150.10** ▲ Elastin content of primate optic nerve sheath and pia. M. VASUDEV*; A. KOKOYAN; A. LE; V. POUKENS; J. L. DEMER. *Univ. of California Los Angeles, Univ. of California Los Angeles, UCLA.*
- 10:00 II7 **150.11** Light-sheet based whole-brain neuronal activity recording during vestibular stimulation. V. BORMUTH*; G. DEBRÉGEAS; R. CANDELIER; G. MIGAULT. *Univ. Pierre Et Marie Curie.*
- 11:00 II8 **150.12** Investigating the potential neural basis of pattern strabismus in the horizontal and vertical oculomotor neural integrators. A. PALLUS*; M. M. WALTON; M. J. MUSTARI. *Univ. of Washington, Univ. of Washington, Univ. Washington.*
- 8:00 II9 **150.13** Characteristics of rebound nystagmus in healthy subjects. J. OTERO-MILLAN*; A. COLPAK; D. S. ZEE; A. KHERADMAND. *JOHNS HOPKINS UNVIVERSITY, Hacettepe Univ. Sch. of Med., Johns Hopkins Univ.*
- 9:00 II10 **150.14** An investigation of the neuronal tuning to horizontal eye movements in the oculomotor system of larval zebrafish. C. BRYSCHE; C. LEYDEN; A. B. ARRENBURG*. *Univ. of Tuebingen, Grad. Training Ctr. for Neurosci.*
- 10:00 II11 **150.15** Remediating attention using gaze-contingent video games. L. CHUKOSKIE*; J. TOWNSEND. *UCSD, UCSD.*
- 11:00 II12 **150.16** Functional mapping for the cortical network of active visual exploration in the marmoset. T. KANEKO*; H. OKANO. *RIKEN Brain Sci. Inst., Keio Univ. Sch. of Med.*
- 8:00 II13 **150.17** An advanced real-time eye tracking system using a new calibration method for untrained marmosets. K. MATSUDA*; Y. SUGASE-MIYAMOTO; K. KAWANO; T. KANEKO. *AIST, AIST, RIKEN Brain Sci. Inst.*

POSTER

151. Cerebellum Interactions With Other Brain Regions

Theme E: Motor Systems

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

- 8:00 II14 **151.01** Interactions between cerebellum and primary motor cortex during sleep. W. XU*; F. DE CARVALHO; A. CLARKE; A. JACKSON. *Newcastle Univ., Newcastle Univ., Newcastle Univ.*
- 9:00 II15 **151.02** The rubrocerebellar feedback pathway and cerebellar nuclear output. C. S. BEITZEL*; S. M. LEWIS; A. L. PERSON. *Univ. of Colorado Denver Sch. of Med., Univ. of Colorado Sch. of Med.*
- 10:00 II16 **151.03** Investigating the role of cerebellar output during skilled motor behavior. M. I. BECKER*; A. L. PERSON. *Univ. of Colorado Sch. of Med.*
- 11:00 II17 **151.04** Cerebellar modulation of prefrontal cortex. A. SCHOTT*; I. CARTA; C. H. CHEN; K. KHODAKHAH. *Albert Einstein Col. of Med., Albert Einstein Col. of Med., Albert Einstein Col. Med.*

- 8:00 II18 **151.05** Cerebellar inputs to the VTA: Reward and social roles. I. CARTA*; C. H. CHEN; A. L. SCHOTT; S. DORIZAN; K. KHODAKHAH. *Albert Einstein Col. of Med., Harvard, Albert Einstein Col. of Med., Northwestern Univ.*
- 9:00 II19 **151.06** Challenging the strict closed-loop organization of olivocerebellar circuits. G. J. WOJACZYNSKI*; J. F. MEDINA. *Baylor Col. of Med.*
- 10:00 II20 **151.07** Transient stimulation of inhibitory cerebello-olivary terminals causes extinction of conditioned eyelid responses. O. A. KIM*; J. F. MEDINA. *Baylor Col. of Med.*
- 11:00 II21 **151.08** The role of the pontine nucleus in generating the novelty and prediction error signals of climbing fibers during eyeblink conditioning in mice. S. OHMAE*; J. F. MEDINA. *Baylor Col. of Med.*
- 8:00 II22 **151.09** Cerebellar control of motor synergies for a learned defensive behavior in mice. S. A. HEINEY*; J. F. MEDINA. *Baylor Col. of Med.*
- 9:00 II23 **151.10** ▲ The number of active purkinje neurons decreases while the distance between them increase with sexual experience in male rats. B. A. LARA*; J. SANCHEZ-RODRIGUEZ; J. MANZO; M. E. HERNANDEZ; L. I. GARCIA; G. ARANDA-ABREU; G. A. CORIA-AVILA; R. TOLEDO-CARDENAS. *DOCTORADO EN INVESTIGACIONES CEREBRALES, UV, CENTRO DE INVESTIGACIONES CEREBRALES, UV.*
- 10:00 II24 **151.11** Combined transsynaptic tracing and activity mapping of cerebellum-to-forebrain pathways. T. J. PISANO*; M. KISLIN; D. E. BAKSHINSKAYA; S. DEIVASIGAMAN; J. C. LEE; R. E. AGUILAR; J. N. KATES-HARBECK*; B. DEVERETT; E. A. ENGEL; L. W. ENQUIST; S. S. WANG. *Princeton Univ., Princeton Univ., Rutgers Robert Wood Johnson Med. Sch., Harvard Univ.*
- 11:00 II25 **151.12** Disrupted cerebellar neural activity in development on neocortical dendritic structure and non-motor behaviors results in altered neocortical dendritic morphology. J. VERPEUT*; A. TAO; A. BADURA; T. D. PEREIRA; L. TAO; E. C. COPE; B. A. BRIONES; E. GOULD; S. S. WANG. *Princeton Neurosci. Inst., Princeton Univ., Netherlands Inst. For Neurosci., Princeton Univ.*
- 8:00 II26 **151.13** Fos expression in cerebellar hemispheres induced by olfactory stimulation of male rats during training for sexual experience. Z. S. HERNANDEZ BRIONES*; L. VASQUEZ-CELAYA; P. CARRILLO; A. J. MARTINEZ-CHACON; R. TOLEDO; M. E. HERNANDEZ; G. A. CORIA-AVILA; J. MANZO; L. I. GARCIA. *Doctorado en Investigaciones Cerebrales, UV, Inst. de Neuroetología, UV, Ctr. de Investigaciones Cerebrales.*
- 9:00 II27 **151.14** ▲ Fastigial nucleus Fos-ir activation induced by olfactory stimulation in male rats. P. B. HERNÁNDEZ*; L. E. LANDA; N. CARLOS; Z. S. HERNANDEZ-BRIONES; L. VASQUEZ-CELAYA; P. CARRILLO; G. A. CORIA-AVILA; J. MANZO; L. I. GARCIA. *Facultad De Medicina, UV, Doctorado en Investigaciones Cerebrales, UV, Inst. de Neuroetología, UV, Ctr. de Investigaciones Cerebrales, UV.*
- 10:00 JJ1 **151.15** The subthalamic nucleus communicates with the cerebellum. R. BHUVANASUNDARAM*; K. KHODAKHAH. *Albert Einstein Col. of Med.*
- 11:00 JJ2 **151.16** Cerebellar Purkinje cell simple spike activity represents phase differences between neuronal oscillations in the medial prefrontal cortex and hippocampus. S. S. MCAFEE*; Y. LIU; R. V. SILLITOE; D. H. HECK. *Univ. of Tennessee Hlth. Sci. Ctr., Baylor Col. of Med.*
- 8:00 JJ3 **151.17** A paired optogenetic and functional MRI method for defining region-specific connectivity between the cerebellar cortex and forebrain. C. F. SANCHEZ; K. CHOE; T. S. OTIS; N. G. HARRIS; P. J. MATHEWS*. *LA BioMed, UCLA, Roche, UCLA, UCLA Harbor/LA Biomed.*
- 9:00 JJ4 **151.18** Single axon morphology of the spinocerebellar projection in the mouse. I. SUGIHARA*; Y. LUO. *Tokyo Med. & Dent. Univ. Grad. Sch. Med., Tokyo Med. & Dent. Univ.*
- 10:00 JJ5 **151.19** Spatial organization of pontine and medial spiriform afferents to the oculomotor cerebellum of pigeons (*Columba livia*). C. GUTIERREZ-IBANEZ*; R. M. LONG; D. R. WYLIE. *Univ. of Alberta.*
- 11:00 JJ6 **151.20** The processing of conditioned stimuli during instrumental learning: 7 Tesla event-related functional MRI. M. MIKKELSEN*; S. A. HURLEY; S. CLARE; N. RAMNANI. *The Johns Hopkins Univ. Sch. of Med., Royal Holloway, Univ. of London, Univ. of Wisconsin–Madison, Univ. of Oxford.*
- 8:00 JJ7 **151.21** Cerebellar histaminergic system participates in motor and non-motor functions of the cerebellum in mice. A. C. GIANLORENÇO*; E. GUILHERME; B. SILVA-MARQUES; C. MONICI; T. RUSSO; R. MATTIOLI. *Federal Univ. of Sao Carlos, Univ. Federal De Sao Carlos.*

POSTER

152. Motor Coordination and Bimanual Control

Theme E: Motor Systems

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

- 8:00 JJ8 **152.01** Assessing performance, role asymmetry, and handedness in physical joint interaction for object manipulation. K. MOJTAHEDI*; Q. FU; M. SANTELLO. *Arizona State Univ., Arizona State Univ.*
- 9:00 JJ9 **152.02** Body position affects muscle activity variances in the non-dominant arm during arm cycling. L. BOTZHEIM; M. MRVCSIK; S. MALIK; N. ZENTAL; J. LACZKO*. *Univ. of Pecs, MTA Wigner Res. Ctr. For Physics.*
- 10:00 JJ10 **152.03** Anodal transcranial direct current stimulation impacts the underlying control processes in bimanual movements. A. MCCULLOCH; I. PARK; J. CHEN; T. KIM; H. KIM; M. NAZIFI; D. L. WRIGHT; J. J. BUCHANAN*. *Texas A&M Univ., Texas A&M Univ., Texas A&M Univ.*
- 11:00 JJ11 **152.04** Interhemispheric interactions modulate behavioral responses during a reaction time task in non-human primates. R. YUN*; A. R. BOGAARD; A. G. RICHARDSON; S. ZANOS; E. E. FETZ. *Univ. of Washington, Univ. of Washington, Univ. of Pennsylvania, Univ. of Washington Sch. of Med., Univ. of Washington.*
- 8:00 JJ12 **152.05** Bimanual use in chronic stroke survivors with left or right hemiparesis is differentially influenced by ipsilesional arm function. R. VARGHESE*; C. WINSTEIN. *USC.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 9:00 JJ13 **152.06** Experimental evaluation of voluntarily activatable muscle synergies. S. TOGO*; H. IMAMIZU. *The Univ. of Electro-Communications, Advanced Telecommunications Res. Inst. Intl., The Univ. of Tokyo.*
- 10:00 JJ14 **152.07** Dynamic and static position sense of body targets in three dimensions. C. R. COFFMAN*; F. R. NAJDRAWI; W. G. DARLING. *Univ. of Iowa, Univ. of Iowa.*
- 11:00 JJ15 **152.08** Age minimally affects proprioception of index finger location and motion. W. G. DARLING*; C. R. COFFMAN; C. CAPADAY. *Univ. of Iowa, Univ. of Iowa, Universitatmedizin Göttingen.*
- 8:00 JJ16 **152.09** Age-related changes in interlimb coordination of complementary bilateral arm movements. E. J. WOYTOWICZ*; K. P. WESTLAKE; R. L. SAINBURG; J. WHITALL. *Univ. of Maryland Baltimore, Penn State Univ.*
- 9:00 JJ17 **152.10** Emergent synergistic grasp behaviour in a visuomotor joint action task: Evidence for internal forward models as building blocks of human social interactions. L. GUO*; M. NIEMEIER. *Univ. of Toronto.*
- 10:00 JJ18 **152.11** Stability of bimanual finger coordination is constrained by salient phase. Y. ZHENG*; T. MURAOKA; K. KANOSUE. *Grad. Sch. of Sport Sciences, Waseda Univ., Nihon Univ., Waseda Univ.*
- 11:00 JJ19 **152.12** Interactions between hands after force field perturbation of one hand. P. C. DESROCHERS*; A. T. BRUNFELDT; F. A. KAGERER. *Michigan State Univ., Michigan State Univ.*
- 8:00 JJ20 **152.13** Bimanual task dynamics affect spatial but not temporal movement characteristics. A. T. BRUNFELDT*; P. C. DESROCHERS; F. A. KAGERER. *Michigan State Univ., Michigan State Univ.*
- 9:00 JJ21 **152.14** Interlimb differences in wrist diadochokinesis. G. A. SRINIVASAN*; R. SAINBURG. *Pennsylvania State Univ. Univ. Park.*
- 10:00 JJ22 **152.15** Hand position and forces covary during anticipatory control of bimanual manipulation. T. LEE-MILLER*; A. M. GORDON; M. SANTELLO. *Teachers College, Columbia Univ., Arizona State Univ.*
- 11:00 JJ23 **152.16** Age-related declines in motor performance are associated with decreased segregation of large-scale brain networks. B. R. KING*; P. VAN RUITENBEEK; I. LEUNISSEN; K. CUYPERS; K. HEISE; T. SANTOS MONTEIRO; L. HERMANS; O. LEVIN; G. ALBOUY; D. MANTINI; S. SWINNEN. *KU Leuven, Maastricht Univ., ETH Zurich, Oxford Univ., KU Leuven.*
- 8:00 JJ24 **152.17** The effect of coordination complexity on reaction time is affected by age in a choice multi-limb reaction time task. S. VERSTRAELEN*; K. CUYPERS; R. L. J. MEESEN. *Univ. of Hasselt, Motor Control Lab.*
- 9:00 JJ25 **152.18** Bimanual reflexes during shared bimanual tasks are asymmetric. J. SCHAFFER*; R. L. SAINBURG. *The Pennsylvania State Univ., Penn State Univ.*
- 10:00 JJ26 **152.19** Control of paretic and non-paretic arm during bimanual reaching movements after stroke. A. SETHI*; N. DOUNSKAIA; S. RAJ; A. ACHARYA. *Univ. of Pittsburgh, Arizona State Univ., Univ. of Pittsburgh.*
- 11:00 JJ27 **152.20** Differences in the internal representation of the two arms could explain hand dominance. D. CORDOVA BULENS*; F. CREVECOEUR; P. LEFEVRE. *Univ. catholique de Louvain.*
- 8:00 JJ28 **152.21** The effects of neural crosstalk on interpersonal and intrapersonal coordination dynamics. D. M. KENNEDY*; A. J. KOVACS; C. SHEA. *Texas A&M Univ., Univ. of Wisconsin - La Crosse.*
- 9:00 JJ29 **152.22** Specificity of sparing effects with cross-education in an immobilized limb. J. W. ANDRUSHKO*; J. L. LANOVAZ; K. M. BJÖRKMANN; S. A. KONTULAINEN; J. P. FARTHING. *Univ. of Saskatchewan.*
- 10:00 JJ30 **152.23** Motor cortex activity during contralateral versus ipsilateral arm movements: Preserved response structure despite local reorganization of responses. K. C. AMES*; M. M. CHURCHLAND. *Columbia Univ.*
- 11:00 KK1 **152.24** Transcallosal inhibition elicited from non-primary motor areas in healthy individuals and chronic stroke. J. L. NEVA*; K. S. HAYWARD; K. E. BROWN; C. S. MANG; L. A. BOYD. *Univ. of British Columbia, Univ. of British Columbia, Univ. of Calgary.*
- 8:00 KK2 **152.25** Dynamic modulation of brain activities during three-ball juggling. H. KAMBARA*; M. MIYAKOSHI; H. TANAKA; T. KAGAWA; N. YOSHIMURA; Y. KOIKE; S. MAKEIG. *Tokyo Inst. Technol., Swartz Ctr. For Computat. Neuroscience, INC, UCSD, Japan Advanced Inst. of Sci. and Technol., Aichi Inst. of Technol., Tokyo Inst. of Technol., Tokyo Inst. Techn., UCSD/INC/SCCN.*
- 9:00 KK3 **152.26** A behavioral model of bimanual motor coordination in mice. M. JEONG*; Y. KIM; D. KIM. *KAIST.*

POSTER

153. Posture and Gait: Higher-Order Control

Theme E: Motor Systems

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

- 8:00 KK4 **153.01** Savings of motor and perceptual components of learning over multiple days of walking training. K. A. LEECH*; K. DAY; A. J. BASTIAN. *Johns Hopkins Univ., Johns Hopkins Univ., KKI & Johns Hopkins.*
- 9:00 KK5 **153.02** Modeling predictive and emergent processes in obstacle avoidance during locomotion. A. DAREKAR*; V. GOUSSEV; B. J. MCFADYEN; A. LAMONTAGNE; J. FUNG. *McGill Univ., Feil & Oberfeld CRIR Res. Centre, Jewish Rehabil. Hosp. (CISSS Laval), Laval Univ.*
- 10:00 KK6 **153.03** The effects of object location perturbations on a combined gait and prehension task. G. C. BELLINGER*; K. A. PICKETT; A. H. MASON. *Northwestern Univ., Univ. of Wisconsin - Madison.*
- 11:00 KK7 **153.04** Accumulation of savings over multiple days of walking training. K. DAY*; K. A. LEECH; R. T. ROEMMICH; A. J. BASTIAN. *Johns Hopkins Univ., Kennedy Krieger Inst.*
- 8:00 KK8 **153.05** Cognitive processing for step precision increases beta and gamma modulation during overground walking. A. S. OLIVEIRA*; F. G. ARGUISSAIN; O. K. ANDERSEN. *Aalborg Univ.*
- 9:00 KK9 **153.06** Using a dual learning paradigm to simultaneously train multiple components of walking in people with stroke. K. M. CHERRY-ALLEN*; M. A. STATTON; P. A. CELNIK; A. J. BASTIAN. *Johns Hopkins Univ., Kennedy Krieger Inst., Johns Hopkins Univ.*

- 10:00 KK10 **153.07** Role of supplementary motor area in postural control. R. GOEL*; S. NAKAGOME; R. A. OZDEMIR; N. RAO; J. L. CONTRERAS-VIDAL, Ph.D.; P. J. PARIKH. *Univ. of Houston, The Miami Project To Cure Paralysis Lois Pope Life, Univ. of Houston, Univ. of Houston.*
- 11:00 KK11 **153.08** Modulation of fronto-parietal networks during adjustments to challenging postural conditions. S. NAKAGOME*; R. GOEL; P. J. PARIKH; J. L. CONTRERAS-VIDAL, Ph.D. *Univ. of Houston, Univ. of Houston.*
- 8:00 KK12 **153.09** Generalization of split-belt treadmill adaptation: Motorized treadmill after-effects are preserved after washout on a non-motorized treadmill. D. L. GREGORY; F. C. SUP; J. T. CHOI*. *Univ. of Massachusetts Amherst.*
- 9:00 KK13 **153.10** Corticospinal drive to tibialis anterior muscle during split-belt treadmill walking. S. SATO*; J. T. CHOI. *Univ. of Massachusetts, Amherst.*
- 10:00 KK14 **153.11** Perceptual and motor learning of locomotor skills. G. BORIN*; J. T. CHOI. *Univ. of Massachusetts.*
- 11:00 KK15 **153.12** ▲ "Look out!": Using environmental cues to retrieve appropriate gait patterns. E. V. PULLEN, 11794-6018; E. V. VASUDEVAN*. *Stony Brook Univ.*
- 8:00 KK16 **153.13** Multi-objective control of lateral foot placement while walking. J. B. DINGWELL*; J. P. CUSUMANO. *Univ. of Texas At Austin, Penn State Univ.*
- 9:00 KK17 **153.14** Impact of cognitive information of transfer of locomotor learning. M. FRENCH*; D. S. REISMAN. *Univ. of Delaware, Univ. Delaware.*

POSTER

154. Reflexes and Reflex Modulation

Theme E: Motor Systems

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

- 8:00 KK18 **154.01** Characterizing short and long latency TMS-conditioning of H-reflexes. T. M. KESAR*; M. HOQUE; C. MCMULLEN; M. R. BORICH. *1441 Clifton Rd NE, Room 205, Emory Univ., Emory Univ.*
- 9:00 KK19 **154.02** H-reflex modulation as a function of sloped support surfaces. R. L. SEGAL*; A. DUTT-MAZUMDER; A. THOMPSON. *Med. Univ. of South Carolina, Med. Univ. of South Carolina, Med. Univ. of South Carolina.*
- 10:00 KK20 **154.03** Morphological and reflex properties of soleus during ankle flexion. A. DUTT-MAZUMDER*; R. L. SEGAL; L. DAVIS; A. K. THOMPSON; J. DEAN. *Med. Univ. of South Carolina, Med. Univ. of South Carolina, Med. Univ. of South Carolina.*
- 11:00 KK21 **154.04** Prediction of postural perturbation modulates the corticospinal excitabilities in the ankle muscles. K. FUJIO*; H. OBATA; N. KAWASHIMA; K. NAKAZAWA. *Chiba Prefectural Univ. of Hlth. Sci., Kyushu Inst. of Technol., Nat'l Rehab Ctr. Japan, The Univ. of Tokyo.*
- 8:00 KK22 **154.05** Dissecting the diversity of spinal circuits for distinct sensorimotor aversive behaviors. G. GATTO*; S. BOURANE; A. DALET; M. GOULDING. *The Salk Inst. For Biol. Studies.*

- 9:00 KK23 **154.06** The spinal nociceptive withdrawal response of the hind limb in the rat exhibits limited dependence on stimulus location. C. L. CLELAND*; C. E. ESQUIVEL; H. T. DAVIS. *James Madison Univ.*
- 10:00 KK24 **154.07** ▲ Decomposition of the tail nociceptive withdrawal response into combinations of movement primitives associated with individual muscles in the rat. J. NGUYEN*; C. L. CLELAND. *James Madison Univ.*
- 11:00 KK25 **154.08** ▲ Contributions of A-delta nociceptors to the direction of the nociceptive withdrawal response in intact, unanesthetized rats. K. M. SAMMONS*; L. C. DEAK; Z. C. OKAFOR; C. L. CLELAND. *James Madison Univ.*
- 8:00 KK26 **154.09** ▲ Postural movements accompany the heat evoked nociceptive withdrawal response in unrestrained rats. S. MAVI*; M. E. PEGELOW; D. A. GRIGORYAN; C. L. CLELAND. *James Madison Univ.*
- 9:00 KK27 **154.10** ▲ Contributions of intrinsic tail muscles to the nociceptive withdrawal response in the rat. H. IZADPANAH*; C. L. CLELAND. *James Madison Univ.*
- 10:00 KK28 **154.11** Behavioral adaptations during downslope walking after cross-reinnervation of medial gastrocnemius and the pretibial flexors. M. A. LYLE*; E. KAJTAZ; H. ANDERSON; H. SHI; B. RAPSAS; H. MAAS; T. NICHOLS. *Georgia Inst. of Technol., Georgia Inst. of Technol., VU Univ.*
- 11:00 KK29 **154.12** Neuromuscular adaptations following acute bout of slope walking in individuals post-stroke. J. LIANG*; E. AKOOPIE; B. CONWAY; T. KOCH; Y. LEE. *Univ. of Nevada Las Vegas, Natl. Tshing-Hua Univ.*

POSTER

155. Motor Systems: Neuromodulation

Theme E: Motor Systems

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

- 8:00 KK30 **155.01** Controlling from behind the scenes - Tritonia swim CPG neuron C2 paradoxically drives crawling while silent. E. S. HILL*; J. WANG; W. N. FROST. *Rosalind Franklin Univ. of Med. and Sci.*
- 9:00 KK31 **155.02** Single neuron RNA-seq and qPCR show correlation of 5-HT receptor subtype expression with species and individual differences in sea slug swimming behaviors. A. N. TAMVACAKIS*; P. S. KATZ. *Georgia State Univ.*
- 10:00 KK32 **155.03** Peptide profiles of key regulatory interneurons in the sea slug *Pleurobranchaea californica*. C. LEE*; E. ROMANOVA; J. BOYKIN; A. N. TAMVACAKIS; P. S. KATZ; R. GILLETTE; J. V. SWEEDLER. *Univ. of Illinois Urbana-Champaign, Univ. of Illinois Urbana-Champaign, Georgia State Univ., Univ. Illinois.*
- 11:00 KK33 **155.04** Neural plasticity supporting repetition priming is maintained by a persistent elevation of cAMP. M. H. PERKINS*; E. C. CROPPER; K. R. WEISS. *Icahn Sch. of Med. At Mt. Sinai, Icahn Sch. of Med. At Mt. Sinai.*
- 8:00 KK34 **155.05** Different neuromodulators directly influence gap junction-mediated electrical coupling strength in oscillatory networks. X. LI*; D. BUCHER; F. NADIM. *Dept Biol. Sci., Rutgers/Njit.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 9:00 KK35 **155.06** ▲ Differential bioactivity of mature and partially processed forms of a neuromodulator, myosuppressin, on the cardiac neuromuscular system of the American lobster, *Homarus americanus*. M. STANHOPE*; T. X. DIAZ; M. G. PASCUAL; A. YU; A. E. CHRISTIE; P. S. DICKINSON. *Bowdoin Col., Univ. of Hawaii at Manoa*.
- 10:00 KK36 **155.07** Sacral networks shape the output of lumbar motoneurons by direct rostral projections of relay neurons through the ventral funiculus. M. CHERNIAK; L. ANGLISTER; A. LEV-TOV*. *Hebrew Univ. Sch. of Med., Dept. Med. Neurobiol., IMRIC, Hebrew Univ. Sch. of Med.*
- 11:00 LL1 **155.08** ▲ Modulation of myogenic contractions in the ventral diaphragm muscle in *Manduca sexta* reveals a mixed excitatory and inhibitory response to glutamate. E. T. REIS; V. P. HALULA; R. J. BAYLINE*. *Washington and Jefferson Coll.*
- 8:00 DP07/LL2 **155.09** (Dynamic Poster) Activity patterns of age-labeled Chx10 interneurons during whole-brain imaging. D. M. CHOW*; J. R. FETCHO. *Cornell Univ.*
- 9:00 LL3 **155.10** Complex dopamine receptor interactions exert diverse modulation on spinal networks of the neonatal mouse. S. A. SHARPLES*; N. E. BURMA; H. L. LEDUC-PESSAH; C. JEAN-XAVIER; P. J. WHELAN. *Univ. of Calgary, Univ. of Calgary, Hotchkiss Brain Inst., Univ. of Calgary, Univ. Calgary.*
- 8:00 LL12 **156.09** Flying *Drosophila* maintain arbitrary but stable headings relative to the angle of polarized light. T. L. WARREN*; P. T. WEIR; M. H. DICKINSON. *Univ. of Oregon, Caltech, Caltech.*
- 9:00 LL13 **156.10** ▲ Internal state modulates the perception of visual and olfactory stimuli by *Drosophila melanogaster*. R. MERNOFF; G. TURNER; P. LU; A. WANG; M. FRYE; S. M. WASSERMAN*. *UC Los Angeles, Wellesley Col.*
- 10:00 LL14 **156.11** Sexual modulation of a shared sensory circuit by a conserved transcription factor. D. S. PORTMAN*; K. A. FAGAN; J. LUO; R. LAGOY; D. ALBRECHT; F. SCHROEDER. *Univ. of Rochester, Univ. of Rochester, Worcester Polytechnic Inst., Boyce Thompson Inst.*
- 11:00 LL15 **156.12** Sensitization of the defensive strike response in *Manduca sexta* larvae is blocked during feeding. M. FUSE*; C. VALTIERRA; G. DOWNING; D. TABUENA; C. MOFFATT. *San Francisco State Univ., City Col. of San Francisco.*
- 8:00 LL16 **156.13** Evolutionary exaptation of an ancient motor-to-sensory circuit correlates with changes in insect flight biomechanics. P. D. CHAPMAN*; S. BRADLEY; K. RIGGS; E. HAUGHT; M. HAFFAR; K. C. DALY; A. M. DACKS. *West Virginia Univ.*
- 9:00 LL17 **156.14** ▲ Escape behavior of the *Grammostola rosea* tarantula and *Phidippus regius* spider in response to heat stimuli. M. D. THOMAS*; C. L. CLELAND. *James Madison Univ.*
- 10:00 LL18 **156.15** Untangling a web of behaviors: Investigating the neuronal basis of web-building behavior by orb-weaving spiders. A. GORDUS*; J. MILLER. *Johns Hopkins Univ., Johns Hopkins Univ.*
- 11:00 LL19 **156.16** Analysis of the choices of African Clawed Toads (*Xenopus laevis*) when presented with paired visual and lateral line stimuli. R. DEAN*; B. YUGO; A. M. MAROTTA; M. ROLINCE; M. MILOSAVLJEVIC; K. GOTH; N. PAPENHAGEN; G. TAYLOR; A. DESHMUKH; C. IYASERE; A. SCHAFFER. *Cleveland State Univ.*
- 8:00 LL20 **156.17** Respiratory motor frequency in bullfrog brainstems remains thermally stable across high, but not low, temperatures. M. VALLEJO*; J. SANTIN; L. K. HARTZLER. *Wright State Univ., Wright State Univ.*
- 9:00 LL21 **156.18** Unveiling the mechanisms that underlie reduced responsiveness in larval zebrafish to uncontrollable stimuli. K. J. HERRERA*; F. ENGERT. *Harvard Univ.*
- 10:00 LL22 **156.19** An analysis of auditory-environment-dependent neuroplasticity in *Danio rerio*. M. K. MACKSOUD; D. M. HIGGS*. *Univ. of Windsor.*
- 11:00 LL23 **156.20** A novel mechanism for mechanosensory based rheotaxis in larval zebrafish. P. A. OTEIZA*; I. ODSTRCIL; G. LAUDER; R. PORTUGUES; F. ENGERT. *Max Planck Inst. For Neurobio., Harvard Univ., Harvard Univ., Harvard Univ., Max Planck Inst. of Neurobio.*
- 8:00 LL24 **156.21** Identified neuronal circuit that controls prepulse inhibition of startle. K. M. TABOR*; C. HARRIS; T. SMITH; K. L. BRIGGMAN; H. A. BURGESS. *NIH, NIH.*
- 9:00 LL25 **156.22** Differences in electromotor behaviors in blind electric cavefish and their surface relatives. E. S. FORTUNE*; N. ANDANAR; M. MADHAV; R. JAYAKUMAR; N. COWAN; M. BICHUETTE; D. SOARES. *New Jersey Inst. of Technol., Johns Hopkins Univ., Univ. Federal de São Carlos.*

POSTER

156. Neuroethology: Circuits and Behavioral Analyses

Theme F: Integrative Physiology and Behavior

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

- 8:00 LL4 **156.01** ● Coincident multisensory inputs enhance bursting activity via large and long-lasting EPSPs in insect auditory neuron. M. SOMEYA*; H. OGAWA. *Hokkaido Univ., Hokkaido Univ.*
- 9:00 LL5 **156.02** Crickets modulate wind-elicited escape behavior depending on auditory context with sound carrier frequency. M. FUKUTOMI*; H. OGAWA. *Hokkaido Univ., Hokkaido Univ.*
- 10:00 LL6 **156.03** Action selection between walking and jump in the wind-elicited escape behavior of the cricket. N. SATO*; H. OGAWA. *Hokkaido Univ., Hokkaido Univ.*
- 11:00 LL7 **156.04** Cold temperature stress increases gut permeability and leads to changes in behavior. K. KOHL; H. M. CHARLES; A. UNGER; K. SCHULTZ; K. A. KILLIAN*. *Miami Univ., Miami Univ.*
- 8:00 LL8 **156.05** Complex visual processing during action selection in *Drosophila melanogaster*. H. JANG*; B. W. MCFARLAND; L. J. SOLOMON; C. R. VON REYN. *Drexel Univ.*
- 9:00 LL9 **156.06** A novel visual assay for escape behavior in *Drosophila*. D. P. GOODMAN*; A. ELDREDGE; M. KABRA; K. BRANSON; C. VON REYN. *Drexel Univ., HHMI Janelia Farm Res. Campus.*
- 10:00 LL10 **156.07** ▲ Genetic analysis of spontaneous grooming behavior in the fruit fly *Drosophila melanogaster*. C. L. HANNUM; D. R. ANDREW*. *Lycoming Col., Lycoming Col.*
- 11:00 LL11 **156.08** Putative non-nuclear splice isoform of *Drosophila* NfκB Dif plays a role in ethanol response. T. WIJESEKERA*; N. ATKINSON. *Univ. of Texas At Austin.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

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* Indicates abstract's submitting author

- 10:00 LL26 **156.23** Matching neural coding strategies to behavior: Responses to communication signals in the hindbrain of Apterodontids. G. MARSAT*; K. M. ALLEN. *West Virginia Univ.*
- 11:00 LL27 **156.24** Serotonergic-dependent SK channel neuromodulation adaptively optimizes neural coding and behavioral perception of natural sensory stimuli. C. HUANG*; M. G. METZEN; M. J. CHACRON. *McGill Univ.*
- 8:00 LL28 **156.25** Motoric and respiratory behaviors of Antarctic fishes with and without hemoglobin in response to rise in ambient temperature. I. I. ISMAILOV*; J. B. SCHARPING; I. E. ANDREEVA; M. J. FRIEDLANDER. *Virginia Tech. Carilion Res. Inst., Virginia Tech. Carilion Sch. of Med.*
- 9:00 LL29 **156.26** Low-level, short-term manganese exposure has long-term effects on escape response and monoamine levels in juvenile *Procambarus clarkii*. A. B. PARSONS-WHITE; L. E. REASOR; G. A. BROWN; B. L. ANTONSEN*. *Marshall Univ.*
- 10:00 LL30 **156.27** Neuropharmacology of alcohol effects on crayfish neural circuitry. J. HERBERHOLZ*; M. E. SWIERZBINSKI; L. C. VENUTI; H. J. LEE; A. C. EXUM. *Univ. of Maryland.*
- 11:00 LL31 **156.28** What are the roles of successful and unsuccessful trials during motor learning? A. T. ZAI*; R. O. TACHIBANA; R. H. HAHNLOSER. *ETH Zurich / Univ. of Zurich.*
- 8:00 LL32 **156.29** Modeling odor tracking computations in the peripheral nervous system of a predatory snail. M. VOLOSHIN; M. U. GILLETTE*; R. GILLETTE. *Yow Time Enterprises, Univ. of Illinois.*
- 8:00 MM4 **157.05** Sound source localization system reveals ultrasonic semantic communication in groups of freely interacting mice. D. T. SANGIAMO; M. R. WARREN; J. P. NEUNUEBEL*. *Univ. of Delaware, Univ. of Illinois.*
- 9:00 MM5 **157.06** ▲ Using sound source localization to investigate the impact of the reproductive cycle on mouse vocal expression. L. A. MECKLER; M. R. WARREN; M. S. SPURRIER; E. ROTH*; J. P. NEUNUEBEL. *Univ. of Delaware.*
- 10:00 MM6 **157.07** Quantification of social communication in a mouse model of autism using a sound source localization system. M. R. WARREN*; J. P. NEUNUEBEL. *Univ. of Delaware.*
- 11:00 MM7 **157.08** Simultaneous whole-body plethysmography and vocalization recordings in the lysosomal-enzyme targeting pathway mouse model of stuttering. T. D. BARNES*; T. E. HOLY; D. DRAYNA. *Washington Univ. Sch. of Med., Washington Univ. Sch. of Med., Natl. Inst. on Deafness and Other Communication Disorders.*
- 8:00 MM8 **157.09** c-Fos expression following alarm call perception by Richardson's ground squirrel. A. FREEMAN; J. F. HARE; H. K. CALDWELL*. *Cornell Univ., Univ. of Manitoba, Kent State Univ.*
- 9:00 MM9 **157.10** Encoding of learned vocalization in a developing mammalian brain. M. C. ROSE*; E. K. SAWYER; M. M. YARTSEV. *Univ. of California Berkeley, Univ. of California Berkeley.*
- 10:00 MM10 **157.11** Towards a fully automated training system for studying vocal production learning in the mammalian brain of Egyptian fruit bats. T. A. SCHMID*; D. GENZEL; M. M. YARTSEV. *Univ. of California Berkeley, Univ. of California, Berkeley.*
- 11:00 MM11 **157.12** Long-term and persistent vocal plasticity in adult bats. D. GENZEL-WEHRFRITZ*; J. DESAI; E. PARAS; M. M. YARTSEV. *Univ. of California At Berkeley, Univ. of California at Berkeley, Univ. of California At Berkeley, Univ. of California At Berkeley.*
- 8:00 MM12 **157.13** Developmental effects of early social complexity in adult zebrafish social traits. M. C. TELES*; C. GONÇALVES; R. F. OLIVEIRA. *Inst. Gulbenkian de Ciência, ISPA - Inst. Universitário, Champalimaud Neurosci. Programm.*
- 9:00 MM13 **157.14** Forebrain control of reciprocal social interaction in the zebrafish. S. J. STEDNITZ*; E. MCDERMOTT; A. SEROKA; P. WASHBOURNE. *Univ. of Oregon.*
- 10:00 DP08/MM14 **157.15** (Dynamic Poster) Evolution of vocal circuits; analyses of hybrid song features in crosses between *Xenopus laevis* and *Xenopus petersii*. E. PEREZ; C. L. BARKAN; I. C. HALL; J. SEGARRA; S. M. WOOLLEY; D. B. KELLEY*. *Columbia Univ., Columbia Univ., Reed, Benedictine Univ., Columbia Univ., Columbia Univ.*
- 11:00 MM15 **157.16** Electroporation and viral vector technique to deliver transgenes into the vocal pathways of African clawed frogs. A. YAMAGUCHI*; P. RODRIGUES. *Univ. of Utah.*
- 8:00 MM16 **157.17** Sexual dimorphism of attention network in anuran brain depends on biologic significance of sounds. G. FANG*; F. XUE; S. E. BRAUTH; Y. TANG. *Chengdu Inst. of Biology, CAS, Chengdu Inst. of Biology, Chinese Acad. of Sci., Univ. Maryland, Chengdu Inst. of Biol.*

POSTER

157. Communicating Vocally in Non-Avian Model Systems

Theme F: Integrative Physiology and Behavior

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

- 8:00 LL33 **157.01** Approaches to identify, impute, interpret and integrate functional genomic data using biobanked tissues from a population of free-ranging rhesus macaques. M. J. MONTAGUE*; N. SNYDER-MACKLER; L. J. BRENT; S. MADLON-KAY; J. E. HORVATH; J. SKENE; M. L. PLATT. *Univ. of Pennsylvania, Duke Univ., Univ. of Exeter, North Carolina Central Univ., Duke Univ.*
- 9:00 MM1 **157.02** External acoustic events induce rapid changes in vocal behavior of marmoset monkeys. T. POMBERGER*; J. LÖSCHNER; C. GLOGE; S. R. HAGE. *Werner Reichardt Ctr. For Integrative Neurosci., Grad. Sch. of Neural & Behavioural Sci. - Intl. Max Planck Res. School, Univ. of Tübingen, Animal Physiology, Inst. for Neurobiology, Univ. of Tübingen, Werner Reichardt Ctr. for Integrative Neurosci.*
- 10:00 MM2 **157.03** Limiting parental feedback during vocal development influences vocal properties in marmoset monkeys. Y. GÜLTEKIN*; S. R. HAGE. *Ctr. of Integrative Neurosci., Werner Reichardt Ctr. for Integrative Neurosci.*
- 11:00 MM3 **157.04** Context-dependent modulation of vocal behavior in marmoset monkeys. D. DOHMEN*; S. R. HAGE. *W. Reichardt Ctr. For Integrative Neurosci. (, Werner Reichardt Ctr. for Integrative Neurosci.*

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POSTER

158. Neural Control of Social Interactions

Theme F: Integrative Physiology and Behavior

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

- 8:00 MM17 **158.01** ▲ Influence of the social environment on female rats exploring a novel open field. T. A. PIETRUSZEWSKI*; N. HERNANDEZ; L. HORBAL; S. AHMED; R. TROHA; S. LEE; E. J. MARKUS. *Univ. of Connecticut, Univ. of Connecticut, Univ. of Connecticut.*
- 9:00 MM18 **158.02** ▲ Effects of lithium and high fat diet on sociability and anxiety in Black Swiss mice. A. V. CUSHMAN; N. L. ARRUDA; R. R. GELINEAU; I. K. MONTEIRO DE PINA; M. J. MARONI; K. M. CAPRI; J. A. SEGGIO*. *Bridgewater State Univ.*
- 10:00 MM19 **158.03** Social enrichment enhances rats' memory span of social, but not object, recognition. M. TOYOSHIMA*; M. SUGITA; Y. ICHITANI; K. YAMADA. *Univ. of Tsukuba.*
- 11:00 MM20 **158.04** ● Are balb/c mice less social? a detailed analysis of social process in two inbred mouse strains. H. ARAKAWA*. *Case Western Reserve Univ.*
- 8:00 MM21 **158.05** The effects of perinatal SSRI exposure on behavior during adulthood. R. HEIJKOOP*; D. J. HOUWING; J. D. OLIVIER; E. M. SNOEREN. *UiT The Arctic Univ. of Norway, Univ. of Groningen/GELIFES.*
- 9:00 MM22 **158.06** Prefrontal D1 dopamine signaling controls social behaviors in mice. B. XING*; W. GAO. *Drexel Univ. Col. of Med.*
- 10:00 NN1 **158.07** Nucleus accumbens dopamine D1-type receptors mediate social learning but not food intake in male and female mice. R. MATTA*; M. J. RUSSELL; D. J. TESSIER; N. BASS; E. CHOLERIS. *Univ. of Guelph.*
- 11:00 NN2 **158.08** ▲ Dopamine enhances female zebra finch preference for male song. L. E. EISENMAN*; M. BURNS; N. F. DAY; S. A. WHITE; M. J. COLEMAN. *Scripps Col., Pitzer Col., Univ. of California Los Angeles, Claremont McKenna, Pitzer and Scripps Colleges.*
- 8:00 NN3 **158.09** Testosterone synthesis in the female brain during auditory processing. C. DE BOURNONVILLE*; L. REMAGE-HEALEY. *Univ. of Massachusetts Amherst, Univ. of Massachusetts, Amherst.*
- 9:00 NN4 **158.10** Immediate early gene activation throughout the social behavior network in response to dynamic changes in social status. C. WILLIAMSON*; W. LEE; I. KLEIN; J. P. CURLEY. *Columbia Univ.*
- 10:00 NN5 **158.11** Effect of relative social rank within a social hierarchy on neural activation in response to familiar or unfamiliar social signals. W. LEE*; H. DOWD; C. NIKAIN; E. YANG; J. P. CURLEY. *Columbia Univ., Columbia Univ.*
- 11:00 NN6 **158.12** Behavioral and neural control of social dominance in mice. R. P. WATERS*; W. D. STAHLMAN. *Univ. of Mary Washington, Univ. of Mary Washington.*
- 8:00 NN7 **158.13** Androgens control distinct social behaviors: Evidence from genetically tractable cichlid fish. B. A. ALWARD*; A. T. HILLIARD; S. A. JUNTITI; R. D. FERNALRD. *Stanford Univ.*
- 9:00 NN8 **158.14** Comparative studies of affiliation, aggression, and selectivity in monogamous and promiscuous voles. N. S. LEE*; K. E. FREITAS; N. L. GOODWIN; A. K. BEERY. *Univ. of Massachusetts Amherst, Smith Col., Univ. of California, San Francisco.*
- 10:00 NN9 **158.15** Stranger Danger! Ghrelin Receptor Signalling in the VTA and its role in social approach and social interaction. S. PARK*; S. KING; S. DE SANTE; G. CULKKA; G. PARODI; L. HYLAND; R. KHAZALL; J. ZIGMAN; B. WOODSIDE; A. ABIZAID. *Carleton Univ., Carleton Univ., Carleton Univ., The Univ. of Texas Southwestern Med. Ctr., Concordia Univ.*
- 11:00 NN10 **158.16** Effects of hormonal therapy on aggressive behavior and central nervous system in an animal model of perimenopause. M. M. SCAFUTO*; N. PESTANA-OLIVEIRA; R. M. DE ALMEIDA; R. O. G. CAROLINO; J. A. ANSELMO-FRANCI. *Univ. of São Paulo, Univ. of São Paulo, UFRGS, Univ. de São Paulo, Dentist Sc Rib Preto.*
- 8:00 NN11 **158.17** Behavioral phenotype following social defeat in prairie voles (*Microtus ochrogaster*). M. C. TICKERHOOF*; A. P. SWOPES; L. H. HALE; A. S. SMITH. *Univ. of Kansas.*
- 9:00 NN12 **158.18** The role of the ventral premammillary nucleus in intermale mouse aggression and hierarchy. A. S. STAGKOURAKIS*; G. SPIGOLON; P. WILLIAMS; J. PROTZMAN; G. FISONE; C. BROBERGER. *Karolinska Institutet, Heidelberg Univ.*
- 10:00 NN13 **158.19** Regulation of aggressive behavior in mice by hippocampal alpha7 nicotinic receptors. A. S. LEWIS*; S. T. PITTENGER; Y. S. MINEUR; P. H. SMITH; M. R. PICCIOTTO. *Yale Univ., The City Col. of New York.*
- 11:00 NN14 **158.20** Elevated aggressive behavior in mice with thyroid-specific PRKARaA and global EPAC1 gene deletion. K. L. G. RUSSART*; D. HUK; R. J. NELSON; L. S. KIRSCHNER. *Ohio State Univ., Ohio State Univ.*
- 8:00 NN15 **158.21** Dorsal raphe regulation of aggression via the medial orbitofrontal cortex and the medial amygdala. J. NORDMAN*; X. MA; Z. LI. *NIH, NIMH.*
- 9:00 NN16 **158.22** 24 months follow-up after amygdala lesion in refractory aggressive patient. F. V. GOUVEIA*; C. HAMANI; E. T. FONOFF; H. BRENTANI; R. M. C. B. MORAIS; S. P. RIGONATTI; M. J. TEIXEIRA; R. C. R. MARTINEZ. *Intituto Sirio Libanes De Ensino E Pesquisa, Toronto Western Hosp. of the Univ. of Toronto, Psychiatry Inst. of the Med. Sch. of the Univ. of Sao Paulo, Psychiatry Inst. of the Med. Sch. of the Univ. of Sao Paulo, Psychiatry Inst. of the Med. Sch. of the Univ. of Sao Paulo.*
- 10:00 NN17 **158.23** Coat color modulates behavioral responses to predator threat in the eastern gray squirrel, *Sciurus carolinensis*. T. J. KOEHNLE*. *Hiram Col.*
- 11:00 NN18 **158.24** Underwater trauma and predator exposure cause distinct neuroendocrine and behavioral response profiles in rats. D. E. ALTMAN; S. GAUCHAN; K. D. CRAVEDI; C. V. VUONG; J. C. SOUSA; N. L. MOORE*. *Walter Reed Army Inst. of Res., Walter Reed Army Inst. of Res.*
- 8:00 NN19 **158.25** Social isolation-induced stress: Influence on the medial prefrontal cortex neurons in african naked mole-rats. N. L. GAGGI*; D. MCCLOSKEY. *Col. of Staten Island, CUNY, Col. of Staten Island, CUNY.*

* Indicated a real or perceived conflict of interest, see page 137 for details.
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 * Indicates abstract's submitting author

- 9:00 NN20 **158.26** ▲ Hippocampal neuropeptide- γ in relation to social behavior in the African naked mole-rat. C. DUNNE-JAFFE; B. CUKOVIC; T. DZEDZITS; D. P. MCCLOSKEY*. *City Univ. of New York, Grad. Ctr. at CUNY, Grad. Ctr. of CUNY.*
- 10:00 NN21 **158.27** Sociogenomics of preoptic area in alternative reproductive morphs of a vocal fish. J. TRIPP; N. Y. FENG; A. H. BASS*. *Cornell Univ., Yale Univ.*
- 11:00 NN22 **158.28** Using behavior tracking to examine Zebrafish (*Danio rerio*) responses to live and simulated social stimuli. A. J. VELKEY*; T. BETTS; H. KAY; I. TILMONT; B. PITTS; B. KERNS; R. BOLAND; K. POND; J. HOOD; K. WIENS. *Christopher Newport Univ., Christopher Newport Univ.*
- 8:00 NN31 **159.09** Effects of dorsal hippocampal estradiol treatment and aromatase inhibition on memory consolidation in male mice. W. A. KOSS*; R. L. GREMMINGER; S. M. PHILIPPI; K. M. FRICK. *Univ. of Wisconsin-Milwaukee.*
- 9:00 NN32 **159.10** Estradiol regulation of energy substrates and memory modulation. W. WANG*; D. KOROL. *Syracuse Univ.*
- 10:00 NN33 **159.11** Estradiol interacts with age-related changes in response and place learning in female F344 rats. D. L. KOROL*; W. WANG; C. G. WHITE; L. A. CASTELAN; P. E. GOLD. *Syracuse Univ., Syracuse Univ.*
- 11:00 OO1 **159.12** The effects of components of licorice root on a novel object task in rats. P. KUNDU*; D. L. KOROL; W. G. HELFERICH; C. E. ONDERA; S. L. SCHANTZ. *Univ. of Illinois at Urbana-Champaign, Syracuse Univ.*

POSTER

159. Hormones and Cognition: Estrogens

Theme F: Integrative Physiology and Behavior

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

- 8:00 NN23 **159.01** ▲ Rapid changes in mushroom spines and synaptic markers in hippocampus CA1 following acute estradiol to male rats. B. CARVAJAL*; J. A. AVILA; A. ALLIGER; R. ZANCA; P. A. SERRANO; V. N. LUINE. *Hunter Col., The Grad. Center, CUNY.*
- 9:00 NN24 **159.02** Rapid estrogenic enhancements of learning and memory within the hippocampus of female mice: A role for membrane-bound receptors. T. KUUN*; S. ARMSTRONG; R. BRAR; M. KLEMENS; E. CHOLERIS. *Univ. of Guelph, Univ. of Guelph.*
- 10:00 NN25 **159.03** The effects of PI3K inhibition on the rapid facilitation of social recognition by estrogens or estrogen receptor agonists in the dorsal hippocampus in female mice. P. A. SHEPPARD*; A. LUMSDEN; I. WATSON; K. SELLERS; D. P. SRIVASTAVA; E. CHOLERIS. *Univ. of Guelph, King's Col. London, King's Col. London.*
- 11:00 NN26 **159.04** The role of actin polymerization in GPER-mediated hippocampal memory enhancement in female mice. J. KIM*; J. C. SCHALK; W. A. KOSS; K. M. FRICK. *Univ. of Wisconsin-Milwaukee.*
- 8:00 NN27 **159.05** Dorsal hippocampal Wnt/ β -catenin signaling is required for 17 β -estradiol to enhance object memory consolidation in female mice. L. TAXIER*; M. M. KIEFER; S. M. PHILIPPI; A. M. FORTRESS; K. M. FRICK. *Univ. of Wisconsin-Milwaukee.*
- 9:00 NN28 **159.06** Chemogenetic investigation of dorsal hippocampal-medial prefrontal interactions in estradiol-mediated enhancement of object memory consolidation in female mice. J. J. TUSCHER*; L. R. TAXIER; K. M. FRICK. *UW-Milwaukee.*
- 10:00 NN29 **159.07** The rapid effects of hippocampally-synthesized estrogens on recognition learning in ovariectomized mice. T. MARTIN*; E. HARMAN; E. CHOLERIS. *Univ. of Guelph, Univ. of Guelph, Univ. of Guelph.*
- 11:00 NN30 **159.08** Repeated restraint stress decreases nuclear estrogen receptor alpha levels in the hippocampus of female rats. N. E. BAUMGARTNER*; J. M. DANIEL. *Tulane Univ., Tulane Univ., Tulane Univ.*
- 8:00 OO2 **159.13** Social recognition is mediated by the interaction between the rapid effects of estrogens and oxytocin. P. PALETTA*; S. HOWARD; K. ALI; E. CHOLERIS. *Univ. of Guelph, Univ. of Guelph.*
- 9:00 OO3 **159.14** Estradiol add-back in BDNF Val66Met mice mimics the behavioral and transcriptional phenotype of premenstrual dysphoric disorder. J. MARROCCO*; G. H. PETTY; N. DUBEY; J. F. HOFFMANN; K. F. BERMAN; D. GOLDMAN; P. J. SCHMIDT; B. S. MCEWEN. *The Rockefeller Univ., Natl. Ctr. for Cell Sci., Uniformed Services Univ. of the Hlth. Sci., Natl. Inst. of Mental Hlth., Natl. Inst. of Alcohol Abuse and Alcoholism, Natl. Inst. of Mental Hlth.*
- 10:00 OO4 **159.15** Effects of estrogen therapy on specific brain regions in animal model of perimenopause induced by diepoxide 4-vinylcyclohexene (VCD). N. PESTANA*; J. A. ANSELMO-FRANCI; B. KALIL; J. A. ROGRIGUES; L. L. K. ELIAS. *Univ. de São Paulo-Faculdade de Medicina de Ribeirão Preto/FMRP, Univ. de São Paulo- Faculdade de Odontologia de Ribeirão Preto (FORP), Univ. de São Paulo-Faculdade de Medicina de Ribeirão Preto/FMRP.*
- 11:00 OO5 **159.16** Estrogen deficiency and neurodegeneration: an inflammatory tale. P. KUMAR*; P. DHAR. *AIIMS, All India Inst. of Med. Sci.*
- 8:00 OO6 **159.17** A dose that is just right? Drospirenone dose-dependently affects cognitive outcomes. S. V. KOEBELE*; M. L. POISSON; J. M. PALMER; C. BERNSELEONE; S. PATEL; I. M. STROUSE; H. A. BIMONTE-NELSON. *Arizona State Univ., Arizona Alzheimer's Consortium.*
- 9:00 OO7 **159.18** Together, but not for better? Evaluating the cognitive effects of ethinyl estradiol and drospirenone given individually and in combination in young OVX rats. V. L. PENA*; M. L. POISSON; S. V. KOEBELE; C. CROFT; S. PATEL; I. M. STROUSE; H. A. BIMONTE-NELSON. *Arizona State Univ., Arizona Alzheimer's Consortium.*
- 10:00 OO8 **159.19** Memory impairments from 17 β -estradiol plus levonorgestrel hormone therapy are dependent on their ratio. A. V. PRAKAPENKA*; C. BERNSELEONE; V. L. PEÑA; S. NORTHUP-SMITH; R. MELIKIAN; S. PATEL; D. S. LADWIG; R. HIROI; A. L. MANN; M. J. VALENZUELA SANCHEZ; R. W. SIRIANNI; H. A. BIMONTE-NELSON. *Arizona State Univ., Arizona State Univ., Arizona State Univ., Arizona Alzheimer's Consortium, Barrow Neurolog. Inst., Red Mountain High Sch., RISE (Research Intensive Scientific Experience), Arizona State Univ.*

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11:00 OO9 **159.20** ▲ Simvastatin increases neuroestradiol in female zebra finches. C. R. MCDERMOTT*; N. NARAYANAN; S. SRINIVASAN; M. L. PHAN; D. S. VICARIO; C. L. PYTTE. *Queens Col., Rutgers The State Univ. of New Jersey.*

POSTER

160. HPG Axis

Theme F: Integrative Physiology and Behavior

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

8:00 OO10 **160.01** Estradiol regulates effects of short-term food deprivation on the gonadotropin-releasing hormone (GnRH) - pituitary luteinizing hormone (LH) Axis. M. SHAKYA*; K. P. BRISKI. *Univ. of Louisiana At Monroe.*

9:00 OO11 **160.02** Examination of age-related changes in NK3R expression and colocalization of KOR with GnRH neurons in the hypothalamus of female sheep. M. BEDENBAUGH*; C. A. RAINEY; R. B. MCCOSH; J. A. LOPEZ; R. L. GOODMAN; S. M. HILEMAN. *West Virginia Univ. HSC, Alderson Broaddus Univ., West Virginia Univ.*

10:00 OO12 **160.03** Hypothalamic GnRH release is stimulated by the combined action of melatonin and estradiol in the South American plains vizcacha (*Lagostomus maximus*). S. E. CHARIF*; P. I. F. INSERRA; A. R. SCHMIDT; S. A. CORTASA; S. PROIETTO; M. C. CORSO; N. P. DI GIORGIO; V. LUX-LANTOS; A. D. VITULLO; J. HALPERIN; V. B. DORFMAN. *Univ. Maimónides, IByME.*

11:00 OO13 **160.04** Synaptically induced high frequency firing of the terminal nerve gonadotropin-releasing hormone 3 neurons and their release activity. C. UMATANI*; Y. OKA. *The Univ. of Tokyo.*

8:00 OO14 **160.05** Orphanin FQ inhibits GnRH neurons by activating opioid-receptor-like 1 receptor and G protein-coupled inwardly-rectifying potassium channels. S. S. CONSTANTIN*; S. WRAY. *NIH, NIH NINDS.*

9:00 OO15 **160.06** Embryonic exposure to bisphenol F affects development of GnRH neurons in the zebrafish. S. RAMAKRISHNAN*; K. WEILER. *Univ. of Puget Sound.*

10:00 OO16 **160.07** Estrogen and thyroid mediated regulation of the BDNF natural antisense transcript. S. SHAH*; P. TIWARI; D. MOAZED; V. A. VAIDYA. *Tata Inst. of Fundamental Res., Harvard Med. Sch.*

11:00 OO17 **160.08** Proestrus evokes transcriptional changes in GnRH neurons and medial preoptic area of mice. C. VASTAGH*; N. SOLYMOSI; Z. LIPOSITS. *Inst. of Exptl. Med., Univ. of Vet. Med., Pázmány Péter Catholic Univ.*

8:00 OO18 **160.09** Stimulation of the GnRH pulse generator activity by peripheral administration of κ -opioid receptor antagonist in goats. T. SASAKI*; D. ITO; T. SONODA; Y. WAKABAYASHI; T. YAMAMURA; H. OKAMURA; S. OISHI; T. NOGUCHI; N. FUJII; Y. UENOYAMA; H. TSUKAMURA; K. MAEDA; F. MATSUDA; S. OHKURA. *Nagoya Univ., Natl. Inst. of Agrobiological Sci., Kyoto Univ., The Univ. of Tokyo.*

9:00 OO19 **160.10** Introduction of DREADDs in goat arcuate nucleus using adeno-associated virus. R. TATEBAYASHI*; Y. SUETOMI; K. KOBAYASHI; S. OHKURA; F. MATSUDA. *Nagoya Univ., Natl. Inst. for Physiological Sci., The Univ. of Tokyo.*

10:00 OO20 **160.11** Stimulation of GnRH neurons by glucagon-like peptide-1 utilizes an activated nitric oxide and suppressed endocannabinoid retrograde signaling to presynaptic GABAergic bouton. I. FARKAS*; C. VASTAGH; E. FARKAS; F. BALINT; K. SKRAPITS; E. HRABOVSKY; C. FEKETE; Z. LIPOSITS. *Inst. of Exptl. Medicine, Hungarian Acad. Inst. of Exptl. Medicine, Hungarian Acad, Pazmany Peter Catholic Univ., Tupper Res. Institute, Tufts Med. Ctr., Pazmany Peter Catholic Univ.*

11:00 OO21 **160.12** Acute psychosocial stress alters LH pulses, kisspeptin neurons, and RFRP-3 neurons in mice. J. A. YANG*; R. A. PARRA; C. I. SONG; S. B. Z. STEPHENS; M. J. KREISMAN; D. J. HAISENLEDER; K. M. BREEN; A. S. KAUFFMAN. *UCSD - Dept of Reproductive Med., Univ. of Virginia.*

8:00 OO22 **160.13** Hypothalamo-pituitary-gonadal axis is transiently affected during experimental autoimmune encephalomyelitis in female dark agouti rats. I. BJELOBABA*; I. LAVRNJA; A. MILOSEVIC; M. M. JANJIC; I. BOZIC; M. JOVANOVIC; S. S. STOJILKOVIC; S. PEKOVIC. *Inst. for Biol. Res. Sinisa Stankovic, NICHD, NIH.*

9:00 OO23 **160.14** Light-induced activation of GnRH using kisspeptin neurons in two distinct hypothalamic nuclei. D. KIM*; J. KIM; I. PARK; S. JANG; M. CHOI; K. KU; G. SON; H. CHOE; K. KIM. *Daegu Gyeongbuk Inst. of Sci. and Technol. (DGIST), Seoul Natl. Univ., Seoul Natl. Univ., Korea Univ., Korea Brain Res. Inst. (KBRI).*

10:00 OO24 **160.15** Suckling-induced changes in TIP39 and somatostatin expressions in the rat brain. A. SUGIMOTO*; Y. UENOYAMA; N. IEDA; K. IKEGAMI; N. INOUE; H. TSUKAMURA. *Nagoya Univ.*

11:00 OO25 **160.16** ER α Δ4, a splice variant of estrogen receptor- α , signals through mGluR2, *in vivo*. A. M. WONG*; A. K. SCOTT; P. E. MICEVYCH. *UCLA, David Geffen Schl Med. at UCLA.*

8:00 OO26 **160.17** ▲ High-fat, high-sugar diet disrupts hormonal balance during preovulatory surge and induces polycystic ovaries. K. M. VOLK; J. A. ROBERTS; V. V. POGREBNA; J. E. ZACHRY; S. BLYTHE*; N. TOPORIKOVA. *Washington & Lee Univ., Washington & Lee Univ., Washington and Lee Univ.*

9:00 OO27 **160.18** Glutamatergic leptin receptor expressing cells in the ventral premammillary nucleus facilitates reproduction. N. BELLEFONTAINE*; A. CARA; C. F. ELIAS. *Univ. of Michigan.*

10:00 OO28 **160.19** Ionotropic glutamatergic transmission to AVPV and arcuate kisspeptin neurons is differentially regulated by estradiol. L. WANG*; M. L. GREENWALD-YARNELL; M. G. MYERS, Jr.; S. M. MOENTER. *Univ. of Michigan, Univ. of Michigan, Ann Arbor, Univ. of Michigan, Univ. of Michigan.*

11:00 OO29 **160.20** Selective depletion of kisspeptin signaling in oocytes causes premature ovarian senescence. S. T. RUOHONEN*; F. GAYTÁN; A. USSEGLIO GAUDI; M. POUTANEN; M. TENA-SEMPERE. *Univ. of Turku, Turku Ctr. for Dis. Modeling, Univ. of Córdoba, Inst. Maimonides de Investigacion Biomedica de Córdoba (IMIBIC) / Hosp. Reina Sofia.*

8:00 OO30 **160.21** Anatomical evidence indicates that reproductive aging of human males coincides with enhanced kisspeptin output by neurokinin B fibers. E. HRABOVSKY*; A. CSEPREGI; B. A. BORSAY; K. RACZ; K. SKRAPITS. *Inst. of Exptl. Med., Fac. of Med. of the Univ. of Debrecen.*

POSTER

161. Thirst and Water Balance

Theme F: Integrative Physiology and Behavior

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

- 8:00 OO31 **161.01** Neural circuits underlying fluid homeostasis. V. M. AUGUSTINE*; S. LEE; S. K. GOKCE; B. WANG; C. LOIS; Y. OKA. *Caltech, Caltech, Caltech.*
- 9:00 OO32 **161.02** Astrocyte immunolabeling in the dorsal vagal complex of female rats after furosemide treatment. S. L. CORE*; K. S. CURTIS. *Oklahoma State Univ. Ctr. For Hlth. Scienc, Oklahoma State Univ. Ctr. for Hlth. Sci.*
- 10:00 OO33 **161.03** Neural mechanism for presystemic regulation of vasopressin release. A. KIM*; Y. MANDELBLAT-CERF; J. MADARA; M. L. ANDERMANN; B. B. LOWELL. *Harvard Med. Sch., Beth Israel Deaconess Med. Ctr.*
- 11:00 OO34 **161.04** Age, but not ovarian hormones, alters astrocyte density in the subfornical organ of female rats. Z. D. SIMSEK*; R. L. THUNHORST; A. K. JOHNSON; B. XUE; T. BELTZ; K. S. CURTIS. *Oklahoma State Univ., Univ. of Iowa.*
- 8:00 OO35 **161.05** Associative learning contributes to the increased water intake observed after daily injections of angiotensin II. M. POSTOLACHE; H. R. JEAN; J. SANTOLLO; D. DANIELS*. *Univ. At Buffalo - SUNY, Univ. At Buffalo - SUNY, Univ. of Kentucky.*
- 9:00 OO36 **161.06** Regulation of supraoptic nucleus vasopressin neuron activity by TRPV in lactating rats. A. J. SEYMOUR*; R. A. AUGUSTINE; C. H. BROWN. *Univ. of Otago.*
- 10:00 PP1 **161.07** Salt loading promotes synchronization of phasic firing in vasopressin neurons of the rat supraoptic nucleus. Z. S. THIROUIN*; K. Y. CHOE; C. W. BOURQUE. *CRN / McGill Univ., CRN / Res. Inst. of the MUHC.*
- 11:00 PP2 **161.08** Changes in gene expression of thyrotropin-releasing hormone (TRH) and its receptor during de- and re-hydration in the hypothalamus of neonatal layer chicks. S. KAWAKAMI*. *Hiroshima Univ. Grad. Sch. of Biosphere Sci.*

POSTER

162. Motivation: Social Communication

Theme G: Motivation and Emotion

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

- 8:00 PP3 **162.01** Recruitment of the ventral tegmental area and its afferent pathways during socially rewarding behavior in juvenile male and female rats. C. J. REPPUCCI*; C. K. GERGELY; N. F. NASCIMENTO; G. S. RO; R. BREDEWOLD; A. H. VEENEMA. *Michigan State Univ., Boston Col.*
- 9:00 PP4 **162.02** Vasopressin and oxytocin in the social behavior neural network: How to fiber projections and receptors compare? C. J. SMITH*; B. T. DIBENEDICTIS; A. H. VEENEMA. *Boston Col., Boston Univ., Michigan State Univ.*

- 10:00 PP5 **162.03** Vasopressin in the lateral septum modulates sex-specific neurotransmission: Implications for sex-specific regulation of social play. R. BREDEWOLD*; J. K. SCHIAVO; A. H. VEENEMA. *Michigan State Univ., Boston Col.*
- 11:00 PP6 **162.04** Behavioral and neuroanatomical characterization of the vasopressin system in the bed nucleus of the stria terminalis reveals potential coordination of separate populations of vasopressin neurons in mediating social behavior. J. A. SMITH*; R. BREDEWOLD; C. J. REPPUCCI; A. H. VEENEMA. *Michigan State Univ.*
- 8:00 PP7 **162.05** Neuronal substrates of group decisions and social bias in mice. R. BÁEZ-MENDOZA*; F. BOUNNI; G. N. FRIEDMAN; Z. M. WILLIAMS. *Massachusetts Gen. Hospital-Harvard Med. Sch.*
- 9:00 PP8 **162.06** Single neuron correlates of disrupted social behavior in an ASD mouse model. G. FRIEDMAN; F. BOUNNI*; M. JAMALI; W. LI; Z. WILLIAMS. *Massachusetts Gen. Hospital/Harvard Med. School, Boston Univ.*
- 10:00 PP9 **162.07** Shared subjective experience and interpersonal neural synchronization in foreign language active learning classroom: A pilot study. T. NOZAWA*; M. KONDO; R. YAMAMOTO; H. JEONG; S. IKEDA; K. SAKAKI; Y. ISHIKAWA; Y. MIYAKE; R. KAWASHIMA. *Tokyo Inst. of Technol., Kyoto Univ. of Foreign Studies, Tohoku Univ.*
- 11:00 PP10 **162.08** Stimulant drugs increase the reinforcing value of social stimuli and decrease the reinforcing value of sucrose in Fischer-344 rats. C. D. MARTIN*; K. CARR; L. EPSTEIN; L. W. HAWK; J. B. RICHARDS. *Univ. at Buffalo Dept. of Psychology, Res. Inst. on Addictions, Univ. at Buffalo Sch. of Med. and Biomed. Sci.*
- 8:00 PP11 **162.09** ● Fatherhood is associated with microarchitectural changes in the prairie vole brain: A diffusion-weighted imaging investigation. J. R. YEE*; A. M. PERKEYBILE; W. M. KENKEL; P. P. KULKARNI; C. CARTER; C. F. FERRIS. *Northeastern Univ., Indiana Univ., Northeastern Univ. Dept. of Psychology, Kinsey Inst. for Res. in Sex Gender and Reproduction, Northeastern University, Ctr. for Translational NeuroImaging.*
- 9:00 PP12 **162.10** EEG changes in pigs during belly rubbing by a human, recorded wirelessly and subdually. J. RAULT*; L. HEMSWORTH; M. LE CHEVOIR; S. BAUQUIER; A. LAI. *Univ. of Melbourne, St. Vincent's Hosp. Melbourne, The Univ. of Melbourne.*
- 10:00 PP13 **162.11** ▲ Effect of Shank3 mutations on zebrafish social behavior. S. ASDJODI*; A. PRASAD; E. GLASGOW; J. KANWAL. *Georgetown Univ.*
- 11:00 PP14 **162.12** Transcription factor Δ FosB regulates aggressive behavior in male mice in a cell-specific manner. H. ALEYASIN*; M. FLANIGAN; S. A. GOLDEN; A. TAKAHASHI; J. PINA; C. MENARD; M. L. PFAU; G. E. HODES; M. HESHMATI; E. A. HELLER; S. J. RUSSO. *Icahn Sch. of Med. Mount Sinai, Natl. Inst. on Drug Abuse, Univ. of Tsukuba, Virginia Tech., Perelman Sch. of Medicine, Univ. of Pennsylv.*
- 8:00 PP15 **162.13** Autism-associated changes in the representation of social information in prefrontal circuits. D. R. LEVY*; T. TAMIR; M. KAUFMAN; A. WEISSBROD; E. SCHNEIDMAN; O. YIZHAR. *Weizmann Inst. of Sci.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 9:00 PP16 **162.14** Escalation of aggressive arousal by alcohol: Dissociation of motivation and behavioral performance by CRF acting on CRF-R1. K. A. MICZEK*; H. E. COVINGTON; S. TRAN; E. NEWMAN; W. RENTHAL; K. HA; L. WALTON; J. DEBOLD. *Tufts Univ., Harvard Univ., Tufts Univ.*
- 10:00 DP09/PP17 **162.15** (Dynamic Poster) Identifying a neural gate for courtship vocalizations in the mouse. K. A. TSCHIDA*; V. MICHAEL; K. SAKURAI; R. MOONEY; F. WANG. *Duke Univ.*
- 11:00 PP18 **162.16** Neural activities during sexually dimorphic social behaviors. Y. WEI*; S. WANG. *Inst. Of Neurosci., Inst. of Neurosci.*
- 8:00 PP19 **162.17** Consequences of prenatal exposure to valproic acid in prairie vole social behaviors. L. L. ELVIR*; F. DUCLOT; Z. WANG; M. KABBAJ. *Florida State Univ., Florida State Univ.*
- 9:00 PP20 **162.18** Molecular mechanisms underlying pair bond maintenance in the socially monogamous prairie voles. F. DUCLOT*; L. L. ELVIR; Y. LIU; Z. WANG; M. KABBAJ. *Florida State Univ., Florida State Univ., Florida State Univ.*
- 10:00 PP21 **162.19** Reunion behavior in adult female degus. N. K. LIDHAR; A. THAKUR; A. DAVID; K. TAKEHARA-NISHIUCHI; N. INSEL*. *Univ. of Toronto, Univ. Toronto, Univ. of Montana.*
- 11:00 PP22 **162.20** The role of specific vasopressin cell populations in the regulation of social communication. N. RIGNEY*; G. J. DE VRIES; A. PETRULIS. *Georgia State Univ., Georgia State Univ.*
- 8:00 PP23 **162.21** Evidence of rejection of a sexually receptive female rat by a group of male rats. A. FERREIRA-NUNO*; A. CRUZ-BENITES; A. MORALES-OTAL. *Univ. Autonoma Metropolitana, Univ. Autonoma Metropolitana.*
- 9:00 PP24 **162.22** Neurocomputational substrates of learned and perceived control. S. NA*; J. JUNG; V. G. FIORE; A. HULA; X. GU. *Univ. of Texas At Dallas, Univ. of Texas at Dallas, Univ. Col. London, Univ. of Texas At Dallas.*
- 10:00 PP25 **162.23** A noreadrenergic hypothesis of social engagement and exclusion. R. W. ROOSEVELT*. *Indiana Univ. Southeast.*
- 11:00 PP26 **162.24** Social affective behaviors activate insular cortex and require PKC. M. M. ROGERS*; J. A. VARELA; J. P. CHRISTIANSON. *Boston Col., Boston Col.*
- 8:00 PP27 **162.25** Social interaction impairments in female genetic absence epilepsy rats from Strasbourg: Reversal by the T-type calcium channel antagonist Z944. W. N. MARKS*; M. T. HENBID; M. J. COLLINS; S. M. CAIN; T. P. SNUTCH; J. G. HOWLAND. *Univ. of Saskatchewan, Univ. of Saskatchewan, Univ. of British Columbia.*
- 9:00 PP28 **162.26** Effects of clozapine N-oxide on social communication in mice expressing inhibitory DREADDs in BNST-MPOA. L. KREVITT*; D. NGUYEN; A. PETRULIS. *Georgia State Univ.*
- 10:00 PP29 **162.27** An extended T-maze for automated learning using social reward in zebrafish. N. NAJIB; S. ASDJODI; J. S. KANWAL*. *Georgetown Univ. Med. Ctr., Georgetown Univ. Med. Ctr., Georgetown Univ. Med. Ctr.*
- 11:00 DP10/QQ1 **162.28** (Dynamic Poster) Probing social motivation heterogeneity in young children. B. L. THOMPSON*; C. M. HOLLAND; D. A. BARON. *USC.*
- 8:00 QQ2 **162.29** The formation of the pair bond reduces the density of newborn cells in the anterior accessory olfactory bulb in *Microtus ochrogaster*: The monogamous prairie vole. G. VALERA-MARIN*; T. AGUILAR-GARCÍA; N. F. DIAZ; L. J. YOUNG; R. G. PAREDES; W. PORTILLO. *Univ. Nacional Autónoma De México, Inst. Nacional de Perinatología, Emory Univ.*
- 9:00 DP11/QQ3 **162.30** (Dynamic Poster) 3D-Tracker, an open-source 3D video based behavioral analysis system for laboratory animals for neuroscience. J. MATSUMOTO*; H. NISHIMARU; Y. TAKAMURA; K. MIMURA; A. ASABA; W. SUZUKI; N. ICHINOHE; T. MINAMIMOTO; T. ONO; H. NISHIJO. *Univ. of Toyama, Natl. Inst. of Radiological Sciences, Natl. Inst. for Quantum and Radiological Sci. and Technol., Natl. Inst. of Neuroscience, Natl. Ctr. of Neurol. and Psychiatry.*

POSTER

163. Treatment Mechanisms for Alcohol Use Disorder

Theme G: Motivation and Emotion

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

- 8:00 QQ4 **163.01** Cross-talk between P2X4 and NMDA receptors: Targets for drug development. D. L. DAVIES*; L. RODRIGUEZ; A. GUAN; J. LIANG; L. ASATRYAN. *USC.*
- 9:00 QQ5 **163.02** Serotonin 2A receptor activation rescues stress-mediated alterations in ethanol-induced GABA signaling in the ventral tegmental area. B. A. KIMMEY*; A. OSTROUMOV; J. A. DANI. *Univ. of Pennsylvania Perelman Sch. of Med.*
- 10:00 QQ6 **163.03** Inhibition of the rostromedial tegmental nucleus reverses withdrawal-induced negative affect. E. J. GLOVER*; E. M. STARR; Y. S. CHAO; L. CHANDLER; T. C. JHOU. *Med. Univ. of South Carolina, Med. Univ. of South Carolina.*
- 11:00 QQ7 **163.04 ▲** Inhibition of intracellular calcium release channels within the rat inferior colliculus suppresses alcohol withdrawal seizures. S. J. CHO; J. NEWTON; S. SUMAN; K. DATTA; P. N'GOUEMO*. *GEORGETOWN UNIVERSITY MEDICAL CENTER, GEORGETOWN UNIVERSITY MEDICAL CENTER, GEORGETOWN UNIVERSITY MEDICAL CENTER.*
- 8:00 QQ8 **163.05** Glutamatergic receptor manipulation can attenuate alcohol-induced depressive-like behavior in rats. B. GETACHEW*; Y. TIZABI. *Howard Univ., Howard Univ. Col. of Med.*
- 9:00 QQ9 **163.06** A_{2A} receptor regulates ethanol-induced impulsivity in mice. P. A. STARSKI*; L. PEYTON; A. OLIVEROS; D. CHOI. *Mayo Clin., Mayo Clin., Mayo Clin., Mayo Clin. Col. of Med.*
- 10:00 QQ10 **163.07** Intracerebroventricular administration of interleukin-6 reduces behavioral sensitivity to ethanol exposure in adult male sprague dawley rats. T. BARNEY*; A. GANO; A. S. VORE; T. DEAK. *SUNY Binghamton, Binghamton Univ., Binghamton Univ., Binghamton University-SUNY.*
- 11:00 QQ11 **163.08** Effect of oxytocin on stress-induced reinstatement of alcohol-seeking behavior in male and female mice. C. KING*; H. C. BECKER. *Med. Univ. of South Carolina, Med. Univ. South Carolina.*

- 8:00 QQ12 **163.09** Effect of oral and intraperitoneal administration of pro-dopamine regulator on binge drinking in rats. N. SOLANKI*; P. DARIUS; K. BLUM; M. C. GONDRE-LEWIS. *Howard Univ., Col. of Medicine, Howard Univ., Univ. of Southern California, Keck Sch. of Med.*
- 9:00 QQ13 **163.10** Neurotensin in the posterior paraventricular thalamus controls excessive ethanol intake. S. PANDEY*; P. BADVE; S. F. LEIBOWITZ; J. R. BARSON. *Drexel Univ. Col. of Med., The Rockefeller Univ.*
- 10:00 QQ14 **163.11** Inhibition of phosphodiesterase 2 decreases ethanol intake in mice. Y. XU*; J. M. O'DONNELL; H. ZHANG. *State Univ. of New York at Buffalo, West Virginia Univ.*
- 11:00 QQ15 **163.12** CRISPR-Cas9 editing of hypocretin (orexin) receptor genes in cell type-specific extended amygdala neurons modulating alcohol drinking and withdrawal-associated behavior. L. DE LECEA*; W. J. GIARDINO; H. YAMAGUCHI. *Stanford Univ. Dept. of Psychiatry and Behavioral Sci.*
- 8:00 QQ16 **163.13** The medial prefrontal cortex neuropeptide y (npy) system modulates binge-like ethanol intake. S. L. ROBINSON*; T. E. THIELE. *Univ. of North Carolina At Chapel Hill, Univ. North Carolina.*
- 9:00 QQ17 **163.14** • Tdcs for the treatment of alcohol cravings among alcohol abusers. D. RUDDER*; P. COULOMBE; C. TESCHE. *Ms., Univ. of New Mexico.*
- 10:00 QQ18 **163.15** Vagotomization disrupts Insular reward anticipation processing. S. VICENCIO*; M. AGUILAR-RIVERA; P. E. MALDONADO. *BNI, Fac. of Medicine, Univ. De Chile., UCSD, Univ. De Chile.*
- 11:00 QQ19 **163.16** ▲ Preclinical evaluation of the kappa-opioid receptor antagonist CERC-501 as a potential candidate therapeutic for alcohol dependence. E. DOMI*; E. BARBIER; E. AUGIER; G. AUGIER; D. GEHLERT; R. BARCHIESI; A. THORSELL; M. HEILIG. *Dept. of Clin. and Exptl. Medicine, Matrix Pharma Consulting, Boulder, CO, United States Cerecor, Baltimore, MD, United States.*
- 8:00 RR2 **164.05** *In vivo* calcium imaging of SKF38393 induced perseverative grooming in awake behaving mice. J. R. HYDE*; S. E. AHMARI. *Univ. of Pittsburgh, Univ. of Pittsburgh.*
- 9:00 RR3 **164.06** Dysregulation of cortical inputs to central striatum play a role in compulsive-like grooming in Sapap3-KO mice. V. L. CORBIT*; A. H. GITTIS; S. E. AHMARI. *Univ. of Pittsburgh, Carnegie Mellon Univ., Univ. of Pittsburgh.*
- 10:00 RR4 **164.07** ▲ Compared to male rats, female rats display increased OCD-like compulsive behaviors in the Hole Board and Marble Arena and decreased anxiety behaviors in the Elevated Plus Maze. J. L. STEPHENS*; E. CHARTAMPELIA; A. T. DANGLER; E. D. ELLIS; H. L. PALMATARY; D. S. KREISS. *Washington & Lee Univ., Macalester Col.*
- 11:00 RR5 **164.08** ▲ Who's your daddy? Transgenerational epigenetic effects of the neonatal clomipramine rodent model of obsessive compulsive disorder. C. C. DAVIS*; K. W. SINGERMAN; S. J. BELFORTI; A. K. FERRERO; A. A. WUBAH; D. S. KREISS. *Washington and Lee Univ., Macalester Col.*
- 8:00 RR6 **164.09** The influence of pavlovian memories on a rodent model of compulsive checking relevant to obsessive-compulsive disorder. A. L. MILTON*; G. H. VOUSDEN; S. PAULCAN; D. M. EAGLE; T. W. ROBBINS. *Univ. of Cambridge.*
- 9:00 RR7 **164.10** Shared and disorder-specific neurocomputational mechanisms of decision-making in autism spectrum disorder and obsessive-compulsive disorder. C. O. CARLISI*; L. J. NORMAN; C. M. MURPHY; A. CHRISTAKOU; K. CHANTILUKE; V. GIAMPIETRO; A. SIMMONS; M. BRAMMER; D. G. MURPHY; D. MATAIX-COLS; K. RUBIA. *Inst. of Psychiatry, King's Col. London, Univ. of Reading, Dept. of Clin. Neuroscience(DM-C), Ctr. for Psychiatry Research, Karolinska Institutet.*
- 10:00 RR8 **164.11** Juvenile onset of stereotypy with loss of BDNF signaling in D1R expressing striatal neurons. M. ENGELN*; R. CHANDRA; A. LA; Y. SONG; B. EVANS; T. C. FRANCIS; R. HERTZANO; M. LOBO. *Univ. of Maryland Baltimore, Univ. of Maryland Baltimore, Univ. of Maryland Baltimore.*
- 11:00 RR9 **164.12** mCPP-induced grooming behavior and fear extinction: Possible relation with obsessive-compulsive disorder. A. R. DE OLIVEIRA*; A. E. REIMER; G. P. BRAGA; L. M. TAGUCHI; V. M. KAWAOKU; M. L. BRANDÃO. *Univ. Federal de Sao Carlos, Inst. de Neurociencia e Comportamento (INeC), Univ. de Sao Paulo, Harvard Med. Sch.*
- 8:00 RR10 **164.13** Altered habit formation in Sapap3 knockout mice. I. EHMER*; M. FEENSTRA; I. WILLUHN; D. DENYS. *Netherlands Inst. For Neurosci., Academic Med. Center, Univ. of Amsterdam.*
- 9:00 RR11 **164.14** A robust evaluation of morphologic alterations in obsessive-compulsive disorder with and without pharmacological interventions. Q. LV; Z. WANG; C. ZHANG; Q. FAN; Q. ZHAO; K. ZELJIC; B. SUN; Z. XIAO; Z. WANG*. *Inst. of Neurosci., Shanghai Mental Hlth. Center, Shanghai Jiao Tong Univ. Sch. of Med., Dept. of Functional Neurosurgery, Shanghai Jiao Tong Univ. Sch. of Med., Shanghai Jiao Tong Univ. Sch. of Med.*

POSTER

164. Animal Models: Obsessive-Compulsive Disorder

Theme G: Motivation and Emotion

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

- 8:00 QQ20 **164.01** Impaired OCD-relevant cognitive flexibility and altered cortico-striatal activity in SAPAP3 knockout mice. E. E. MANNING*; M. M. TORREGROSSA; S. E. AHMARI. *Univ. of Pittsburgh.*
- 9:00 QQ21 **164.02** • The role of candidate gene Slc1a1 in ocd-relevant behaviors in mice. J. M. KOPELMAN*; I. D. ZIKE; K. F. TANAKA; J. VEENSTRA-VANDERWEELE; S. E. AHMARI. *Univ. of Pittsburgh, Columbia Univ., Keio Univ., Univ. of Pittsburgh.*
- 10:00 QQ22 **164.03** Stimulation of medial orbitofrontal cortex terminals in ventromedial striatum causes neuroplastic changes in cortex. J. WOOD*; R. K. SNYDER; S. E. AHMARI. *Univ. of Pittsburgh, Univ. of Pittsburgh.*
- 11:00 RR1 **164.04** Cortico-striatal molecular dysfunction in OCD post-mortem brain tissue. S. E. AHMARI*; B. CHAMBERLAIN; D. A. LEWIS; S. C. PIANTADOSI. *Univ. of Pittsburgh.*

• Indicated a real or perceived conflict of interest, see page 137 for details.
 ▲ Indicates a high school or undergraduate student presenter.
 * Indicates abstract's submitting author

- 10:00 RR12 **164.15** MeCP2 and histone deacetylases 1 and 2 in dorsal striatum collectively suppress repetitive behaviors. M. MAHGOUB*; M. ADACHI; K. SUZUKI; X. LIU; E. T. KAVALLALI; M. H. CHAHROUR; L. M. MONTEGGIA. *UTSW Med. Ctr. At Dallas, UTSW Med. Ctr. At Dallas, UTSW Med. Ctr. At Dallas.*
- 11:00 RR13 **164.16** Obsessive-compulsive disorder and brain activation during changes in action intention. P. BÉDARD; S. L. GARNAAT; B. D. GREENBERG; J. N. SANES*. *Brown Univ., Brown Univ., Providence VA Med. Ctr.*
- POSTER**
- 165. Animal Models of Trauma, Stress, and Anxiety I**
- Theme G: Motivation and Emotion**
- Sun. 8:00 AM – *Walter E. Washington Convention Center, Halls A-C*
- 8:00 RR14 **165.01** Post-traumatic stress disorder in the controlled cortical impact model of brain injury. A. M. CHOO; S. DAVIS; M. LANG; A. BARBOZA; A. HACKETT; W. ALVINS; M. OSBORNE; Q. CHANG; T. HANANIA*. *PsychoGenics Inc.*
- 9:00 RR15 **165.02** Different sources of stress: Sex and model type differences. P. TORRES-CARRILLO*; M. VARGAS-GOMEZ; J. MIRANDA-GUZMAN; H. T. GOMEZ-AVALOS; L. VERDIN-RUVALCABA; D. B. PAZ-TREJO; L. D. OCHOA DE LA PAZ; H. SANCHEZ-CASTILLO. *Univ. Nacional Autonoma De Mexico, Facultad de Psicología, UNAM, Facultad de Psicología, UNAM, Univ. de Guadalajara, Facultad de Medicina, UNAM, Univ. Nacional Autonoma De Mexico. Fac Psicología.*
- 10:00 RR16 **165.03** Characterization of predator odor scent stress using a behavioral battery and exploration of inheritance of behavioral phenotypes in Long Evans rats. D. DOPFEL*; A. VERBITSKY; T. SCHLAMB; N. ZHANG. *Pennsylvania State Univ.*
- 11:00 RR17 **165.04** Studying a post-traumatic stress disorder rat model with awake resting-state fMRI and behavior techniques. P. D. PEREZ*; D. DOPFEL; N. ZHANG. *Pennsylvania State Univ., Pennsylvania State Univ.*
- 8:00 RR18 **165.05** Changes in Neurotrophic factors and PKB/AKT in the striatum and cerebellum in a rat model of posttraumatic stress disorder (PTSD): A relevance for movement disorders. G. T. NGOUPAYE*; W. M. U. DANIELS; M. V. MABANDLA. *Dept. of Animal Biology, Univ. of Dschan, Univ. of Kwazulu Natal, Univ. of Witwatersrand.*
- 9:00 RR19 **165.06** ▲ Early life trauma exposure yields resistance to fear extinction without increased anxiety in adulthood. A. PEGUERO*; E. J. PASCOE; K. M. SCHEIVE; J. J. QUINN, 45056. *Miami Unviersity.*
- 10:00 RR20 **165.07** Gene expression analysis in foot-shock induced PTSD model mouse. H. LI; M. TANAKA*; X. ZHANG; J. SINGH; C. DALGARD; M. WILKERSON; G. MUELLER; Y. ZHANG. *USUHS, USUHS.*
- 11:00 RR21 **165.08** Identification and characterization of a genetic candidate for fear extinction from quantitative trait locus to pharmacology. O. GUNDUZ CINAR*; E. BROCKWAY; L. LEDERLE; T. WILCOX; L. R. HALLADAY; Y. DING; H. OH; E. F. BUSCH; K. KAUGARS; S. FLYNN; K. P. MACPHERSON; S. MASNEUF; C. PINARD; E. SIBILLE; E. J. CHESLER; A. HOLMES. *Natl. Inst. on Alcoholism and Alcohol Abuse, The Jackson Lab., Dept. of Statistics, Univ. of Pittsburgh, Dept. of, Psychiatry Univ. of Pittsburgh, Campbell Family Mental Hlth. Res. Inst. of CAMH, Departments of Psychiatry and Pharmacol. & Toxicology, Univ. of Toronto.*
- 8:00 RR22 **165.09** ● Ganaxolone improves anxiety and PTSD associated behaviors in socially isolated mice by increasing allopregnanolone biosynthesis. M. S. SAPORITO*; A. LOCCI; G. PINNA. *Marinus Pharmaceuticals, Inc., Univ. of Illinois at Chicago, Univ. of Illinois at Chicago.*
- 9:00 RR23 **165.10** Intravenous sub-anesthetic ketamine infusion dose-dependently enhances fear and delays fear extinction in male Sprague-Dawley rats. K. D. RADFORD; T. Y. PARK; L. OSBORNE-SMITH; K. CHOI*. *Uniformed Services Univ. of the Hlth. Sci., Uniformed Services Univ. of the Hlth. Sci., Ctr. for the Study of Traumatic Stress, Oregon Hlth. and Sci. Univ.*
- 10:00 RR24 **165.11** Increased mGluR5 and CB1R mRNA expression in the amygdala is associated with resilience to anxiety following predator odor exposure in rats. J. SHALLCROSS*; M. SCHWENDT; L. KNACKSTEDT. *Univ. of Florida.*
- 11:00 RR25 **165.12** Interaction of regional distribution of NMDA receptor subtypes with glucocorticoid effects upon these subtypes as a potential substrate for PTSD. T. S. COTRONE; M. F. EHRICH; B. G. KLEIN*. *Virginia Tech, Col. of Vet. Med.*
- 8:00 RR26 **165.13** Characterization of the neurobiological and behavioral correlates of susceptibility and resilience to traumatic stress. E. M. BLACK*; Z. D. BRODNIK; N. W. SNYDER; R. A. ESPAÑA. *Drexel Univ. Col. of Med., A.J. Drexel Autism Inst.*
- 9:00 RR27 **165.14** Target gene prediction of differentially expressed small RNAs in the prefrontal cortex of FKBP5 knock out mouse. K. CHOI*; S. SIHWAN; K. HYO JUNG. *Chung-Ang Univ.*
- 10:00 RR28 **165.15** ▲ Sex-dependent effects of chronic nicotine in spontaneous recovery of contextual fear. J. TUMOLO*; M. G. KUTLU; T. J. GOULD. *Temple Univ., Penn State Univ., Penn State.*
- 11:00 RR29 **165.16** Single prolonged stress causes changes in neural activation within the PAG and Amygdala during fear conditioning. R. DELLA VALLE; E. MOULTON; M. CHAMNESS; D. K. KNOX*. *Univ. of Delaware.*
- 8:00 RR30 **165.17** ● Characterization of novel mouse model reveals a new role for FKBP5 in regulating synaptic plasticity. L. J. BLAIR*; M. CRIADO-MARRERO; X. WANG; D. ZHENG; J. M. WEBSTER; E. J. WEEBER; C. A. DICKEY. *USF Byrd Inst., Univ. of South Florida, Univ. of South Florida, Univ. of South Florida, Univ. of South Florida, Univ. of South Florida.*
- 9:00 RR31 **165.18** Genetic model of co-morbid posttraumatic stress disorder and increased alcohol intake. E. REDEI*; P. H. LIM; G. SHI; T. WANG; M. MULLIGAN; H. CHEN. *Northwestern Univ. Feinberg Sch. of Med., Univ. Tennessee Hlth. Sci. Ctr.*

- 10:00 RR32 **165.19** Stimulation of the endocannabinoid system by PEA engages neurosteroid biosynthesis to improve anxiety and fear in a PTSD mouse model. A. LOCCI; G. PINNA*. *The Psychiatric Institute, UIC, Univ. of Illinois At Chicago.*
- 11:00 RR33 **165.20** Prior stress differentially alters anxiety-like responding to intra-BNST pituitary adenylate cyclase activating polypeptide (PACAP) in male and female rats. S. B. KING*; D. J. TOUFEXIS; V. MAY; S. E. HAMMACK. *Univ. of Vermont, Univ. of Vermont.*

POSTER

166. Learning and Memory: Hippocampal-Prefrontal-Basal Forebrain Interactions

Theme H: Cognition

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

- 8:00 RR34 **166.01** Projection-specific inactivations of prelimbic cortex to the nucleus reuniens of the thalamus and perirhinal/lateral entorhinal cortex impairs memory for sequences of events in rats. M. JAYACHANDRAN*; M. SCHLECHT; S. B. LINLEY; R. P. VERTES; T. A. ALLEN. *Florida Intl. Univ., Florida Intl. Univ., Florida Atlantic Univ., FAU/Ctr Complex Systems.*
- 9:00 RR35 **166.02** • NeuroCap: A 3D-printable stereotaxic system for fast, precise, and reliable chronic brain implants in rodents. L. M. FEINBERG*; L. M. ALLEN*; M. JAYACHANDRAN; T. A. ALLEN. *Florida Intl. Univ.*
- 10:00 RR36 **166.03** The effect of chemogenetic inactivation of the nucleus reuniens (RE) or selective RE terminals to the hippocampus or medial prefrontal cortex on spatial working memory in a delayed nonmatch to sample t-maze task in rats. T. D. VIENA*; M. E. SCHREIBER, 33431; K. J. HARRIS; T. A. ALLEN; S. B. LINLEY; R. P. VERTES. *Florida Atlantic Univ., Florida Atlantic Univ., Florida Intl. Univ.*
- 11:00 SS1 **166.04** Inactivation of the nucleus reuniens of the thalamus through hm4Di DREADDs improves interval timing performance. A. DRAPER*; M. JAYACHANDRAN; S. B. LINLEY; R. P. VERTES; T. A. ALLEN. *Florida Intl. Univ., Florida Intl. Univ., Florida Atlantic Univ., FAU/Ctr Complex Systems.*
- 8:00 SS2 **166.05** Role of the thalamic nucleus reuniens in hippocampo-cortical coupling. M. FERRARIS*; A. GHESTEM; A. F. VICENTE; C. BERNARD; P. P. QUILICHINI. *Inst. De Neurosciences Des Systèmes.*
- 9:00 SS3 **166.06** Hippocampal-prefrontal reactivation during awake and sleep sharp-wave ripple events. W. TANG*; J. D. SHIN; L. M. FRANK; S. P. JADHAV. *Brandeis Univ., UC San Francisco, Brandeis Univ.*
- 10:00 SS4 **166.07** Effects of learning on the co-occurrence of hippocampal sharp-wave ripples and prefrontal cortical spindles in the rat. B. HARPER*; M. CONTRERAS; J. FELLOUS. *Univ. of Arizona, Univ. of Arizona.*
- 11:00 SS5 **166.08** Prefrontal cortical disinhibition induces widespread neuronal activation in cortical and subcortical structures that are modified by spatial learning. M. AUGER*; J. MECCIA; L. A. GALEA; S. B. FLORESCO. *Univ. of British Columbia, Univ. of British Columbia, Univ. of British Columbia, Univ. British Columbia.*
- 8:00 SS6 **166.09** Chemogenetic enhancement of prefrontal neuron activity facilitates the formation of precise temporal associations. J. JAROVÍ*; J. VOLLE; X. YU; K. TAKEHARA-NISHIUCHI. *Univ. of Toronto, Univ. of Toronto.*
- 9:00 SS7 **166.10** Distributed representations of temporal associations in the medial prefrontal cortex. K. TAKEHARA-NISHIUCHI*; M. D. MORRISSEY. *Univ. Toronto.*
- 10:00 SS8 **166.11** Investigating the role of septal gabaergic and glutamatergic neurons in exploration and sleep. J. ROBINSON; G. DUCHARME; S. EL MESTIKAWY*; S. WILLIAMS. *Inst. Universitaire En Santé Mentale Douglas, McGill Univ., Univ. Pierre et Marie Curie, McGill Univ.*
- 11:00 SS9 **166.12** Calcium imaging of medial septal glutamatergic neurons during goal-directed freely-behaving navigation. J. BOTT*; E. GAUTHIER-LAFRENIERE; S. WILLIAMS. *Dept of Pyschiatry, McGill University, Douglas Ins.*
- 8:00 SS10 **166.13** Role of medial septum cholinergic neurons in memory consolidation during REM sleep. J. KANG*; E. TRILLAUD-DOPPIA; S. WILLIAMS. *Douglas Mental Hlth. Univ. Inst.*
- 9:00 SS11 **166.14** Dynamically maintaining the spatial relationship of an electrical tether to a freely-behaving mouse using computer numerical control. B. RIVARD*; S. WILLIAMS. *Douglas Mental Hlth. Univ. Inst.*
- 10:00 SS12 **166.15** Deep brain stimulation improves spatial memory in an Alzheimer's disease mouse model. E. VICO VARELA*; G. ETTER; S. WILLIAMS. *McGill Univ. -Douglas Mental Hlth. Uni. Inst.*
- 11:00 SS13 **166.16** Optogenetic stimulation of medial septum parvalbumin neurons to restore memory functions in freely moving APP Alzheimer mice. G. ETTER*; E. VICO-VARELA; S. WILLIAMS. *Douglas Mental Hlth. Inst.*
- 8:00 SS14 **166.17** • Simultaneous multi-region calcium imaging in freely behaving mice. L. PENAZZI*; J. BOTT; Y. SOUDAGAR; E. LAFRENIERE; F. MANSEAU; B. RIVARD; S. WILLIAMS. *McGill University-Douglas Inst., Neurescence Inc.*
- 9:00 SS15 **166.18** Dynamics of cholinergic modulation in hippocampal region CA1 during context exploration and goal oriented learning. R. NYILAS*; J. B. PRIESTLEY, IV; W. LI; E. M. BALOUGH; J. C. BOWLER; A. LOSONCZY. *Columbia Univ. Med. Ctr.*

POSTER

167. Human Long-Term Memory: Declarative

Theme H: Cognition

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

- 8:00 SS16 **167.01** Neural activity associated with repetitive simulation of episodic counterfactual thoughts. F. DE BRIGARD*; N. PARIKH; G. W. STEWART; K. K. SZPUNAR; D. L. SCHAFTER. *Duke Univ., Duke Univ., Univ. of Illinois at Chicago, Harvard Univ.*
- 9:00 SS17 **167.02** Imaging memory transformation: Neural signature of detailed and gist-like memories of recent and remote events. L. C. DANDOLO*; L. SCHWABE. *Univ. Hamburg.*

• Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 10:00 SS18 **167.03** Hippocampal contribution to cortical reinstatement during episodic retrieval. J. JIANG*; K. F. LAROCQUE; S. GUERIN; C. FERNANDEZ; A. D. WAGNER. *Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ.*
- 11:00 SS19 **167.04** Hippocampal subfield contributions to the recollection of multi-element events: Functional evidence at 7 tesla. X. GRANDE*; J. A. BISBY; D. BERRON; A. J. HORNER; E. DUZEL; N. BURGESS. *Otto-von-Guericke Univ. Magdeburg, German Ctr. for Neurodegenerative Dis., Univ. Col. London, Univ. Col. London, Univ. of York.*
- 8:00 SS20 **167.05** Identifying multivariate representations associated with temporal duration information in the context of individual event sequence memories. S. THAVABALASINGAM*; E. B. O'NEIL; J. TAY; A. NESTOR; A. C. LEE. *Univ. of Toronto, Rotman Res. Institute, Baycrest Ctr.*
- 9:00 SS21 **167.06** The neural basis of thematically and spatially guided recall of recent and remote autobiographical memories. L. GURGURYAN*; S. SHELDON. *McGill Univ.*
- 10:00 SS22 **167.07** Long range cortical, but not local, substantia nigra single neuron spike field coherence predicts successful declarative memory formation in humans. J. KAMINSKI*; A. MAMELAK; K. BIRCH; M. TAGLIATI; U. RUTISHAUSER. *Cedars-Sinai Med. Ctr., Caltech, Cedars-Sinai Med. Ctr., Cedars-Sinai Med. Ctr.*
- 11:00 SS23 **167.08** Functional network of medial prefrontal cortex compensates episodic memory function following medial temporal lobe resection. W. JEONG*; H. LEE; J. KIM; C. CHUNG. *Seoul Natl. Univ. Hosiptal, Seoul Natl. Univ. Col. of Natural Sci., Natl. Ctr. for Mental Hlth., Seoul Natl. Univ. Col. of Natural Sci.*
- 8:00 SS24 **167.09** Perception and recall of narrative event schemas. C. BALDASSANO*; R. MASIS-OBANDO; U. HASSON; K. A. NORMAN. *Princeton Univ.*
- 9:00 SS25 **167.10** Understanding the relationship between repetition priming and episodic memory. G. KIM*; B. A. KUHL. *Univ. of Oregon.*
- 10:00 SS26 **167.11** Dynamic functional connectivity during incidental memory encoding: A functional magnetic resonance imaging (fMRI) study. R. KEERATIVITTAYAYUT*; R. AOKI; K. NAKAHARA. *Kochi Univ. of Technol.*
- 11:00 SS27 **167.12** Encoding related modulation of regional activity differs depending on how memory is tested. D. R. KING*; B. C. LEGA; M. D. RUGG. *Ctr. for Vital Longevity, UT Dallas, UT Southwestern Med. Ctr., Univ. of Texas at Dallas Ctr. for Vital Longevity.*
- 9:00 SS29 **168.02** Frequency-specific noninvasive modulation of hippocampal-cortical networks and memory. M. S. HERMILLER*; D. J. GREEN; S. VANHAERENTS; T. RAIJ; D. J. BRIDGE; J. L. VOSS. *Northwestern Univ., Northwestern Univ., Northwestern Univ., Rehabil. Inst. of Chicago, Northwestern Univ., Northwestern Univ.*
- 10:00 SS30 **168.03** Is memory precision supported by a hippocampal-cortical network? Evidence from brain lesions and noninvasive stimulation. A. NILAKANTAN*; D. J. BRIDGE; S. A. VANHAERENTS; J. L. VOSS. *Northwestern Univ. - Chicago, Northwestern Univ., Northwestern Univ.*
- 11:00 SS31 **168.04** Testing the role of dorsolateral prefrontal cortex in memory-related viewing behaviors using non-invasive stimulation. D. R. O'YOUNG*; D. J. BRIDGE; S. A. VANHAERENTS; J. L. VOSS. *Northwestern Univ. - Chicago, Northwestern Univ., Northwestern Univ.*
- 8:00 SS32 **168.05** Targeting hippocampal-cortical memory networks in elderly adults using noninvasive brain stimulation. J. A. WALKER*; M. S. HERMILLER; A. S. NILAKANTAN; M. MESULAM; S. WEINTRAUB; M. WARD; S. A. VANHAERENTS; D. J. BRIDGE; J. L. VOSS. *Northwestern Univ., Northwestern Univ., Northwestern Univ. - Chicago, Cognitive Neurol. and Alzheimer's Dis. Ctr., Northwestern University, Feinberg Sch. of Medicine, Northwestern Univ., Northwestern Univ.*
- 9:00 SS33 **168.06** Evaluating long-term effects of multi-day rTMS in healthy young and elderly adults. M. M. GUNLOGSON*; R. T. PALUMBO; J. T. O'NEIL; V. MCDONALD; S. A. VANHAERENTS; J. L. VOSS. *Northwestern Univ., Northwestern Univ., Northwestern Med.*
- 10:00 SS34 **168.07** Comparison of hippocampal-cortical network modulation by targeted noninvasive stimulation to modulation by memory processing. K. N. WARREN*; M. HERMILLER; R. PALUMBO; S. VANHAERENTS; D. BRIDGE; J. VOSS. *Northwestern Univ., Northwestern Univ., Northwestern Univ.*
- 11:00 SS35 **168.08** Dynamic interaction between episodic and motor memory systems. J. L. VOSS*; S. KIM. *Northwestern Univ., Northwestern Univ.*
- 8:00 SS36 **168.09** Hippocampal oscillatory signals of memory-related viewing behaviors. D. J. BRIDGE*; J. A. WALKER; C. ZELANO; N. W. WHITMORE; S. A. VANHAERENTS; J. L. VOSS. *Northwestern Univ., Northwestern Univ.*
- 9:00 SS37 **168.10** Brain stimulation of functional networks for associative learning in aging. Z. FATIMA*; T. RAIJ; N. SCHNEIDER-GARCES; M. S. HERMILLER; R. MCINTOSH; J. L. VOSS. *Northwestern Univ. Feinberg Sch. of Medicine, Northwestern Univ., Shirley Ryan Ability Lab., Northwestern Univ., Rotman Res. Inst.*
- 10:00 SS38 **168.11** Memory framework for testing deep brain stimulation, augmenting memory and investigating long term accelerated forgetting in patients with epilepsy. C. KATZ*; V. BARKLEY; K. D. DUNCAN; T. A. VALIANTE. *Univ. of Toronto Univ. Hlth. Network, Univ. Hlth. Network, Univ. of Toronto, Toronto Western Hosp.*
- 11:00 SS39 **168.12** Tuning direct electrical amygdala stimulation parameters for declarative memory enhancement in humans. C. S. INMAN*; J. R. MANNS; K. R. BIJANKI; D. I. BASS; R. E. GROSS; J. T. WILLIE. *Emory Univ. Sch. of Med., Emory Univ., Univ. of Washington.*
- 8:00 SS40 **168.13** Direct electrical stimulation of the human temporal cortex enhances memory. S. JUN*; J. KIM; C. CHUNG. *Seoul Natl. Univ., Seoul Natl. Univ. Hosp.*

POSTER

168. Human Long-Term Memory: Brain Stimulation and Neural Prostheses

Theme H: Cognition

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

- 8:00 SS28 **168.01** Enhanced stimulus-evoked hippocampal-cortical activity during memory formation following network-targeted noninvasive brain stimulation. S. KIM*; M. S. HERMILLER; R. PALUMBO; S. A. VANHAERENTS; J. L. VOSS. *Northwestern Univ., Northwestern Univ.*

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* Indicates abstract's submitting author

- 9:00 SS41 **168.14** Fixing broken memory: Facilitation of delayed recognition short-term memory in human subjects via a neural prosthetic for human memory. R. E. HAMPSON*; B. M. ROEDER; A. S. DAKOS; R. T. WICKS; M. R. WITCHER; D. E. COUTURE; A. W. LAXTON; H. MUNGER-CLARY; G. POPLI; M. J. SOLLMAN; D. SONG; B. S. ROBINSON; V. Z. MARMARELIS; T. W. BERGER; S. A. DEADWYLER. *Wake Forest Sch. of Med., USC.*
- 10:00 SS42 **168.15** Fixing broken memory: Measuring human hippocampal dimensions for depth electrode placement in a neural prosthetic for human memory. B. M. ROEDER*; C. WHITLOW; A. S. WHITLOW; R. T. WICKS; M. R. WITCHER; D. E. COUTURE; A. W. LAXTON; H. MUNGER-CLARY; G. POPLI; M. J. SOLLMAN; S. A. DEADWYLER; R. E. HAMPSON. *Wake Forest Sch. of Med., Wake Forest Sch. of Med., Wake Forest Sch. of Med., Wake Forest Sch. of Med., Wake Forest Sch. of Med.*
- 11:00 SS43 **168.16** Fixing broken memory: Decoding memories from human hippocampal spiking activities. X. SHE*; D. SONG; R. E. HAMPSON; V. MARMARELIS; S. A. DEADWYLER; T. W. BERGER. *USC, Univ. of Southern California Dept. of Biomed. Engin., Wake Forest Sch. of Med., USC.*
- 8:00 SS44 **168.17** Fixing broken memory: Reinstating memory codes with multi-input, multi-output models of the hippocampus in human. D. SONG*; R. E. HAMPSON; B. S. ROBINSON; X. SHE; V. Z. MARMARELIS; S. A. DEADWYLER; T. W. BERGER. *Univ. of Southern California Dept. of Biomed. Engin., USC, Wake Forest Sch. of Med.*
- 9:00 SS45 **168.18** Fixing broken memory: Facilitation of delayed match to sample working memory in human subjects via a neural prosthetic for human memory. S. A. DEADWYLER*; B. M. ROEDER; A. S. DAKOS; R. T. WICKS; M. R. WITCHER; D. E. COUTURE; A. W. LAXTON; H. MUNGER-CLARY; G. POPLI; M. J. SOLLMAN; D. SONG; B. S. ROBINSON; V. Z. MARMARELIS; T. W. BERGER; R. E. HAMPSON. *Wake Forest Sch. of Med., USC.*
- 8:00 SS50 **169.05** Deforming memory space. J. BELLMUND*; T. A. RUITER; C. BARRY; C. F. DOELLER. *Kavli Inst. For Systems Neuroscience, NTNU, Donders Institute, Radboud Univ., Univ. of Amsterdam, UCL.*
- 9:00 SS51 **169.06** Hexadirectional signals during exploration of visual space in human MEG data. T. STAUDIGL*; O. JENSEN; C. F. DOELLER. *Donders Institute, Radboud Univ., Univ. of Birmingham, Kavli Inst. for Systems Neuroscience, NTNU.*
- 10:00 SS52 **169.07** Electromagnetic dynamics of hexadirectional activity during virtual navigation. T. NAVARRO SCHROEDER*; T. STAUDIGL; J. SCHOFFELEN; C. F. DOELLER. *Kavli Inst. For Systems Neuroscience, NTNU, Donders Institute, Radboud Univ., Donders Institute, Radboud University, Nijmegen, Netherlands.*
- 11:00 SS53 **169.08** Visual space in human entorhinal cortex. M. NAU*; T. NAVARRO SCHRÖDER; C. F. DOELLER. *Kavli Inst. For Systems Neuroscience, NTNU, Donders Institute, Radboud Univ.*
- 8:00 SS54 **169.09** Preactivation of choice options while anticipating future events. S. H. COLLIN*; C. VAN DUN; B. MILIVOJEVIC; C. F. DOELLER. *Donders Institute, Radboud Univ., Kavli Inst. for Systems Neurosci. | Ctr. for Neural Computation, NTNU – Norwegian Univ. of Sci. and Technol.*
- 9:00 SS55 **169.10** Interacting mechanisms between the ventral striatum and hippocampus during the encoding of social memories associated with a victory in a competition with others. H. SUGIMOTO*; T. TSUKIURA. *Kyoto Univ.*
- 10:00 SS56 **169.11** Inter-subject synchrony predicts learning success for educational content. S. S. COHEN*; G. TOUCHAN; D. ROBLES; S. FERRARI; S. HENIN; L. C. PARRA. *The CUNY Grad. Ctr., The City Col. of the City Univ. of New York, City Col. of New York.*
- 11:00 SS57 **169.12** Administration of a beta-adrenoceptor antagonist to block action-induced episodic memory enhancement. A. I. GALARZA VALLEJO*; M. YEBRA; V. SOTO-LEÓN; A. OLIVIERO; B. A. STRANGE. *Ctr. De Tecnologia Biomedica CTB, Univ. Politécnica de Madrid, Ctr. de Biomed. Technol. (CTB), Hosp. Nacional de Paraplégicos.*
- 8:00 SS58 **169.13** Neural representation of musical contexts in high-level cortical regions. J. A. WILLIAMS*; J. CHEN; C. BALDASSANO; U. HASSON; K. NORMAN. *Princeton Univ., Johns Hopkins.*
- 9:00 SS59 **169.14** Preparatory attentional control state influences later memory. M. T. DEBETTENCOURT*; E. AWH; E. K. VOGEL. *Univ. of Chicago.*
- 10:00 SS60 **169.15** Recognition of attended words is differentially represented in the anterior temporal lobe and the prefrontal cortex. T. BONNEVIE*; J. H. WITTIG, JR; K. A. ZAGHLOUL. *Norwegian Univ. of Sci. and Technol., Trondheim Univ. Hosp., NINDS, Natl. Inst. of Neurolog. Disorders and Stroke, NIH.*
- 11:00 SS61 **169.16** Human anterior temporal lobe controls top-down attention to improve verbal memory. J. H. WITTIG*, JR; S. INATI; K. A. ZAGHLOUL. *NINDS, Natl. Inst. of Neurolog. Disorders and Stroke, NIH.*
- 8:00 DP12/SS62 **169.17** (Dynamic Poster) Traveling waves in the human cortex are ubiquitous. V. SREEKUMAR*; K. A. ZAGHLOUL. *NINDS/NIH, Natl. Inst. of Neurolog. Disorders and Stroke, NIH.*

POSTER

169. Human Long-Term Memory: Encoding

Theme H: Cognition

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

- 8:00 SS46 **169.01** Coding and recoding of distances in space. N. DE HAAS*; L. OTTINK; C. F. DOELLER. *Donders Institute, Radboud Univ., Kavli Inst. for Systems Neurosci. | Ctr. for Neural Computation, NTNU - Norwegian Univ. of Sci. and Technol.*
- 9:00 SS47 **169.02** Mapping and remapping in conceptual space. S. THEVES*; A. JODZIO; G. FERNANDEZ; C. F. DOELLER. *Donders Institute, Radboud Univ., Radboud Univ. Med. Ctr., Kavli Inst. for Systems Neuroscience, NTNU.*
- 10:00 SS48 **169.03** Neural signatures of conceptual knowledge acquisition. L. S. SCHURMANN*; A. R. BACKUS; B. MILIVOJEVIC; C. F. DOELLER. *Donders Institute, Radboud Univ., Kavli Inst. for Systems Neurosci. | Ctr. for Neural Computation, NTNU – Norwegian Univ. of Sci. and Technol.*
- 11:00 SS49 **169.04** Temporal metric for narrative memory space. B. MILIVOJEVIC*; T. NAVARRO SCHROEDER; C. F. DOELLER. *Donders Inst. for Brain, Cognition and Behaviour; Radboud Univ. Nijmegen, Kavli Institute, NTNU.*

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

- 9:00 SS63 **169.18** Decreases in spectral power and flattening of spectral slope, across time scales, correlate with improved performance during a paired associates memory task. T. SHEEHAN*; V. SREEKUMAR; K. A. ZAGHLOUL. *NIH, NINDS/NIH, Natl. Inst. of Neurolog. Disorders and Stroke, NIH.*
- 10:00 SS64 **169.19** Decoding the dynamic neural representation of specific stimuli in human associative memory. M. TROTTA*; J. H. WITTIG, JR; K. A. ZAGHLOUL. *NIH, NINDS, Natl. Inst. of Neurolog. Disorders and Stroke, NIH.*
- 11:00 SS65 **169.20** Hold that thought: When mental contexts survive interruptions to bind memories. S. DUBROW*; M. SONG; Y. NIV; K. NORMAN. *Princeton Univ.*
- 8:00 SS66 **169.21** Intentional forgetting via memory weakening in sensory cortex. T. H. WANG*; K. PLACEK; J. A. LEWIS-PEACOCK. *Univ. of Texas At Austin, Univ. of Pennsylvania, Univ. of Texas at Austin.*
- 9:00 TT1 **169.22** Large-scale network connectivity changes underlying memory formation. A. TAMBINI*; D. J. LURIE; R. C. LAPATE; M. D'ESPOSITO. *Univ. of California Berkeley, Univ. of California, Berkeley.*
- 10:00 TT2 **169.23** ▲ The role of corrective feedback in memory for contextual details. A. S. HOWARD*; L. E. BERNSTEIN; J. D. W. STEPHENS; A. A. OVERMAN. *Elon Univ., North Carolina A&T State Univ.*
- 11:00 TT3 **169.24** Valence-specific interactions between heart rate deceleration during encoding and subsequent memory vividness. S. M. KARK*; E. A. KENSINGER. *Boston Col.*
- 8:00 TT4 **169.25** ▲ fMRI activation likelihood estimation of item-item and item-context associative memory. E. S. DENEEN*; A. A. OVERMAN. *Elon Univ., Elon Univ.*
- 9:00 TT5 **169.26** Fronto-parietal EEG inter-subjects synchronization during watching of naturalistic videos predicts subsequent memory recall. V. B. BOGDANOV*; C. BORDIER; V. MAZZA; E. MACALUSO. *Impact Team, Lyon Neurosci. Res. Ctr., Ctr. for Neurosci. and Cognitive Systems, Ctr. for Mind/Brain Sci. (CIMeC), Impact Team.*
- 10:00 TT6 **169.27** Competition between items during learning influences targeted memory reactivation during sleep. J. W. ANTONY*; L. CHENG; P. A. PACHECO; B. WANG; K. A. PALLER; K. A. NORMAN. *Princeton Univ., Northwestern Univ., Princeton Univ., Northwestern Univ.*
- 11:00 TT7 **169.28** ▲ Glucose effect on event model memory. M. TOMBLIN*; G. RADVANSKY; M. ROY; C. FOX, 46556. *Holy Cross Col., Univ. of Notre Dame.*
- 8:00 TT8 **169.29** Survival of the self: Neural examinations of survival encoding. T. EATON*; A. K. ANDERSON. *Col. of Human Ecology, Cornell Univ.*

POSTER

170. Memory Modulation: From Stimulation to Functional Connectivity

Theme H: Cognition

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

- 8:00 TT9 **170.01** ● Pathological ripple oscillations disrupt memory encoding during a free recall task. Z. WALDMAN; B. M. BERRY; M. T. KUCEWICZ; B. ELAHIAN; J. STEIN; S. DAS; R. GORNIK; A. SHARAN; R. E. GROSS; C. S. INMAN; B. C. LEGA; K. A. ZAGHLOUL; B. C. JOBST; K. DAVIS; P. WANDA; M. KHADJEVAND; D. S. RIZZUTO; M. J. KAHANA; G. WORRELL; M. SPERLING; S. A. WEISS*. *Thomas Jefferson Univ., Mayo Clin., Mayo Clin., Univ. of Pennsylvania, Univ. of Pennsylvania, Thomas Jefferson Univ., Emory Univ. Sch. Med., Emory Univ., UT Southwestern Med. Ctr., Natl. Inst. of Neurolog. Disorders and Stroke, NIH, Dartmouth-Hitchcock Med. Ctr., Univ. of Pennsylvania, Univ. of Pennsylvania, Thomas Jefferson Univ.*
- 9:00 TT10 **170.02** Spatiotemporal dynamics of gamma frequency oscillations reveal a widespread network for human memory processing. M. T. KUCEWICZ*; B. M. BERRY; L. R. MILLER; F. KHADJEVAND; P. WANDA; J. M. STEIN; M. R. SPERLING; R. GORNIK; K. A. DAVIS; B. C. JOBST; R. E. GROSS; B. C. LEGA; S. A. SHETH; M. S. STEAD; D. S. RIZZUTO; M. J. KAHANA; G. A. WORRELL. *Mayo Clin., Mayo Clin., Mayo Clin., Mayo Clin. Minnesota, Univ. of Pennsylvania, Univ. of Pennsylvania Hosp., Thomas Jefferson Univ. Hosp., Dartmouth-Hitchcock Med. Ctr., Emory Univ. Sch. Med., UT Southwestern Med. Ctr., Columbia Univ., Univ. of Pennsylvania.*
- 10:00 TT11 **170.03** Changes in low frequency activity depend on location of electrical stimulation in the human cortex. U. R. MOHAN*; A. WATROUS; M. SPERLING; A. SHARAN; G. WORRELL; B. BARRY; B. C. LEGA; B. C. JOBST; K. DAVIS; R. E. GROSS; S. A. SHETH; S. DAS; J. STEIN; R. GORNIK; D. S. RIZZUTO; M. J. KAHANA; J. JACOBS. *Columbia Univ., Thomas Jefferson Univ. Hosp., Thomas Jefferson Univ. Hosp., Mayo Clin., UT Southwestern Med. Ctr., Dartmouth-Hitchcock Med. Ctr., Hosp. of the Univ. of Pennsylvania, Emory Univ. Sch. Med., Columbia Univ., Univ. of Pennsylvania, Hosp. of the Univ. of Pennsylvania, Thomas Jefferson Univ. Hosp., Univ. of Pennsylvania, Univ. of Pennsylvania.*
- 11:00 TT12 **170.04** Identifying single-unit activity in the human medial temporal lobe relating to associative spatial memory. M. TSITSIKLIS*; A. WATROUS; S. QASIM; J. MILLER; S. A. SHETH; C. SCHEVON; R. E. GROSS; C. S. INMAN; M. SPERLING; J. STEIN; S. DAS; R. GORNIK; D. S. RIZZUTO; M. J. KAHANA; D. SHOHAMY; J. JACOBS. *Columbia Univ., Columbia Univ., Columbia Univ., Emory Univ. Sch. Med., Emory Univ., Thomas Jefferson Univ. Hosp., Hosp. of the Univ. of Pennsylvania, Univ. of Pennsylvania, Thomas Jefferson Univ. Hosp., Univ. of Pennsylvania, Columbia Univ.*

- 8:00 TT13 **170.05** The connectivity “tilt”: A detailed map of low-frequency neural synchronization and high-frequency desynchronization within human MTL during learning. E. A. SOLOMON*; S. DAS; R. GORNIK; J. STEIN; C. S. INMAN; B. C. LEGA; B. C. JOBST; K. A. ZAGHLOUL; S. A. SHETH; K. A. DAVIS; G. A. WORRELL; L. MILLER; M. T. SPERLING; A. D. SHARAN; D. S. RIZZUTO; M. J. KAHANA. *Univ. of Pennsylvania, Univ. of Pennsylvania, Thomas Jefferson Univ., Emory Univ., UT Southwestern Med. Ctr., Dartmouth-Hitchcock Med. Ctr., Natl. Inst. of Neurolog. Disorders and Stroke, NIH, Columbia Univ., Univ. of Pennsylvania, Mayo Clin., Univ. of Pennsylvania.*
- 9:00 TT14 **170.06** Evaluating the effects of targeted electrical stimulation on interictal spiking across stimulation sites and parameters. M. A. GORENSTEIN*; S. MEISENHILTER; M. E. TESTORF; P. C. HORAK; J. M. STEIN; M. R. SPERLING; A. D. SHARAN; G. A. WORRELL; L. R. MILLER; K. A. DAVIS; R. E. GROSS; K. A. ZAGHLOUL; S. A. SHETH; B. C. LEGA; D. S. RIZZUTO; M. J. KAHANA; B. C. JOBST. *Dartmouth-Hitchcock Med. Ctr., Dartmouth Col. Geisel Sch. of Med., Dartmouth Col., Hosp. of the Univ. of Pennsylvania, Thomas Jefferson Univ. Hosp., Thomas Jefferson Univ. Hosp., Mayo Clin., Mayo Clin., Hosp. of the Univ. of Pennsylvania, Emory Univ. Hosp., Natl. Inst. of Neurolog. Disorders and Stroke, NIH, Columbia Univ., UT Southwestern Med. Ctr., Univ. of Pennsylvania.*
- 10:00 TT15 **170.07** Novel system for physiologic closed-loop restoration of breathing using cranial nerve derived inputs and electrical stimulation. B. M. BERRY*; M. T. KUCEWICZ; O. U. KHURRAM; C. B. MANTILLA; G. C. SIECK. *Mayo Clin., Mayo Clin., Mayo Clin. Col. of Med., Mayo Clin., Mayo Clin.*
- 11:00 TT16 **170.08** Direct brain stimulation in closed-loop to modulate human episodic memory encoding. Y. EZZYAT*; P. WANDA; J. STEIN; S. DAS; R. GORNIK; M. SPERLING; A. SHARAN; G. WORRELL; R. E. GROSS; B. C. LEGA; K. A. ZAGHLOUL; B. C. JOBST; K. DAVIS; D. S. RIZZUTO; M. J. KAHANA. *Univ. of Pennsylvania, Hosp. of the Univ. of Pennsylvania, Thomas Jefferson Univ. Hosp., Mayo Clin., Emory Univ. Sch. Med., UT Southwestern Med. Ctr., Natl. Inst. of Neurolog. Disorders and Stroke, NIH, Dartmouth-Hitchcock Med. Ctr., Univ. of Pennsylvania.*
- 8:00 TT17 **170.09** • Design of a flexible sense and stimulation system to investigate memory restoration. H. ORSER*; G. LOXTERCAMP; D. CARLSON; M. SWAT; M. DEPALATIS; M. J. KAHANA; T. DENISON; D. RIZZUTO. *Medtronic, Inc., Univ. of Pennsylvania.*
- 9:00 TT18 **170.10** Frequency and phase-tuned neuronal firing supports goal-directed human navigation. A. WATROUS*; J. MILLER; I. FRIED; J. JACOBS. *Columbia Univ., Columbia Univ., UCLA Sch. Med.*
- 10:00 TT19 **170.11** Human place cell activity and remapping during a virtual spatial memory task. S. E. QASIM*; A. SHARAN; C. WU; M. SPERLING; S. SHETH; G. MCKHANN; C. SCHEVON; E. SMITH; B. LEGA; J. LIN; R. E. GROSS; J. T. WILLIE; C. S. INMAN; J. MILLER; J. JACOBS. *Columbia, Thomas Jefferson Univ., Thomas Jefferson Univ., Columbia, Columbia, Univ. of Texas, Southwestern, Emory.*
- 11:00 TT20 **170.12** Hippocampal-parietal interactions during retrieval of true versus false memories. J. LIN*; R. TAN; D. RIZZUTO; M. KAHANA; B. LEGA. *Univ. of Texas Southwestern Med. Ctr., Univ. of Pennsylvania.*
- 8:00 TT21 **170.13** Patterns of directed connectivity during episodic memory encoding and retrieval. J. W. GERMI*; V. S. NATU; J. STEIN; D. S. RIZZUTO; M. J. KAHANA; B. C. LEGA. *Univ. of Texas Southwestern, Dept. of Psychology, Stanford University, Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania, UT Southwestern Med. Ctr.*
- 9:00 TT22 **170.14** Intrinsic functional architecture of cortico-hippocampal networks determines episodic memory formation in humans. J. E. KRAGEL*; T. D. PHAN; P. A. WANDA; J. M. STEIN; S. DAS; R. GORNIK; M. R. SPERLING; A. D. SHARAN; C. S. INMAN; B. C. LEGA; K. A. DAVIS; G. A. WORRELL; M. T. KUCEWICZ; B. C. JOBST; K. A. ZAGHLOUL; S. A. SHETH; D. S. RIZZUTO; M. J. KAHANA. *Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania, Thomas Jefferson Univ., Thomas Jefferson Univ., Emory Univ., UT Southwestern Med. Ctr., Mayo Clin., Dartmouth-Hitchcock Med. Ctr., Natl. Inst. of Neurolog. Disorders and Stroke, NIH, Columbia Univ.*
- 10:00 TT23 **170.15** Neural signatures of location and movement in a human spatial memory task. J. MILLER*; A. WATROUS; S. LEE; M. SPERLING; A. SHARAN; G. WORRELL; B. BERRY; B. C. LEGA; B. C. JOBST; K. DAVIS; R. E. GROSS; S. A. SHETH; S. DAS; J. STEIN; R. GORNIK; D. S. RIZZUTO; J. JACOBS. *Columbia Univ., Thomas Jefferson Univ., Mayo Clin., UT Southwestern Med. Ctr., Dartmouth-Hitchcock Med. Ctr., Hosp. of the Univ. of Pennsylvania, Emory Univ. Sch. Med., Columbia Univ., Univ. of Pennsylvania, Univ. of Pennsylvania.*
- 11:00 TT24 **170.16** Machine learning based classifier to predict episodic memory recall performance in epileptogenic patients. A. ARORA*; B. C. LEGA; S. SEGAR; D. S. RIZZUTO. *UTSOUTHWESTERN MEDICAL CENTER, Univ. of Pennsylvania.*
- 8:00 TT25 **170.17** Trapping memory recall using electrical brain stimulation in epileptic patients. J. CUROT*; L. VALTON; M. DENUELLE; J. SOL; C. BENAR; J. PARIENTE; F. BARTOLOMEI; E. BARBEAU. *Ctr. De Recherche Cerveau Et Cognition (CERCO), Toulouse Univ. Hosp., UMR1106, INSERM, Inst. de Neurosciences des Systèmes Marseille, Aix Marseille Univ., INSERM 1214, Service de Neurophysiologie Clinique, CHU Timone, Assistance Publique des Hôpitaux de Marseille.*
- 9:00 TT26 **170.18** Integrating distributed knowledge for future simulations: the ventromedial prefrontal cortex as a hub of brain-wide connectivity. R. BERKERS*; R. G. BENOIT; D. L. SCHACTER. *Max Planck Inst. For Human Cognitive and Brain, Harvard Univ.*
- 10:00 TT27 **170.19** Distinct neuronal populations for recognition memory and categorization in the human medial frontal cortex. J. MINXHA*; R. ADOLPHS; A. MAMELAK; U. RUTISHAUSER. *Caltech, Cedars-Sinai Medial Ctr., Cedars-Sinai Med. Ctr.*

• Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

POSTER

171. Decision Making and Reasoning: Value and Effort-Based Decisions

Theme H: Cognition

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

- 8:00 TT28 **171.01** Neural substrates of hierarchical processing in strategic reasoning and language: an fMRI study. T. IWABUCHI*; T. INUI. *Hamamatsu Univ. Sch. of Med., Otomon Gakuin Univ.*
- 9:00 TT29 **171.02** A neural signature of malleability: General intelligence correlates with ventral striatal activation and epigenetic markers of dopamine neurotransmission. A. HEINZ*; J. A. KAMINSKI; M. RAPP; F. SCHLAGENHAUF; S. AWASTHI; H. WALTER; B. RUGGERI; G. SCHUMANN; S. RIPKE. *Charité Universitätsmedizin, Berlin, Univ. Potsdam, King's Col. London.*
- 10:00 TT30 **171.03** Neural correlates of discounted subjective value track heroin use in treatment-seeking opioid users. S. LOPEZ-GUZMAN*; A. B. KONOVA; A. URMANCHE; S. ROSS; K. LOUIE; J. ROTROSEN; P. W. GLIMCHER. *NYU, New York Univ., NYU Sch. of Med.*
- 11:00 TT31 **171.04** An imbalance in neural subjective value signaling and connectivity within the brain's valuation circuit underlies heroin use vulnerability in humans. A. B. KONOVA*; S. LOPEZ-GUZMAN; A. URMANCHE; S. ROSS; K. LOUIE; J. ROTROSEN; P. W. GLIMCHER. *New York Univ., New York Univ. Sch. of Med.*
- 8:00 TT32 **171.05** ▲ Personal core values modulate risky choice evaluation and subsequent risk-taking behavior: an fMRI study. Y. CHUANG*; Y. SU; J. O. S. GOH. *Natl. Taiwan Univ., Grad. Inst. of Brain and Mind Sciences, Natl. Taiwan Univ. Col. of Med.*
- 9:00 TT33 **171.06** The use of contextual information in uncertain value-based choices. V. MAN*; W. A. CUNNINGHAM. *Univ. of Toronto.*
- 10:00 TT34 **171.07** Evidence for a neural bottleneck in the transformation from objective value to subjective utility. O. A. MULLETTE-GILLMAN*; Q. LEE; M. CHEUNG; Y. A. KURNIANINGSIH. *Natl. Univ. of Singapore, Natl. Univ. of Singapore.*
- 11:00 TT35 **171.08** Multiple loci of value comparison independently distributed in the brain. J. SU*; Y. NI; Y. GUAN; G. LUAN; X. WAN. *Beijing Normal Univ., IDG/McGovern Inst. for Brain Research, Beijing Normal Univ., SanBo Brain Hospital, Capital Med. Univ., Ctr. of Epilepsy, Beijing Inst. for Brain Disorders.*
- 8:00 TT36 **171.09** Computation of value representations when choosing among attractive faces. N. FURL*. *Royal Holloway, Univ. of London.*
- 9:00 TT37 **171.10** Neural mechanisms underlying effortful persistence. L. M. PATRICK*; K. M. ANDERSON; A. J. HOLMES. *YALE UNIVERSITY, Massachusetts Gen. Hosp.*
- 10:00 TT38 **171.11** Investigating the cost of cognitive effort. C. Z. SAYALI*; A. SPRIO; D. BADRE. *Brown Univ., Brown Univ.*
- 11:00 TT39 **171.12** Fatigue acts on the behavioral and neural representations of effort valuation. P. S. HOGAN*; S. X. CHEN; V. S. CHIB. *Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ., Johns Hopkins Sch. of Med.*
- 8:00 TT40 **171.13** The cognitive chronometry of rapid human decision making. M. D. NUNEZ*; J. VANDEKERCKHOVE; R. SRINIVASAN. *Univ. of California, Irvine.*
- 9:00 TT41 **171.14** The influence of distractor interference and stimulus ambiguity on neural indices of performance monitoring. P. J. BEATTY*; J. R. FEDOTA; D. M. ROBERTS; C. G. MCDONALD. *George Mason Univ., Natl. Inst. on Drug Abuse, Natl. Inst. of Hlth.*
- 10:00 TT42 **171.15** Medical decision making under uncertainty: Behavior and neural correlates. R. JIA*; L. RUDERMAN; T. R. FRIED; I. LEVY. *Yale Univ. Sch. of Med., Yale Univ. Grad. Sch. of Arts and Sci., Yale Univ. Sch. of Med.*
- 11:00 TT43 **171.16** Neural and behavioral expression of human olfactory fear generalization. D. B. PORTER*; L. P. QU; E. GJORGIEVA; T. KAHNT; J. A. GOTTFRIED. *Northwestern Univ.*
- 8:00 TT44 **171.17** Endogenously initiated movements are preceded by neural activities in multiple cortical regions: an event-related fMRI study. H. SAKATA*; K. ITOH; Y. SUZUKI; K. NAKAMURA; M. WATANABE; H. IGARASHI; T. NAKADA. *Brain Res. Institute, Univ. of Niigata, Primate Res. Institute, Kyoto Univ.*
- 9:00 TT45 **171.18** Why do irrelevant option matter? An fMRI-TMS study of context-dependent preferences. H. CHUNG*; T. SJÖSTRÖM; H. LEE; Y. LU; F. TSUO; T. CHEN; C. CHANG; C. JUAN; W. KUO; C. HUANG. *New York Univ., Rutgers Univ., Natl. Yang-Ming Univ., Stony Brook Univ., Natl. Taiwan Univ., Washington Univ. in St. Louis, Natl. Central Univ., Natl. Central University, Taiwan, Natl. Taiwan Univ.*
- 10:00 TT46 **171.19** Electrophysiological and behavioural indices of decision bound adjustments across contexts of weak and strong evidence. S. KELLY*; K. MOHR; R. G. O'CONNELL; H. CRADDOCK. *Univ. Col. Dublin, Trinity Col. Dublin.*
- 11:00 TT47 **171.20** Food-specific hypothalamic up-regulation of valuation signals after sleep deprivation. J. RIHM*; M. M. MENZ; S. M. SCHMID; L. SCHILBACH; J. PETERS. *Univ. of Cologne, Univ. Hosp. Hamburg-Eppendorf, Univ. Hosp. Schleswig-Holstein, German Ctr. for Diabetes Res., Max Planck Inst. of Psychiatry.*
- 8:00 TT48 **171.21** Shared and unique brain activations involved in pleasantness and self-control inferences about foods. J. AVERY*; K. BURROWS; K. L. KERR; J. BODURKA; W. K. SIMMONS. *Natl. Inst. of Mental Hlth., Laureate Inst. for Brain Res., Laureate Inst. For Brain Res., Univ. of Tulsa, Univ. of Tulsa.*
- 9:00 TT49 **171.22** Ultra high gamma codes choice options in delay discounting. S. DÜRSCHMID*; A. MARIC; C. REICHERT; H. HINRICHS. *Otto-von-Guericke Univ. Magdeburg.*
- 10:00 TT50 **171.23** Impaired congruence between preference and choice following damage to the ventromedial prefrontal cortex. M. D. BOWREN*, JR; K. E. CROFT; J. REBER; D. TRANEL. *Univ. of Iowa, Hockaday Sch., Univ. Iowa.*
- 11:00 TT51 **171.24** Individuals with ventromedial prefrontal damage have unstable, but fundamentally transitive preferences. L. Q. YU*; J. DANA; J. W. KABLE. *Univ. of Pennsylvania, Yale Sch. of Mgmt.*

* Indicated a real or perceived conflict of interest, see page 137 for details.
 ▲ Indicates a high school or undergraduate student presenter.
 * Indicates abstract's submitting author

- 8:00 TT52 **171.25** Distributed temporal processing in human prefrontal cortical neurons during cognitive control. E. H. SMITH*; G. HORGA; C. B. MIKELL; M. YATES; G. P. BANKS; Y. PATHAK; S. L. PULLMAN; Q. YU; C. A. SCHEVON; S. SRINIVASAN; G. MCKHANN, II; M. M. BOTVINICK; S. A. SHETH. *Columbia Univ., Columbia Univ. Med. Ctr., Stony Brook Univ., Columbia Univ., Columbia Univ., Princeton Univ.*
- 9:00 TT53 **171.26** An acute bout of aerobic exercise increases metabolism at the prefrontal cortex as determined by optical brain imaging data while subjects perform Stroop test. A. PAL*; N. D. TAM. *UNT, Univ. of North Texas.*
- 10:00 TT54 **171.27** Cathodal tDCS over pmFC reduces post-decisional preference change. M. COLOSIO*; A. SHESTAKOVA; V. KLUCHAREV. *Higher Sch. of Econ. - Natl. Res. Uni.*
- 11:00 TT55 **171.28** Hippocampal encoding of causal confounding. M. LILJEHOLM*; S. M. PONCE; S. KOH. *Univ. of California, Irvine, Univ. of California, Irvine.*
- 8:00 TT56 **171.29** Can foraging behavior shed insights on depression? Using LFPs, EEG and eye tracking in conjunction with a patchy foraging task to establish biomarkers for depression. A. RAMAKRISHNAN*; D. BERKAY; M. L. PLATT. *Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania.*
- POSTER**
- 172. Social Cognition**
- Theme H: Cognition**
- Sun. 8:00 AM – *Walter E. Washington Convention Center, Halls A-C*
- 8:00 TT57 **172.01** The impact of individuation on the bases of human empathic responding. J. E. KIAT*; J. E. CHEADLE. *Univ. of Nebraska-Lincoln.*
- 9:00 TT58 **172.02** Reciprocity of social influence. A. MAHMOODI*; B. BAHRAMI; C. MEHRING. *Bernstein Centre Freiburg, Univ. Col. London, Bernstein Ctr. Freiburg.*
- 10:00 TT59 **172.03** ● Social modulation of foraging behavior in humans: using the patch-use paradigm. Y. OGURA*; A. TOYOMAKI; I. KUSUMI; T. MATSUSHIMA. *Univ. of Tokyo, Grad. Sch. of Medicine, Hokkaido Univ., Hokkaido Univ. Grad Sch. of Med., Hokkaido University, Grad Sch. Sci.*
- 11:00 TT60 **172.04** Neural mechanisms underlying self-consistency in social behavior. J. FUJIWARA*; P. N. TOBLER; K. TSUTSUI; M. TAIRA; Y. UGAWA; S. EIFUKU. *Dept Sys Neurosci, Fukushima Med. Univ., Univ. of Zurich, Tohoku Univ. Grad Sch Life Sci., Tokyo Med. and Dent. Univ., Dept Neurol, Fukushima Med. Univ.*
- 8:00 TT61 **172.05** Deconstructing neurodynamic information flows in healthcare teams during simulation training. R. STEVENS*; T. GALLOWAY; A. WILLEMSSEN-DUNALP. *IMMEX/UCLA, The Learning Chameleon, Order of St. Francis Hosp.*
- 9:00 TT62 **172.06** Characteristics of cognitive impairments and their effects on the functional outcome after inpatient rehabilitation in subacute stroke patients. Y. KIM*; M. SOHN. *Chungnam Natl. Univ. Hosp.*
- 10:00 TT63 **172.07** Multiagent social coordination dynamics - from experiment to model. M. ZHANG*; J. A. S. KELSO; E. TOGNOLI. *Florida Atlantic Univ., Ulster Univ.*
- 11:00 TT64 **172.08** Fundamental modes of social coordination correspond to specific patterns of correlated neural activity in the virtual brain. R. A. STEFANESCU*; E. TOGNOLI; J. A. S. KELSO. *Florida Atlantic Univ., Ulster Univ.*
- 8:00 TT65 **172.09** Functional brain networks reflecting human characteristics. Y. SUNG*; Y. K. KAWACHI, 9893201; D. KANG, 9893201; C. ABE; Y. OTOMO; S. OGAWA, 9893201. *Kansei Fukushi Inst, Tohoku Fukushi Univ., Kansei Fukushi Inst, Tohoku Fukushi Univ.*
- 9:00 TT66 **172.10** Using a dual-task paradigm to assess the effects of cerebral hemispheric load on attribution judgments. K. T. BRENNAN*; B. JAMES; E. M. MOLOONEY; S. J. E. WONG-GOODRICH. *Iona Col., Iona Col.*
- 10:00 UU1 **172.11** ▲ 'Tis but they name that is (not) my enemy: Reading about benefits of oxytocin does not impact how people categorize others into social groups. M. L. GROFT*; N. J. PISTORY; R. M. HARDY; P. J. MCLAUGHLIN. *Edinboro Univ., Edinboro Univ., Edinboro Univ. of Pennsylvania.*
- 11:00 UU2 **172.12** Mechanistic contributions of the ventromedial frontal lobe to the exploration and recognition of emotional expressions. A. R. VAIDYA*; L. K. FELLOWS. *Brown Univ., McGill Univ.*
- 8:00 UU3 **172.13** Topiramate-phentermine combinations as a pharmacotherapy for cocaine dependence. A. REYNOLDS*; W. W. STOOPS; J. A. LILE; C. R. RUSH. *Univ. of Kentucky Chandler Med. Ctr., Univ. of Kentucky Chandler Med. Ctr.*
- 9:00 UU4 **172.14** Classifying borderline personality disorder using resting state functional connectivity: A machine learning approach. S. N. GOSNELL*; R. SALAS; K. CURTIS. *Howard Hughes Med. Inst. - Baylor Col. O, Baylor Col. of Med.*
- POSTER**
- 173. Schizophrenia: Pathophysiology and Therapeutics**
- Theme H: Cognition**
- Sun. 8:00 AM – *Walter E. Washington Convention Center, Halls A-C*
- 8:00 UU5 **173.01** Role of microRNA-936 in human neurons and adolescent mouse brains. D. PANJA*; Y. LI; Z. LI. *NIH.*
- 9:00 UU6 **173.02** JAK-STAT1 regulated gene expression and association with symptomatology in psychosis. J. K. MELBOURNE*; B. FEINER; C. ROSEN; R. P. SHARMA. *Univ. of Illinois At Chicago.*
- 10:00 UU7 **173.03** ▲ Characterization of copper transporter CTR1 in normal postmortem hippocampus. C. NGUYEN*; K. E. SCHOONOVER; S. J. MABRY; C. B. FARMER; R. C. ROBERTS. *Univ. of Alabama At Birmingham, Univ. of Alabama at Birmingham.*
- 11:00 UU8 **173.04** Abnormalities in the copper transporters ATP7A and CTR1 in postmortem schizophrenia substantia nigra. K. E. SCHOONOVER*; R. C. ROBERTS. *Univ. of Alabama At Birmingham, Univ. of Alabama at Birmingham.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 8:00 UU9 **173.05** Catechol-o-methyltransferase SNPs rs4818 and rs4680 are associated with protein levels independent of psychiatric disorder. G. PARKIN*; M. UDAWELA; A. GIBBONS; B. DEAN. *The Florey Inst., CRC for Mental Hlth., The Univ. of Melbourne.*
- 9:00 UU10 **173.06** Schizophrenia polygenic score associations with hippocampal activation and DOPA decarboxylase activity. M. WINSTON*; R. RASETTI; M. GREGORY; B. KOLACHANA; C. HEGARTY; A. IANNI; P. KOHN; J. H. CALLICOTT, III; V. S. MATTAY; D. R. WEINBERGER; D. P. EISENBERG; K. F. BERMAN. *NIMH, NIH, NIMH, Natl. Inst. of Mental Hlth., Clin. and Translational Neurosci. Br., Lieber Inst. For Brain Develop., Natl. Inst. of Mental Hlth., Natl. Inst. of Mental Hlth.*
- 10:00 UU11 **173.07** The mechanism of nuclear localization of Gomafu, a schizophrenia-related long non-coding RNA. G. UMEMOTO*; S. NAKAGAWA; M. YOSHIDA; M. HATTORI; H. TSUIJI. *Nagoya City Univ., Hokkaido Univ., RIKEN.*
- 11:00 UU12 **173.08** Splicing of the PIK3CD gene in human brain and peripheral blood and expression alterations in schizophrenia. V. L. FREGOSO*; R. BERGER; A. J. LAW. *Univ. of CO Denver, Univ. of Colorado Anschutz Med. Campus, UCD/SOM, UCD/SOM.*
- 8:00 UU13 **173.09** • Effect of NBI-98782, a selective vesicular monoamine transporter 2 (VMAT2) inhibitor, on neurotransmitter efflux and phencyclidine- and amphetamine-induced locomotor activity: Relevance to tardive dyskinesia, antipsychotic behavior and cognition. M. HUANG*; W. HE; L. RAJAGOPAL; A. E. KUDWA; D. E. GRIGORIADIS; H. Y. MELTZER. *Northwestern Univ. Feinberg Sch. of Med., Neurocrine Biosci. Inc, Neurocrine Biosci Inc.*
- 9:00 UU14 **173.10** Alpha7 nicotinic receptor agonists reverse the hyperdopaminergic tone in the MAM model of schizophrenia. G. A. NEVES*; A. A. GRACE. *Univ. of Pittsburgh.*
- 10:00 UU15 **173.11** • The preclinical use of EEG evoked responses for drug discovery in brain disorders. V. DUVEAU*; B. POUYATOS; C. TOULLER; R. MAURY; C. DUMONT; C. ROUCARD; Y. ROCHE. *SynapCell, Synapcell, SynapCell SAS, SYNAPCELL.*
- 11:00 UU16 **173.12** Reduction of plasma glutathione in psychosis associated with schizophrenia and bipolar disorder in translational psychiatry. L. G. NUCIFORA*; T. TANAKA; L. N. HAYES; M. KIM; B. J. LEE; T. MATSUDO; F. C. NUCIFORA, Jr.; T. SEDLAK; R. MOJTABAI; W. EATON; A. SAWA. *Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Bloomberg Sch. of Publ. Hlth.*
- 8:00 UU17 **173.13** ▲ Treatment augmentation in schizophrenia and schizoaffective disorder. H. C. RUDOLPH*; J. L. LARIMORE. *Agnes Scott Col., Agnes Scott Col.*
- 9:00 UU18 **173.14** Auditory oddball training improves prepulse inhibition in serine racemase (-/-) mice. G. D. GUERCIO*; J. TRAVASSOS; S. COSTA; A. PEROZZO; L. MORORO; L. GENARO; L. SCORIELS; E. DE VILLERS-SIDANI; R. A. PANIZZUTTI. *Univ. Federal Do Rio De Janeiro, Univ. Federal Do Rio De Janeiro, Montreal Neurolog. Inst., Federal Univ. of Rio De Janeiro.*
- 10:00 UU19 **173.15** Dissecting the neurophysiological role of Ca_v3.3 in thalamic reticular nucleus: Translating emerging genetics into potential novel therapeutic approach for schizophrenia. A. GHOSHAL*; L. YANG; V. G. LOPEZ-HUERTA; M. A. ARIAS-GARCIA; D. BAEZ-NIETO; A. ALLEN; D. S. UYGUN; R. E. STRECKER; R. W. MCCARLEY; S. PURCELL; Q. ZHANG; X. MAO; T. NICHOLSON; Z. FU; G. FENG; E. M. SCOLNICK; J. Q. PAN. *Broad Inst., Harvard Med. Sch., VABHS & Harvard Med. Sch., VA Boston Healthcare Syst. & Harvard Med. Sch., Brigham & Women's Hospital, Harvard Med. Sch., MIT, Novartis.*
- 11:00 UU20 **173.16** • Modulation of dopamine receptors significantly impacts ivermectin-mediated effects on DARPP-32/ERK/CREB phosphorylation in the ventral striatum of C57BL/6J mice. S. KHOJA*; L. ASATRYAN; M. W. JAKOWEC; D. L. DAVIES. *USC, USC, USC.*
- 8:00 UU21 **173.17** Nuclear GAPDH cascade and autofluorescence: A possible mechanism-guided high throughput biomarker for cognitive flexibility in severe psychiatric illnesses. F. E. DOMINGUEZ; M. NIWA*; A. RAMOS; N. J. ELKINS; T. TSUJIMURA; C. LIN; K. ISHIZUKA; A. SAWA. *Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med.*

POSTER

174. Systems Biology and Bioinformatics

Theme 1: Techniques

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

- 8:00 UU22 **174.01** Comparative analysis of proteic profile in the dorsal hippocampal formation of rats submitted to suppression of the licking response. R. B. GAIARDO*; A. P. PEDROSO; A. K. TASHIMA; M. M. TELLES; S. M. CERUTTI. *Federal Univ. of Sao Paulo, Federal Univ. of Sao Paulo.*
- 9:00 UU23 **174.02** Building mouse models: A resource for mutant mouse lines expressing Cre-recombinase using the CrePortal www.creportal.org. H. ONDA*; L. BECHTEL; S. A. MURRAY; C. L. SMITH. *The Jackson Lab., The Jackson Lab.*
- 10:00 UU24 **174.03** • Artificial intelligence and multi-omic assessment of plasma reveals molecular signature of parkinsons disease. M. A. KIEBISH; P. NARAIN; B. SCHUELE; S. AKMAEV; V. VEMULAPALLI; J. GARREN; V. TOLSTIKOV; F. GAO; K. PANAGOPOULOS; E. CHEN; L. REES; F. KAUSAR; P. TEKUMALLA; L. RODRIGUES; V. VISHNUDAS; S. GESTA; C. BARLOW; N. NARAIN; R. SARANGARAJAN*; J. LANGSTON. *BERG, LLC, Parkinson's Inst.*
- 11:00 UU25 **174.04** Unexpected complexities of numerically simpler neural systems as revealed by novel single-cell "omics" technologies. L. L. MOROZ*; M. BASANTA-SANCHEZ; L. HALAMKOVA; E. DABE; C. BOSTWICK; A. B. KOHN. *Univ. of Florida, Univ. of Florida, Univ. of Florida, SUNY.*
- 8:00 UU26 **174.05** Making structured neurophysiology data searchable using Semantic Web methods. J. L. TEETERS*; P. JEZEK; S. MACKESEY; F. SOMMER. *UC Berkeley.*

- 9:00 UU27 **174.06** The renderer: A toolkit for managing and materializing large scale image volumes. E. T. TRAUTMAN*; T. DOLAFI; E. PERLMAN; S. SAALFELD. *Howard Hughes Med. Inst.*
- 10:00 UU28 **174.07** Large-scale calcium imaging of the visual cortex in freely behaving, juvenile mice. C. GROVES KUHNLE*; K. B. HENGEN; S. E. RICHARDS; S. D. VAN HOOSER; G. TURRIGIANO. *Brandeis Univ., Washington Univ. In St. Louis, Brandeis Univ., Brandeis Univ., Brandeis Univ.*
- 11:00 UU29 **174.08** ▲ Analysis of neural homeologous genes in the developing allotetraploid frog *Xenopus laevis*. R. R. CUTLER*; C. GOLINO; L. LO; M. POWNALL; L. BOLKHOVITINOV; C. DONG; J. GIRIBHATTANAVAR; M. SAHA. *Col. of William and Mary.*
- 8:00 UU30 **174.09** Alterations of neuron-subtype-specific non-coding regulatory elements in the course of evolution of the primate prefrontal cortex. A. KOZLENKOV*; M. VERMUNT; P. APONTES; C. SHERWOOD; Y. L. HURD; W. BYNE; M. CREYGHTON; S. DRACHEVA. *Mount Sinai Sch. of Med., James J. Peters VA Med. Ctr., Hubrecht Institute-KNAW and Univ. Med. Ctr. Utrecht, George Washington Univ., Mount Sinai Sch. of Med.*
- 9:00 UU31 **174.10** Nervous system-wide single cell RNA-seq of the *Drosophila larva*. B. COCANOUGH*; J. WITTENBACH; J. YAN; L. AITCHISON; J. V. ALEMAN; A. B. KOHN; A. CARDONA; M. ZLATIC; S. C. TURAGA; L. L. MOROZ. *HHMI Janelia Res. Campus; Univ. of Cambri, Univ. of Cambridge, HHMI Janelia Res. Campus, Univ. of Florida, Univ. of Florida, Univ. of Florida.*
- 10:00 UU32 **174.11** Unable to Attend Neurodata without borders: A framework for converting neurophysiology data to a standard format. G. A. DENISOV*; J. L. TEETERS; L. UMayAM; K. SVOBODA. *Howard Hughes Med. Inst., Univ. of California, Berkeley.*
- 11:00 UU33 **174.12** ViBrism database for gene expression maps and co-expression networks analysis on the 3D brain. K. SHIMOKAWA; M. MORITA; M. NISHIMURA; H. YOKOTA; S. WEMLER; Y. OKUMURA; Y. YAMAGUCHI; Y. OKAMURA-OHO*. *ToMMo, Tohoku Univ., RIKEN RAP, Wemler Software, RIKEN, NIJC, Jissen Women's Univ., BRenT.*
- 8:00 UU34 **174.13** Cell-type-specific integrated analysis of the epigenome and transcriptome of human prefrontal cortex. J. LI*; A. KOZLENKOV; P. APONTES; Y. HURD; W. BYNE; E. A. MUKAMEL; S. DRACHEVA. *UCSD, James J. Peters VA Med. Ctr., Icahn Sch. of Med. at Mount Sinai.*
- 9:00 UU35 **174.14** Probing mitochondrial diversity by isolating cell-type-specific mitochondria *in situ*. C. FECHER; L. TROVÓ; J. WETTMARSHAUSEN; S. A. MUELLER; N. SNAIDERO; O. ORTIZ; S. HEINK; T. KORN; W. WURST; S. F. LICHTENTHALER; F. PEROCCHI; T. MISGELD*. *Tech. Univ. of Munich, Ctr. of Integrated Protein Sci. (CiPSM), Munich Cluster for Systems Neurol. (SyNergy), Ludwig-Maximilians-University of Munich, German Ctr. for Neurodegenerative Dis., Ludwig-Maximilians-University of Munich, Tech. Univ. of Munich, Helmholtz Zentrum München, Klinikum rechts der Isar, Tech. Univ. of Munich, Helmholtz Zentrum München, Technische Univ. München.*
- 10:00 UU36 **174.15** 3' untranslated region transcript variation in neuroplasticity. B. J. HARRISON*. *Univ. of New England.*
- 11:00 UU37 **174.16** Big data approaches for diverse preclinical TBI research. B. E. HAWKINS*; J. L. NIELSON; J. WOLF; C. R. ANDERSEN; H. M. SPRATT; J. HUIE; D. S. DEWITT; D. S. PROUGH; A. R. FERGUSON. *Univ. of Texas Med. Br., Univ. of Texas Med. Br., Univ. of California San Francisco, San Francisco Veteran's Admin. Med. Ctr., Univ. of Texas Med. Br., San Francisco Veteran's Admin. Med. Ctr.*
- 8:00 UU38 **174.17** Imaging mRNAs in living animals. H. LIM*; C. NWOKAFOR; R. H. SINGER. *Hunter Col., Albert Einstein Col. of Med., Albert Einstein Col. of Med.*
- 9:00 UU39 **174.18** Bottom-up proteomics of limited neuron populations by microanalytical mass spectrometry. S. B. CHOI; P. NEMES*; M. ZAMARBIDE; M. MANZINI. *George Washington Univ., George Washington Univ.*
- 10:00 UU40 **174.19** A novel approach to rapidly identify systemic immune patterns after cardiac arrest and resuscitation: A t-SNE analysis. N. R. BRANDON; H. DOU; Y. XU*. *Univ. Pittsburgh Sch. Med., Texas Tech. Univ. Hlth. Sci. Ctr. - El Paso Campus.*
- 11:00 UU41 **174.20** Validation of a data-driven neuroinformatics approach to identifying novel candidate genes for Alzheimer's disease. R. J. MULLINS*; E. HUTCHISON; E. EITAN; A. ALAGHATTA; M. WILSON; J. WILLIAMSON; M. MATTSON; D. KAPOGIANNIS. *Natl. Inst. On Aging.*
- 8:00 UU42 **174.21** Regulation of the human dopamine transporter (hDAT) from a full-length model perspective. M. FENOLLAR FERRER; S. G. AMARA*. *Natl. Inst. of Mental Hlth.*
- 9:00 UU43 **174.22** Denoising high density gene expression in whole mouse brain images. A. VADATHYA; K. UMADEVI VENKATARAJU*; K. MITRA; P. OSTEN. *Indian Inst. of Technol. - Madras, Cold Spring Harbor Lab.*
- 10:00 UU44 **174.23** Single cell genomic analysis reveals vulnerable cell types and pathways to brain trauma. D. ARNESON*; H. BYUN; Y. ZHUANG; I. AHN; Z. YING; F. GOMEZ-PINILLA; X. YANG. *UCLA, UCLA, UCLA.*
- 11:00 UU45 **174.24** The transcriptional response of isolated single neurons in the dorsal motor nucleus of the vagus to the development of ischemic heart failure. J. GORKY*; R. VADIGEPALLI; J. S. SCHWABER. *Thomas Jefferson Univ.*
- 8:00 UU46 **174.25** Not by systems alone: Identifying functional outliers in rare disease pedigrees. S. BALLOUZ*; M. DÖRFEL; J. CRAIN; M. CROW; G. J. LYON; J. GILLIS. *Cold Spring Harbor Lab., Utah Fndn. for Biomed. Res.*
- 9:00 UU47 **174.26** A comprehensive molecular atlas of striatal projection neurons by single-cell rna-seq. G. STANLEY*; O. GOKCE; B. TREUTLEIN; R. C. MALENKA; P. E. ROTHWELL; M. V. FUCCILLO; T. C. SUDHOF; S. QUAKE. *Stanford Dept. of Bioengineering, Lmu-Klinikum Der Univ. München, Max Planck Society, Stanford Univ. Sch. of Med., Univ. of Minnesota, Univ. of Pennsylvania, Stanford Univ.*
- 10:00 UU48 **174.27** Novel *in vitro* model of aging identifies specific histone modifications in rat cortical cells. L. RUOXU*; B. MCCLARTY; G. RODRIGUEZ; A. SANZ-CLEMENTE; H. DONG. *Northwestern Univ. Feingberg Sch. of Medici, Beijing Inst. of Basic Med. Sci., Northwestern Univ. - Chicago.*
- 11:00 DP13/UU49 **174.28** (Dynamic Poster) Cognition and micro-connectomics. A. NAKAMURA; M. SHIMONO*. *Osaka Univ., Osaka Univ.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 8:00 UU50 **174.29** Xeno-free induced pluripotent stem cell research: advancing standards, best practices and discovery through an open toolkit. A. LAM*; F. LI; A. R. MUOTRI; E. L. OHAYON. *Physicians Committee For Responsible Med., NeuroInx Res. Inst., UCSD.*
- 9:00 UU51 **174.30** Measuring integrated information in large neural networks. D. TOKER*; F. T. SOMMER. *Univ. of California, Berkeley, Helen Wills Neurosci. Inst.*
- 10:00 UU52 **174.31** Caloric-restriction prevents age-associated epigenetic changes in the old brain. N. HADAD*; D. R. MASSER; D. R. STANFORD; A. UNNIKRISHNAN; A. G. RICHARDSON; W. M. FREEMAN. *The Univ. of Oklahoma Hlth. Sci. Ctr., The Univ. of Oklahoma Hlth. Sci. Ctr., Oklahoma City VA Med. Ctr.*

POSTER

175. Connectomics: Automatic Tracing Techniques

Theme I: Techniques

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

- 8:00 UU53 **175.01** Chemical sectioning: High throughput brain imaging at axonal resolution. S. ZENG*; H. XIONG; T. YANG; X. WANG; Y. GANG; L. LI; Q. ZHANG; Y. LIU; H. ZHANG; N. LI; K. HUANG; F. YIN; A. LI; H. GONG; Q. LUO. *Huazhong Univ. of Sci. & Technol., Huazhong Univ. of Sci. and Technol.*
- 9:00 UU54 **175.02** Generation of the whole brain 3-dimensional atlas for the neuronal diversity with brain-wide precision imaging. H. GONG; X. LI*; J. PENG; C. ZHANG; A. LI; J. YUAN; Q. LUO. *Wuhan Natl. Lab. For Optoelectronics, Wuhan Natl. Lab. for Optoelectronics-Huazhong Univ. of Sci. and Technol., Wuhan Natl. Lab. for Optoelectronics-Huazhong Univ. of Sci. and Technol., Huazhong Univ. of Sci. and Technol., HUAZHONG UNIVERSITY OF SCIENCE AND TECHNOLOGY, Huazhong Univ. of Sci. and Technol.*
- 10:00 UU55 **175.03** Mouse cerebral vascular atlas in stereotaxic coordinates with one-micron voxel resolution. H. GONG*; B. XIONG; A. LI; Y. LOU; Q. LUO. *Wuhan Natl. Lab. For Optoelectronics.*
- 11:00 UU56 **175.04** A fast Hematoxylin and Eosin staining of intact tissues. Y. LEE*; N. LI; K. HUANG; T. ZHENG; S. ZENG; X. LIU. *Huazhong Univ. of Sci. and Technol., Convergence Technol. Co., Ltd., Wuhan OE-Bio Co., Ltd.*
- 8:00 UU57 **175.05** A three-dimensional image registration method for brain-wide positioning system. H. NI*; Z. FENG; C. TAN; S. CHEN; H. GONG; Q. LUO; A. LI. *Wuhan Natl. Lab. For Optoelectronics.*
- 9:00 UU58 **175.06** Acquiring golgi-stained neuronal morphology with co-located cytoarchitecture in the same mouse brain. X. CHEN*; X. ZHANG; Q. ZHONG; Q. SUN; J. PENG; H. GONG; J. YUAN. *Wuhan Natl. Lab. For Optoelectronics.*
- 10:00 UU59 **175.07** Skull optical clearing window for *in vivo* imaging of the cortex in mice. Y. ZHAO*; C. ZHANG; Z. LI; T. YU; T. XU; D. ZHU. *Huazhong Univ. of Sci. and Technol., Huazhong Univ. of Sci. and Technol.*
- 11:00 UU60 **175.08** Brainsmatics—Bridging the brain science and brain-inspired artificial intelligence. Q. LUO*. *Huazhong Univ. of Sci. and Technol.*
- 8:00 UU61 **175.09** High-throughput strip-scanning fluorescence micro-optical sectioning tomography with improved optical sectioning. Q. ZHONG*; J. YUAN; Y. HAN; C. ZHOU; X. LV; H. GONG; Q. LUO. *Wuhan Natl. Lab. For Optoelectronics.*
- 9:00 UU62 **175.10** Whole mount *in situ* hybridization of mouse brain to precisely locate mRNAs via fluorescence tomography. W. GUO*; Y. GANG; F. YIN; P. LI; F. HUANG; N. LI; Q. ZHANG; Y. LI; Y. JIA; F. XIONG; X. WANG; X. LIU; H. GONG; Q. LUO; S. ZENG. *Huazhong Univ. of Sci. and Technol.*
- 10:00 DP14/UU63 **175.11** (Dynamic Poster) Advanced NeuroGPS-Tree achieves brain-wide reconstruction of neuronal population equal to manual reconstruction level. Q. TINGWEI*; H. ZHOU; S. LI; L. LI; Y. GANG; Q. LUO; H. GONG; S. ZENG; A. LI. *Huazhong Univ. of Sci. and Technol., Huazhong Univ. of Sci. and Technol.*
- 11:00 UU64 **175.12** A platform for efficient identification of molecular phenotypes of brain-wide neural circuits. J. YUAN*; H. GONG; T. JIANG; B. LONG; T. XU; Q. LUO. *HUAZHONG UNIVERSITY OF SCIENCE AND TECHNOLOGY.*
- 8:00 UU65 **175.13** Optimization of 3DISCO for whole-brain clearing and imaging. T. YU*; Y. QI; J. XU; Y. LI; H. GONG; Q. LUO; D. ZHU. *Huazhong Univ. of Sci. and Technol., Huazhong Univ. of Sci. and Technol.*
- 9:00 UU66 **175.14** Sparse and high-bright neuronal labeling for brain-wide reconstructing complete morphologies of individual neurons in mice. Z. YU-HUI*; P. SUN; S. JIN; X. HE; J. KUANG; Y. GANG; H. LIN; Q. LUO; H. GONG; S. ZENG; F. XU; J. PENG. *Wuhan Natl. Lab. for Optoelectronics, Wuhan Inst. of Physics and Mathematics, Chinese Acad. of Sci.*
- 10:00 UU67 **175.15** Bessel Brain-wide light-sheet fluorescence microscopy (2B-LSFM) for high-resolution, isotropic imaging of ultra-fine neural structures. T. YU; X. WANG; Y. LI; C. FANG; D. ZHU*; P. FEI. *Huazhong Univ. of Sci. and Technol., Huazhong Univ. of Sci. and Technol.*
- 11:00 UU68 **175.16** Identifying weak signals in inhomogeneous neuronal images for large-scale tracing of neurites. S. LI*; T. QUAN; F. YIN; R. GUO; H. ZHOU; A. LI; L. FU; Q. LUO; H. GONG; S. ZENG. *Wuhan Natl. Lab. For Optoelectronics, Huazhong Univ. of Sci. and Technol.-Wuhan Natl. Lab. for Optoelectronics.*
- 8:00 UU69 **175.17** DeepBouton: automated identification of single-neuron axonal bouton in the whole brain. S. CHENG*; T. QUAN; X. WANG; Y. LIU; X. LIU; H. GONG; S. ZENG; Q. LUO. *Huazhong Univ. of Sci. and Technol.*
- 9:00 UU70 **175.18** A large-scale, switchable optical clearing skull window for cerebrovascular imaging. C. ZHANG*; Y. ZHAO; W. FENG; R. SHI; T. YU; T. XU; P. LI; Q. LUO; D. ZHU. *Huazhong Univ. Of Sci. and Technol., Huazhong Univ. of Sci. and Technol.*
- 10:00 UU71 **175.19** Volumetric mGRASP: Large-scale 3D mapping of mammalian synaptic connectivity with light microscopy. S. KIM*; D. KOO; H. LEE; H. PARK; J. KIM. *Seoul Natl. Univ., Korea Inst. of Sci. and Technol. (KIST), Korea Inst. of Sci. and Technol. (KIST).*
- 11:00 UU72 **175.20** Molecular and electrophysiological interaction between heart and sensory neurons. T. AKGUL*; M. Y. GUNAL; G. OZTURK; E. CAGAVI. *Istanbul Medipol Univ.*

- 8:00 UU73 **175.21** Increase in dendritic spine numbers revealed using Dii in *in vitro* slices. J. S. TRIVINO PAREDES*; P. C. NAHIRNEY; B. R. CHRISTIE. *Univ. of Victoria, Univ. of Victoria, Univ. of British Columbia, Univ. of British Columbia.*
- 9:00 UU74 **175.22** ● Automatic reconstruction of vessels in images from cleared specimens. S. TAPPAN*; A. RODRIGUEZ; M. A. KARIM; D. HOPPE; C. THOMAS; P. J. ANGSTMANN; J. R. GLASER. *MBF Biosci. - MicroBrightField Inc.*
- 10:00 UU75 **175.23** Quantitative analysis and prediction of neuronal response via one-photon photolysis of caged glutamate. H. YANG*; J. LEE; G. CHOI; W. JUNG; C. GHIM. *Ulsan Natl. Inst. of Sci. and Technol., Ulsan Natl. Inst. of Sci. and Technol.*
- 11:00 UU76 **175.24** Life-long genetic and functional access to neural circuits using self-inactivating Rabies virus. E. CIABATTI*; A. GONZÁLEZ-RUEDA; L. MARIOTTI; F. MORGESE; M. TRIPODI. *MRC Lab. of Mol. Biol.*
- 8:00 UU77 **175.25** Neuronal connectivity analysis in zebrafish with monosynaptic viral labeling and 3D mapping. M. M. MA*; S. KLER; Y. A. PAN. *Med. Col. of Georgia, Augusta Univ.*

POSTER

176. Neurocomputational Limits

Theme I: Techniques

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

- 8:00 UU78 **176.01** The zero lag time in manual tracking performance. H. U. VOSS*. *Weill Cornell Med. Col.*
- 9:00 UU79 **176.02** Motor temporal scaling reveals a novel interaction between speed and timing reliability. N. HARDY*; V. GOUDAR; J. ROMERO-SOSA; D. V. BUONOMANO. *UCLA, UCLA, UCLA.*
- 10:00 UU80 **176.03** ● ▲ High fidelity information transmission comes at the cost of compromised stimulus discrimination. K. L. MCCLANAHAN*; W. L. SHEW. *Univ. of Arkansas.*
- 11:00 UU81 **176.04** ▲ Comparing information-theoretic measures of complexity in Boltzmann machines. M. S. KANWAL*. *Univ. of California, Berkeley.*
- 8:00 UU82 **176.05** Optimal E:I cell ratios in efficient coding models of V1 under volume constraints. A. ALREJA; I. NEMENMAN; C. ROZELL*. *Carnegie Mellon Univ., Emory Univ., Georgia Inst. of Technol.*
- 9:00 UU83 **176.06** Emergent spatio-temporal trade-off in axon arbors defines dynamic efficiency in neurons. F. PUPPO*; V. GEORGE; G. A. SILVA. *UC San Diego.*
- 10:00 VV1 **176.07** Getting good predictions from bad neuron models. D. RAMAN; T. O'LEARY*. *Univ. of Cambridge.*
- 11:00 VV2 **176.08** Measures of integration and differentiation in microscale model networks: Computationally feasible PHI correlates. A. S. NILSEN*; B. E. JUEL; J. F. STORM. *Brain signalling group, Univ. of Oslo, Univ. of Oslo, Univ. of Oslo.*
- 8:00 VV3 **176.09** How strong are correlations in strongly recurrent networks? R. DARSHAN*; C. VAN VREESWIJK; D. HANSEL. *Hebrew Univ., Univ. Paris Descartes, CNRS.*
- 9:00 VV4 **176.10** A general model for divisive normalization and its identification. N. UKANI*; Y. ZHOU; A. LAZAR. *Columbia Univ.*

• Indicated a real or perceived conflict of interest, see page 137 for details.
 ▲ Indicates a high school or undergraduate student presenter.
 * Indicates abstract's submitting author

Sunday PM

LECTURE *Walter E. Washington Convention Center*

177. Genetic Dissection of Neural Circuit Assembly and Organization — CME

Sun. 1:00 PM - 2:10 PM — Hall D

Speaker: L. LUO, *Stanford Univ. and Howard Hughes Med. Inst.*

This lecture will discuss recent work on the development and function of neural circuits in flies and mice. Discussion of development will focus on cellular and molecular mechanisms that mediate the establishment of wiring specificity between pre- and postsynaptic partners. Discussion of function will focus on applications of viral-genetic tracing and TRAP methods we developed to interrogate circuits involved in neuromodulation and remote memory.

SYMPOSIUM *Walter E. Washington Convention Center*

178. Neuroimmune Interactions: A Status Change — CME

Sun. 1:30 PM - 4:00 PM — Ballroom A

Chair: J. IVAN ALVAREZ

Co-Chair: J. KIPNIS

Identifying the mechanisms regulating the influence of the immune system on the nervous system is critical to understanding brain health, behavior, cognition, and disease processes. In this symposium, a panel of expert scientists will describe how peripheral immune elements activate unique signaling pathways regulating neuronal function and how unique neurointrinsic signals shape the activity of leukocytes entering the central and peripheral nervous systems during homeostasis and disease.

1:30 **178.01** Introduction.

1:35 **178.02** ● Reciprocal neuroimmune interactions that amplify or suppress inflammation. C. J. WOOLF. *Children's Hosp. Boston.*

2:10 **178.03** Meningeal immunity and lymphatics in neurological disorders. J. KIPNIS. *Univ. of Virginia.*

2:45 **178.04** Tissue intrinsic mechanisms regulating neuroinflammation. J. I. ALVAREZ. *Univ. of Pennsylvania.*

3:20 **178.05** Microbiome-nervous system interactions in health and disease. E. HSIAO. *UCLA.*

3:55 **178.06** Closing Remarks.

SYMPOSIUM *Walter E. Washington Convention Center*

179. Cortical Plasticity Following Sensory Loss and Restoration — CME

Sun. 1:30 PM - 4:00 PM — Ballroom B

Chair: S. G. LOMBER

Co-Chair: A. AMEDI

Studies of sensory loss and restoration are changing traditional views of cortical organization. Integrating animal and human models, as well as insights from the study of blindness and deafness, this symposium will discuss mechanisms of crossmodal plasticity in visual and auditory cortices throughout the lifespan, the role of critical periods, impact on perception and cognition, and how these changes influence the outcomes of sensory prosthetics.

1:30 **179.01** Introduction.

1:35 **179.02** Crossmodal plasticity in auditory cortex of the congenitally deaf. S. G. LOMBER. *Univ. of Western Ontario.*

2:10 **179.03** Deficits after early visual deprivation: A role for cross-modal re-organization? D. MAURER. *McMaster Univ.*

2:45 **179.04** Functional links between brain reorganization and auditory processing: Evidence from cochlear implanted and unilateral deaf patients. P. BARONE. *Cerveau & Cognition. CNRS UMR 5549.*

3:20 **179.05** An updated view of cortical specializations and its dependence on sensory experience. A. AMEDI. *The Hebrew Univ. of Jerusalem.*

3:55 **179.06** Closing Remarks.

MINISYMPOSIUM *Walter E. Washington Convention Center*

180. New Breakthroughs in Understanding the Role of Functional Interactions Between the Neocortex and the Claustrum — CME

Sun. 1:30 PM - 4:00 PM — Ballroom C

Chair: S. P. BROWN

Co-Chair: B. N. MATHUR

The claustrum is highly interconnected with almost all areas of the neocortex, yet the function of this corticoclaustal system has largely remained mysterious. Recent work has sparked new hypotheses regarding the corticoclaustal system based on analyses from the microcircuit to the behavioral level. This minisymposium will bring together a diverse array of researchers to discuss emerging views of the claustrum's influence on cortical activity and its role in cognitive function.

1:30 **180.01** Introduction.

1:35 **180.02** Claustral-cortical communication in a visual change detection task. S. R. OLSEN. *Allen Inst. For Brain Sci.*

1:55 **180.03** The claustrum enables resilience to distraction through gain control of cortical sensory processing. A. CITRI. *Hebrew Univ.*

2:15 **180.04** Anterior cingulate cortex input to the claustrum is required for top-down action control. B. N. MATHUR. *Univ. of Maryland Sch. of Med.*

- 2:35 **180.05** Is the claustrum responsible for cortical activation during REM sleep? P. LUPPI. *CNRS UMR 5292/INSERM U1028*.
- 2:55 **180.06** Synaptic circuits of the claustrum: A comparison with the dorsal thalamus. M. E. BICKFORD. *Univ. of Louisville Sch. of Med.*
- 3:15 **180.07** Functional organization of the neural circuits of the corticoclaustal system. S. P. BROWN. *Johns Hopkins Sch. of Med.*
- 3:35 **180.08** Closing Remarks.

MINISYMPOSIUM *Walter E. Washington Convention Center*

181. Emerging Mechanisms Underlying Dynamics of GABAergic Synapses — CME

Sun. 1:30 PM - 4:00 PM — 145B

Chair: S. K. TYAGARAJAN

Co-Chair: A. MAFFEI

In recent years it has emerged that GABAergic inhibition is flexible, allowing input-specific adaptations at excitatory connections. This minisymposium will address several novel mechanisms for “plastic” GABAergic neurotransmission and highlight mechanisms that are operational during development and in mature neuronal circuits. This event will also showcase a tight molecular interplay between glutamatergic and GABAergic neurotransmission systems.

- 1:30 **181.01** Introduction.
- 1:35 **181.02** Molecular mechanisms coordinating the development of inhibitory and excitatory synapses: insights from a human-specific gene. C. CHARRIER. *Ecole Normale Supérieure*.
- 1:55 **181.03** CB1 receptor and parvalbumin interneurons: A novel developmental GABAergic affair. M. CAIATI. *Harvard Univ.*
- 2:15 **181.04** Cellular signaling facilitates GABAergic synapse plasticity via gephyrin scaffold dynamics. S. K. TYAGARAJAN. *Univ. of Zurich*.
- 2:35 **181.05** Coordinated plasticity at dendritic excitatory and inhibitory synapses. A. BARBERIS. *Italian Inst. of Technol.*
- 2:55 **181.06** Novel proteins moonlighting between GABAergic and glutamatergic synapse. M. A. WOODIN. *Univ. of Toronto*.
- 3:15 **181.07** Multiple roles for GABAergic inhibition in sensory neocortex. A. MAFFEI. *SUNY-Stony Brook*.
- 3:35 **181.08** Closing Remarks.

MINISYMPOSIUM *Walter E. Washington Convention Center*

182. ● Advances in Parkinson’s Disease Biomarkers and Disease Modeling — CME

Sun. 1:30 PM - 4:00 PM — 146A

Chair: M. L. SUTHERLAND

Co-Chair: D. J. STONE

Parkinson’s disease (PD), a chronic movement disorder with no cure, is benefiting from coordinated efforts around high-quality, standardized clinical data acquisition and biosample collections that are being broadly shared with the research community to promote biomarker development and disease modeling. Academic and industry researchers will highlight advances in PD genetics, imaging, transcriptomics, wearable technology, and data integration.

- 1:30 **182.01** Introduction.
- 1:35 **182.02** Transcriptomic analysis of biofluid samples in Parkinson’s disease. K. VAN KEUREN-JENSEN. *TGen*.
- 1:55 **182.03** Integrating diverse data in the prediction of Parkinson’s disease. A. SINGLETON. *Natl. Inst. of Aging*.
- 2:15 **182.04** The ENIGMA project: Mapping disease and genetic effects on the brain in 50,000 people from 35 countries worldwide. P. THOMPSON. *Keck Sch. of Med. of USC*.
- 2:35 **182.05 ●** The promise of device-based sensors in contributing to biomarker data in PD. W. MARKS. *Verily Life Sci.*
- 2:55 **182.06 ●** Open systems for biomarker development. L. MANGRAVITE. *Sage Bionetworks*.
- 3:15 **182.07** Data-driven analysis of brain disorders: The case of Parkinsonism descriptive and predictive modeling. F. FAGHRI. *Natl. Inst. of Aging*.
- 3:35 **182.08** Closing Remarks.

MINISYMPOSIUM *Walter E. Washington Convention Center*

183. The Science of Storytelling and Storytelling in Science

Sun. 1:30 PM - 4:00 PM — 151B

Chair: P. L. CROXSON

Co-Chair: D. SCHILLER

Now more than ever, it is essential that scientists actively engage with the public. Through storytelling, the use of a personal narrative to bring science to life, we can improve communication not only with the public, but also within the community, promoting better scientific progress. Through presentations about the science of storytelling, why and how to do it, and three powerful personal stories, this session aims to demonstrate how storytelling can transform science communication.

- 1:30 **183.01** Introduction.
- 1:35 **183.02** Telling stories of science. L. NEELEY. *The Story Collider*.
- 1:55 **183.03** Understanding addiction as a neuroscientist and a sister. M. BOYLE. *NIDA*.
- 2:15 **183.04** Nobody has to read this: Why storytelling matters in science journalism. E. YONG. *The Atlantic*.
- 2:35 **183.05** A new last memory. D. SCHILLER. *Icahn Sch. of Med. at Mount Sinai*.
- 2:55 **183.06** Naturalistic experiments and public engagement. J. L. GALLANT. *Univ. of California Berkeley*.

Sun. PM

• Indicated a real or perceived conflict of interest, see page 137 for details.
 ▲ Indicates a high school or undergraduate student presenter.
 * Indicates abstract’s submitting author

3:15 **183.07** My father's insanity becomes my sanity: Breaking the psychological cycle of poverty. E. D. JARVIS. *Duke Univ. Med. Ctr.*

3:35 **183.08** Closing Remarks.

LECTURE *Walter E. Washington Convention Center*

184. PETER AND PATRICIA GRUBER LECTURE: Assembling Neural Circuits: Cells and Synapses

Sun. 2:30 PM - 3:40 PM — Hall D

Speaker: J. R. SANES, *Harvard Univ.*

Support contributed by: The Gruber Foundation

The retina is emerging as a leading model system for elucidating mechanisms that govern neural circuit assembly and function. Visual information is passed from retinal photoreceptors to interneurons to retinal ganglion cells (RGCs) and finally to the rest of the brain. Each of the more than 40 types of RGCs responds to specific visual features, and the features to which each RGC type responds depend on which of the more than 70 types of interneurons synapse on it. This lecture will describe genetic, morphological, and physiological studies that have led to identification of some molecules and mechanisms that underlie assembly of these circuits. The lecture will then discuss new molecular methods that are enabling a comprehensive cataloging of neuronal cell types and the recognition molecules they use.

LECTURE *Walter E. Washington Convention Center*

185. PRESIDENTIAL SPECIAL LECTURE: Illuminating Neurobiology at the Nanoscale and Systems Scale by Imaging — CME

Sun. 5:15 PM - 6:30 PM — Hall D

Speaker: X. ZHUANG, *Harvard Univ. and Howard Hughes Med. Inst.*

Support contributed by: Janssen Research & Development LLC

Imaging has helped to advance many areas of neurobiology. This lecture will describe super-resolution imaging methods that allow fluorescence imaging of cells and tissues with nanometer-scale resolution, as well as discoveries of novel cellular structures in neurons enabled by this approach. The lecture will also highlight a single-cell transcriptome imaging approach that allows the expression of thousands of genes to be profiled *in situ* in a spatially resolved manner. The application of this method to neurobiology studies will also be discussed.

NANOSYMPOSIUM

186. Neurodevelopmental Disorders: Mechanisms

Theme A: Development

Sun. 1:00 PM – *Walter E. Washington Convention Center, 152A*

1:00 **186.01** Aberrant pain phenotype in a mouse model of the rare autism spectrum disorder Pitt Hopkins Syndrome. E. J. RAHN*; A. J. KENNEDY; J. W. LEWIS; S. G. DORSEY; J. D. SWEATT. *Univ. of Alabama at Birmingham, Bates Col., Univ. of Maryland Baltimore, Vanderbilt Univ. Sch. of Med.*

1:15 **186.02** Environmental contribution to brain transcriptome dynamics in a maternal immune activation mouse model of autism spectrum disorders. C. LAI*; J. LI; J. D. LUCERO; R. G. CASTANON; J. R. NERY; D. A. AMODEO; Y. WANG; T. J. SEJNOWSKI; S. B. POWELL; J. R. ECKER; E. A. MUKAMEL; M. BEHRENS. *The Salk Inst. For Biol. Studies, Univ. of California San Diego, The Salk Inst. For Biol. Studies, California State Univ. San Bernardino, Univ. of California San Diego, The Salk Inst. For Biol. Studies, Howard Hughes Med. Inst., Univ. of California San Diego.*

1:30 **186.03** Studying somatic mosaicism in normal brain and in neurodevelopmental disorders using neuronal and glial fractions. L. FASCHING*; G. COPPOLA; L. TOMASINI; A. E. URBAN; A. ABYZOV; F. M. VACCARINO. *Yale Sch. of Med., Stanford Univ. Sch. of Med., Mayo Clin., Yale Univ.*

1:45 **186.04** Recurrent *de novo* variants in EBF3 cause a neurodevelopmental syndrome characterized by hypotonia, ataxia, and expressive speech disorder. H. CHAO*; M. DAVIDS; E. BURKE; J. G. PAPPAS; J. A. ROSENFELD; A. J. MCCARTY; T. DAVIS; L. WOLFE; C. TORO; C. TIFFT; F. XIA; N. STONG; T. K. JOHNSON; C. G. WARR; S. YAMAMOTO; D. R. ADAMS; T. C. MARKELLO; W. A. GAHL; H. J. BELLEN; M. F. WANGLER; M. C. V. MALICIDAN. *Baylor Col. of Med., NHGRI, NYU Langone Med. Ctr., Baylor Col. of Med., Columbia Univ., Monash Univ., NHGRI, Howard Hughes Med. Inst.*

2:00 **186.05** Intervention for viral-induced brain anomaly and intellectual disability by the CRISPR/Cas9 genome editing strategy: Through the study of congenital CMV infection model. K. ISHII*; S. TANKOU; M. S. SUZUKI; K. ISHIZUKA; Q. TANG; I. KOSUGI; A. SAWA. *Johns Hopkins Univ. Sch. of Med., Hamamatsu Univ. Sch. of Med., Howard Univ. Col. of Med.*

2:15 **186.06** Rates of cerebral protein synthesis measured with the L-[1-¹¹C]leucine positron emission tomography method are decreased in adult subjects with fragile X syndrome. C. B. SMITH*; K. C. SCHMIDT; I. LOUTAIEV; T. J. BURLIN; T. HUANG; L. KRYCH; N. MIAO; C. SHEELER; D. VESSELINOVITCH; Z. XIA. *NIH, NIMH-SNPM, NIH, CC.*

2:30 **186.07** Excitation/inhibition imbalance in humans with Fragile-x syndrome. F. MORIN-PARENT; C. CHAMPIGNY; F. CORBIN; J. LEPAGE*. *Sherbrooke Univ., Sherbrooke Univ., Sherbrooke Univ.*

2:45 **186.08** Fragile X Syndrome causes widespread epigenetic dysfunction treatable with BET inhibitor JQ1. E. KORB*; M. HERRE; I. ZUCKER-SCHARFF; J. GRESACK; C. ALLIS; R. DARNELL. *Rockefeller Univ.*

3:00 **186.09** Development of an experimental paradigm to model neurobehavioral outcomes in Fragile X syndrome at advanced ages. B. P. VICARI*; S. VEERARAGAVAN; R. C. SAMACO. *Baylor Col. of Med., Baylor Col. of Medicine/Jan and Dan Duncan Neurolog. Res. Inst.*

3:15 **186.10** Genome-wide measurement of mRNA translation in Fragile X syndrome. S. ARYAL*; S. ARYAL*; S. ARYAL*; S. ARYAL*; S. ARYAL*; F. LONGO; E. KLANN. *New York Univ., New York Univ. Sch. of Med.*

3:30 **186.11** Neurotrophic-mimetic strategy to rescue synaptic plasticity and cognitive functions in a mouse model of Down syndrome. A. CONTESTABILE*; M. PARRINI; M. ALBERTI; D. GHEZZI; G. DEIDDA; L. CANCEDDA. *Fondazione Inst. Italiano Di Tecnologia, Dulbecco Telethon Inst.*

* Indicated a real or perceived conflict of interest, see page 137 for details.
 ▲ Indicates a high school or undergraduate student presenter.
 * Indicates abstract's submitting author

- 3:45 **186.12** Amelioration of UBE3A-dependent, hippocampal phenotypes in Angelman syndrome mouse model by reduction of RhoA-activating protein Ephexin5. G. SELL*; W. XIN; M. A. ZBINDEN; E. K. COOK; A. BONCI; S. S. MARGOLIS. *Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Natl. Inst. On Drug Abuse.*
- 4:00 **186.13** Development of an artificial transcription factor therapy for angelman syndrome. K. FINK*; P. DENG; B. PYLES; U. BEITNERE; H. O'GEEN; J. NOLTA; D. SEGAL. *UC Davis Med. Ctr., UC Davis, UC Davis.*
- 4:15 **186.14** Intellectual disability-linked KDM5C loss triggers spurious transcription, prevents germline gene silencing and deregulates activity-driven enhancers. A. BARCO*; M. SCANDAGLIA; J. P. LOPEZ-ATALAYA; A. MEDRANO-FERNÁNDEZ; M. T. LÓPEZ-CASCALES; B. DEL BLANCO; M. LIPINSKI; E. BENITO; R. OLIVARES; S. IWASE; Y. SHI. *Inst. De Neurociencias (UMH-CSIC), Univ. of Michigan Med. Sch., Harvard Med. Sch.*

NANOSYMPOSIUM

187. Current Perspectives on Homeostatic Plasticity and Activity-Dependent Remodeling

Theme B: Neural Excitability, Synapses, and Glia

Sun. 1:00 PM – Walter E. Washington Convention Center, 140A

- 1:00 **187.01** Postsynaptic remodeling of neuromuscular synapses during postnatal synaptic competition. I. W. SMITH*; W. J. THOMPSON. *Inst. For Neurosci., Texas A&M Univ.*
- 1:15 **187.02** Retrograde signaling by a secreted Semaphorin and presynaptic Plexin drives homeostatic synaptic plasticity. B. O. ORR*; R. D. FETTER; G. W. DAVIS. *Univ. of California San Francisco.*
- 1:30 **187.03** Long-term depression of a superprimed vesicle pool links presynaptic homeostasis to quantal scaling. M. MUELLER*; J. KEIM; S. SYDLIK. *Univ. of Zurich, Univ. of Zurich.*
- 1:45 **187.04** Reduction in synaptic Shank3 levels disrupts homeostatic synaptic scaling. V. TATAVARTY*; H. K. LIN; C. WU; G. G. TURRIGIANO. *Brandeis Univ.*
- 2:00 **187.05** Experience-dependent homeostatic plasticity of layer 5 IB and RS neurons in visual cortex. A. PANDEY*; K. D. FOX. *Cardiff Univ., Cardiff Univ.*
- 2:15 **187.06** • Sensory experience-dependent circuit refinement requires the cytokine receptor Fn14. L. CHEADLE*; C. TZENG; B. T. KALISH; S. RIVERA; D. HARMIN; L. BURKLY; C. CHEN; M. E. GREENBERG. *Harvard Med. Sch., Biogen, Children's Hosp, Harvard Med. Sch., Harvard Med. Sch.*
- 2:30 **187.07** Plasticity in cortical fast-spiking GABA networks supports recovered sensory processing following peripheral nerve injury. J. RESNIK*; R. S. WILLIAMSON; D. B. POLLEY. *Harvard Med. Sch.*
- 2:45 **187.08** Cerebellar role in emotional memory processing at parallel fiber-Purkinje cell synapses. J. HAN*; S. KIM. *Seoul Natl. Univ., Seoul Natl. Univ.*

NANOSYMPOSIUM

188. Novel Therapeutics for Neurodegenerative Disorders

Theme C: Neurodegenerative Disorders and Injury

Sun. 1:00 PM – Walter E. Washington Convention Center, 146C

- 1:00 **188.01** KEAP1 inhibition is neuroprotective and suppresses the development of epilepsy. T. SHEKH-AHMAD*; R. ECKEL; S. DAYALAN NAIDU; M. HIGGINS; M. YAMAMOTO; A. T. DINKOVA-KOSTOVA; S. KOVAC; A. Y. ABRAMOV; W. MATTHEW. *Ucl/Institute Of Neurol., Jacqui Wood Cancer Centre, Univ. of Dundee, Tohoku Univ. Grad. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Univ. of Muenster.*
- 1:15 **188.02** Chemical Nrf2 activators display broad dose-dependent neuroprotection in porcine neonatal hypoxia-ischemia encephalopathy. R. SINGH*; B. WANG; M. REYES; P. SANTOS; E. KULIKOWICZ; Z. YANG; J. K. LEE; L. J. MARTIN; R. C. KOEHLER. *Johns Hopkins Univ., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med.*
- 1:30 **188.03** Amyloid beta oligomer elimination enhances cognition and impedes neurodegeneration in various Alzheimer's disease mouse models. D. WILLBOLD*. *Forschungszentrum Jülich GmbH, Heinrich-Heine-Universität Düsseldorf.*
- 1:45 **188.04** Unilateral focused ultrasound-induced blood-brain barrier opening alters the spatial profile of hyperphosphorylated tau in an Alzheimer's mouse model. M. KARAKATSANI*; T. L. KUGELMAN; S. WANG; K. E. DUFF; E. KONOFAGOU. *Columbia Univ., Dept of Biomed. Engin., Taub Inst. at Columbia Univ/ NYSPI, Columbia University, Dept. of Radiology.*
- 2:00 **188.05** Nutritional strategies against synaptic and metabolic alterations in Alzheimer's disease. T. SYEDA*; A. PINEDO-VARGAS; S. DIAZ-CINTRA; N. TORRES-TORRES; C. PEREZ CRUZ. *Ctr. de Investigación y de Estudios Avanzados, Dept. de Neurofisiología y Desarrollo, Inst. d Neurobiología, Univ. Nacional Autónoma de México, Campus Juriquilla, Inst. Nacional de Ciencias Médicas y de la Nutrición.*
- 2:15 **188.06** • Systemic TIMP2 treatment revitalizes hippocampal function in aged mice. J. M. CASTELLANO*; K. I. MOSHER; R. J. ABBEY; A. A. MCBRIDE; M. L. JAMES; D. BERDNIK; J. C. SHEN; B. ZOU; X. S. XIE; M. TINGLE; M. S. ANGST; T. WYSS-CORAY. *Icahn Sch. of Med. At Mt. Sinai, Univ. of California, Berkeley, Stanford Univ. Sch. of Med., Stanford Univ. Sch. of Med., AfaSci Res. Labs, Stanford Univ. Sch. of Med.*
- 2:30 **188.07** Enhanced skeletal muscle proteostasis as a determinant of CNS protein quality control and neural function in the aging brain. C. J. CORTES*; H. A. TUCKER; A. GROMOVA; A. R. LA SPADA. *UCSD, UCSD, UCSD, UCSD.*
- 2:45 **188.08** Reduction of neuropathological deficits in transgenic mouse models of Huntington's disease using solid lipid curcumin particles. A. AL-GHARAIBEH*; R. CULVER; L. PALADUGU; S. HEILEMAN; A. OSTERHOUT; N. MUHN; N. MUNRO; D. STORY; J. ROSSIGNOL; G. L. DUNBAR; P. MAITI. *Central Michigan Univ., Field Neurosciences Inst. Lab. for Restorative Neurol., Col. of Med., Field Neurosciences Inst.*

• Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

3:00 **188.09** One year aerobic exercise increases regional cerebral blood flow in anterior cingulate cortex: A blinded, randomized trial in patients with Mild Cognitive Impairment. B. P. THOMAS*; T. TARUMI; M. SHENG; B. Y. TSENG; K. WOMACK; M. C. CULLUM; B. RYPMA; R. ZHANG; H. LU. *Univ. of Texas Southwestern Med. Ctr., Inst. for Exercise and Envrn. Medicine, Texas Hlth. Presbyterian Hosp., Univ. of Texas Southwestern Med. Ctr., Univ. of Texas Southwestern Med. Ctr., Univ. of Texas at Dallas, Univ. of Texas Southwestern Med. Ctr., Johns Hopkins Univ.*

NANOSYMPOSIUM

189. Parkinson's Disease: Human Therapeutic Studies

Theme C: Neurodegenerative Disorders and Injury

Sun. 1:00 PM – Walter E. Washington Convention Center, 143A

- 1:00 **189.01** Single center assessment of deep brain stimulation (DBS) program: Degree, onset and longevity of benefit from subthalamic nucleus (STN) implantation for Parkinson's disease (PD) as assessed by the universal Parkinson disease rating scale (UPDRS) III. E. L. HARGREAVES*; O. MARK; D. P. SCHNEIDER; R. J. DIPAOLOA; S. F. DANISH; D. L. CAPUTO. *Robert Wood Johnson Med. School- Rutgers Univer, Robert Wood Johnson Med. School- Rutgers Univer, Robert Wood Johnson Med. School- Rutgers Univer.*
- 1:15 **189.02** ▲ Deep brain stimulation battery longevity of medtronic activa PC neurostimulators; parameter contribution using linear regression models. R. P. PATEL*; R. J. DIPAOLOA; D. P. SCHNEIDER.; S. WONG; S. F. DANISH; E. L. HARGREAVES. *Rutgers Robert Wood Johnson Med. Sch., Rutgers Robert Wood Johnson Med. Sch., Rutgers Robert Wood Johnson Med. Sch.*
- 1:30 **189.03** Human fetal dopamine cell transplants survive for the lifetime of Parkinson patients independent of the time since transplant or the age of the transplant recipient. C. R. FREED*; R. E. BREEZE; B. A. SYMMES; S. FAHN; D. EIDELBERG; W. ZHOU. *Univ. of Colorado, Univ. of Colorado, Columbia Univ., Feinstein Inst. for Med. Res.*
- 1:45 **189.04** ● Six month update on the First-in-Human clinical study of neural stem cells in patients with Parkinson's disease. R. A. KERN*; I. GARITAONANDIA; R. GONZALEZ; G. SHERMAN; A. NOSKOV; D. CARDIFF; T. CHRISTIANSEN-WEBER; A. SEMECHKIN; E. BRAINE; A. SHAHRUL; G. NAIR; A. H. EVANS. *Intl. Stem Cell Corp, The Royal Melbourne Hosp.*
- 2:00 **189.05** Focused ultrasound subthalamotomy restores intracortical inhibition in Parkinson's disease. M. DILEONE*; R. RODRÍGUEZ-ROJAS; R. MARTÍNEZ-FERNÁNDEZ; J. PINEDA-PARDO; M. DEL ÁLAMO; F. HERNÁNDEZ-FERNÁNDEZ; G. FOFFANI; J. A. OBESO. *CINAC, Univ. Hosp. HM Puerta Del Sur.*
- 2:15 **189.06** Safety and efficacy of focused ultrasound subthalamotomy for the treatment of Parkinson's disease. R. MARTINEZ*; R. RODRÍGUEZ-ROJAS; M. DEL ÁLAMO; M. DILEONE; F. HERNÁNDEZ-FERNÁNDEZ; J. PINEDA-PARDO; I. OBESO; G. FOFFANI; J. OBESO. *Cinac-University Hosp. HM Puerta Del Sur.*
- 2:30 **189.07** Investigating possible mechanisms of action of transcranial electric stimulation in Parkinson's disease. Y. SALIMPOUR*; K. A. MILLS; W. S. ANDERSON. *Johns Hopkins Sch. of Med., Johns Hopkins Sch. of Med., Johns Hopkins Sch. of Med.*

- 2:45 **189.08** Accelerometry in Parkinson's disease. T. HARRIGAN*; J. R. BRASIC; G. N. MCKAY; K. A. MILLS; B. J. HWANG; C. MISHRA; A. PANTELYAT; L. FAYAD; D. F. WONG. *Johns Hopkins Univ. Applied Physics Laboratory, Johns Hopkins Sch. of Med., Johns Hopkins Univ. Sch. of Medicine, Dept. of Neurol., Johns Hopkins Univ., Johns Hopkins Univ. Sch. of Medicine, Dept. of Radiology, Johns Hopkins Univ. Sch. of Medicine, Dept. of Neurol., Johns Hopkins Univ., Johns Hopkins Univ. Med. Sch.*
- 3:00 **189.09** ▲ Test-retest of instrumentation to quantitatively measure movements of Parkinson's disease. B. J. HWANG*; G. N. MCKAY; T. HARRIGAN; C. MISHRA; A. PANTELYAT; D. F. WONG; J. R. BRASIC. *Johns Hopkins Univ., Johns Hopkins Sch. of Med., Johns Hopkins Univ. Applied Physics Laboratory, Johns Hopkins Sch. of Med., Johns Hopkins Med. Insts., Johns Hopkins Sch. of Med.*
- 3:15 **189.10** Quantitative continuous measurement of movements in the extremities of people with Parkinson's disease. J. R. BRASIC*; G. N. MCKAY; B. J. HWANG; T. P. HARRIGAN; C. MISHRA; K. A. MILLS; A. PANTELYAT; J. BANG; L. ROSENTHAL; A. MATHUR; K. KITZMILLER; D. F. WONG. *Johns Hopkins Sch. of Med., Johns Hopkins Sch. of Med., Johns Hopkins Krieger Sch. of Arts and Sci., Johns Hopkins Applied Physics Lab., Johns Hopkins Sch. of Med.*
- 3:30 **189.11** Pallidal deep brain stimulation reduces excessive cortical phase amplitude coupling in parkinson disease. M. MALEKMOHAMMADI*; N. AUYONG; N. POURATIAN. *Univ. of California Los Angeles.*

NANOSYMPOSIUM

190. Mechanisms of Neurotoxicity and Degeneration

Theme C: Neurodegenerative Disorders and Injury

Sun. 1:00 PM – Walter E. Washington Convention Center, 147A

- 1:00 **190.01** An essential role for palmitoylation-dependent retrograde signaling in developmental axon degeneration. J. NIU*; S. M. HOLLAND; A. KETSCHKEK; K. M. COLLURA; F. I. DESIMONE; G. GALLO; G. M. THOMAS. *Temple Univ. Med. Sch.*
- 1:15 **190.02** ● Caveolae as a novel component of proteostasis compromised by excess fatty acids: Relevance to neurodegeneration. S. AGHDAM*; S. AYYADEVARA; S. T. GRIFFIN; S. W. BARGER. *Univ. AR For Med. Sci., McClellan Veterans Med. Center, Central Arkansas Veterans Healthcare Service, Little Rock, AR 72205, USA, Univ. of Arkansas for Med. Sci., Univ. of Arkansas for Med. Sci., Geriatric Res. Educ. and Clin. Ctr. at the Central Arkansas Veterans Healthcare Syst.*
- 1:30 **190.03** Apolipoprotein E4 expression reduces brain exosome secretion. K. PENG*; M. J. ALLDRED; R. PEREZ-GONZALEZ; J. MORALES-CORRALIZA; M. SAITO; M. SAITO; S. D. GINSBERG; P. M. MATHEWS; E. LEVY. *Nathan Kline Inst., Nathan S. Kline Inst., Nathan Kline Institute-New York Univ., Nathan S Kline Inst., Nathan S Kline Institute/NYU Langone Med. Ctr., New York Univ. Sch. Med.*
- 1:45 **190.04** Accelerated aging in a mouse model of Frontotemporal dementia with progranulin haploinsufficiency. M. TELPOUKHOVSKAIA*; L. ZHAN; D. LE; Y. LI; Y. ZHOU; C. THEODORIS; D. SRIVASTAVA; L. GAN. *Gladstone Inst.*

- 2:00 **190.05** Integrated omics analysis of patient iPSC-derived model for CHMP2B-dependent frontotemporal dementia. Y. ZHANG*; P. JENSEN; B. I. ALDANA; J. E. NIELSEN; B. HOLST; P. HYTTTEL; H. S. WAAGEPETERSEN; M. R. LARSEN; K. K. FREUDE. *Univ. of Copenhagen, Univ. of Southern Denmark, Danish Dementia Res. Centre, Rigshospitalet, Univ. of Copenhagen, Bioneer A/S.*
- 2:15 **190.06** ▲ Nicotine neurotoxicity is exacerbated in hypertension. S. SHARMA*; D. F. MURESANU; J. V. LAFUENTE; A. NOZARI; A. SHARMA; H. SHARMA*. *Uppsala Univ., Blekinge Institute of Technol., THE FOUNDATION OF THE SOCIETY FOR THE STUDY OF NEU, Univ. of Basque Country, Massachusetts Gen. Hosp., Uppsala Univ.*
- 2:30 **190.07** A traumatic spinal cord injury initiates the oxidative stress pathway and metabolic impairments. E. N. SHIMIZU*; J. L. SEIFERT; K. J. JOHNSON; M. I. ROMERO-ORTEGA. *Univ. of Texas At Dallas, UT Dallas, Univ. of Texas at Dallas.*
- 2:45 **190.08** Neuroprotective effects of nicotinic receptor partial agonist varenicline in aged mice after laparotomy. Implication of prevention for post-operative cognitive dysfunctions. R. C. CHANG*; C. HUANG; J. M. T. CHU; G. T. C. WONG. *Lab. of Neurodegenerative Diseases, LKS Fac. of Medicine, Univ. of Hong Kong, State Key Lab. of Brain and Cognitive Sciences, The Univ. of Hong Kong, The Univ. of Hong Kong.*
- 2:00 **191.05** cPLA2 activation leads to lysosomal damage and autophagy impairment after TBI. C. SARKAR*; J. W. JONES; N. U. HEGDEKAR; J. PETER; A. KUMAR; M. A. KANE; A. I. FADEN; M. M. LIPINSKI. *Univ. of Maryland Sch. of Med., Univ. of Maryland Sch. of Pharm.*
- 2:15 **191.06** cPLA2 activation after spinal cord injury contributes to lysosomal defects and impairment of autophagy. Y. LI*; J. W. JONES; C. SARKAR; S. LIU; M. A. KANE; A. I. FADEN; E. Y. KOH; M. M. LIPINSKI; J. WU. *Univ. of Maryland, Sch. of Med., Univ. of Maryland, Sch. of Pharm., Univ. of Maryland, Sch. of Med., Univ. of Maryland, Sch. of Med.*
- 2:30 **191.07** Optical control of neural ablation in zebrafish as a model for secondary injury mechanisms. K. MRUK*; P. PIZA; J. K. CHEN. *Stanford Univ., Stanford Univ.*
- 2:45 **191.08** The nature of the inflammatory response to spinal cord injury differs between mature and developing rats. T. SUTHERLAND*; C. GORRIE. *Univ. of Technol. Sydney.*
- 3:00 **191.09** MRI-guided high intensity focused ultrasound to improve drug delivery in spinal cord injury. D. J. CROSS*; A. H. PAYNE; M. A. OSTLIE; G. G. GARWIN; E. C. REICHERT; Y. ANZAI; G. W. J. HAWRYLUK. *Univ. of Utah.*
- 3:15 **191.10** RNA-Seq analysis of microglia and astrocytes reveal time- and injury-dependent activation of specific genetic program following spinal cord injury. H. NORISTANI*; Y. N. GERBER; J. SABOURIN; H. BOUKHADDAOUI; H. E. HIRBEC; F. E. PERRIN. *Shriners Hosp. Pediatric Res. Center, Temp, MMDN, Univ. of Montpellier; EPHE, Inst. Natl. de la Santé et de la Recherche Médicale, "Integrative Biol. of Neurodegeneration", IKERBASQUE Basque Fndn. for Sci. and Univ. of the Basque Countr, "Integrative Biol. of Neurodegeneration", IKERBASQUE Basque Fndn. for Sci. and Univ. of the Basque Country, Inst. Natl. de la Santé et de la Recherche Médicale, Inst. for Functional Genomics, CNRS UMR5203, Inst. Natl. de la Santé et de la Recherche Médicale U1191, MMDN, Univ. of Montpellier; EPHE, Inst. Natl. de la Santé et de la Recherche Médicale U1198, Inst. Natl. de la Santé et de la Recherche Médicale, U1051.*
- 3:30 **191.11** Delayed radial sorting and re-myelination in a 4cm long gap repair despite synergistic effect of neurotrophins and pleiotrophins in nerve regeneration. G. S. BENDALE*; N. ALSMADI; R. GRANJA-VAZQUEZ; E. HOR; M. ROMERO-ORTEGA. *Univ. of Texas At Dallas, Univ. of Texas at Dallas, Cleveland Clin. Fndn., Univ. of North Texas.*
- 3:45 **191.12** Acteoside improves chronic spinal cord injury via a skeletal muscle-secreted new myokine. A. KODANI*; C. TOHDA. *Inst. of Natural Medicine, Univ. of Toyama.*
- 4:00 **191.13** Role of autophagic protein ULK1 in axonal degeneration and regeneration after traumatic lesion to the central nervous system. V. T. RIBAS*; B. VAHSEN; C. LENZ; U. MICHEL; H. URLAUB; M. BÄHR; P. LINGOR. *Federal Univ. of Minas Gerais, Univ. Med. Ctr. Göttingen, Max Planck Inst. for Biophysical Chem.*
- 4:15 **191.14** Aligned fiber-mediated microRNA delivery in promoting neurite outgrowth in CNS neurons. N. ZHANG; S. CHEW*; J. CHIN. *Nanyang Technological Univ., Nanyang Technological Univ.*

NANOSYMPOSIUM

191. Spinal Cord Injury: Mechanisms and Repair

Theme C: Neurodegenerative Disorders and Injury

Sun. 1:00 PM – Walter E. Washington Convention Center, 144A

- 1:00 **191.01** Transplanted human iPSC cell-derived neuronal precursor cells promote motor functional recovery after chronic spinal cord injury. T. OKUBO*; N. NAGOSHI; J. KOHYAMA; O. TSUJI; M. MASTUMOTO; M. NAKAMURA; H. OKANO. *Keio Univ. Sch. of Med., Keio university school of medicine, Keio university school of medicine.*
- 1:15 **191.02** Selective ablation of tumorigenic cells following human induced pluripotent stem cell-derived neural stem/progenitor cell (hiPSC-NS/PC) transplantation in spinal cord injury - Suicide genes in stem cell therapy. K. KOJIMA*; H. MIYOSHI; S. ITO; T. IIDA; M. OZAKI; S. KAWABATA; G. ITAKURA; O. TSUJI; N. NAGOSHI; M. MATSUMOTO; M. NAKAMURA; H. OKANO. *Keio Univ. Hosp., Keio Univ., Dept of Orthop, Sch. of Med, Keio Univ., Keio Univ. Sch. of Med., Dept. of Orthopaedics Surgery, Sch. of Medicine, Keio Univ., Dept. of Orthopaedic Surgery, Sch. of Medicine, Keio Univ., Keio Univ.*
- 1:30 **191.03** A sensitized IGF1 treatment restores corticospinal axon-dependent functions. Y. LIU*; X. WANG; W. LI; Q. ZHANG; Y. LI; Z. ZHANG; P. WILLIAMS; J. R. SANES; Z. HE. *Children's Hosp. At Boston, The Affiliated Hosp. of Nanjing Univ. of Chinese Med., Fourth Military Med. Univ., Harvard Univ.*
- 1:45 **191.04** Lysosomal damage after spinal cord injury causes accumulation of RIPK1 and RIPK3 proteins and potentiates necroptosis. M. M. LIPINSKI*; S. LIU; C. SARKAR; Y. LI; A. I. FADEN; E. Y. KOH; J. WU. *Univ. of Maryland Sch. of Med., Univ. of Maryland Sch. of Med.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

NANOSYMPOSIUM

192. Representation of Faces and Bodies

Theme D: Sensory Systems

Sun. 1:00 PM – Walter E. Washington Convention Center, 147B

- 1:00 **192.01** Coding of faces by tensor components. S. R. LEHKY*; A. PHAN; A. CICHOCKI; K. TANAKA. *Salk Inst., RIKEN Brain Sci. Inst., RIKEN Brain Sci. Inst.*
- 1:15 **192.02** The consequence of data demeaning on inferences regarding mirror-symmetric coding in the macaque face-processing system. F. M. RAMIREZ*; E. F. RODRIGUEZ. *Bernstein Ctr. for Computat. Neurosci., Pontificia Univ. Catolica de Chile.*
- 1:30 **192.03** A computational approach to predict view tuning and face inversion effect of face neurons in inferior temporal cortex. Y. NAM; G. UCHIDA; T. SATO*; M. TANIFUJI. *RIKEN, RIKEN, RIKEN Brain Sci. Inst., Riken BSI.*
- 1:45 **192.04** Recordings from macaque face and body patches in the upper bank of the superior temporal sulcus reveal strong species selectivity. L. SHE*; D. TSAO. *Caltech.*
- 2:00 **192.05** Multiplexing in face selective cortex: Evidence of flexible trial-by-trial and sub-trial representations of multiple stimuli. V. C. CARUSO*; A. F. EBHARA; S. TOKDAR; W. FREIWALD; J. M. GROH. *Duke Univ., The Rockefeller Univ., Duke Univ., Rockefeller Univ., Duke Univ.*
- 2:15 **192.06** Diverse response properties of face-selective cells in the human fusiform face area. S. KHUVIS*; E. M. YEAGLE; A. D. MEHTA. *Hofstra Northwell Sch. of Med.*
- 2:30 **192.07** Spatial and temporal ensemble coding in face adaptation. H. XU*; H. YING; E. BURNS. *Nanyang Technological Univ.*
- 2:45 **192.08** Elucidating temporal processing in human high-level visual cortex using fMRI and encoding approaches. A. STIGLIANI*; B. JESKA; K. GRILL-SPECTOR. *Stanford Univ.*
- 3:00 **192.09** Microstructural development of vertical connections impacts functional selectivity in face and reading networks. Z. ZHEN*; J. GOMEZ; V. S. NATU; M. BARNETT; B. L. JESKA; K. S. WEINER; K. GRILL-SPECTOR. *Beijing Normal Univ., Stanford Univ., Stanford Univ., Univ. of Pennsylvania.*
- 3:15 **192.10** The dorsal and ventral visual pathways exchange information during configural face processing. V. ZACHARIOU*; N. P. MLYNARYK; L. G. UNGERLEIDER. *NIH/NIMH.*
- 3:30 **192.11** Comparing human and monkey neural circuits for processing social scenes. J. SLIWA*; S. R. MARVEL; W. A. FREIWALD. *The Rockefeller Univ., Bard Col.*
- 3:45 **192.12** Characterizing the response to face pareidolia in human category-selective visual cortex. S. WARDLE*; K. SEYMOUR; J. TAUBERT. *Macquarie Univ., UNSW Sydney, The Natl. Inst. of Mental Hlth.*
- 4:00 **192.13** Monkeys experience face pareidolia. J. TAUBERT*; S. WARDLE; M. FLESSERT; D. A. LEOPOLD; L. G. UNGERLEIDER. *The Natl. Inst. of Mental Hlth., Macquarie Univ., Lab. of Brain and Cognition, NIMH/NIH/DHHS, NIMH, Natl. Inst. of Mental Hlth.*
- 4:15 **192.14** Action categories are represented as distributed patterns in ventral and dorsal structures: A high field and high resolution fMRI (7T) study. M. ZHAN*; R. GOEBEL; M. VAESSEN; B. DE GELDER. *Maastricht Univ.*

NANOSYMPOSIUM

193. Sleep: Key Advances

Theme F: Integrative Physiology and Behavior

Sun. 1:00 PM – Walter E. Washington Convention Center, 156

- 1:00 **193.01** Hypothalamic switch of REM sleep. K. CHEN*; M. XU; Y. DAN. *Univ. of California Berkeley, Howard Hughes Med. Inst.*
- 1:15 **193.02** Tracking fluctuating thalamocortical dynamics during the transition into sleep through high temporal resolution neuroimaging. L. D. LEWIS*; J. R. POLIMENI; K. SETSOMPOP; R. STICKGOLD; G. BONMASSAR; B. R. ROSEN. *Harvard Univ., Massachusetts Gen. Hosp., Harvard Med. Sch., Ctr. For Sleep and Cognition.*
- 1:30 **193.03** Parvalbumin interneuron-driven theta oscillations are sufficient for network stabilization leading to contextual fear consolidation independent of sleep. N. OGNJANOVSKI*; M. ZOCHOWSKI; S. J. ATON. *Univ. of Michigan Aton Lab., Univ. of Michigan.*
- 1:45 **193.04** A high-throughput non-invasive screen to measure both sleep and circadian parameters in IMPC knockout mouse lines. P. M. NOLAN*; N. HORNER; P. LAU; L. BROWN; S. PEIRSON; S. WELLS; G. BANKS. *MRC Harwell Inst., Oxford Univ.*
- 2:00 **193.05** Identification of preoptic sleep neurons using retrograde labeling and gene profiling. S. CHUNG*; F. WEBER; P. ZHONG; C. TAN; T. NGUYEN; K. T. BEIER; N. HÖRMANN; W. CHANG; Z. ZHANG; J. DO; S. YAO; M. J. KRASHES; B. TASIC; A. CETIN; H. ZENG; Z. A. KNIGHT; L. LUO; Y. DAN. *UNIVERSITY OF PENNSYLVANIA, UC Berkeley, UC San Francisco, Allen Inst., Stanford Univ., Natl. Inst. of Diabetes and Digestive and Kidney Dis.*
- 2:15 **193.06** Enhancement and stabilization of visual perceptual learning during sleep are subserved by different mechanisms. M. TAMAKI*; A. V. BERARD; T. WATANABE; Y. SASAKI. *Brown Univ.*
- 2:30 **193.07** ● Effects of acute and chronic sleep on beta amyloid accumulation and glucose metabolism in the brain. E. SHOKRI-KOJORI*; G. WANG; C. E. WIERS; S. B. DEMIRAL; M. GUO; S. KIM; V. RAMIREZ; E. LINDGREN; G. MILLER; C. FREEMAN; A. ZEHRA; S. DE SANTI; D. TOMASI; H. BENVENISTE; N. D. VOLKOW. *NIH, Piramal Pharma Inc, Yale Sch. of Med., NIH.*
- 2:45 **193.08** Neonatal sleep fragmentation results in reduced EEG power bands and long-term behavioral consequences. S. J. BERTRAND*; S. R. KUDCHADKAR; Z. ZHANG; N. PUNJABI; S. KANNAN. *Johns Hopkins University Sch. of Med., Johns Hopkins Univ. Sch. of Med.*
- 3:00 **193.09** Decoding material-specific memory reprocessing during sleep in humans. M. SCHÖNAUER*; S. ALIZADEH; H. JAMALABADI; A. ABRAHAM; A. PAWLIZKI; S. GAIS. *Univ. of Tübingen, LMU München.*

NANOSYMPOSIUM

194. Memory Retrieval

Theme H: Cognition

Sun. 1:00 PM – *Walter E. Washington Convention Center*, 150A

- 1:00 **194.01** Neural dissociation of stimulus memorability and subjective recognition during episodic retrieval. W. A. BAINBRIDGE*; J. RISSMAN. *NIH, UCLA*.
- 1:15 **194.02** Temporal dynamics of episodic memory reinstatement revealed by scalp and intracranial eeg. M. S. TREDER*; I. CHAREST; D. ROLLINGS; V. SAWLANI; R. CHELVARAJAH; M. WIMBER; S. HANSLMAYR; B. STARESINA. *Univ. of Birmingham, Univ. Hosp. Birmingham NHS Fndn. Trust*.
- 1:30 **194.03** Search and recovery of autobiographical and laboratory memories: Shared and distinct neural components. Z. A. MONGE*; E. A. WING; J. STOKES; R. E. CABEZA. *Duke Univ., UC Davis*.
- 1:45 **194.04** A necessary role for the left angular gyrus in episodic memory and episodic simulation. P. P. THAKRAL*; K. P. MADORE; D. L. SCHACTER. *Harvard Univ.*
- 2:00 **194.05** Retrieving autobiographical memories under stress: Examining the effects of cortisol on retrieval and reconsolidation processes. S. SHELDON*; S. CHU; J. NITSCHKE; J. BARTZ; J. C. PRUESSNER. *McGill Univ., McGill Ctr. For Studies In Aging*.
- 2:15 **194.06** Differences in retrieval of what, where, and when components of recently-formed episodic memories. J. J. SAKON*; R. KIANI. *New York Univ.*
- 2:30 **194.07** Brain functional and structural changes over learning and sleep. S. BRODT*; J. BECK; M. ERB; K. SCHEFFLER; S. GAIS; M. SCHÖNAUER. *Univ. of Tübingen, Univ. of Fribourg, Max-Planck-Institute for Biol. Cybernetics*.
- 2:45 **194.08** Olfactory cues evoke stimulus-specific replay in the sleeping human brain to enhance memory recall. L. K. SHANAHAN*; E. GJORGIEVA; T. KAHNT; J. A. GOTTFRIED. *Northwestern Univ.*

NANOSYMPOSIUM

195. Corticolimbic Circuits in Decision Making

Theme H: Cognition

Sun. 1:00 PM – *Walter E. Washington Convention Center*, 150B

- 1:00 **195.01** Medial prefrontal cortex shapes hidden state inference in the midbrain dopamine system. C. K. STARKWEATHER*; S. J. GERSHMAN; N. UCHIDA. *Harvard Univ., Harvard Univ., Harvard Univ. Dept. of Mol. and Cell. Biol.*
- 1:15 **195.02** Decoding the nature of hierarchical representations in distributed cortical structures during complex behaviors. S. A. MCKENZIE*; D. F. ENGLISH; G. BUZSÁKI; H. B. EICHENBAUM. *NYUMC, Boston Univ.*
- 1:30 **195.03** Task specific value encoding in the orbitofrontal cortex. E. L. RICH*; E. F. CHANG. *Icahn Sch. of Med. At Mount Sinia, UCSF*.
- 1:45 **195.04** Dynamic neural representation of reward predictions. A. LANGDON*; Y. K. TAKAHASHI; M. R. ROESCH; G. SCHOENBAUM; Y. NIV. *Princeton Univ., NIDA/NIH, Univ. of Maryland at Col. Park*.

- 2:00 **195.05** Sequential replay of non-spatial task states in the human hippocampus. N. SCHUCK*; Y. NIV. *Princeton Univ.*
- 2:15 **195.06** Orbitofrontal ensembles encode current state or "place" within an odor sequence task. J. ZHOU*; T. STALNAKER; S. RAMUS; G. SCHOENBAUM. *Natl. Inst. on Drug Abuse, IRP, Bowdoin Col., Univ. of Maryland Sch. of Med., The Johns Hopkins Univ.*
- 2:30 **195.07** Hippocampal sequences and model-based planning in the rat. K. J. MILLER*; J. BOYD-MEREDITH; M. M. BOTVINICK; C. D. BRODY. *Princeton Univ., Princeton Univ., DeepMind, HHMI / Princeton Univ.*
- 2:45 **195.08** Human hippocampal theta oscillations reflect sequential dependencies in deep planning. R. KAPLAN*; A. TAUSTE CAMPO; J. KING; A. PRINCIPE; R. KOSTER; M. LEY-NACHER; D. BUSH; N. BURGESS; R. ROCAMORA; K. J. FRISTON. *Univ. Col. London, Univ. Pompeu Fabra, Hosp. Del Mar, Google DeepMind, UCL Inst. of Cognitive Neurosci., UCL, Wellcome Trust Ctr. For Neuroimaging*.
- 3:00 **195.09** Evidence for distinct hippocampal representations of current location and distance to goal. J. L. GAUTHIER*; D. W. TANK. *Princeton Univ.*
- 3:15 **195.10** Reward identity and value prediction errors differentially update task state representations in human orbitofrontal cortex and amygdala. J. D. HOWARD*; T. KAHNT. *Northwestern Univ.*
- 3:30 **195.11** An acquired choice: Reduced corticostriatal excitability during delay-contingency learning steepens reward discounting. M. R. CARR*; M. J. N. BAELDE; Y. VAN MOURIK; T. S. HEISTEK; H. MANSVELDER; T. J. DE VRIES; T. PATTIJ. *VU Med. Ctr., VU Univ. Med. Ctr., Neurosci. Campus Amsterdam*.

NANOSYMPOSIUM

196. Methods for Combined Analysis of Genetic Information

Theme I: Techniques

Sun. 1:00 PM – *Walter E. Washington Convention Center*, 152B

- 1:00 **196.01** Enigma: Imaging & genetics of 18 brain diseases in 50,000 people worldwide. P. M. THOMPSON*; A. MCMAHON; N. JAHANSHAD. *Univ. of Southern California (USC), USC, IGC-INI @ USC*.
- 1:15 **196.02** Gene expression associates with aspects of cortico-striatal networks in the human brain. K. M. ANDERSON*; F. M. KRIENEN; E. CHOI; J. M. REINEN; B. YEO; A. J. HOLMES. *Yale Univ., Harvard Med. Sch., Stanford Univ., Natl. Univ. of Singapore*.
- 1:30 **196.03** Genomic drivers of neuroimaging phenotypes in health and disease. P. VERTES*; K. WHITAKER; R. ROMERO-GARCIA; F. VASA; M. MOUTOUSSIS; G. PRABHU; N. WEISKOPF; M. CALLAHAN; K. WAGSTYL; T. RITTMAN; R. TAIT; C. OOI; J. SUCKLING; B. INKSTER; P. FONAGY; R. DOLAN; P. JONES; I. GOODYEAR; E. BULLMORE. *Brain Mapping Unit, Univ. of Cambridge, Univ. Col. London, Max Planck Inst. for Human Cognitive and Brain Sci., Univ. of Cambridge, Cambridgeshire and Peterborough Natl. Hlth. Service Fndn. Trust, Univ. of Cambridge, Univ. Col. London, Univ. Col. London, GlaxoSmithKline Res. and Develop.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 1:45 **196.04** Neurotrophin-3 signaling in the dorsal amygdala decreases early-life anxious temperament in non-human primates. A. S. FOX*; T. SOUAIAlA; J. A. OLER; R. KOVNER; J. KIM; M. RIEDEL; E. FEKETE; P. H. ROSEBOOM; J. A. KNOWLES; N. H. KALIN. *Univ. of California - Davis, USC, Univ. of Wisconsin, Univ. of Wisconsin-Madison, USC, Univ. of Wisconsin-Madison, Univ. of Wisconsin Madison Sch. of Med. and Publ. Hlth.*
- 2:00 **196.05** ● Genome-wide association study of conduct disorder and extension to emotional brain function. C. E. CAREY*; A. AGRAWAL; B. ZHANG; N. VAKKALAGADDA; E. DRABANT CONLEY; A. R. HARIRI; E. C. NELSON; R. BOGDAN. *Washington Univ. In St. Louis, Washington Univ. Sch. of Med., Washington Univ. Sch. of Med., 23andMe, Duke Univ.*
- 2:15 **196.06** A novel polygenic score for molecular vulnerability to depression modulates amygdala reactivity and anhedonic symptoms. Y. S. NIKOLOVA*; A. BAKHT; L. FRENCH; A. R. HARIRI; E. SIBILLE. *Ctr. for Addiction and Mental Hlth., Duke Univ., CAMH - Univ. of Toronto.*
- 2:30 **196.07** Altered human brain gene expression correspondence with resting state brain activity in autism. G. KONOPKA*; S. BERTO; Y. FETAHI; A. KULKARNI; M. J. GANDAL; A. MONTILLO. *UT Southwestern Med. Ctr., UCLA.*
- 2:45 **196.08** Intrabody-dependent activation of cell-specific gene expression in CNS. A. VENKATARAMAN*; E. CAMPBELL; A. KOIDE; S. KOIDE; S. ANDERSON; S. BLACKSHAW. *Johns Hopkins Univ., Rutgers Univ., NYU Langone Med. Center.*
- 3:00 **196.09** Human brain and skull shape is related to percentage of Neanderthal-derived DNA. M. D. GREGORY*; J. S. KIPPENHAN; D. P. EISENBERG; P. D. KOHN; D. DICKINSON; V. S. MATTAY; Q. CHEN; D. R. WEINBERGER; Z. S. SAAD; K. F. BERMAN. *NIMH/NIH, NIH, Natl. Inst. of Mental Hlth., Lieber Inst. For Brain Develop., Janssen Pharmaceuticals, Natl. Inst. of Mental Hlth.*
- POSTER**
- 197. Neuronal Differentiation Mechanisms**
- Theme A: Development**
- Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*
- 1:00 A1 **197.01** improving the regenerative potential of olfactory ensheathing cells by overexpressing prostacyclin synthetase and its application in spinal cord repair. H. CHENG*. *Neurolog. Inst., Taipei Veterans Gen. Hosp.*
- 2:00 A2 **197.02** The potential role of G-protein-coupled receptor 3 in the formation of neuronal polarity in rat hippocampal neurons. S. TANAKA*; N. SHIMADA; T. MIYAGI; I. HIDE; T. SHIRAFUJI; N. SAKAI. *Hiroshima Univ. Sch. of Biomed. Sci.*
- 3:00 A3 **197.03** ▲ Differential response of xenopus homeologs following notch signaling perturbation. M. POWNALL*; R. CUTLER; C. GOLINO; A. HALLERAN; M. MCDONOUGH; S. PAUDEL; M. S. SAHA. *Col. of William and Mary, Caltech, Univ. of Cincinnati Med. Col., Col. of William and Mary.*
- 4:00 A4 **197.04** Characteristics of neuronal differentiated cells derived from human dental pulp stem cells (hDPSCs). Y. ARIMURA*; T. KIKUCHI; R. YAMANAKA; Y. SHINDO; K. HOTTA; M. MOCHIZUKI; T. NAKAHARA; K. OKA. *Keio University Sch. of Fundamental Sci. and, Sch. of Life Dent. at Tokyo, The Nippon Univ.*
- 1:00 A5 **197.05** Comparative analysis of vitamin C and vitamin A in stimulating neurite growth in neural progenitors. F. ESPINOZA ROMERO*; R. MAGDALENA; K. A. SALAZAR; F. A. MARTINEZ ACUÑA; F. J. NUALART. *Univ. De Concepcion, Univ. De Concepcion, Univ. of Concepcion, Univ. de Concepcion.*
- 2:00 A6 **197.06** The first neurons of the human cephalic ectoderm. I. BYSTRON*. *Univ. of Oxford.*
- 3:00 A7 **197.07** Interactions between endocannabinoid and glucocorticoid signaling pathways in mouse neural stem/progenitor cells. A. L. FRANKS*; G. A. MCCARTHY; R. A. CARSON; L. WANG; A. P. MONAGHAN; D. B. DEFRANCO. *Children's Hosp. of Pittsburgh of UPMC, Washington & Jefferson Col., Univ. of Pittsburgh Sch. of Med., Univ. of Pittsburgh Sch. of Med., UPMC Sch. of Med.*
- 4:00 A8 **197.08** Histone deacetylase inhibitor enhances neurogenic differentiation through Wnt/MAPK signaling pathway in human mesenchymal stem cells. S. JANG*; H. JEONG; J. PARK; S. PARK. *Chonnam Natl. Univ. Med. Sch., Res. Inst. of Med. Sciences, Chonnam Natl. Univ.*
- 1:00 A9 **197.09** Exosome-induced differentiation of neural stem progenitor cells. G. POIANA*; E. STRONATI; R. CONTI; Z. BOUSSADIA; M. SARGIACOMO; E. CACCI; S. BIAGIONI. *Sapienza Univ., Inst. Superiore di Sanità.*
- 2:00 A10 **197.10** Design and validation of an *in vivo* functional screen for key regulators of neocortical development. A. S. SHETTY*; F. SCHMIDT; F. ZHANG; R. J. PLATT; P. ARLOTTA. *Harvard Univ., Broad Inst. of MIT and Harvard, ETH, Broad Inst.*
- 3:00 B1 **197.11** Epigenetic regulation controls Fgf8 expression in the olfactory placode during gonadotropin-releasing hormone neuron emergence. M. L. LINSKOTT*; W. C. CHUNG. *Kent State Univ.*
- 4:00 B2 **197.12** ▲ Inducing neurite outgrowth using a neuroblastoma cell culture model. M. MURZELLO*; E. CASEY; D. COOK-SNYDER. *Carthage Col.*
- 1:00 B3 **197.13** Regulation of Traf2 and Nck interacting kinase (TNIK) alternative splicing in human tissues and during neuronal differentiation. V. GUMINA; C. COLOMBRITA; P. BOSSOLASCO; A. MARASCHI; F. SASSONE; E. BURATTI; V. SILANI; A. RATTI*. *IRCCS Inst. Auxologico Italiano, Doctorate Sch. of Mol. Medicine, Univ. degli Studi di Milano, Intl. Ctr. for Genet. Engin. and Biotech. (ICGEB), Univ. degli Studi di Milano.*
- 2:00 B4 **197.14** Expression of glycoprotein non-metastatic melanoma B in the prenatal rat brain. S. YOKOYAMA*; H. ZHU. *Kanazawa Univ.*
- 3:00 B5 **197.15** Stereological estimation of NeuN and GFAP labeled cells in the developing human cochlear nucleus. S. SAINI*; C. KAUR; T. G. JACOB; A. THAKAR; K. K. ROY; T. ROY. *All India Inst. of Med. Sci., All India Inst. of Med. Sci., All India Inst. Of Med. Sci.*

* Indicated a real or perceived conflict of interest, see page 137 for details.
 ▲ Indicates a high school or undergraduate student presenter.
 * Indicates abstract's submitting author

- 4:00 B6 **197.16** Liposomes treatment antagonized dendritic spine loss and reduction of neurogenesis in hippocampus of chronically stressed rats. M. C. MOSTALLINO*; F. BIGGIO; L. BOI; V. LOCCI; G. TOFFANO; G. BIGGIO. *Natl. Res. Council, CNR, Univ. of Cagliari, Univ. of Cagliari, Fidia Farmaceutici, Univ. of Cagliari.*
- 1:00 B7 **197.17** Essential roles for mitochondria biogenesis regulator Nrf1 in retina development and homeostasis. T. KIYAMA*; C. CHEN; S. W. WANG; P. PAN; S. TAKADA; W. KLEIN; C. MAO. *Univ. of Texas, Hlth. Sci. Ctr., Baylor Col. of Med., Univ. Texas M.D. Anderson Cancer Ctr., Univ. Texas M.D. Anderson Cancer Ctr.*
- 2:00 B8 **197.18** Mitotic cerebellar granule cell precursors can extend neurites, undergo migration and retract their processes prior to each cell division and their differentiation depends on the levels of NeuroD1 expression. M. HANZEL*; M. E. HATTEN; R. J. WINGATE. *Rockefeller Univ., King's Col. London.*
- 3:00 B9 **197.19** Erythropoietin overexpression in murine central nervous system accelerates postnatal GABAergic development. K. KHALID*; J. FRITSCHY; E. SCHNEIDER GASSER. *Univ. of Zurich, Univ. Zurich/ Inst. Pharmacol Toxicol.*
- 4:00 B10 **197.20** ▲ An analysis of the downstream effects of tyh perturbation. C. RATNAYAKE*. *Col. of William and Mary.*
- 1:00 B11 **197.21** Assembly of inhibitory circuitry by FoxG1, a gene associated with autism spectrum disorders. G. MIYOSHI*; Y. UETA; H. OSAKI; M. TANAKA; C. HANASHIMA; G. FISHELL; M. MIYATA. *Tokyo Women's Med. Univ., CDB RIKEN, NYU Sch. of Med.*

POSTER

198. Axon: Adhesion and Cytoskeleton

Theme A: Development

Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*

- 1:00 B12 **198.01** Remodelling of the endoplasmic reticulum into growth cone filopodia is mediated by STIM1. M. P. PAVEZ*; R. GASPERINI; L. C. FOA. *Univ. of Tasmania, Univ. of Tasmania.*
- 2:00 B13 **198.02** Study Piezo1 localization and transportation dynamics by light-sheet microscopy. F. CAO*; R. ZHANG; Z. QIU; L. SUN. *The Hong Kong Polytechnic Univ., The Hong Kong Polytechnic Univ.*
- 3:00 B14 **198.03** Unexpected consequences of xyloside treatment on neuronal cytoskeleton assembly and function. C. MENCIO*; S. M. TILVE; C. AGBAEGBU; H. KATAGIRI; H. M. GELLER. *Natl. Inst. of Hlth., NHLBI, Natl. Heart, Lung, and Blood Institute, NIH.*
- 4:00 B15 **198.04** Coordinated membrane retrieval with actin bundling in the growth cone revealed by superresolution microscopy. M. NOZUMI*; M. IGARASHI. *Niigata Univ, Grad Sch. Med. Dent. Sci.*
- 1:00 B16 **198.05** RACK1 regulates point contact dynamics and local translation at point contacts. L. J. KERSHNER*; K. WELSHHANS. *Kent State Univ., Kent State Univ.*
- 2:00 B17 **198.06** Peculiar cell phenotypes caused by plasticity related gene 3/5 due to RhoA/Rac1 imbalance. S. M. TILVE*; C. MENCIO; N. GEORGE; C. AGBAEGBU; H. KATAGIRI; H. M. GELLER. *NIH.*
- 3:00 B18 **198.07** A dynamic cycle of severing and annealing of regulates neurofilament polymer transport. A. UCHIDA*; A. BROWN. *The Ohio State Unvers, Ohio State Univ.*
- 4:00 B19 **198.08** Intermediate filament mediated phospho-regulation of doublecortin during neuronal development. C. BOTT*; C. YAP; B. WINCKLER. *Univ. of Virginia.*
- 1:00 B20 **198.09** Myosin II activity regulates the assembly and plasticity of the axon initial segment. S. L. BERGER*; A. LEO-MACIAS; S. YUEN; S. PFENNIG; Y. ZHANG; E. AGULLO-PASCUAL; M. ZHU; E. ROTHENBERG; C. V. MELENDEZ-VASQUEZ; M. DELMAR; J. L. SALZER. *New York Univ. Sch. of Med., Wenzhou Med. Col., Hunter Col.*
- 2:00 B21 **198.10** The roles of β 1-spectrin and β 4-spectrin in axons. C. LIU*; S. STEVENS; M. STANKEWICH; P. MOHLER; M. RASBAND. *Baylor Col. of Med., Yale Univ., Ohio State Univ.*
- 3:00 B22 **198.11** The novel NDEL1 phosphorylation mediated by TARA-GSK3 β complex regulates neuronal development. Y. WOO; Y. KWAK; J. HONG; S. KIM; D. MUN; M. NGUYEN; S. PARK*. *POSTECH, Univ. of Calgary.*
- 4:00 B23 **198.12** The microtubule plus-end-tracking protein TACC3, is an important regulator of microtubule dynamics, axon outgrowth and guidance. B. ERDOGAN*; G. CAMMARATA; E. LEE; B. PRATT; L. A. LOWERY. *Boston Col., Boston Col.*
- 1:00 B24 **198.13** The effect of CSPGs on neuronal cell adhesion, spreading and neurite growth in culture. J. JIN*; S. M. TILVE; L. SHI; Z. HUANG; L. ZHOU; H. M. GELLER; P. YU. *Jinan Univ., NIH, Natl. Heart, Lung, and Blood Institute, NIH, Jinan Univ.*
- 2:00 B25 **198.14** Defining links between an intellectual disability-associated RNA-binding protein and planar cell polarity in neurodevelopment. E. B. CORGIAT*, III; J. ROUNDS; R. BIENKOWSKI; D. YU; P. CHEN; A. CORBETT; K. MOBERG. *Emory Univ., Shanghai Jiaotong Univ. Sch. of Med., Emory Univ.*
- 3:00 B26 **198.15** Magnetic organization of neural networks via micropatterned substrates. M. MARCUS*; N. VARDI; I. LEVY; A. SHARONI; O. SHEFI. *Bar Ilan Univ., Bar Ilan Univ., Bar Ilan Univ.*

POSTER

199. Axon: Intrinsic Mechanisms

Theme A: Development

Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*

- 1:00 B27 **199.01** ▲ A modified western blot protocol for chondroitin sulfate-proteoglycan detection and its applications. H. NAGASE*; S. HIGASHI; Y. HIRATA; Y. KATAGIRI; H. M. GELLER. *Gifu Univ., NHLBI, NIH.*
- 2:00 B28 **199.02** Native dynamics of mitochondrial membrane potential and ATP levels in growing neurites visualized by simultaneous imaging. R. SUZUKI*; K. HOTTA; K. OKA. *Keio Univ., Keio Univ.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 3:00 B29 **199.03** Axon tortuosity during new axon growth in the nigro-striatal projection in the adult mouse brain. S. PADMANABHAN; A. P. TAGLIAFERRO; T. OO; T. KAREVA; N. KHOLODILOV; R. E. BURKE*. *The Michael J. Fox Fndn. for Parkinson's Rese, Columbia Univ. Dept. of Neurol.*
- 4:00 B30 **199.04** The role of Plexin-A1 receptor in the guidance of cingulate pioneering axons during the corpus callosum development. K. YUKAWA*; M. M. HOSSAIN; M. J. LABONI; M. E. R. BHUIYAN; I. TAKAHASHI; T. NEGISHI. *Meijo Univ.*
- 1:00 B31 **199.05** The function of survival of motor neuron protein and RNA binding proteins complexes during vertebrate motoneuron development and disease. L. HAO*; J. TALBOT; P. GANGRAS; D. PHAN; M. AN; G. SINGH; M. WOLMAN; C. BEATTIE. *Ohio State Univ., Ohio State Univ., Ohio State Univ., Univ. of Wisconsin-Madison.*
- 2:00 B32 **199.06** Sensitivity and robustness of nerve growth factor signaling. B. A. BICKNELL*; P. DAYAN; G. J. GOODHILL. *The Univ. of Queensland, Univ. Col. London.*
- 3:00 B33 **199.07** Beta-catenin cooperates with Cannabinoid Receptor CB1R to regulate optic axon pathfinding and growth cone protrusions in the optic tract. T. M. ELUL*; S. WEDEE; K. FARLEY; M. BURK. *Touro Univ. California.*
- 4:00 B34 **199.08** Axon growth regulation by a bistable molecular switch. P. PADMANABHAN*; G. J. GOODHILL. *Univ. of Queensland, Univ. of Queensland.*
- 1:00 B35 **199.09** Molecular mechanisms underlying the regulation of R-Ras activation and R-Ras-mediated axon branching formation in primary cultured cortical neurons. K. UMEDA*; H. KATOH; M. NEGISHI. *Kyoto Univ.*
- 2:00 B36 **199.10** Developmental refinement of axonal projections of the corpus callosum is mediated by the signaling receptor plexin-A4. A. I. SON*; F. SUTO; X. FU; Y. M. MOROZOV; S. ISHII; P. RAKIC; P. R. LEVITT; J. S. LIU; K. HASHIMOTO-TORII; M. TORII. *Children's Natl. Hlth. Syst., Natl. Inst. of Neuroscience, NCNP, Children's Natl. Med. Ctr., Yale Univ. Sch. Med., Children's Natl. Med. Ctr., Yale Univ. Sch. Med, Dept of Neurosci., Children's Hosp. Los Angeles, Children's Natl. Med. Ctr.*
- 3:00 B37 **199.11** ▲ Protein targeting of L1CAM mutants in cultured neurons. G. M. RAIMONDI; E. MURPHY; C. LEW; S. K. PIGNATELLI; D. R. CANNATA; M. I. JAREB*. *Sacred Heart Univ.*
- 4:00 B38 **199.12** Structure-function relationship of the multifunctional axon guidance receptor Robo3. Z. DELOUGHERY*; N. ACHARYA; A. JAWORSKI. *Brown Univ.*
- 1:00 B39 **199.13** Unable to Attend Role of FOR20/FOPNL in neuronal development. Y. ZHOU*; P. YAN; T. ZHOU. *UESTC/Sichuan Provincial People's Hosp., Sch. of Medicine, Zhejiang Univ.*
- 2:00 B40 **199.14** The role of exocyst complex in the insertion of new membrane at the growth cone at initial stages of axon formation. J. BUSTOS*; S. QUIROGA. *Facultad De Ciencias Quimicas- UNC, Facultad De Ciencias Quimicas- UNC.*
- 3:00 B41 **199.15** Axonal localization of precursor microRNA-433 is directed by sequence- and structure-specific cis-elements. M. PHAY*; S. YOO. *Univ. of Delaware, Nemours Biomed. Res., Univ. of Delaware.*
- 4:00 B42 **199.16** Adaptor protein 2 (AP-2) complex is essential for functional axogenesis in hippocampal neurons. J. KYUNG*; I. CHO; T. A. RYAN; S. KIM. *Kyung Hee Univ., Dartmouth Col., Joan and Sanford I Weill Med. Col. of Cornell Univ., Kyung Hee University, Sch. of Med.*
- 1:00 B43 **199.17** Decreased axonal caspase-9 activity in dorsal root ganglion neurons dysregulates mitochondrial dynamics and causes axon degradation *in vitro*. J. A. BELARDE*; J. C. MARTINEZ; M. QIU; M. RAMACHANDRAN; U. HENGST; C. M. TROY. *Columbia Univ., Columbia Univ., Columbia Univ.*
- 2:00 B44 **199.18** A novel self-contained three-dimensional platform to model intra-axonal contractile forces and tension-mediated elongation in post-synaptic axonal tracts. W. J. GORDIAN VELEZ*; D. O. ADEWOLE; L. A. STRUZYNA; E. R. CULLEN; J. C. O'DONNELL; D. K. CULLEN. *Univ. of Pennsylvania, Perelman Sch. of Medicine, Univ. of Pennsylvania, Michael J. Crescenz Veterans Affairs Med. Ctr.*
- 3:00 B45 **199.19** Axonal mRNA dynamics in live hippocampal neurons. B. LEE*; S. BANG; S. LEE; N. JEON; H. PARK. *Seoul Natl. Univ., 2Division of WCU (World Class University) Multiscale Mechanical Design Sch. of Mechanical and Aerospace Engin. Inst. of Advanced Machinery and Design Seoul Natl. Univ.*
- 4:00 B46 **199.20** mTOR upregulation in Neuro2a cells alters spontaneous intracellular calcium signaling. C. L. KUBERA*; J. HIMMELREICH; K. FITTIPALDI; H. COUGHLIN; R. BASTIAN. *Monmouth Univ.*
- 1:00 B47 **199.21** Regulation of DISC1 by FBXL14 during neurodevelopment. P. HUANG*; H. CHENG. *Grad. Inst. of Pathology, UC Davis.*
- 2:00 B48 **199.22** Growth cone subcellular RNA-proteome mapping in subtype-specific cortical circuit development. J. HATCH*; A. POULOPOULOS; J. D. MACKLIS. *Harvard Univ., Univ. of Maryland Sch. of Med., Harvard Univ.*
- 1:00 DP01/B49 **199.23** (Dynamic Poster) On the right track: Building the circuit for feeding and swallowing. Z. MOTAHARI*; A. S. POPRATILOFF; S. A. MOODY; A. S. LAMANTIA. *George Washington Univ., George Washington Univ., George Washington Univ.*
- 4:00 B50 **199.24** Mechanisms of Robo1/2-mediated motor neuron cell body and axon positioning in the spinal cord. K. NICKERSON*; Y. ZHOU; A. JAWORSKI. *Brown Univ., Brown Univ.*
- 1:00 B51 **199.25** Role of EphB1 in axon guidance and context fear memory. A. ASSALI; B. ZIRLIN; G. CHENAUX; M. ROBICHAUX; M. HENKEMEYER; C. W. COWAN*. *Med. Univ. of South Carolina, UC Davis, Baylor Col. of Med., UT Southwestern Med. Ctr.*
- 2:00 B52 **199.26** Transcriptional signatures of inspiratory and expiratory motor neuron development. S. KIM*; A. H. YOON; K. KAM; S. SWARTWOOD; D. L. ROUSSO; D. MEIJER; M. LEID; J. L. FELDMAN; B. G. NOVITCH. *Dept. of Neurobiology, UCLA, UCLA, Rosalind Franklin Univ. of Med. and Sci., Univ. of Edinburgh, Oregon State Univ.*
- 3:00 B53 **199.27** Pilot neurons regulate early postnatal axon projections in the olfactory system. Y. WU*; L. MA; H. SCHEERER; W. XU; R. YU. *Stowers Institute For Med. Res., University of Kansas Med. Ctr.*

POSTER

200. GABA_A and Other Ligand-Gated Ion Channels**Theme B: Neural Excitability, Synapses, and Glia**

Sun. 1:00 PM – Walter E. Washington Convention Center, Halls A-C

- 1:00 B54 **200.01** ▲ Pregnenolone administration increases brain 3 α ,5 α -THP levels in male C57BL/6J mice. K. J. DAVIDSON*; T. LITTLE; A. MORROW; A. M. MALDONADO-DEVINCCI. *North Carolina A&T State Univ., UNC Sch. of Med., North Carolina A&T State Univ.*
- 2:00 B55 **200.02** Neurosteroid regulation of excitability and tonic inhibition at GABA- α 4 receptors. M. MINERE*; T. G. SMART. *UCL, Univ. Col. London.*
- 3:00 B56 **200.03** Rapid agonist induced GABAergic synaptic and functional plasticity. T. C. JACOB*; M. L. BRADY; J. PILLI; J. M. LORENZ-GUERTIN; S. DAS; C. E. MOON; N. GRAFF. *Univ. of Pittsburgh Sch. of Med.*
- 4:00 B57 **200.04** Diazepam induces bidirectional modulation of the GABA type A receptor. J. LORENZ-GUERTIN*; S. DAS; J. PILLI; M. MACDONALD; T. JACOB. *Univ. of Pittsburgh, Univ. of Pittsburgh.*
- 1:00 B58 **200.05** Structural determinants for selective binding of drugs to intersubunit general anesthetic binding sites in the α 1 β 3 γ 2 γ -aminobutyric acid type A receptor transmembrane domain. S. S. JAYAKAR*; X. ZHOU; P. Y. SAVECHENKOV; K. S. BRUZIK; K. W. MILLER; J. B. COHEN. *Harvard Med. Sch., Massachusetts Gen. Hosp., Univ. of Illinois, Harvard Med. Sch.*
- 2:00 B59 **200.06** The effect of neonatal sevoflurane on adult gaba_A receptor. D. LIN*; J. LIU; J. COTTRELL; I. KASS. *SUNY Downstate Med. Ctr., SUNY Downstate Med. Ctr.*
- 3:00 B60 **200.07** The role of the extrasynaptic δ -containing GABA_A receptors early in stroke. L. Y. HARTIADI*; P. S. VAN NIEUWENHUIJZEN; E. GOWING; L. BOOTHMAN-BURRELL; A. CLARKSON; M. CHEBIB. *The Univ. of Sydney, Univ. of Otago.*
- 4:00 B61 **200.08** Electrostatic interactions of the GABA_AR influence benzodiazepine action. N. C. PFLANZ*; A. W. DASZKOWSKI; S. J. MIHIC. *Univ. of Texas At Austin, Univ. of Texas at Austin.*
- 1:00 B62 **200.09** Higher IPSC frequencies in non-adapting than in adapting layer 5 pyramidal neurons in the somatosensory cortex of mice. I. R. POPESCU*; K. LE; R. VOGLEWEDE; R. MOSTANY. *Tulane Univ., Tulane Univ.*
- 2:00 B63 **200.10** The role of GABA_A receptor β subunits in the regulation of GABAergic synaptic transmission in hippocampus. J. DUAN*. *NINDS.*
- 3:00 B64 **200.11** Selective alteration of inhibition in D1 spiny projection neurons in the nucleus accumbens of MMP-1 overexpressing mice. N. AL-MUHTASIB*; K. CONANT; S. VICINI. *Georgetown Univ., Georgetown Univ., Georgetown Univ.*
- 4:00 B65 **200.12** ● Optimizing methods for the functional screening at GABA_A receptor subtypes. F. KNOFLACH*; M. HERNANDEZ; S. BERTRAND; D. BERTRAND. *F. Hoffmann-La Roche Ltd, Hiqscreen.*
- 1:00 C1 **200.13** Impact of myrtenol on GABA_A receptor function. S. MILANOS; T. FRIMURER; C. VILLMANN*. *Univ. Wuerzburg, Univ. of Copenhagen.*
- 2:00 C2 **200.14** The alpha-subunit GABA_A receptor connectom in cortical inhibitory microcircuit. M. TSAI*; W. LIN; R. H. KRAMER. *Univ. of California Berkeley.*
- 3:00 C3 **200.15** A completely novel class of intravenous anesthetics without hemodynamic sequelae. M. DAVIES*; N. S. CAYLA; Y. LU; Y. WU; B. A. DAGNE; E. R. GROSS; B. MACIVER; E. J. BERTACCINI. *Stanford Univ. Sch. Med., Palo Alto VAHCS, Stanford Sch. of Med., Stanford Univ., Stanford Univ., Palo Alto VA HCS.*
- 4:00 C4 **200.16** Neuroligin 2 regulates anxiety behaviors through effects on amygdala inhibitory synapses. D. KRUEGER*; O. BABAIEV; H. CRUCES-SOLIS; M. HAMMER; C. PILETTI CHATAIN; H. TASCHENBERGER; H. EHRENREICH; N. BROSE. *Max Planck Inst. For Exptl. Med.*
- 1:00 C5 **200.17** Peripheral GABA_B receptors regulate colonic afferent excitability. J. E. LOEZAALCOCER*; M. S. GOLD. *Univ. of Pittsburgh, Univ. Pittsburgh.*
- 2:00 C6 **200.18** Molecular mapping of neurosteroid binding sites in GLIC protein. Z. CHEN*; W. W. CHENG; M. M. BUDELIER; D. F. COVEY; A. S. EVERS. *Washington Univ. In St Louis, Washington Univ. In St Louis.*
- 3:00 C7 **200.19** Disruption of gabaa receptor RDL subunits by RNAi and its effects on odor discrimination in the honey bee *apis mellifera*. I. SINAKEVITCH*; G. AGABITINI; S. KREISSL; P. SZYSZKA; C. G. GALIZIA; B. H. SMITH. *Arizona State Univ., Univ. of Konstanz.*
- 4:00 C8 **200.20** Tonic and phasic inhibition in vb thalamus. H. J. KWAK*; W. KOH; K. SONG; G. HA; E. H. LEE; C. J. LEE; E. CHEONG. *Yonsei Univ., Korea Inst. of Sci. and Technol.*
- 1:00 C9 **200.21** Expression of ethanol sensitive glycine receptors in brain regions of the reward system. S. S. GALLEGOS*; B. MUÑOZ; R. VIVEROS; L. G. AGUAYO. *Univ. of Concepcion.*
- 2:00 C10 **200.22** Characterizing a 5-HT₃ receptor-ELIC chimera. S. C. LUMMIS*; K. PRICE. *Univ. of Cambridge.*
- 3:00 C11 **200.23** Identification of neurosteroids that are able to interact with modulatory sites on P2X receptors. H. ZEMKOVA*; S. SIVCEV; M. IVETIC; B. SLAVIKOVA; E. KUDOVA. *Inst. of Physiol. ASCR, Fac. of Sciences, Charles Univ. in Prague, Inst. of Organic Chem. and Biochem. ASCR.*
- 4:00 C12 **200.24** Intracellular domain of glycine receptors is an essential domain to confer sensitivity to allosteric modulators. C. F. BURGOS*; M. P. ESPINOZA; C. MUÑOZ-MONTESINO; A. M. MARILEO; V. P. SAN MARTÍN; L. G. AGUAYO; P. CORRINGER; G. E. YÉVENES; G. MORAGA-CID. *Univ. of Concepcion, Inst. Pasteur.*
- 1:00 C13 **200.25** The ionotropic 5-HT₃ receptor: A sensitive model for pharmacogenomic differences. L. DANOBER*; S. BERTRAND; T. SCHAER; D. BERTRAND. *Inst. de Recherches SERVIER, Inst. De Recherches SERVIER, PIT-NPS, Hiqscreen.*
- 2:00 C14 **200.26** Alkylation of cysteine 132 or cysteine 159 abolished the zinc-induced positive allosteric modulation in rP2X4R but not in rP2X2R. F. A. PERALTA*; J. P. HUIDOBRO-TORO. *Univ. De Santiago De Chile, CEDENNA.*
- 3:00 C15 **200.27** New P2X4mCherryIN knockin transgenic mice expressing non-internalized P2X4 receptors revealed alteration in hippocampal plasticity and memory. E. BOUE-GRABOT*; T. DELUC; J. POUGNET; A. MARTINEZ; E. BERTIN; E. DOUDNIKOFF; E. TOULMÉ; A. ALLAIN; E. BEZARD; S. S. BERTRAND; B. BONTEMPI; O. NICOLE. *Univ. de Bordeaux, Univ. de Bordeaux.*

• Indicated a real or perceived conflict of interest, see page 137 for details.

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* Indicates abstract's submitting author

- 4:00 C16 **200.28** Loss of the alpha2 subunit of glycine receptors affects the maturation and the development of the glutamatergic input on striatal medium spiny neurons. J. RIGO*; J. COMHAIR; S. MOLCHANOVA; G. MORELLI; R. J. HARVEY; D. GALL; E. PICCART; S. SCHIFFMANN; B. BRÔNE. *Hasselt Univ., Univ. Libre de Bruxelles, UCL Sch. of Pharm.*
- 1:00 C17 **200.29** Tricyclic antidepressant amitriptyline inhibits 5-hydroxytryptamine 3 receptors currents in NCB 20 cells. K. SUNG*; Y. PARK; S. MYEONG. *The Catholic Univ. of Korea, Med. Col., The Catholic Univ. of Korea, Col. of Med., The Catholic Univ. of Korea, Col. of Med.*
- POSTER**
- 201. Structural Plasticity: Circuit Function**
- Theme B: Neural Excitability, Synapses, and Glia**
- Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*
- 1:00 C18 **201.01** Gene ablation in cerebellar Purkinje cells reduces regenerative capacity of peripheral neuron after injury. K. K. SINGH*; G. KUMAR; W. Y. TAM; K. M. KWAN; C. H. E. MA. *City Univ. of Hong Kong, The Chinese Univ. of Hong Kong, The Chinese Univ. of Hong Kong, The Chinese Univ. of Hong Kong, City Univ. of Hong Kong.*
- 2:00 C19 **201.02** The structural & functional reorganization of neuro-glio-vascular complexes of the perifocal zones in focal damage of the human neocortex. V. AKULININ*; A. MYTSIK; A. STEPANOV; D. AVDEEV; S. STEPANOV; A. SERGEEV. *Omsk State Med. Univ., Omsk State Med. Univ.*
- 3:00 C20 **201.03** Role of microglia in structural plasticity of touch circuitry in neuropathic pain. N. YOUSEFPOUR*; M. APARICIO; A. RIBEIRO-DA-SILVA. *McGill Univ., McGill Univ.*
- 4:00 C21 **201.04** Differences between juvenile and adult fear memory capabilities: The role of IP3/MAP kinase activation and trafficking of glua2 into mature spines. S. SANAY*; R. M. ZANCA; H. N. SHAIR; P. A. SERRANO. *New York State Psychiatric Inst., Icahn Sch. of Med. at Mount Sinai, Grad. Sch. of Biomed. Sci., Hunter College, CUNY, The Grad. Center, CUNY.*
- 1:00 C22 **201.05** The role of complement signaling in olfactory map plasticity. K. LEHMANN*; A. N. WOOD; B. A. STEVENS; L. BELLUSCIO. *NIH, Emory Univ., Childrens Hosp., NIH.*
- 2:00 C23 **201.06** Morphometric plasticity of neuron somata and alterations in satellite glial cells of paravaginal ganglia in pregnant and primiparous rabbits. L. G. HERNANDEZ ARAGON*; E. CUEVAS-ROMERO; M. MARTÍNEZ-GÓMEZ; A. ORTEGA; F. CASTELAN. *Univ. Autonoma De Tlaxcala, Inst. de Investigaciones Biomédicas, Univ. Nacional Autónoma de México, Ctr. de Investigación y de Estudios Avanzados del Inst. Politécnico Nacional, Inst. de Investigaciones Biomédicas, Univ. Nacional Autónoma de México (UNAM).*
- 3:00 C24 **201.07** Exposure to a high-fat diet alters perineuronal nets in the prefrontal cortex. P. M. DINGESS*; E. T. JORGENSEN; J. H. HARKNESS; M. SLAKER; B. A. SORG; C. R. FERRARIO; T. E. BROWN. *Univ. of Wyoming, Washington State University, Vancouver, Med. Col. of Wisconsin, Washington State Univ., The Univ. of Michigan, Univ. of Wyoming.*
- 4:00 C25 **201.08** The role of ampar trafficking and phosphorylation during pavlovian reward conditioning and extinction. R. ZANCA*; R. CAAMANO-TUBIO; J. A. AVILA; P. A. SERRANO; A. R. DELAMATER. *Hunter College, CUNY, The Grad. Center, CUNY, Brooklyn College, CUNY.*
- 1:00 C26 **201.09** Abnormal retina specific segregation at the dLGN of flailer mice - A dominant negative myosin 5a mutant mice. S. PANDIAN*; J. ZHAO, 02139; M. CONSTANTINE-PATON. *MIT, MIT, Massachusetts Inst. Tech.*
- 2:00 C27 **201.10** Synaptic changes upon removal of extracellular perineuronal nets in adult visual cortex. G. FAINI; C. DELEUZE; S. LANDI; A. AGUIRRE; T. PIZZORUSSO; G. RATTO; A. BACCI*. *Inst. du Cerveau et de la Moelle Epiniere (ICM), Inst. Nanoscienze CNR, CNR.*
- 3:00 C28 **201.11** Focused ultrasound increases vesicular zinc and concomitant adult hippocampal neurogenesis. J. SHIN*; B. CHOI; C. KONG; S. LEE; J. CHANG; W. CHANG; S. SUH. *Yonsei Univ. Col. of Med., Yonsei Univ. Col. of Med., Hallym University, Col. of Med.*
- 4:00 C29 **201.12** Improvements in memory after focused ultrasound are associated with changes in hippocampal cholinergic activity and neurogenesis. C. KONG*; J. SHIN; J. LEE; C. KOH; M. YOON; Y. NA; J. CHANG; W. CHANG. *Yonsei Univ. Col. of Med., Yonsei Univ. Col. of Med., Catholic Kwandong Univ. Col. of Med.*
- 1:00 C30 **201.13** Circuit plasticity reconstruction pain modeling (cprp): New method inducing hypersensitivity in rat. M. YOON*; C. KOH; J. LEE; J. SHIN; C. KONG; H. JUNG; J. CHANG. *Dept. of Neurosurg. Yonsei Univ., Brain Korea 21 PLUS Project for Med. Sci. and Brain Res. Inst.*
- 2:00 C31 **201.14** Right dorsolateral prefrontal cortex stimulation reduces mechanical allodynia in neuropathic pain model. C. KOH*; M. YOON; J. SHIN; C. KONG; J. LEE; W. CHANG; H. JUNG; J. CHANG. *Yonsei Univ. Col. of Med., Dept. of Neurosurg. Yonsei Univ., Yonsei Univ. Col. of Med.*
- 3:00 C32 **201.15** Function of schizophrenia risk gene dysbindin in stress induced anxiety and aggression. Q. GU*. *NIH.*
- 1:00 DP02/C33 **201.16** (Dynamic Poster) Biphasic change in water diffusion MRI signals in the hippocampus of the rat brains following training of the Barnes maze task across the successive 2-days and 6-days sessions. M. ABE*; Y. TAKANO; T. A. HIGUCHI, 960-1295; R. RYOKE; S. OHARA; Y. TAKI; R. KAWASHIMA. *Fukushima Med. Univ., Ctr. for Baby Science, Doshisha Univ., Ctr. for Brain Disorder, Fac. of Medicine, Fukushima Med. Univ., Dept. of Functional Brain Imaging, Inst. of Deveelopment, Aging and Cancer, Tohoku Univ., Tohoku Univ. Grad Sch. Life Sci., Dept. of Radiology and Nuclear Medicine, Inst. of Deveelopment, Aging and Cancer, Tohoku Univ., Dept. of Functional Brain Imaging, Inst. of Deveelopment, Aging and Cancer, Tohoku Univ.*

POSTER

202. Neuronal Firing Properties and Regulation

Theme B: Neural Excitability, Synapses, and Glia

Sun. 1:00 PM – Walter E. Washington Convention Center, Halls A-C

- 1:00 C34 **202.01** Orexin receptor activation in serotonergic (5-HT) dorsal raphe (DR) neurons induces a novel slow afterhyperpolarization (sAHP) that results from the Ca²⁺-dependent closure of cation channels. M. ISHIBASHI*; C. S. LEONARD. *New York Med. Col.*
- 2:00 C35 **202.02** Alpha-1 adrenergic receptor excitation of serotonergic (5-HT) dorsal raphe (DR) neurons increases membrane noise, the late afterhyperpolarization (AHP), spike frequency adaptation and has a subtractive effect on firing gain. N. E. MOLINA*; M. ISHIBASHI; C. S. LEONARD. *New York Med. Col., New York Med. Coll., New York Med. Coll.*
- 3:00 C36 **202.03** Novel description of the large conductance Ca²⁺-modulated K⁺ current, BK, during an action potential from suprachiasmatic nucleus neurons. J. R. CLAY*. *NIH.*
- 4:00 C37 **202.04** ▲ The effect of neural orientation on action potential generation elicited by transcranial magnetic stimulation: a computational study. D. ELCIN; R. A. TIKIDJI-HAMBURYAN; C. C. CANAVIER*. *Tulane Univ., LSU Hlth.*
- 1:00 C38 **202.05** Frequency-dependent regulation of intrinsic excitability and spiking resonance by voltage-gated currents. A. SZÜCS*; A. RÁTKAI; K. SCHLETT; R. HUERTA. *UCSD, Eotvos Lorand Univ., Univ. of California San Diego.*
- 2:00 C39 **202.06** Decreases of extracellular calcium elicit sustained firing in axons of primary afferents through Na_v1.6 channels. J. GIRAUD; P. C. MORQUETTE; B. BRÉANT; M. COUILLARD-LAROCQUE; D. VERDIER; A. KOLTA*. *Univ. de Montréal, Harvard, UPMC, Sorbonne Universités, Univ. Paris 06, Univ. de Montréal, Univ. of Montreal, Univ. Montreal.*
- 3:00 C40 **202.07** Rhythmic persistent firing of neurogliaform interneurons in the human and rodent neocortex. M. RÓZSA*; M. TÓTH; G. OLÁH; J. BAKA; P. BARZÓ; G. TAMÁS. *MTA-SZTE Res. Group For Cortical Microcircuits, Univ. of Szeged.*
- 4:00 C41 **202.08** Excitability differences and ionic currents in mouse neurons of major pelvic ganglion. M. L. GRAY*; C. KYI; D. SCHULZ. *Univ. of Missouri.*
- 1:00 C42 **202.09** Electric field confinement and control of spreading depression. A. J. WHALEN*; H. KADJI; M. DAHLEM; B. J. GLUCKMAN; S. J. SCHIFF. *Penn State Univ., Penn State Univ., Humboldt Univ., Penn State Univ.*
- 2:00 C43 **202.10** Biophysical maturation of the action potential waveform. F. H. INKPEN*; N. F. LEPORA; M. C. ASHBY. *Univ. of Bristol, Univ. of Bristol.*
- 3:00 C44 **202.11** Kv1.1 functions as a regulator blocking Na_v1.6 rather than a K⁺ channel inducing outward current in ventral cochlear nucleus. M. FU*; W. ZHONG; Z. XIAO. *Southern Med. Univ.*
- 4:00 C45 **202.12** Selective boosting of burst firing by L-type calcium channels in lateral substantia nigra dopamine neurons. J. SHIN*; C. A. PALADINI; J. ROEPER. *Inst. of Neurophysiology, Neurosci. Ctr., UTSA.*
- 1:00 C46 **202.13** Neuroinflammation-hypoxia breaks the excitatory-inhibitory balance in neural networks. Y. YANG*; S. SON; J. RAH. *Korea Brain Res. Inst.*
- 2:00 C47 **202.14** The difference between activity and function: Utilizing mouse models and hiPSCs for elucidating the electrophysiology of bipolar disorder. C. D. PERNIA*; R. C. O'DONNELL; B. TOBE; A. WINQUIST; Y. GOSHIMA; E. Y. SNYDER. *The Sanford Burnham Med. Res. Inst., Sanford Burnham Prebys Med. Discovery Inst., Yokohama City Univ. Sch. Med., Sanford Burnham Prebys Med. Discovery Inst.*
- 3:00 C48 **202.15** Emergence of conserved firing patterns of reverberatory activity in neuronal networks through activity-dependent synaptic plasticity. F. XU*; D. SHI; P. LAU; G. BI. *Univ. of Sci. and Technol. of China.*
- 4:00 C49 **202.16** Differences in potassium channel gating properties have little effect on spike propagation in an unmyelinated axon. N. DAUR; F. NADIM; D. M. BUCHER*. *NJIT and Rutgers Univ., New Jersey Inst. of Technol., New Jersey Inst. of Technol.*
- 1:00 C50 **202.17** Glutamate stimulation leads to down-regulation of ATF4/CREB2. F. AMAR*; J. LIU; C. CORONA; E. GRAEFF; L. GREENE; M. SHELANSKI. *Columbia Univ. Med. Ctr., AgroParisTech.*
- 2:00 C51 **202.18** ATF4 modulates neuronal excitability by regulating GABAB receptors trafficking. C. CORONA*; J. LIU; S. PASINI; F. AMAR; L. A. GREENE; M. L. SHELANSKI. *Columbia Univ.*
- 3:00 C52 **202.19** Inhibitory action of beta-thujaplicin on compound action potentials in frog sciatic nerve fibers. N. MAGORI; T. FUJITA; R. SUZUKI; C. WANG; F. YANG; E. KUMAMOTO*. *Saga Med. Sch.*
- 4:00 C53 **202.20** Non-steroidal anti-inflammatory drugs inhibit compound action potentials in frog sciatic nerve fibers. R. SUZUKI; T. FUJITA; K. MIZUTA; N. MAGORI; C. WANG; F. YANG; M. ISHIMATSU*; E. KUMAMOTO. *Saga Med. Sch., Kyoto Univ., Nishikyushu Univ.*
- 1:00 C54 **202.21** Plasticity of developmentally regulated postinhibitory rebound depolarization enhances precision of spike timing in developing midbrain neurons. H. SUN*. *Carleton Univ.*

POSTER

203. Epilepsy: Channels - Ion channels and receptors

Theme B: Neural Excitability, Synapses, and Glia

Sun. 1:00 PM – Walter E. Washington Convention Center, Halls A-C

- 1:00 C55 **203.01** Impaired action potential initiation and propagation shape cortical network dysfunction following loss of the voltage-gated sodium channel Na_v1.6. C. D. MAKINSON*; T. N. WEERAKKODY; J. R. HUGUENARD. *Stanford Univ.*
- 2:00 C56 **203.02** Mitochondrial Ca²⁺ uniporter (MCO) knockout (KO) protects against neural network hyperexcitability and seizures. J. RYSTED*; Z. LIN; A. GNANASEKARAN; B. PURNELL; K. DAYTON; E. ANDERSON; G. WALTERS; L. SHUTOV; G. F. BUCHANAN; Y. M. USACHEV. *Univ. of Iowa, Univ. of Iowa.*
- 3:00 C57 **203.03** Analysis of KCNT1 mutation in epilepsy. T. S. GERTLER*; A. L. GEORGE, JR. *Ann and Robert H. Lurie Children's Hosp., Northwestern Univ. Feinberg Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 4:00 C58 **203.04** • iPSC-derived neurons harboring a known epilepsy mutation display known and novel electrophysiological phenotypes. K. P. MANGAN*; I. H. QURAIHI; Y. ZHANG; E. ENGHOFFER; C. KANNEMEIER; M. MCLACHLAN; B. MELINE; C. MCMAHON; E. JONES; L. K. KACZMAREK. *Cell. Dynamics, Intl., Yale Sch. of Med., Yale Univ. Sch. Med.*
- 1:00 C59 **203.05** Copy number variation of GABRA1 and GABRG2 is associated with severe epilepsy and optical atrophy. J. KANG*; Q. ZHANG; C. GIBSON; Z. LI; K. BOYD; H. DONG; S. GUTTI; M. J. GALLAGHER; T. S. REX. *Vanderbilt Univ., Vanderbilt Univ. Med. Ctr., Trillium Hlth. Partners, Vanderbilt Univ. Med. Ctr., Vanderbilt Univ. Sch. of Med.*
- 2:00 C60 **203.06** Diminished excitability of 5-HT3aR-expressing GABAergic interneurons but no pro-epileptic effects caused by selective deletion of Nav1.1 channels in a mouse model of Dravet Syndrome. A. D. WILLIAMS*; C. S. CHEAH; W. A. CATTERALL; J. C. OAKLEY. *Univ. of Washington, Univ. of Washington.*
- 3:00 C61 **203.07** Deconstructing thalamic circuits to treat seizures in Dravet syndrome. S. L. MAKINSON*; A. P. CLEMENTE; B. HIGASHIKUBO; B. DELORD; J. T. PAZ. *Gladstone Inst., UCSF Neurosci. Grad. Program, Inst. des Systèmes Intelligents et de Robotique, UCSF Dept. of Neurol.*
- 4:00 C62 **203.08** Loss of KCNQ2/3 from interneurons leads to increase interneuron population and network activity in the immature forbrain. B. HOU*; H. SOH; A. TZINGOUNIS. *Univ. of Connecticut, Univ. of Connecticut.*
- 1:00 C63 **203.09** Cell type-specific defects in sodium channel functions in an isogenic human iPSC model of genetic epilepsy with febrile seizures plus. Y. XIE*; N. NG; O. SAFRINA; S. KONOPLESKI; A. STOVER; K. ESS; A. GEORGE; D. O'DOWD. *Univ. of California, Irvine, Children's Hosp. of Orange County, Vanderbilt Univ., Northwestern Univ.*
- 2:00 D1 **203.10** Inhibition of thrombin receptor 1 attenuates upregulation of persistent sodium current after status epilepticus in young rats. O. ISAEVA*; O. LUNKO; O. NETSYK; M. SEMENIKHINA; L. AL KURY; V. SYDORENKO; G. HOLMES; O. KRISHTAL. *Inst. Of Physiol., Univ. of Vermont Col. of Med., Bogomoletz Inst. of Physiol., Zayed Univ.*
- 3:00 D4 **204.03** Effect of epilepsy-associated panic disorder on depression. S. MEDEL-MATUS*; D. SHIN; R. SANKAR; A. MAZARATI. *Univ. of California Los Angeles.*
- 4:00 D5 **204.04** P2X7 receptor antagonism lowers the innate seizure threshold possibly through inhibition of Interleukin-1 β release. S. S. DUTTA*; J. HEWETT. *Syracuse Univ.*
- 1:00 D6 **204.05** Development of new multitargeted antiepileptogenic drug combinations: tolerability in nonepileptic and post-status epilepticus mice. L. WELZEL*; F. TWELE; K. TÖLLNER; W. LÖSCHER. *Univ. of Vet. Med. Hannover.*
- 2:00 D7 **204.06** Neuropharmacological screening of chiral and non-chiral thaidomide analogues containing phthalimide moiety in mice. C. CAMPOS RODRIGUEZ*; J. G. TRUJILLO FERRARA; A. ALVAREZ GUERRA; I. M. CUMBRES VARGAS; R. OLSSON; E. RAMIREZ-SAN JUAN. *Escuela Nacional De Ciencias Biologicas, IPN, Biomedicinsk Centrum, Lund Univ., Escuela Superior de Medicina, Escuela Nacional de Ciencias Biologicas IPN, Escuela Nacional De Ciencias Biologicas IPN.*
- 3:00 D8 **204.07** Real-time measurements of brain acetylcholinesterase activity following nerve agent exposure in the guinea pig. C. E. KAROLENKO; J. L. WINKLER; J. W. SKOVIRA*. *USAMRICD, US Army Med. Res. Inst. of Chem. Def.*
- 4:00 D9 **204.08** Deep brain stimulation to anterior thalamic nucleus affects the EEG patterns of pilocarpine-induced chronic temporal lobe epilepsy model. S. BAE*; E. BAEG; H. LIM; Y. SHON; M. SUH. *Ctr. for Neurosci. Imaging Research, IBS, Sungkyunkwan Univ., Sungkyunkwan Univ., Samsung Med. Center, Sungkyunkwan Univ. Sch. of Med.*
- 1:00 D10 **204.09** Characterization of chemical biomarkers in a novel *in vivo* model of ictogenesis. H. LUNA-MUNGUIA*; A. G. ZESTOS; S. GLISKE; R. T. KENNEDY; W. C. STACEY. *Inst. de Neurobiologia UNAM, Univ. of Michigan, Univ. of Michigan.*
- 2:00 D11 **204.10** Interference of TRPV1 function altered the susceptibility of PTZ-induced seizure. R. MAO*; Y. JIA; L. XU. *Kunming Inst. of Zoology, Chinese Acad. of Sc.*

POSTER

204. Epilepsy: *In Vivo* and Behavior - Identifying and Targeting Seizure Mechanisms

Theme B: Neural Excitability, Synapses, and Glia

Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*

- 1:00 D2 **204.01** Neuronal nitric oxide synthase contributes to PTZ kindling-induced cognitive impairment and depressive-like behavior by activation of hippocampal endoplasmic reticulum stress. X. ZHU*. *Med. Sch. of Southeast Univ.*
- 2:00 D3 **204.02** Phenobarbital treated neonatal mice present worse neurodevelopmental outcomes independent of brain injury. S. QUINLAN*; N. RODRIGUEZ-ALVAREZ; E. JIMENEZ-MATEOS. *RCSI.*

POSTER

205. Epilepsy: Human Studies - Seizure Analysis and Modelling

Theme B: Neural Excitability, Synapses, and Glia

Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*

- 1:00 D12 **205.01** ▲ Neural activity model of hemodynamic response during absence seizures. J. RYU*; Y. CHEN; S. BRAUN; J. N. GUO; H. BLUMENFELD. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Yale Univ. Sch. of Med.*
- 2:00 D13 **205.02** ▲ Evaluating the feasibility of automated responsiveness testing in epilepsy (ARTIE). N. SALEEM*; C. ARENCIBIA; Z. SHEIKH; T. LIAO; L. GOBER; R. KHOZEIN; L. HIRSCH; H. BLUMENFELD. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Yale Univ. Sch. of Med.*

- 3:00 D14 **205.03** ▲ Impaired consciousness in frontal lobe seizures: Quantitative analysis of intracranial electroencephalography. C. A. ARENCIBIA*; R. GEBRE; M. DHAKAR; E. GROVER; I. QURAIISHI; E. STERNBERG; I. GEORGE; A. SIVARAJU; J. BONITO; H. P. ZAVERI; L. GOBER; S. GHOSHAL; P. FAROOQUE; L. HIRSCH; J. GERRARD; D. SPENCER; S. AHAMMAD; H. BLUMENFELD. *Yale Sch. of Med., Yale Sch. of Med., Yale Sch. of Med.*
- 4:00 D15 **205.04** Diverse mechanisms for ictal loss of consciousness: A comparison of intracranial recordings during complex partial and secondarily generalized seizures. E. JUAN*; T. BUGNON; G. FINDLAY; R. VERHAGEN; A. MENSEN; C. A. SCHEVON; O. DEVINSKY; R. MAGANTI; G. TONONI; H. BLUMENFELD; M. BOLY. *Univ. of Wisconsin-Madison, Columbia Univ., NYU Langone Comprehensive Epilepsy-Sleep Inst., Univ. of Wisconsin Madison, Yale Univ. Sch. of Med.*
- 1:00 D16 **205.05** Neural correlates of loss of consciousness in simple versus complex partial seizures: A high-density EEG study. R. Y. VERHAGEN*; G. FINDLAY; B. JONES; E. JUAN; T. BUGNON; A. MENSEN; H. BLUMENFELD; G. TONONI; R. MAGANTI; M. BOLY. *Vrije Univ., Univ. of Wisconsin-Madison, Yale Univ. Sch. of Med.*
- 2:00 D17 **205.06** Network inference for dynamic modeling of epileptic seizures. E. SPENCER*; L. MARTINET; E. N. ESKANDAR; U. EDEN; C. CHU; E. KOLACZYK; S. S. CASH; M. KRAMER. *Boston Univ., Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., Mass Genl Hosp.*
- 3:00 D18 **205.07** Dynamic functional network analysis during human seizures. L. MARTINET*; E. SPENCER; C. CHU; E. N. ESKANDAR; E. KOLACZYK; M. A. KRAMER; S. S. CASH. *Massachusetts Gen. Hosp., Boston Univ., Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., Boston Univ.*
- 4:00 D19 **205.08** A new method to assess cross frequency coupling with changes in low frequency amplitude: application to human seizures. J. NADALIN*; L. MARTINET; G. FIDDYMENT; E. N. ESKANDAR; C. CHU; S. S. CASH; M. KRAMER. *Boston Univ., Massachusetts Gen. Hosp., Mass Genl Hosp.*
- 1:00 D20 **205.09** Cellular and synaptic pathology in intractable epilepsy: Observations from surgically resected seizure foci. M. VARGHESE*; L. COUTO; W. G. JANSSEN; T. VASILKOVA; Y. GROSSMAN; D. DUMITRIU; K. SARPONG; D. DEL VALLE; N. TSANKOVA; L. MARCUSE; F. PANOVA; P. MCGOLDRICK; S. WOLF; S. GHATAN; D. MEYER; D. PINTO; P. R. HOF. *Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. At Mount Sinai, GE Global Res.*
- 2:00 D21 **205.10** Proliferative glial pathology in drug resistant human epilepsy. J. TOME-GARCIA; E. CABALLERO; S. GHATAN; F. PANOVA; L. MARCUSE; J. YOO; W. JANSSEN; S. AKBARIAN; E. ZASLAVSKY; P. R. HOF*; N. TSANKOVA. *ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI, ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI, ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI, ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI, Icahn Sch. of Med. At Mount Sinai.*
- 3:00 D22 **205.11** Task-synchronized vagus nerve stimulation (VNS) showed the improvement of cerebral blood flow responsiveness in the VNS responders. S. SHIMADA*; N. KUNII; T. KOIZUMI; K. KAWAI; N. SAITO. *The Univ. of Tokyo Hosp., Jichi Med. Univ. Hosp.*
- 4:00 D23 **205.12** Epilepsy seizures in children with rare diseases. O. V. GLOBA*; L. KUZENKOVA; T. PODKLETNOVA. *Scientific Ctr. of Children's Hlth.*
- 1:00 D24 **205.13** Long-term correlation structure is preserved in time-shifted intracranial EEG signals. R. B. JOSHI*; I. I. GONCHAROVA; R. B. DUCKROW; J. L. GERRARD; D. D. SPENCER; L. J. HIRSCH; D. W. GODWIN; H. P. ZAVERI. *Wake Forest Sch. of Med., Yale Univ., Yale Univ., Wake Forest Sch. of Med., Yale Univ.*
- 2:00 D25 **205.14** Characterizing single unit activity from putative excitatory neurons in limbic structures during spontaneous focal seizures in patients with medically refractory epilepsy. B. ELAHIAN*; N. LADO; K. A. MOXON; A. MISRA; A. SHARAN; I. FRIED; M. YEASIN; J. ENGEL, Jr.; M. SPERLING; R. STABA; S. A. WEISS. *Thomas Jefferson Univ., Univ. of California Davis, The Massachusetts Gen. Hosp., Thomas Jefferson Univ. Hosp., UCLA Sch. Med., Univ. of Memphis, UCLA, Univ. of California Los Angeles.*
- 3:00 D26 **205.15** ● Development of a wearable, EEG-based seizure diary for people living with epilepsy. M. J. LEHMKUHLE*; M. ELWOOD; J. WHEELER; J. MORRISON; R. LINGSTUYL; M. FRANKEL; F. DUDEK; M. WATSON; L. FREY; A. SHRESTHA; C. DREES; M. BROWN; P. KORB; L. STROM; M. SPITZ. *Epitel, Inc., Univ. of Utah, Epitel, Inc., Univ. of Utah, Univ. of Colorado Anschutz Med. Ctr.*
- 4:00 D27 **205.16** The role of slow ictal wavefronts and fast spike-and-wave discharges during propagation and termination of focal seizures. T. PROIX; V. K. JIRSA; W. TRUCCOLO*. *Brown Univ., Inst. De Neurosciences Des Systemes.*
- 1:00 D28 **205.17** Seizure-onset assessment in ECoG via dynamical stability analysis. A. ASHOURVAN*; S. PEQUITO; S. N. BALDASSANO; A. KHAMBHATI; J. M. VETTEL; B. LITT; G. J. PAPPAS; D. S. BASSETT. *Univ. of Pennsylvania, Army Res. Lab., Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania, university of Pennsylvania, Army Res. Lab., Univ. of California, Univ. of Pennsylvania, Hosp. of the Univ. of Pennsylvania, Univ. of Pennsylvania.*
- 2:00 D29 **205.18** Modeling of epileptic high frequency oscillations recorded by clinical macro-electrodes. F. WENDLING*; M. SHAMAS; A. NICA; I. MERLET; P. BENQUET. *Inserm U1099, Inserm U1099.*
- 3:00 D30 **205.19** Gamma activity in epileptic and non-epileptic brain during a verbal memory task. F. KHADJEVAND*; M. T. KUCEWICZ; B. BERRY; J. CIMBALNIK; V. KREMEN; L. MILLER; B. H. BRINKMANN; J. VAN GOMPEL; M. STEAD; G. A. WORRELL. *Mayo Clin. Minnesota.*
- 4:00 D31 **205.20** Bimodal coupling of ripples and slower oscillations during sleep in the frontal and parietal lobe of patients with medically refractory epilepsy. I. SONG*; I. OROSZ; I. CHERVONEVA; Z. J. WALDMAN; I. FRIED; C. WU; A. SHARAN; N. SALAMON; R. GORNIK; S. DEWAR; A. BRAGIN; J. ENGEL, Jr.; M. SPERLING; R. J. STABA; S. A. WEISS. *Thomas Jefferson Univ., David Geffen Sch. of Med. at UCLA, Thomas Jefferson Univ., David Geffen Sch. of Med. at UCLA, Thomas Jefferson Univ., Thomas Jefferson Univ., David Geffen Sch. of Med. at UCLA, David Geffen Sch. of Med. at UCLA.*
- 1:00 D32 **205.21** Removing electromyographic activity-related events improves the accuracy of intracranial high frequency oscillations as biomarker for epilepsy. S. REN*; S. GLISKE; W. C. STACEY. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 2:00 D33 **205.22** A GUI-based platform for human brain functional mapping in epilepsy patients. Y. SONG*; M. A. GORENSTEIN; K. C. HARTSTEIN; P. U. TSE; D. W. ROBERTS; J. HONG; K. A. BUJARSKI; E. J. KOBYLARZ; V. M. THADANI; G. P. THOMAS, Jr.; B. C. JOBST. *Dartmouth-Hitchcock Med. Ctr., Geisel Sch. of Med. at Dartmouth, Dartmouth Col., Geisel Sch. of Med. at Dartmouth, Thayer Sch. of Engin. at Dartmouth, Dartmouth-Hitchcock Med. Ctr.*
- 3:00 D34 **205.23** Role of ictal brain SPECT in refractory epilepsy in comparison with MRI and EEG - Experience from a tertiary center in southern India. J. HEPHIZIBAH*; M. M. THOMAS; D. MATHEW; N. SHANTHLY. *Christian Med. Col. - Vellore.*
- 4:00 D35 **205.24** Automated classification and quantification of human epileptic spikes for the purpose of modelling simultaneously acquired intracranial EEG-fMRI. N. SHARMA*; C. PEDREIRA; M. CENTENO; U. J. CHAUDHARY; D. W. CARMICHAEL; T. YADEE; T. MURTA; M. LEITE; B. DIEHL; L. LEMIEUX. *Univ. Col. London, Inst. of Neurol., Univ. of Oxford, Exptl. Psychology, Univ. Col. London, Inst. of Child Hlth.*
- 1:00 D36 **205.25** Systemic markers of inflammation and neuronal injury in patients with epilepsy. S. KUNDA*; R. LAFRANCE-COREY; F. KHADJEVAND; G. WORRELL; C. L. HOWE. *Mayo Clin.*
- 2:00 D37 **205.26** Mapping interictal MREG signal variance abnormality in intractable epilepsy. J. KANANEN*; T. TUOVINEN; H. ANSAKORPI; V. KORHONEN; V. RAATIKAINEN; N. HUOTARI; H. HELAKARI; A. RASILA; V. KIVINIEMI. *Univ. of Oulu, Univ. of Oulu.*
- 3:00 D38 **205.27** Efficacy and tolerability of perampanel in refractory epilepsy. D. BARR; R. CASTILLO; B. F. KIRMANI*; ESQ. *Baylor Scott & White Hlth., Texas A&M HSC Coll of Med/ Scott & White Epilepsy Ctr., T, Texas A&M HSC Coll of Med/ Scott & White Epilepsy Ctr.*
- POSTER**
- 206. Astrocytes: Disease Mechanisms**
- Theme B: Neural Excitability, Synapses, and Glia**
- Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*
- 1:00 D39 **206.01** Exploring the effect of DBS-like high frequency electrical stimulation on human astrocytes through single cell RNA sequencing. S. CHANG*; J. JANG; C. CHOI; J. YI; I. KIM; K. BUTTERS; A. BHAGWATE; J. JEN. *Mayo Clin., Mayo Clinic, Mayo Clin., Pomona Col., Mayo Clin., Mayo Clin., Mayo Clin.*
- 2:00 D40 **206.02** Role of connexin 43 in hypobaric hypoxia induced glutamate excitotoxicity in rat hippocampus. A. DHEER*; V. JAIN; M. PANT; N. KUSHWAH; R. KUMAR; D. PRASAD; P. SETH; S. SINGH. *Defence Inst. of Physiol. and Allied Sci., Natl. Brain Res. Ctr., Defence Res. and Develop. Organisation.*
- 3:00 D41 **206.03** Astroglial differentiation block in childhood-onset schizophrenia may be relieved by suppression of REST and TGFB/SMAD4-dependent signaling. Z. LIU*; M. OSIPOVITCH; J. BATES; D. CHANDLER-MILITELLO; M. NEDERGAARD; M. WINDREM; A. BENRAISS; P. TESAR; S. GOLDMAN. *Univ. of Rochester Med. Ctr., Univ. of Copenhagen Fac. of Hlth. and Med. Sci., Case Western Univ. Med. Sch., Rigshospitalet.*
- 4:00 D42 **206.04** Astrocyte heterogeneity across the brain and spinal cord occurs developmentally, in adulthood and in response to demyelination. H. YOON*; G. WALTERS; A. PAULSEN; I. A. SCARISBRICK. *Mayo Clin., Mayo Clin., Mayo Clin.*
- 1:00 D43 **206.05** Astrocytic end-foot degeneration as a key mediator of vascular cognitive impairment and dementia. B. R. PRICE*; T. L. SUDDUTH; E. M. WEEKMAN; D. M. WILCOCK. *Univ. of Kentucky, University of Kentucky, Univ. of Kentucky.*
- 2:00 D44 **206.06** Consequences of altered calcium signaling in astrocytes with implications on Alzheimer's disease pathology. A. G. PILLAI*; S. NADKARNI. *Indian Inst. of Sci. Educ. and Res., Indian Inst. of Sci. Educ. and Res. Pune.*
- 3:00 D45 **206.07** Profiling cortical astroglial cells in response to stress. S. SIMARD*; G. COPPOLA; S. HAYLEY; N. SALMASO. *Carleton Univ., Yale Univ.*
- 4:00 D46 **206.08** Cuprizone induced GFAP+ astrocyte activation is FGF8 dependent. C. E. STEWART*; W. C. CHUNG. *Kent State Univ.*
- 1:00 D47 **206.09** The amyloid precursor protein is crucial for robust calcium activity in astrocytes. S. CRUX*; E. MONTAGNA; J. HERBER; C. SGOBIO; A. COLOMBO; S. TAHIROVIC; S. LICHTENTHALER; J. HERMS. *DZNE E.V., Ludwig-Maximilians-Universitaet, Munich Cluster for Systems Neurol. (SyNergy), Tech. Univ. of Munich.*
- 2:00 D48 **206.10** The role of kir4.1 in the development of epilepsy. J. BONI*; A. RANDOLPH; M. OLSEN. *Virginia Tech, Sch. of Neurosci., Univ. of Alabama at Birmingham.*
- 3:00 D49 **206.11** ▲ Differential roles in temozolomide-resistant glioblastoma cells. S. LAI*. *China Med. Univ.*
- 4:00 D50 **206.12** Mechanism underlying hypoxia-independent upregulation of astrocytic HIF-1 α after ischemic preconditioning. Y. HIRAYAMA*; H. P. N. LE; S. KOIZUMI. *Univ. of Yamanashi, Univ. of Yamanashi Hosp.*
- 1:00 D51 **206.13** Investigation of local protein synthesis at peri-synaptic astrocyte processes in Fragile X Syndrome (FXS). H. HIGASHIMORI*; Y. YANG; Y. MEN. *Tufts Univ.*
- 2:00 D52 **206.14** Role of microRNA and opiates in HIV-1 Tat protein neuropathogenesis. K. CHEN*; L. SARDO; S. MITA; Z. KLASE. *Univ. of the Sci., Philadelphia Col. of Osteo. Med.*
- 3:00 D53 **206.15** ▲ Adrenergic modulation of Cerebellar Glial activity during Nociception. S. KIM; S. ROH; S. KIM; S. KIM*. *Seoul Natl. Univ. Col. of Med., Kyung Hee Univ. Col. of Korean Med., Seoul Natl. Univ. Col. of Med.*
- 4:00 D54 **206.16** Serum response factor regulates astrogliosis in a cell autonomous manner. M. JAIN*; P. Y. LU; S. KORADA; D. GUTMANN; N. RAMANAN. *Indian Inst. of Sci., Jiangsu Hengrui Med., Washington Univ. Sch. of Med.*
- 1:00 D55 **206.17** Astrocyte heterogeneity after stroke: Identifying new targets for neural repair. A. J. GLEICHMAN*; R. KAWAGUCHI; M. V. SOFRONIEW; G. COPPOLA; S. CARMICHAEL. *UCLA, UCLA, UCLA Schl Med., UCLA Sch. Med.*
- 2:00 D56 **206.18** Analysis of astrocyte morphology during hypoxia adaptation using higher-order image features extracted by deep convolutional neural network. S. TANAKA; T. NISHINO; M. NITTA; T. SUGASHI; K. MASAMOTO; Y. MIYAWAKI*. *The Univ. of Electro-Communications.*

- 3:00 D57 **206.19** Transcriptional regulators of astrocyte reactivity. J. E. BURDA^{*}; R. KAWAGUCHI; G. COPPOLA; M. V. SOFRONIEW. *UCLA, UCLA, UCLA, UCLA.*
- 4:00 D58 **206.20** Suppression of pro-inflammatory cytokines released from activated glia by Cinnamomi Cortex and its major phytochemical Coumarin alleviates oxaliplatin induced cold allodynia in rats. J. LEE^{*}; H. CHAE; W. KIM; H. BAE; S. KIM. *Col. of Korea Medicine, Kyung Hee Univ., Grad. school, Kyung Hee Univ., Grad. school, Kyung Hee Univ., Dept. of Physiology, Kyung Hee Univ., Col. of Korean Med., Kyung Hee Univ. Col. of Korean Med.*
- 1:00 D59 **206.21** DISC1 in astrocytes regulates glycolytic pathways and lactate production: Implications for psychiatric disorders. Y. JOUROUKHIN^{*}; V. MISHENEVA; Y. KAGEYAMA; S. A. ANDRABI; C. Y. YANG; V. L. DAWSON; T. M. DAWSON; H. SESAKI; M. PLETNIKOV. *Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med., UAB Sch. of Med., Johns Hopkins Univ. Sch. Med., Johns Hopkins Univ. Inst. for Cell Engin., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med.*
- 2:00 D60 **206.22** Chronic systemic LPS administration induces aberrant Kir6.2 expression in reactive astrocytes. C. M. GRIFFITH^{*}; A. A. SHARP; G. M. ROSE; P. R. PATRYLO. *Southern Illinois Univ. Sch. of Med., Southern Illinois Univ. Sch. of Med.*
- 3:00 D61 **206.23** The effect of cocaine self-administration on morphometric properties of astrocytes and synaptic colocalization within the reward circuitry. A. TESTEN^{*}; M. SEPULVEDA; C. H. HILL; K. J. REISSNER. *UNC, Univ. of North Carolina at Chapel Hill.*
- 4:00 D62 **206.24** Genetic risk factors in neuron-astrocyte interactions in mental disorders. A. V. SHEVELKIN^{*}; Y. JOUROUKHIN; L. NUCIFORA; C. TERRILLION; O. MYCHKO; C. YANG; A. SAWA; F. NUCIFORA; M. PLETNIKOV. *P.K.Anokhin Inst. Norm Physiol, Johns Hopkins Univ.*
- 1:00 D63 **206.25** The extracellular glutamate-to-glutamine ratio modulates glycolysis in primary murine astrocytes. P. KABIRAJ^{*}; M. CAULFIELD; C. MCCARTHY; R. JOHNSON; C. F. LUCCHINETTI; C. HOWE. *Mayo Clin.*
- 2:00 E1 **206.26** Effects of the C9orf72 repeat expansion on human iPSC-derived astrocytes in Amyotrophic Lateral Sclerosis. J. T. PHAM^{*}; L. R. HAYES; J. DAIGLE; J. C. GRIMA; S. J. MILLER; X. TANG; W. ZHOU; L. XUE; S. VIDENSKY; S. MACKEY-ALFONSO; T. GENDRON; J. D. ROTHSTEIN. *The Johns Hopkins Sch. of Med., The Johns Hopkins Sch. of Med., Johns Hopkins Univ., Mayo Clin., The Johns Hopkins Sch. of Med.*
- 3:00 E2 **206.27** Antimicrobial peptides derived from human and bovine cathelicidins inhibit zika virus replication through interferon signaling. M. HE^{*}; H. ZHANG; Y. LI; G. WANG; J. ZHAO; Y. HUANG; J. ZHENG. *Univ. of Nebraska Med. Ctr., Central South Univ., The Second Xiangya Hosp.*

POSTER

207. Alzheimer's Disease: -Omics Approaches

Theme C: Neurodegenerative Disorders and Injury

Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*

- 1:00 E3 **207.01** Ezrin upregulation is a potential early biomarker of tau-mediated neurodegeneration. I. E. VEGA^{*}; A. UMSTEAD; C. WYGANT; J. S. BECK; S. E. COUNTS; J. M. VAN RAAMSDONK. *Michigan State Univ., Univ. of Michigan, Van Andel Res. Inst.*
- 2:00 E4 **207.02** An anatomical correlate of the mouse default mode network. J. D. WHITESELL^{*}; A. LISKA; N. GRADDIS; P. BOHN; S. MIHALAS; A. GOZZI; J. A. HARRIS. *Allen Inst. for Brain Sci., Inst. Italiano Di Tecnologia, Ctr. for Neurosci. and Cognitive Systems @ UNITN.*
- 3:00 E5 **207.03** Neuronal expression of Alzheimer's disease associated U1-70K fragment causes splicing dysfunction, impaired synaptic plasticity, and cognitive deficits in mice. P. CHEN^{*}; T. I. SHAW; B. TEUBNER; M. LIU; B. BAI; Y. LI; A. MANCIERI; Z. WU; I. T. BAYAZITOV; D. EDDINS; H. WANG; L. R. EARLS; S. S. ZAKHARENKO; R. J. SMEYNE; J. PENG. *St Jude Children Res. Hosp., St Jude Children Res. Hosp., St. Jude Children's Res. Hosp., Thomas Jefferson Univ., St. Jude Children's Res. Hosp.*
- 4:00 E6 **207.04** MicroRNA-455-3p as a potential peripheral biomarker for Alzheimer's disease. S. KUMAR^{*}; M. VIJAYAN; P. REDDY. *Texas Tech. Univ. Hlth. Sci. Ctr.*
- 1:00 E7 **207.05** Quantitative analysis of endosomal-lysosomal markers within the septohippocampal circuit of Ts65Dn mice following maternal choline supplementation (MCS). M. K. GAUTIER^{*}; M. J. ALLDRED; H. M. CHAO; A. SALTZMAN; E. J. MUFSON; S. D. GINSBERG. *Ctr. for Dementia Res. Nathan Kline Inst., NYU Langone Med. Ctr., NYU Langone Med. Ctr., Barrow Neurolog. Inst., NYU Langone Med. Ctr., NYU Langone Med. Ctr.*
- 2:00 E8 **207.06** Single population RNA sequencing (RNA-seq) analysis of basal forebrain cholinergic neurons (BFCNs) within the medial septal nucleus in a mouse model of Down syndrome (DS) and Alzheimer's disease (AD) identifies unique transcriptional mosaics following maternal choline supplementation (MCS). H. M. CHAO^{*}; M. J. ALLDRED; A. SALTZMAN; A. HEGUY; S. D. GINSBERG. *Ctr. for Dementia Res. Nathan Kline Inst., New York Univ. Langone Med. Ctr., New York Univ. Langone Med. Ctr., New York Univ. Langone Med. Ctr., New York Univ. Langone Med. Ctr.*
- 3:00 E9 **207.07** Single-population RNA-sequencing (RNA-seq) analysis of septohippocampal neurons in trisomic mice identify differential expression profile mosaics following perinatal, prenatal, and postnatal maternal choline supplementation (MCS). M. J. ALLDRED^{*}; H. M. CHAO; T. LHAKHANG; Y. ZHANG; A. HEGUY; S. D. GINSBERG. *Nathan Kline Inst., NYU Langone Med. Ctr., NYU Langone Med. Ctr., NYU Langone Med. Ctr., NYU Langone Med. Ctr., NYU Langone Med. Ctr.*

^{*} Indicated a real or perceived conflict of interest, see page 137 for details.

[▲] Indicates a high school or undergraduate student presenter.

^{*} Indicates abstract's submitting author

- 4:00 E10 **207.08** Downregulation of select neurotrophin and neurotrophin receptor genes within CA1 pyramidal neurons and hippocampus: Correlation with cognitive performance and neuropathology in mild cognitive impairment (MCI) and Alzheimer's disease (AD). S. D. GINSBERG*; M. H. MALEK-AHMADI; M. J. ALLDRED; Y. CHEN; F. D. JEANNETEAU; T. M. KRANZ; M. V. CHAO; S. E. COUNTS; E. J. MUFSON. *Nathan S Kline Institute/NYU Langone Med. Ctr., Nathan S Kline Institute/NYU Langone Med. Ctr., Nathan S Kline Institute/NYU Langone Med. Ctr., Banner Alzheimer's Inst., Inst. of Functional Genomics, Univ. de Montpellier, Nathan S Kline Institute/NYU Langone Med. Ctr., Michigan State Univ., Michigan State Univ., Barrow Neurolog. Inst.*
- 1:00 E11 **207.09** Dysregulation of synaptic and neurotransmitter receptor gene expression is associated with tau oligomerization in nucleus basalis neurons during the progression of Alzheimer's disease. C. T. TIERNAN*; J. S. BECK; S. D. GINSBERG; N. M. KANAAN; E. J. MUFSON; S. E. COUNTS. *Michigan State Univ., Nathan S Kline Institute/NYU Langone Med. Ctr., Mercy Hlth. St. Mary's, Barrow Neurolog. Inst., Michigan State Univ., Michigan Alzheimer's Dis. Core Ctr.*
- 2:00 E12 **207.10** Sex specific metabolic and epigenetic changes in primary fibroblasts from patients with Alzheimer's disease. J. M. WILKINS*; S. TRUSHIN; T. DUTTA; S. BAHETI; D. SAKRIKAR; X. PERSSON; I. LANZA; E. TRUSHINA. *Mayo Clin., Mayo Clin., Mayo Clin., Mayo Clin.*
- 3:00 F1 **207.11** Differential enrichment and elution proteome (DEEP) analysis of amyloid precursor protein interactome in Alzheimer's brain. J. M. SIFFORD*; B. BAI; Y. LI; J. PENG. *St Jude Children's Res. Hosp.*
- 4:00 F2 **207.12** Integrated system approach reveals the dynamic changes of brain transcriptome associated with aging and amyloid pathology. K. NAM*; N. F. FITZ; C. M. WOLFE; F. LETRONNE; I. LEFTEROV; R. KOLDAMOVA. *Univ. of Pittsburgh.*
- 1:00 F3 **207.13** Dyregulation of AZGP1, AEBP1 and antisense RNAs in middle temporal gyrus of Alzheimer's disease patients. I. S. PIRAS*; J. KRATE; E. DELVAUX; J. NOLZ; D. BROKAW; M. D. DE BOTH; D. F. MASTROENI; T. G. BEACH; P. D. COLEMAN; M. J. HUENTELMAN. *Translational Genomics Res. Inst., Univ. of Arizona Col. of Med., Arizona State Univ., Banner Sun Hlth. Res. Inst.*
- 2:00 F4 **207.14** Single nucleus RNA-sequencing of human AD brain. M. OTERO-GARCIA; Y. XUE; T. SHAKOURI; G. COPPOLA; I. COBOS*. *UCLA, UCLA.*
- 3:00 F5 **207.15** Systems biology resource for Alzheimer's disease target prioritization: The AMP-AD Knowledge Portal. K. DAILY*; B. LOGSDON; M. PETERS; R. AL-OURAN; Y. WAN; J. M. SHULMAN; Z. LIU; L. OMBERG; L. MANGRAVITE. *Sage Bionetworks, Baylor Col. of Med.*
- 4:00 F6 **207.16** Understanding the molecular etiology of Alzheimers disease based on transcriptomic changes across seven brain regions. T. M. PERUMAL*; O. AMP-AD RNASEQ WORKING GROUP; L. MANGRAVITE. *Sage Bionetworks, Sage Bionetworks, AMP-AD Consortium.*
- 1:00 F7 **207.17** Cross study analysis highlights endothelial and microglial transcriptomic components of Alzheimer's disease risk. B. LOGSDON*; T. M. PERUMAL; S. K. SIEBERTS; L. OMBERG; L. M. MANGRAVITE. *Sage Bionetworks.*
- 2:00 F8 **207.18** Characterization of astrocytic circular RNAs in late-onset Alzheimer's disease. S. SEKAR*; L. CUYUGAN; J. ADKINS; P. GEIGER; D. F. MASTROENI; P. D. COLEMAN; W. LIANG. *Translational Genomics Res. Inst., Arizona State Univ., ASU-Banner Neurodegenerative Res. Ctr.*

POSTER

208. Synaptic Deficits in Alzheimer's Disease and Neurodegeneration I

Theme C: Neurodegenerative Disorders and Injury

Sun. 1:00 PM – Walter E. Washington Convention Center, Halls A-C

- 1:00 F9 **208.01** ● Autophagic degradation of stromal interaction molecule 2 by ER stress leads to inhibition of SOCE and dendritic spine degeneration. J. ZHOU*; S. WU. *Wenzhou Med. Univ., Wenzhou Med. Univ.*
- 2:00 F10 **208.02** Defects in vacuolar ATP-ase affect lysosome-autophagosome regulation and synaptic vesicles in early stages of Alzheimer's disease. S. H. MUSTALY*; M. GARSTKA; N. KAPECKI; K. D. BEAMAN; A. GILMAN-SACHS; G. STUTZMANN. *Rosalind Franklin Univ., Rosalind Franklin Univ.*
- 3:00 F11 **208.03** Selective activation of the thalamic reticular nucleus reduces sleep fragmentation and improves slow wave sleep in Alzheimer's disease mice. R. JAGIRDAR*; F. M. SEIBT; M. BEIERLEIN; J. CHIN. *Baylor Col. of Med., McGovern Med. Sch. at UTHealth.*
- 4:00 F12 **208.04** ▲ SIRT3 agonist in an *in vitro* model of Alzheimer's disease. T. LYND*; M. Y. GOVINDARAJULU; G. BRIGGS; M. DHANASEKARAN; V. D. SUPPIRAMANIAM. *Auburn Univ., Auburn Univ., Auburn Univ., Harrison Sch. of Pharmacy, Auburn Univ., Auburn Univ.*
- 1:00 G1 **208.05** Developmental cannabinoid exposure causes cognitive deficits in offspring. P. D. PINKY*; J. E. BLOEMER; R. HESLIN; S. SETTI; A. ALHOWAIL; M. GOVINDARAJULU; M. REED; V. SUPPIRAMANIAM. *Harrison Sch. of Pharmacy, Auburn Univ.*
- 2:00 G2 **208.06** Mice lacking adiponectin display synaptic plasticity deficits and central insulin resistance. J. BLOEMER*; D. BHATTACHARYA; A. H. ALHOWAIL; P. DAS PINKY; M. GOVINDARAJULU; R. JUDD; V. D. SUPPIRAMANIAM. *Auburn Univ., Auburn Univ.*
- 3:00 G3 **208.07** Novel PPAR-gamma agonist improve pathology and memory deficits in a 3xTg-Ad mouse model of Alzheimer's disease. M. Y. GOVINDARAJULU*. *Auburn Univ.*
- 4:00 G4 **208.08** ▲ Cerebellar neurotoxic effects of nicotine on prenatal exposed rodent models. G. H. BRIGGS*; M. Y. GOVINDARAJULU; M. DHANASEKARAN; D. BATTACHARYA. *Harrison Sch. of Pharm., Harrison Sch. of Pharmacy, Auburn Univ., Auburn Univ.*
- 1:00 G5 **208.09** Adenosine A2A receptor over-activation is necessary and sufficient for the emergence of memory and synaptic plasticity deficits in animal models of early Alzheimer's disease. R. A. CUNHA*; P. AGOSTINHO. *CNC -Center For Neurosci. and Cell Biol., CNC-Center for Neurosci. and Cell Biol.*

- 2:00 G6 **208.10** Early hippocampal denervation of the TgF344-AD rat. A. GOODMAN*; C. E. STRANG; L. SMITH; L. MCMAHON. *Univ. of Alabama At Birmingham, Univ. of Alabama At Birmingham, Univ. of Alabama At Birmingham.*
- 3:00 G7 **208.11** Early synapse vulnerability targets dentate gyrus in the novel TgF344-Alzheimer's disease rat model. L. A. SMITH*; L. L. MCMAHON. *Univ. of Alabama, Birmingham (UAB).*
- 4:00 G8 **208.12** Amyloid precursor protein family regulates synaptic function and neuronal excitability in the adult mouse hippocampus. S. LEE*; A. HO; H. WATANABE; J. KANG; V. Y. BOLSHAKOV; J. SHEN. *Brigham & Women's Hospital, Harvard Med. Sch., McLean Hospital, Harvard Med. Sch.*
- 1:00 G9 **208.13** Synapse-specific role of Akt kinases in Alzheimer's disease. R. GOWAIKAR; V. RAVINDRANATH*. *Indian Inst. of Sci., Ctr. for Brain Res.*
- 2:00 G10 **208.14** Synaptosomal F-actin loss mediates early behavioural deficits in Alzheimer's disease mouse model. S. KARUNAKARAN*; R. KOMMADDI; D. DAS; A. RAY; D. BENNETT; V. RAVINDRANATH. *Ctr. for Neuroscience, Indian Inst. of Science, Rush Univ. Med. Ctr., Ctr. for Brain Res.*
- 3:00 H1 **208.15** Modulation of ocular dominance plasticity by Amyloid Precursor Protein and Amyloid-beta. C. M. WILLIAM*; M. A. STERN; L. SAQRAN; X. PEI; M. P. FROSCH; B. T. HYMAN. *New York Univ. Sch. of Med., Massachusetts Gen. Hosp., New York Univ. Sch. of Med., Massachusetts Gen. Hosp.*
- 4:00 H2 **208.16** Calcium channel blockers and Alzheimer's disease: Evidence of interaction with Apolipoprotein E. S. D. EDLAND*; R. P. GELBER; L. J. LAUNER; L. R. WHITE. *UCSD, Pacific Hlth. Res. and Educ. Inst., Natl. Inst. on Aging.*
- 1:00 H3 **208.17** Using uncoupling in mitochondria of astrocytes to promote neuroprotection in Alzheimer's disease. N. ROSENBERG*; A. B. ROCHER; M. BRIQUET; Y. BERNARDINELLI; J. CHATTON. *Univ. of Lausanne, Univ. of Lausanne, Neonomia.*
- 2:00 H4 **208.18** Oligomers of tau and amyloid beta synergistically converge onto calcineurin to disrupt synaptic plasticity and memory function. G. TAGLIALATELA*; B. KRISHNAN; W. ZHANG; R. KAYED; M. MICCI. *Univ. of Texas Med. Br. Dept. of Neurol., UTMB.*
- 3:00 H5 **208.19** NSC-derived exosomes reduce hippocampal synapses vulnerability to the dysfunctional impact of both amyloid beta and tau oligomers. M. MICCI*; B. KRISHNAN; R. KAYED; W. ZHANG; E. BISHOP; G. TAGLIALATELA. *UTMB, UTMB.*
- 4:00 H6 **208.20** Increased synaptic sensitivity to A β and tau oligomers in aging CNS as a function of decreasing neural stem cells. B. KRISHNAN*; D. BRILEY; R. KAYED; G. TAGLIALATELA; M. A. MICCI. *Univ. of Texas Med. Br. Galveston.*

POSTER

209. Parkinson's Disease: Neuroprotective Mechanisms**Theme C: Neurodegenerative Disorders and Injury**Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*

- 1:00 H7 **209.01** Characterisation of zebrafish CDNF mutant throughout the lifespan. Y. CHEN*; S. SEMENOVA; M. SUNDVIK; P. PANULA. *Univ. of Helsinki.*
- 2:00 H8 **209.02** ERK5 is expressed in ventral midbrain neurons and may regulate nurr1 transcriptional activity. P. SACCHETTI*; S. DELVECCHIO. *Univ. of Hartford, Univ. of Hartford.*
- 3:00 H9 **209.03** Nigral GFR alpha1 expression as mediator of striatal GDNF impact: Evidence from aged and 6-OHDA lesioned rats. M. F. SALVATORE*; E. A. KASANGA; C. OWENS; F. P. MANFREDSSON; A. D. RICHARD; B. S. PRUETT; M. CANTU; L. MCDIVITT; C. TAN; A. GAJEWSKI; B. LATIMER. *Univ. of North Texas Hlth. Sci. Ctr., Univ. of North Texas Hlth. Sci. Ctr., LSU Hlth. Sci. Ctr., Michigan State Univ., Louisiana State Univ. Hlth. Sci. Ctr.*
- 4:00 H10 **209.04** Molecular insights into the endogenous GDNF expression in striatal parvalbumin neurons: A possible tool for neuroprotective therapy for Parkinson's disease? D. ENTERRIA-MORALES*; I. LÓPEZ-LÓPEZ; J. LÓPEZ-BARNEO; X. D'ANGLEMONT DE TASSIGNY. *Inst. De Biomedicina De Sevilla.*
- 1:00 H11 **209.05** Elucidating the molecular mechanisms of enoxacin and CDNF-mediated protection of dopaminergic neurons. J. KONOVALOVA; P. CHMIELARZ; A. DOMANSKYI*. *Univ. of Helsinki.*
- 2:00 H12 **209.06** The neuroprotective role of cAMP signaling pathway in *Drosophila* model of Parkinson's disease. S. ISMAEL; D. LEE*. *Ohio Univ.*
- 3:00 I1 **209.07** Nurr1 regulates inflammatory activation of glia in a model of Parkinson's disease. S. L. HAMMOND*. *Colorado State Univ.*
- 4:00 I2 **209.08** • Mechanisms of GHSR-mediated protection of Substantia nigra dopamine neurons. B. STUTZ*; C. NASRALLAH; M. NIGRO; Z. LIU; X. GAO; J. D. ELSWORTH; L. MINTZ; T. L. HORVATH. *Neurochemistry, Yale Univ., Yale Univ., Yale Univ., DiaLean.*
- 1:00 I3 **209.09** Mirtazapine exerts astrocytes-mediated dopaminergic neuroprotection. R. KIKUOKA*; I. MIYAZAKI; N. KUBOTA; M. MAEDA; D. KAGAWA; M. MORIYAMA; A. KUME; S. MURAKAMI; Y. KITAMURA; M. ASANUMA. *Okayama Univ., Okayama Univ., Okayama Univ., SAIDO Co.*
- 2:00 I4 **209.10** The AMPK-PGC-1 α axis in neuroprotection - implications for energy deficits in Parkinson's disease. L. HANG*; C. NG; A. H. BASIL; J. L. THUNDYIL; K. LIM. *Natl. Neurosci. Inst., Natl. Univ. of Singapore, Natl. Univ. of Singapore, Duke-NUS Med. Sch.*

• Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 3:00 I5 **209.11** Role of RTP801 in neuronal plasticity and motor learning. L. PÉREZ-SISQUÉS*; N. MARTÍN-FLORES; A. LLOBET; M. CANAL; J. ROMANÍ-AUMEDES; M. MASANA; M. LACHÉN-MONTES; E. SANTAMARÍA; J. FERNÁNDEZ; J. GILBERT; H. MAN; E. FEINSTEIN; D. WILLIAMSON; X. GASULL; D. SOTO; J. ALBERCH; C. MALAGELADA. *Univ. of Barcelona, Inst. de Neurociències - Univ. de Barcelona, Inst. des neurosciences, Faculté des sciences de la vie, École polytechnique fédérale de Lausanne, IDIBAPS - Inst. d'Investigacions Biomèdiques August Pi i Sunyer, Ctr. de Investigación Biomédica en Red sobre Enfermedades Neurodegenerativas (CIBERNED), Proteomics Unit, Clin. Neuroproteomics Laboratory, NavarraBiomed Biomed. Res. Ctr., Dept. of Biology, Pharmacol. and Exptl. Therapeutics, Boston Univ., Quark Pharmaceuticals, Kinesiology Program, Sch. of Behavioral Sci. and Education, Penn State Harrisburg.*
- 4:00 I6 **209.12** Molecular cloning of a novel 69 kDa brain-specific isoform of Regulator of G protein Signaling 6 (RGS6). K. E. AHLERS-DANNEN*; A. STEWART; J. YANG; J. G. KOLAND; R. A. FISHER. *Univ. of Iowa, Florida Atlantic Univ., Univ. of Iowa.*
- 1:00 I7 **209.13** Exploring the role of locus coeruleus in Parkinson's disease and its importance for nigral dopaminergic cell survival. A. VIREL; R. LATERVEER; I. DUDKA; S. OLMEDO-DIAZ; R. STENMARK PERSSON; A. BARKANDER; N. KARALIJA; S. AF BJERKEN*. *Umeå Univ., Umeå Univ.*
- 2:00 I8 **209.14** ▲ Serum quantification of glp-1 induced by ileal interposition in wistar male rats. M. S. SALGADO*. *Autonomous Univ. of Queretaro.*
- POSTER**
- 210. Parkinson's Disease: Preclinical Therapeutic Development**
- Theme C: Neurodegenerative Disorders and Injury**
- Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*
- 1:00 I9 **210.01** Effects of parkinsonism and therapeutic deep brain stimulation on phase-synchronization across the subthalamic nucleus, globus pallidus, and primary motor cortex. D. ESCOBAR SANABRIA*; L. A. JOHNSON; J. ZHANG; S. NEBECK; M. D. JOHNSON; G. F. MOLNAR; J. L. VITEK. *Univ. of Minnesota, Univ. of Minnesota.*
- 2:00 I10 **210.02** ● Critical parameters determining efficacy of coordinated reset stimulation of subthalamic nucleus and related changes in behavior and primary motor cortical local field potentials in a parkinsonian monkey. J. WANG*; S. NEBECK; D. ESCOBAR; L. A. JOHNSON; J. ZHANG; S. FERGUS; S. KULKARNI; A. FEATHERSTONE; H. BOKIL; M. D. JOHNSON; G. F. MOLNAR; J. L. VITEK. *Univ. of Minnesota, Boston Scientific Neuromodulation, Univ. of Minnesota.*
- 3:00 J1 **210.03** Advanced stimulation patterns to increase therapeutic windows for deep brains stimulation applications. J. SLOPSEMA*; L. LEHTO; S. MICHAELI; M. D. JOHNSON. *Univ. of Minnesota, Univ. of Minnesota.*
- 4:00 J2 **210.04** Bilateral SMA and M1 LFP activity and connectivity is altered in the MPTP NHP model of Parkinson's disease. B. J. TITTLE; C. M. HENDRIX*; A. M. AMUNDSON; M. D. JOHNSON; G. F. MOLNAR; J. L. VITEK. *Univ. of Minnesota Twin Cities, Univ. of Minnesota.*
- 1:00 J3 **210.05** Multi-objective particle swarm optimization with subject-specific models facilitate spatially targeted programming in subthalamic nucleus deep brain stimulation. E. PEÑA*; S. ZHANG; R. PATRIAT; N. HAREL; M. D. JOHNSON. *Univ. of Minnesota Twin Cities, Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota Syst., Univ. of Minnesota.*
- 2:00 J4 **210.06** Reinforcement learning for phasic disruption of pathological oscillations in a computational model of Parkinson's disease. L. GRADO*; M. D. JOHNSON; T. I. NETOFF. *Univ. of Minnesota, Univ. of Minnesota.*
- 3:00 J5 **210.07** Parkinsonism alters directional tuning in primary motor cortex. Y. YU*; L. JOHNSON; S. NEBECK; J. ZHANG; M. D. JOHNSON; G. F. MOLNAR; J. L. VITEK. *Univ. of Minnesota Dept. of Neurol., Univ. of Minnesota.*
- 4:00 J6 **210.08** A particle-swarm optimization algorithm for predicting deep brain stimulation settings that improve parkinsonian motor signs. A. M. DOYLE*; S. ZHANG; E. PEÑA; M. YEATTS; M. D. JOHNSON. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota Twin Cities.*
- 1:00 J7 **210.09** ● Antiparkinsonian effect of caffeine in unilateral 6-OHDA-lesioned rat model: Comparison with selective A_{2A} antagonist drugs. A. MICHEL*; J. NICOLAS; C. DE WOLF; F. HUSTADT; M. CITRON; P. DOWNEY. *UCB Biopharma.*
- 2:00 J8 **210.10** Assay development and validation of a high content-based high-throughput assay to measure α-synuclein aggregation in dopaminergic human neurons differentiated *in vitro*. F. VERKAAR; T. N. MARTINEZ; A. JENSEN; T. D. WOLINSKY*; D. F. FISCHER; J. DEGROOT; B. MILLE-BAKER. *Charles River Labs., The Michael J. Fox Fndn. For Parkinson's Res., Discovery from Charles River, Charles River.*
- 3:00 J9 **210.11** A closed loop brain machine interface for Parkinson's disease using dorsal column electrical stimulation. A. YADAV*; M. A. NICOLELIS. *Duke Univ.*
- 4:00 J10 **210.12** ● Effect of amantadine on L-DOPA-induced cortical gamma oscillations in the 6-OHDA rat. B. POUYATOS*; A. EVRARD; R. MAURY; C. ROUCARD; Y. ROCHE; V. DUVEAU. *Synapcell.*
- 1:00 J11 **210.13** GDNF, CDFN and MANF have divergent effects on γ-aminobutyric acid neurotransmission and dopamine neurochemistry in rats. J. RENKO*; A. KONTTI; I. REENILÄ; P. PIEPPONEN; M. SAARMA; R. K. TUOMINEN. *Univ. of Helsinki.*
- 2:00 J12 **210.14** ● Inhaling xenon ameliorates gait in the MPTP macaque model of Parkinson disease. E. BEZARD*; T. MIKELOVIC; E. M. MORAUD; S. SUN; D. W. KO; Q. LI; A. MILLET; G. FARJOT; E. PIOLI; G. COURTINE; B. BESSIERE. *Inst. of Neurodegenerative Dis., Swiss Federal Inst. of Technol., Motac Neurosci. Ltd, Air Liquide Santé Intl.*
- 3:00 K1 **210.15** Determination of the pharmacokinetic profiles of the mGluR2 positive allosteric modulator LY-487,379 and of the mGluR2 orthosteric agonist LY-354,740, in the rat and the common marmoset. D. BÉDARD*; A. HAMADJIDA; F. GAUDETTE; S. G. NUARA; J. C. GOURDON; F. BEAUDRY; P. HUOT. *CRCHUM, McGill Univ., Univ. de Montréal.*

- 4:00 K2 **210.16** The selective metabotropic glutamate receptor 2 orthosteric agonist LY-354,740 alleviates L-DOPA-induced dyskinesia in the 6-OHDA-lesioned rat model of Parkinson's disease. A. HAMADJIDA*; I. FROUNI; C. KWAN; V. NAFADÉ; D. BÉDARD; C. ROUILLARD; P. HUOT. *CRCHUM, University of McGill, CRCHUQ.*
- 1:00 K3 **210.17** The clinically-ready metabotropic glutamate receptor 2 orthosteric agonist LY-354,740 alleviates both psychosis and dyskinesia in the MPTP-lesioned marmoset model of Parkinson's disease. P. HUOT*; S. G. NUARA; J. C. GOURDON; A. HAMADJIDA. *CHUM Res. Centre, R09.436, McGill Univ., CRCHUM.*
- 2:00 K4 **210.18** • A novel mGluR4 PAM alleviates motor symptoms in primate models of Parkinson's disease. D. CHARVIN*; T. DI PAOLO; E. BEZARD; C. HALLDIN; G. DUVEY; L. GRÉGOIRE; A. TAKANO; E. PIOLI; R. MEDORI; F. CONQUET. *Prexton Therapeut. B.V., CHU de Québec, CHUL Pavillon and Fac. of Pharmacy, Laval Univ., Motac Neurosci. Ltd, Karolinska Institutet.*
- 3:00 K5 **210.19** BDNF and mTOR contribute to the suppression of L-DOPA-induced dyskinesia by sub-anesthetic ketamine. A. J. FLORES*; M. J. BARTLETT; H. K. DOLLISH; K. P. DOYLE; S. J. SHERMAN; T. FALK. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona Col. of Med., Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*
- 4:00 K6 **210.20** Optical control of Parkinsonism using a photoactive adenosine A_{2A} receptor antagonist. F. CIRUELA*; J. TAURA; E. G. NÖLEN; G. CABRÉ; J. HERNANDO; M. LÓPEZ-CANO; V. FERNÁNDEZ-DUEÑAS; K. A. JACOBSON. *IDIBELL-Universitat de Barcelona, Inst. de Neurociències-Universitat de Barcelona, Colgate Univ., Univ. Autònoma de Barcelona, Natl. Inst. of Diabetes and Digestive and Kidney Dis.*
- 1:00 K7 **210.21** 50-kHz ultrasonic vocalizations can induce paradoxical kinesis in cataleptic rats: A new animal model and its possible mechanisms. R. K. SCHWARTING*; L. C. TONELLI; M. WÖHR; L. MELO-THOMAS. *Philipps-University of Marburg.*
- 2:00 K8 **210.22** A pharmacokinetic study of orally administered nilotinib in chronically catheterized beagle dogs to assess its partitioning into the cerebrospinal fluid and brain tissue. K. MERCHANT*; C. S. VENUTO; A. FRICKE; B. SIDDIQI; B. FISKE. *Transthera Consulting Co, Northwestern Univ., Univ. of Rochester, Rochester, The Michael J. Fox Fndn. for Parkinson's Res.*
- 3:00 K9 **210.23** mGluR5 modulation as a neuro-recovery strategy for Parkinson's disease. K. FARMER*; T. FORTIN; A. DERKSEN; E. ROWE; N. PROWSE; A. THOMPSON; C. RUDYK; Z. DWYER; S. S. G. FERGUSON; S. P. HAYLEY. *Carleton University, Dept. of Neurosci., Univ. of Ottawa Brain and Mind Inst. and Dept. of Cell. and Mol. Med.*
- 4:00 K10 **210.24** A novel substrate for preclinical models of cell-based therapy for Parkinson's disease. S. M. BENOIT; S. SCHMID; M. O. HEBB*. *Univ. of Western Ontario, Univ. of Western Ontario, Western Univ.*
- 1:00 K11 **210.25** Focused ultrasound enhancement of intranasal delivery of GDNF hDNA nanoparticles to rat brain. A. E. ALY*; T. SUN; Y. ZHANG; O. SESENOGLU-LAIRD; L. PADEGIMAS; M. J. COOPER; N. MCDANNOLD; B. L. WASZCZAK. *Northeastern Univ., Harvard Med. Sch. and Brigham & Women's Hosp., Harvard Med. Sch. and Brigham & Women's Hosp., Copernicus Therapeut., Northeastern Univ.*
- 2:00 K12 **210.26** The c-Abl inhibitor, Radotinib, protects dopaminergic neurons in a preclinical model of sporadic Parkinson's disease. S. LEE*; Y. PARK; S. KIM; D. KIM; J. SHIN; D. CHO; G. LEE; H. JU; H. YUN; S. LEE; H. KO. *Johns Hopkins Med. Inst., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Central Res. Institute, Il-Yang Pharmaceut. Co. Ltd., Neuraly, Inc. 20271 Goldenrod Lane, Suite 2046, Adrienne Helis Malvin Med. Res. Fndn., Diana Helis Henry Med. Res. Fndn.*
- 3:00 L1 **210.27** Characterization of microrecordings in the Substantia Nigra pars reticulata for the accurate placement of deep brain stimulation electrodes. H. LI*; G. C. MCCONNELL. *Stevens Inst. of Technol., Stevens Inst. of Technol.*
- 4:00 L2 **210.28** *In vivo* imaging of cortical activity elicited by STN DBS during the acute response to electrode implantation. A. J. SUMINSKI*; S. SALEH; J. NOVELLO; J. YE; S. K. BRODNICK; J. PISANIELLO; J. NESS; A. M. DINGLE; J. C. WILLIAMS; W. B. LAKE. *Univ. of Wisconsin-Madison, Univ. of Madison WI, Univ. of Wisconsin-Madison, Univ. of Madison, WI, Univ. of Wisconsin.*
- 1:00 L3 **210.29** • General amyloid interaction motif (GAIM) reduces misfolded alpha synuclein inclusions formation in cell-to-cell transmission model. C. H. CHUNG*; E. ASP; J. LEVENSON; C. ROCKWELL-POSTEL; K. MCDOWELL; M. LULU; J. WRIGHT; M. PROSCHITSKY; R. KRISHNAN; R. FISHER. *Proclara Biosci.*

POSTER

211. Parkinson's Disease: Human Therapeutic Studies

Theme C: Neurodegenerative Disorders and Injury

Sun. 1:00 PM – Walter E. Washington Convention Center, Halls A-C

- 1:00 L4 **211.01** Effect of osteopathic manipulative medicine on constipation and the gut microbiota in Parkinson's disease. J. D. MANCINI*; L. R. MARTINEZ; G. TORRES; E. CHEN; S. JACOB; J. SAMUEL; T. LI. *NYITCOM, NYITCOM, NYITCOM, NYITCOM.*
- 2:00 L5 **211.02** • Stimulus-evoked cortical physiology identifies corticospinal tract activation by subthalamic deep brain stimulation. H. C. WALKER*; A. ROMEO; C. L. GONZALEZ; G. CUTTER; B. L. GUTHRIE. *UAB, UAB, UAB.*
- 3:00 L6 **211.03** Transcranial direct current stimulation augmented individualized gait training targeted at freezing of gait in Parkinson's disease: A case description. J. RICE*; A. SWAROWSKY; K. CAI; S. ALDRAIWEISH; J. GOMES-OSMAN. *Univ. of Miami Miller Sch. of Med., Santa Catarina State Univ., Univ. of Miami, Univ. of Miami Miller Sch. of Med., Univ. of Miami.*
- 4:00 L7 **211.04** Endurance exercise improves function in individuals with Parkinson's disease: A meta-analysis. S. O. AHMAD; A. FLACH*; L. JAEGER; M. KRIEGER; E. BIXLER; P. KELLY; E. P. WEISS. *St. Louis Univ., St. Louis Univ., St. Louis Univ., St. Louis Univ., St. Louis Univ.*
- 1:00 L8 **211.05** The effect of osteopathic manual treatments on motor and nonmotor aspects of camptocormia in Parkinson's disease. T. G. NG*; D. PASTERNAK; A. LEDER; J. MANCINI. *New York Inst. of Technol. Col. of Osteop., New York Inst. of Technol. Col. of Osteo. Med.*

• Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 2:00 L9 **211.06** Long-term responsive deep brain stimulation for medically refractory freezing of gait in Parkinson's disease. R. MOLINA*; K. SOWALSKY; J. ROPER; J. B. SHUTE; E. OPRI; D. MARTINEZ-RAMIREZ; K. FOOTE; C. J. HASS; M. OKUN; A. GUNDUZ. *Univ. of Florida, Univ. of Florida, UF, Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida.*
- 3:00 L10 **211.07** • Intracortical plasticity is preserved in *de novo* Parkinson's disease: A tSMS study. G. FOFFANI*; M. DILEONE; V. CATANZARO; A. OLIVIERO; J. A. OBESO. *CINAC, Univ. Hosp. HM Puerta Del Sur, Hosp. Nacional de Paraplégicos, CIBERNED, Inst. Carlos III.*
- 4:00 M1 **211.08** Electrophysiological signatures of clinically effective regions of subthalamic nucleus deep brain stimulation in Parkinson's disease. K. A. MALAGA*; C. W. LU; K. L. CHOU; P. G. PATIL. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*
- 1:00 M2 **211.09** • Peripheral nerve grafts to the brain of patients with Parkinson's disease: Microscopic, biochemical, and immunohistochemical characterization. A. S. WELLFORD*; C. G. VAN HORNE; J. QUINTERO; Y. AI; G. GERHARDT. *Univ. of Kentucky, Brain Restoration Ctr.*
- 2:00 M3 **211.10** A phase 1 trial evaluating the safety and feasibility of autologous peripheral nerve grafts in patients with Parkinson's disease. C. G. VAN HORNE*; J. E. QUINTERO; J. GURWELL; A. ANDERSON-MOONEY; A. S. WELLFORD; J. R. LAMM; J. T. SLEVIN; G. A. GERHARDT. *Univ. of Kentucky Med. Ctr., Univ. of Kentucky Med. Ctr., Univ. of Kentucky Med. Ctr.*
- 3:00 M4 **211.11** Dose escalation of autologous peripheral nerve grafts at the time of deep brain stimulation surgery in patients with Parkinson's disease. J. E. QUINTERO; J. A. GURWELL; A. J. ANDERSON-MOONEY; A. S. WELLFORD; J. R. LAMM; J. T. SLEVIN; G. A. GERHARDT*; C. G. VAN HORNE. *Univ. of Kentucky Med. Ctr., Univ. of Kentucky Med. Ctr., Univ. of Kentucky Med. Ctr., Univ. of Kentucky Med. Ctr.*
- 4:00 M5 **211.12** • DBStar: an open-source toolkit for reconstructing targets from deep brain stimulation procedures performed with patient-customized stereotactic platforms. P. M. LAURO*; S. LEE; M. AHN; A. BARBORICA; W. F. ASAAD. *Alpert Med. School, Brown Univ., Brown Univ., Handong Global Univ., Univ. of Bucharest, Brown Univ.*
- 1:00 M6 **211.13** Cholinergic enhancement of endogenous event-related potentials in Parkinson's patients with cognitive impairments. S. KRYZHANOVSKYI*; O. SHALENKO; N. KARASEVYCH; I. KARABAN. *Inst. of Gerontology AMS of Ukraine.*
- 2:00 M7 **211.14** Movement-related beta-band desynchronization in supplementary motor area is reduced by anti-Parkinsonian medication and relates to the velocity of upper limb movement in Parkinson's disease. J. CHUNG*; R. G. BURCIU; E. OFORI; M. S. OKUN; C. W. HESS; D. E. VAILLANCOURT. *Univ. of Florida, Univ. of Florida, Univ. of Florida.*
- 3:00 M8 **211.15** Tracts involved in the improvement subsequent to ablative neurosurgery of the subthalamus in Parkinson's disease. M. GARCIA-GOMAR*; F. VELASCO; L. CONCHA. *Univ. Nacional Autonoma De Mexico, Hosp. Gen. de Mexico.*
- 4:00 M9 **211.16** Optimizing cognitive neurorehabilitation in Parkinson's disease. H. M. NGUYEN*; K. S. HOLLY; A. ARAVINDAKSHAN; E. A. DISBROW. *Louisiana State Univ. Hlth. Sci. Ctr. Shreveport, Louisiana State Univ. Hlth. Sci. Ctr. in Shreveport, Univ. of California, Davis, Louisiana State Univ. Hlth. Sci. Ctr. Shreveport.*
- 1:00 M10 **211.17** Clinical validation of a novel palm-worn device to quantify rigidity in Parkinson's disease. T. PERERA*; N. C. SINCLAIR; M. JONES; J. L. TAN; E. L. PROUD; W. L. LEE; R. F. PEPPARD; H. J. MCDERMOTT. *The Bionics Inst. of Australia, The Univ. of Melbourne, St. Vincent's Hosp., Royal Melbourne Hosp.*
- 2:00 N1 **211.18** Prefronto-subthalamic modulation of movement inhibition in Parkinson's disease. W. CHEN*; C. DE HEMPTINNE; A. MILLER; P. A. STARR. *Univ. of California San Francisco, Univ. of California San Francisco, Univ. of California San Francisco Dept. of Neurolog. Surgery.*
- 3:00 N2 **211.19** Effects of deep brain stimulation on synergic control of hand and whole-body tasks in Parkinson's patients. A. FALAKI*; J. HANG JIN; X. HUANG; M. M. LEWIS; B. K. O'CONNELL; S. DE JESUS; M. L. LATASH. *Pennsylvania State Univ., Univ. of Miami Hosp., Penn State University-Milton S. Hershey Med. Ctr.*
- 4:00 N3 **211.20** Discounting of delayed rewards after deep brain stimulation. M. AIELLO*; D. TEREZNI; R. ELEOPRA; A. PIANI; R. I. RUMIATI. *SISSA, S.O.C. Neurologia, Azienda Ospedaliero Universitaria "Santa Maria della Misericordia".*
- 1:00 N4 **211.21** • Closed loop deep brain stimulation for dyskinesia control in Parkinson's disease. N. C. SWANN*; C. DE HEMPTINNE; M. C. THOMPSON; S. MIOCINOVIC; A. MILLER; R. GILRON; J. OSTREM; H. J. CHIZECK; P. A. STARR. *Univ. of California, San Francisco, Univ. of Washington, Emory Universtiy, Univ. of California, San Francisco.*
- 2:00 N5 **211.22** Information processing improves in Parkinson's disease patients following aerobic exercise. A. ROSENFELDT; M. MILLER KOOP; J. L. ALBERTS*. *Cleveland Clin. Fndn., Cleveland Clin., Cleveland Clin.*
- 3:00 N6 **211.23** The effects of dopamine replacement therapy on response inhibition in Parkinson's disease. J. E. AMAN*; E. L. TWEDELL; S. E. COOPER. *Univ. of Minnesota.*
- 4:00 N7 **211.24** Dissecting the biophysical basis of local field potentials recorded from deep brain stimulation electrodes using patient-specific models. N. MALING*; S. F. LEMPKA; Z. BLUMENFELD; H. BRONTE-STEWART; C. C. MCINTYRE. *Case Western Reserve Univ., Univ. of Michigan, Stanford Univ.*
- 1:00 N8 **211.25** Precision deep brain stimulation: Defining the tractographic profile for maximal therapeutic benefit. J. A. THOMPSON*; W. KINDEL; J. ZYLBERBERG. *Univ. of Colorado Sch. of Med., Univ. of Colorado Sch. of Med., Univ. of Colorado Denver Anschutz Med. Campus.*
- 2:00 N9 **211.26** Mobility during Timed-Up-and-Go improves following aerobic exercise training in individuals with Parkinson's disease. M. MILLER KOOP*; J. L. ALBERTS. *Cleveland Clin., Cleveland Clin.*

- 3:00 N10 **211.27** Motor cortex plasticity and behavior improvement promoted by treadmill exercise in an initial phase of Parkinson disease rat model. C. C. REAL*; K. H. BINDA; P. C. GARCIA; C. D. CARNEIRO; D. FARIA; C. A. BUCHPIGUEL; L. R. G. BRITTO. *ICB - Univ. of São Paulo (USP), Inrad - Univ. of São Paulo Med. School, Univ. of São Paulo (USP).*
- 4:00 N11 **211.28** The inferior colliculus: An alternative structure for deep brain stimulation in Parkinson's disease? L. MELO-THOMAS*; K. ENGELHARDT; R. SCHWARTING. *Philipps Univ. Marburg, Rainer Schwarting.*
- 1:00 DP03/N12 **211.29** (Dynamic Poster) Gait adaptation patterns in subjects with Parkinson's disease - a split belt treadmill study. E. ARAD; S. HASSIN-BAER; A. GRINBERG; M. PLOTNIK*. *Sheba Med. Ctr., Tel Aviv Univ., Sheba Med. Ctr.*

- 1:00 O9 **212.09** Multiple sources of aberrant calcium signaling in motor cortex pyramidal neurons from the Q175 mouse model of Huntington's disease. C. A. BRIGGS*; S. CHAKROBORTY; A. R. WEST; G. E. STUTZMANN. *Rosalind Franklin Univ. of Med. and Sci.*
- 2:00 O10 **212.10** A preliminary study on Rapamycin-regulated miRNA against huntingtin gene. W. LIU*; F. BOREL; Q. TANG; C. GREER; L. KENNINGTON; K. CHASE; M. DIFIGLIA; C. MUELLER; N. ARONIN. *UMass Med. Sch., Univ. of Massachusetts Med. Sch., Massachusetts Gen. Hosp.*
- 3:00 P1 **212.11** Genetic reduction of ATM modifies transcriptional network and neuropathology in the zQ175 mouse model of Huntington's disease. C. D. LEE*; N. WANG; P. LANGFELDER; F. GAO; J. B. RICHMAN; S. HORVATH; G. COPPOLA; X. YANG. *UCLA.*

POSTER

212. Molecular Mechanisms of Huntington's Disease

Theme C: Neurodegenerative Disorders and Injury

Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*

- 1:00 O1 **212.01** complement c3 deficiency modifies bachd disease phenotypes. X. GU*; D. WILTON; A. DAGGETT; C. LEE; B. A. STEVENS; X. YANG. *Univ. of California Los Angeles, Childrens Hosp.*
- 2:00 O2 **212.02** Cortico-striatal phase-amplitude coupling in gamma genesis. S. NAZE*; J. HUMBLE; P. ZHENG; S. BARTON; G. V. REBEC; J. KOZLOSKI. *IBM Res., Daimler AG, Indiana Univ.*
- 3:00 O3 **212.03** Kinome Profiling of Neural Stem cells (NSC) derived from (induce pluripotent stem cells (iPSC) of Huntington's disease patient. A. BAHARANI*; E. SCRUTEN; S. NAPPER. *Univ. of Saskatchewan, Univ. of Saskatchewan, Univ. of Saskatchewan.*
- 4:00 O4 **212.04** NTRK2 as a modifier of frontal gray matter and cognition in prodromal Huntington disease. J. CIAROCHI; J. LIU; V. CALHOUN; J. BOCKHOLT; H. JOHNSON; M. MISIURA; J. LONG; S. PLIS; F. ESPINOZA; A. CAPRIHAN; V. VERGARA; J. A. TURNER*; J. PAULSEN. *Georgia State Univ., Mind Res. Network, Univ. of Iowa, Georgia State Univ.*
- 1:00 O5 **212.05** Cannabinoid signaling, modulation and risk in Huntington's disease. J. HUMBLE*; J. KOZLOSKI. *IBM T. J. Watson Res. Ctr.*
- 2:00 O6 **212.06** TRiC reagents act through enhanced BDNF trafficking and signaling to both prevent and rescue HD phenotypes in BACHD portico-striatal cultures. X. ZHAO; X. CHEN; J. OVERMAN; A. LAU; W. CHIU; L. M. THOMPSON; C. WU*; W. C. MOBLEY. *UCSD, UCSD, Univ. of California Irvine, Univ. of California, Irvine, Baylor college of Med., Univ. California, UCSD Sch. of Med., Univ. of California San Diego Dept. of Neurosciences.*
- 3:00 O7 **212.07** Prion-like transmission of mutant huntingtin aggregates in *Drosophila* brains. K. M. DONNELLY*; M. M. P. PEARCE. *Univ. of the Sci. In Philadelphia.*
- 4:00 O8 **212.08** CRISPR/Cas9-mediated therapeutic effects in Huntington's disease mice. S. YANG*; R. CHANG; S. LI; X. LI. *Emory Univ.*

POSTER

213. Ataxia

Theme C: Neurodegenerative Disorders and Injury

Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*

- 1:00 P2 **213.01** Ankyrin-R is required for cerebellar Purkinje cell survival. S. R. STEVENS*; M. N. RASBAND. *Baylor Col. of Med.*
- 2:00 P3 **213.02** Altered excitability of the motor cortex in a mouse model of spinocerebellar ataxia type 8. R. CARTER*; G. CHEN; M. GRAY; J. D. CLEARY; T. S. REID; L. P. W. RANUM; T. J. EBNER. *Univ. of Minnesota, Univ. of Florida.*
- 3:00 P4 **213.03** Bidirectional transcription at the PPP2R2B gene locus in spinocerebellar ataxia type 12. P. P. LI*; H. KHALED; D. D. RUDNICKI; R. L. MARGOLIS. *Johns Hopkins Univ. Sch. of Med.*
- 4:00 P5 **213.04** Activation of alpha1 adrenergic receptors and mGluR1 receptors is required for attacks of motor dysfunction in a mouse model of episodic ataxia type 2. A. VITENZON*; E. TARA; H. SNELL; C. CHEN; K. KHODAKHAH. *Albert Einstein Col. of Medicine, Albert Einstein Col. of Medicine, Albert Einstein Col. of Medicine.*
- 1:00 P6 **213.05** ● Deep cerebellar stimulation to treat degenerative cerebellar ataxias. C. ANDERSON*; A. D. DORVAL; S. M. PULST. *Univ. of Utah, Univ. of Utah, Univ. of Utah Clin. Neurosciences Ctr.*
- 2:00 P7 **213.06** Disrupted vocalization production in a mouse model of spinocerebellar ataxia type 1. G. A. CASTELLUCCI*; D. A. MCCORMICK; J. LIM. *Yale Univ., Yale Univ., Yale Univ.*
- 3:00 P8 **213.07** Evaluation of microstructural alterations in spinocerebellar ataxia type 6 by neurite orientation dispersion < density imaging. A. YOSHIDA*; K. SHIMOJI; A. UEMATSU; I. YABE; H. SASAKI; M. TANAKA. *RIKEN, Tokyo Metropolitan Geriatric Hosp., Hokkaido Univ. Sch. Med., Hokkaido Univ. Sch. Med.*
- 4:00 P9 **213.08** Modeling the Neurological Phenotype of Ataxia-telangiectasia. A. TEWARI*; K. KHODAKHAH. *Albert Einstein Col. of Med.*
- 1:00 P10 **213.09** ▲ Programming Mathematica and Python to quantify cerebellar Purkinje dendritic length and soma count. D. E. NGUYEN; E. F. BURR; T. PHILLIPS; S. LAGALWAR*. *Skidmore Col., Skidmore Col., Skidmore Col.*

• Indicated a real or perceived conflict of interest, see page 137 for details.
 ▲ Indicates a high school or undergraduate student presenter.
 * Indicates abstract's submitting author

- 2:00 Q1 **213.10** Motor behavior decline and cerebellar pathology in mouse model of spinocerebellar ataxia type 1. C. G. JANUS*; G. GIRALDO; S. ARMINANA; R. MANEK; A. COOMES; E. RODRIGUEZ-LEBRON. *Univ. of Florida.*
- 3:00 Q2 **213.11** A mutation of the spinocerebellar ataxia gene CACNA1G induces cerebellar Purkinje cell death and ataxia in mice. Y. MATSUDA*; H. MORINO; T. KURASHIGE; T. MATSUOKA; Y. SOTOMARU; K. HASHIMOTO; H. KAWAKAMI. *Dept. Epidemiology, RIRBM, Hiroshima Univ., JSPS Res. Fellow, Dept. Neurology, Natl. Hosp. Organization Kure Med. Ctr., Dept. Neurophysiol., Grad. Sch. of Biomed. and Hlth. Sci., Hiroshima Univ., Natural Sci. Ctr. of Basic Res. and Development, Hiroshima Univ.*
- 4:00 Q3 **213.12** Addressing both aberrant spiking and increased dendritic excitability is necessary for sustained improvement in motor dysfunction in spinocerebellar ataxia type 1. D. BUSHART*; R. CHOPRA; V. SINGH; G. G. MURPHY; H. WULFF; V. G. SHAKKOTTAI. *Univ. of Michigan, Univ. of Michigan, Univ. of California, Univ. of Michigan, Univ. of California Davis, Univ. of Michigan.*
- 1:00 Q4 **213.13** Impact of altered expression of excitatory amino acid transporter on intrinsic spontaneous activity of cerebellar Purkinje cells - Possible contribution to the pathophysiology of Niemann-Pick disease type C1? M. RABENSTEIN*; A. ROLFS; M. J. FRECH. *Universitätsmedizin Rostock.*
- 2:00 Q5 **213.14** Frataxin deficiency impairs IP3R-coupled ER-mitochondrial signaling in cerebellum of Friedreich ataxia mouse models. H. LIN; S. H. HALAWANI; D. M. MALIK; A. RATTELLE; E. M. CLARK; Y. DONG; J. MAGRANE; D. R. LYNCH*. *The Children's Hosp. of Philadelphia, Univ. of Pennsylvania Perelman Sch. of Med., Weill Cornell Med. Col.*
- 3:00 Q6 **213.15** Increased dendritic excitability drives Purkinje neuron dendrite degeneration in cerebellar ataxia. R. CHOPRA*; D. D. BUSHART; S. M. PULST; A. H. WASSERMAN; C. I. DE ZEEUW; V. G. SHAKKOTTAI. *Univ. of Michigan Med. Ctr., Univ. of Michigan, Univ. of Utah Clin. Neurosciences Ctr., Erasmus Univ.*
- 4:00 Q7 **213.16** Investigation of the contribution of ATXN1 phosphorylation on cerebellar pathology in SCA1. J. LEE*; T. M. DRIESSEN; H. T. ORR; J. LIM. *Yale Univ., Yale Univ., Univ. of Minnesota.*
- 1:00 Q8 **213.17** Characterizing the physiological and pathophysiological functions of ataxin-3 and its isoforms. T. SCHMIDT*; D. WEISHAEUPL; J. SCHNEIDER; B. PEIXOTO PINHEIRO; F. VON ZWEYDORF; C. GLOECKNER; O. RIESS. *Med. Genetics, Univ. Tuebingen, Treatment and Res. Ctr. for Rare Dis. (ZSE Tuebingen), Grad. Training Ctr. of Neurosci. (GTC), German Ctr. for Neurodegenerative Dis. (DZNE).*
- 2:00 Q9 **213.18** Wolframín (WFS1) deficiency is associated with trigeminal atrophy. M. A. HICKEY*; V. VDOVENKOVA; K. TULVA; M. MANDEL; A. VAARMANN; A. KAASIK. *Univ. of Tartu.*
- 3:00 Q10 **213.19** Characterization of vestibular and optokinetic reflexes and adaptation in a mouse model of spinocerebellar ataxia type 6. H. V. CHANG*; S. JAYABAL; A. J. WATT; K. E. CULLEN. *Johns Hopkins Univ., McGill Univ., McGill Univ., McGill Univ.*
- 4:00 Q11 **213.20** Emotion dysfunction and its correlates in cerebellar ataxia. C. L. MARVEL*; S. I. KRONEMER; J. R. PIETROWSKI; L. I. ROSENTHAL; C. U. ONYIKE. *Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Yale Univ.*
- 1:00 Q12 **213.21** Visuospatial processing and strategy formation in cerebellar ataxia. M. SLAPIK*; S. I. KRONEMER; J. A. MANDEL; R. D. BLOES; J. A. CREIGHTON; S. D. LIEBERMAN; L. I. ROSENTHAL; C. L. MARVEL. *Johns Hopkins Univ. Sch. of Med., Yale Univ.*
- 2:00 R1 **213.22** Selective working memory deficits in cerebellar ataxia. R. BLOES*; S. I. KRONEMER; J. OTERO-MILLAN; J. PETERBURS; C. MARVEL. *Johns Hopkins Univ. Sch. of Med., Yale Univ., Univ. of Muenster.*
- 3:00 R2 **213.23** The influence of visual feedback on aiming movements' performance and learning in individuals with cerebellar dysfunction. V. F. GIANGIARDI*; S. M. S. F. FREITAS; S. R. ALOUCHE. *Univ. Cidade De São Paulo, Univ. Cidade de São Paulo, Univ. Cidade De São Paulo.*

POSTER

214. Cell Biology of Ischemia

Theme C: Neurodegenerative Disorders and Injury

Sun. 1:00 PM – Walter E. Washington Convention Center, Halls A-C

- 1:00 R3 **214.01** Alpha-chimaerin suppresses axonal connections in peri-infarct cortex of a mouse model after ischemic stroke. S. LI*; J. JIN; Y. JIN; A. J. BRUMM; M. MACHNICKI; H. ZHANG; J. XIAO; G. LIANG; S. T. CARMICHAEL; X. LI. *Wenzhou University, UCLA, Wenzhou Med. Univ., David Geffen Sch. of Medicine, UCLA, Wenzhou Univ. and Wenzhou Med. Univ.*
- 2:00 R4 **214.02** Oxygen glucose deprivation causes a short-lasting, transient contraction of rat brain pericytes in primary culture. Z. REDZIC*; L. ABDULLAH; A. HENKEL; J. CRAIG. *Fac. of Med., Fac. of Med.*
- 3:00 R5 **214.03** Role of microglia and Interferon-B in establishing ischemic preconditioning. A. MCDONOUGH*; T. LE; J. R. WEINSTEIN. *Univ. of Washington.*
- 4:00 R6 **214.04** miR-34a opens blood-brain barrier and exacerbates stroke. X. REN*; H. HU; S. N. S. SARKAR; I. FAROOQI; K. GRASMICK; J. W. SIMPKINS. *West Virginia University Robert C. Byrd Health Sci. Ctr.*
- 1:00 R7 **214.05** The role of Tet enzymes and DNA hydroxymethylation in neuroprotection following experimental stroke. K. MORRIS-BLANCO*; T. KIM; M. J. BERTOGLIAT; R. VEMUGANTI. *Univ. of Wisconsin-Madison.*
- 2:00 R8 **214.06** Effect of a nicotinic receptor blocker in murine astrocyte primary culture after an ischemia model. G. E. SANCHEZ*; L. G. RIVERA GARCÍA; W. CASTRO; A. H. MARTINS; N. SABEVA; P. A. FERCHMIN; V. A. ETEROVIC; Y. FERRER ACOSTA. *Univ. Central Del Caribe, Bromedicon Inc, Univ. of Puerto Rico Med. Sci. Campus, Univ. Central Del Caribe.*
- 3:00 R9 **214.07** Perlecan is essential for the maintenance and repair of the blood-brain barrier against ischemic stroke through interacting with and activating pericytes. K. NAKAMURA*; T. IKEUCHI; P. ZHANG; C. RHODES; Y. CHIBA; T. AGO; Y. MUKOUYAMA; Y. YAMADA. *NIH, Grad. Sch. of Med. Sciences, Kyushu Univ., NIH.*

- 4:00 R10 **214.08** Targeted photothrombotic stroke to mouse motor cortex instigates sustained increases in dendritic spine turnover that continue after impairments improve. T. CLARK*; C. SULLENDER; A. DUNN; T. JONES. *Univ. of Texas At Austin, Univ. of Texas at Austin, Univ. of Texas at Austin.*
- 1:00 S1 **214.09** Impact of global ischemia-induced spreading depolarization on dendrites and dendritic spines in the murine neocortex examined by two-photon imaging and quantitative serial section electron microscopy. I. V. FOMITCHEVA; J. SWORD; S. A. KIROV*. *Med. Coll Georgia at Augusta Univ.*
- 2:00 S2 **214.10** Tau mediates excitotoxic brain injury in middle cerebral artery occlusion model of stroke. M. BI*; A. GLADBACH; J. VAN EERSEL; A. ITTNER; M. PRZYBYLA; Y. D. KE; L. M. ITTNER. *The Univ. of New South Wales, Neurosci. Res. Australia.*
- 3:00 S3 **214.11** miRNA miR-7a-5p ameliorates ischemic brain damage by targeting α -synuclein. T. KIM*; S. L. MEHTA; H. KIM; C. KIM; R. VEMUGANTI. *Univ. of Wisconsin, Univ. of Wisconsin.*
- 2:00 T5 **215.06** ▲ Unique role of CD163 and Haptoglobin in transient middle cerebral artery occlusion ischemic stroke. R. PATEL*; J. L. LECLERC; P. K. KAMAT; S. JEAN; I. SATYAVARAPU; S. DORÉ. *Univ. of Florida, Univ. of Florida, Univ. of Florida.*
- 3:00 T6 **215.07** Effect of delayed treatment with ADAMTS13 on cerebral ischemic injury compared with tPA. T. NAKANO*; K. IRIE; Y. YAMASHITA; T. MYOSE; K. SANNO; Y. NAKAMURA; T. SATHO; M. KAI; K. TOMINAGA; H. KAMIMURA; K. MISHIMA; T. EGAWA. *Fac. of Pharmaceut. Sciences, Fukuoka Univ., Dept. of Emergency and Critical Care Medicine, Fukuoka Univ. Hosp.*
- 4:00 T7 **215.08** Functional characterization of diabetic mice with and without stroke. L. BUITRAGO; J. LI; J. PERK; D. CEPEDA; A. BRICKMAN; J. LUCHSINGER; F. BARONE; H. W. MORENO*. *SUNY Downstate Med. Ctr., SUNY Downstate Med. Ctr., Columbia Univ. Med. Ctr., SUNY Downstate.*
- 1:00 T8 **215.09** The effect of environmental enrichment on presynaptic plasticity in an animal model of chronic hypoxic-ischemic brain injury. S. SONG*; J. YU; J. PARK; S. PYO; J. CHOI; S. CHO. *Yonsei Univ. Col. of Med., Yonsei Univ. Col. of Med., Eulji Univ. Hospital, Eulji Univ. Sch. of Med., Yonsei Univ.*
- 2:00 T9 **215.10** The cell assay of regenerative associated cells may show the dysfunction of mononuclear cells with moyamoya disease. T. NAKAYAMA*; E. NAGATA; H. MASUDA; S. KOHARA; H. YUZAWA; N. FUJII; T. OSADA; T. SORIMACHI; M. MATSUMAE; T. ASAHARA; S. TAKIZAWA. *Tokai Univ., Tokai Univ. Sch. Med., Tokai Univ. Sch. Med., Tokai Univ. Sch. Med.*
- 3:00 T10 **215.11** ▲ Development of a zebrafish (Danio rerio) model of cerebral ischemia. E. R. SILVA; J. A. WINDELBORN*. *Washington Col.*

POSTER

215. Ischemia and Hemorrhage

Theme C: Neurodegenerative Disorders and Injury

Sun. 1:00 PM – Walter E. Washington Convention Center, Halls A-C

- 1:00 S4 **215.01** Generation of Notch3 mutations in marmoset embryos using CRISPR/Cas9 system. J. PARK*; X. ZHANG; J. CHOI; A. C. SILVA. *Natl. Inst. of Neurolog. Disorders and S.*
- 2:00 T1 **215.02** ▲ Resveratrol regulates SUR1 expression in cerebral ischemia. I. M. ALQUISIRAS BURGOS*; A. ORTIZ PLATA; P. AGUILERA HERNANDEZ; A. MILLAN VEGA. *Inst. Nacional De Neurologia Y Neurocirugia M, Inst. Nacional De Neurologia Y Neurocirugia M, Inst. Nacional De Neurologia Y Neurocirugia M, Univ. Autónoma de Guerrero.*
- 3:00 T2 **215.03** Rab7 regulates endothelial tight junction protein trafficking and paracellular permeability of the blood-brain barrier after ischemic stroke. A. COTTARELLI*; M. HSU; A. ARAC; D. KNOWLAND; A. EDINGER; D. AGALLIU. *Columbia Univ., Univ. of Wisconsin - Madison, UCLA, UCSD, Developmental & Cell Biology, Univ. of California Irvine, Columbia Univ. Med. Ctr.*
- 4:00 T3 **215.04** Ependymal motile cilia injury in a novel pre-clinical model of post-hemorrhagic hydrocephalus of prematurity. F. S. CONTEH*; A. OPPONG; T. R. YELLOWHAIR; J. MAXWELL; L. L. JANTZIE; S. ROBINSON. *Johns Hopkins Univ., Univ. of New Mexico Sch. of Med., Univ. of New Mexico Hosp., Univ. of New Mexico Dept. of Pediatrics, Johns Hopkins Univ.*
- 1:00 T4 **215.05** Nogo-A-targeting immunotherapy improves blood vessel regeneration and visual recovery in a mouse model of proliferative retinopathy. L. RODRIGUEZ*; S. M. JOLY; A. DEJDA; P. SAPIEHA; V. E. PERNET. *Univ. Laval, Maisonneuve-Rosemont Hosp. Res. Centre, Univ. of Montreal.*

POSTER

216. Traumatic Brain Injury: Human Studies I

Theme C: Neurodegenerative Disorders and Injury

Sun. 1:00 PM – Walter E. Washington Convention Center, Halls A-C

- 1:00 T11 **216.01** Submaximal aerobic exertion to detect cognitive deficits in adolescent hockey players with a history of concussions. J. LORTIE*; V. SICARD; R. MOORE; D. ELLEMBERG. *Univ. De Montreal, Ctr. de recherche en neuropsychologie, Univ. of South Carolina.*
- 2:00 T12 **216.02** ▲ Baseline neurocognitive performance and symptoms in those with attention deficit disorders and a history of concussions with a loss of consciousness. S. KAYE; M. H. SUNDMAN; E. E. HALL*; K. PATEL; C. J. KETCHAM. *Dickinson Col., Univ. of Arizona, Elon University, Elon University, Elon Univ.*
- 3:00 U1 **216.03** EEG neurofeedback enhances default mode network integration and segregation in patients with a history of traumatic brain injury. G. J. MAY*; E. M. GORDON; R. ATHEY; K. GEORGE; J. SRIKANTH; R. SWEIDAN; B. GARY; A. MCGINNIS; S. M. NELSON. *VA VISN 17 Ctr. of Excellence, Univ. of Texas at Dallas, Baylor Univ.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 4:00 U2 **216.04** EEG coherence changes correlate with changes in cognition after neurofeedback treatment in veterans with TBI. L. ZAMBRANO-VAZQUEZ*; G. J. MAY; K. GEORGE; J. SRIKANTH; R. ATHEY; A. MCGINNIS; S. M. NELSON. *Ctr. of Excellence For Res. On War Veterans, Univ. of Texas at Dallas, Baylor Univ.*
- 1:00 U3 **216.05** Elucidating relationships between traumatic brain injury, white matter integrity, functional network communication, and post-traumatic stress disorder in veterans precisely characterized with high-data MRI. E. M. GORDON*; L. ZAMBRANO-VAZQUEZ; M. JIA-RICHARDS; B. S. GARY; R. SWEIDAN; R. ATHEY; J. L. REID; S. M. NELSON. *Ctr. of Excellence for Res. on War Veterans, Univ. of Texas at Dallas, Baylor Univ.*
- 2:00 U4 **216.06** ▲ Ventricular volume changes as a result of severe TBI in pediatric patients. M. B. UNSON*; M. BROWN; J. J. WISCO; E. BIGLER; N. MUNCY. *Brigham Young Univ., Univ. of Utah Sch. of Med., Brigham Young Univ.*
- 3:00 U5 **216.07** Binocular horizontal saccade velocity abnormalities in mTBI. J. H. ANDERSON*. *Univ. of Minnesota Dept. of Otolaryngology, Minneapolis VA Med. Ctr.*
- 4:00 U6 **216.08** ● Assessment of sensory, motor and cognitive function following sport-related concussion using the KINARM robot: A prospective validation study. C. S. MANG*; T. A. WHITTEN; M. S. COSH; C. T. DEBERT; S. H. SCOTT; B. W. BENSON; S. P. DUKELOW. *Univ. of Calgary, Winsport Med. Clin., Queen's Univ.*
- 1:00 U7 **216.09** Affective network in acute mild traumatic brain injury. M. SHPANER*; A. THOMAS; K. FREEMAN; M. R. NAYLOR. *Univ. of Vermont Col. of Med., Univ. of Vermont Col. of Med., Univ. of Vermont Col. of Med.*
- 2:00 U8 **216.10** Effects of cognitive reserve on post-deployment neurodegeneration and symptomatology. J. T. GULLICKSON; N. D. DAVENPORT*. *Minneapolis Vahcs/University of Minnesota.*
- 3:00 U9 **216.11** Psychometric evaluation in anxiety, depression and sleep quality after a mild traumatic brain injury: A 2 year follow-up study. Y. CHIANG*; K. CHEN; J. OU; C. HU; K. LIAO; C. WU. *Taipei Med. Univ., Shuang Ho Hospital, Taipei Med. Univ., Taipei Med. Univ., Wan Fang Hospital, Taipei Med. Univ., Taipei Med. Univ.*
- 4:00 U10 **216.12** Arm amputation impacts the relationships between neuronal metabolic state of the sensorimotor cortex and microstructural integrity of the major sensory tract in the ipsilateral hemisphere. H. PENG*; S. H. FREY; C. M. CIRSTEA. *Univ. of Missouri Columbia, Univ. of Missouri, Univ. of Missouri.*
- 1:00 U11 **216.13** Restoration of sleep dynamics may index recovery induced by central thalamic deep brain stimulation following severe brain injury. J. L. GOTTSCHALL*; Z. M. ADAMS; P. B. FORGACS; N. D. SCHIFF. *Weill Cornell Grad. Sch. of Med. Sci., Weill Cornell Med., Weill Cornell Med., Rockefeller Univ.*
- 2:00 U12 **216.14** Sex-related differences in self-reported personality traits in varsity concussed athletes. S. GUAY*; E. LÉVEILLÉ; C. BEAULIEU; L. DE BEAUMONT. *Montreal Sacred-Heart Hosp. Res. Ctr., Univ. de Montréal, Univ. du Québec à Montréal, Univ. Du Québec À Trois-Rivières.*
- 3:00 V1 **216.15** ● Assessment of spatial working memory following sport-related concussion. T. A. WHITTEN*; C. MANG; M. S. COSH; S. H. SCOTT; S. P. DUKELOW; B. W. BENSON. *Univ. of Calgary, Univ. of Calgary, WinSport Med. Clinic, Winter Sport Inst., Queen's Univ., Univ. of Calgary.*

POSTER

217. Traumatic Brain Injury: Therapeutic Interventions I

Theme C: Neurodegenerative Disorders and Injury

Sun. 1:00 PM – Walter E. Washington Convention Center, Halls A-C

- 1:00 V2 **217.01** ▲ Comparable impediment of cognitive function in female and male rats subsequent to daily administration of haloperidol after traumatic brain injury. I. H. BLEIMEISTER*; K. E. FREE; A. M. GREENE; H. L. RADABAUGH; P. B. DE LA TREMBLAYE; C. O. BONDI; N. LAJUD; A. E. KLINE. *Univ. of Pittsburgh, Safar Ctr. for Resuscitation Res., Inst. Mexicano del Seguro Social.*
- 2:00 V3 **217.02** ▲ Assessment of executive function after cardiac arrest and resuscitation in pediatric and adult rats. D. A. O'NEIL*; M. D. MANOLE; C. DEZFULIAN; A. E. KLINE; C. O. BONDI. *Univ. of Pittsburgh, Univ. of Pittsburgh, Safar Ctr. for Resuscitation Res., Univ. of Pittsburgh.*
- 3:00 V4 **217.03** ▲ Abbreviated EE and galantamine synergize to promote cognitive recovery after experimental brain trauma. J. WELLCOME; D. BERRY; E. SHARKEY; P. NIESMAN; K. NASSAU; H. RADABAUGH; J. P. CHENG; C. O. BONDI; A. E. KLINE*. *Univ. of Pittsburgh, Univ. of Pittsburgh.*
- 4:00 V5 **217.04** ▲ Frontal lobe brain trauma impairs attentional set-shifting performance in male rats. I. P. MARSHALL*; L. KUTASH; M. NICHOLAS; D. A. O'NEIL; H. L. RADABAUGH; A. E. KLINE; C. O. BONDI. *Univ. of Pittsburgh, Safar Ctr. for Resuscitation Res.*
- 1:00 V6 **217.05** ▲ Intermittent administration of the antipsychotic drug haloperidol does not reduce the efficacy of neurorehabilitation. G. C. BAO*; P. J. NIESMAN; K. L. NASSAU; J. L. WELLCOME; I. H. BLEIMEISTER; J. P. CHENG; C. O. BONDI; A. E. KLINE. *Univ. of Pittsburgh, Safar Ctr. for Resuscitation Res.*
- 2:00 V7 **217.06** ▲ Albeit nocturnal, rats subjected to traumatic brain injury do not differ in neurobehavioral performance whether tested during the day or night. P. J. NIESMAN*; J. WEI; M. J. LAPORTE; J. P. CHENG; P. B. DE LA TREMBLAYE; N. LAJUD; C. O. BONDI; A. E. KLINE. *Univ. of Pittsburgh, Safar Ctr. for Resuscitation Res., Inst. Mexicano del Seguro Social.*
- 3:00 V8 **217.07** ▲ Detrimental effects of traumatic brain injury on attentional set-shifting behavior in female rats. M. NICHOLAS*; H. M. TENNANT; K. E. FREE; I. NJOKU; J. B. LEARY; M. J. LAPORTE; J. P. CHENG; A. E. KLINE; C. O. BONDI. *Univ. of Pittsburgh, Safar Ctr. for Resuscitation Res.*
- 4:00 V9 **217.08** Effect of galantamine on attentional set-shifting performance after experimental brain trauma. I. NJOKU*; L. KUTASH; D. A. O'NEIL; I. P. MARSHALL; H. L. RADABAUGH; J. P. CHENG; A. E. KLINE; C. O. BONDI. *Univ. of Pittsburgh, Safar Ctr. for Resuscitation Res.*

- 1:00 V10 **217.09** ▲ Interaction of brain trauma and chronic unpredictable stress on cognition, anxiety, and markers of neurotransmission and neuroinflammation. L. KUTASH; D. O'NEIL; P. B. DE LA TREMBLAYE; I. MARSHALL; M. NICHOLAS; H. RADABAUGH; J. CHENG; N. LAJUD; A. KLINE; C. O. BONDI*. *Univ. of Pittsburgh.*
- 2:00 V11 **217.10** Role of cannabinoid CB1 receptors in modulating long-term effects of adolescent chronic stress on cognitive and emotional impairments in adult male TBI rats. P. BARRA DE LA TREMBLAYE*; H. L. RADABAUGH; K. L. NASSAU; J. L. WELLCOME; J. P. CHENG; C. O. BONDI; A. E. KLINE. *Univ. of Pittsburgh, Safar Ctr. for Resuscitation Res.*
- 3:00 V12 **217.11** How reliable is tractography-based targeting during central thalamic deep brain stimulation for the treatment of traumatic brain injury? A. JANSON*; J. M. HENDERSON; N. D. SCHIFF; J. L. BAKER; J. SU; B. RUTT; C. R. BUTSON. *Scientific Computing and Imaging Inst., Univ. of Utah, Stanford Univ. Dept. of Neurosurg., Weill Cornell Med. Col., Weill Cornell Med. Col., Stanford Univ.*
- 4:00 V13 **217.12** Therapeutic effect of intravenous pomalidomide on traumatic brain injury through multiple mechanisms to reduce neuronal death and improve behavioral deficits. J. WANG*; Y. LIU; J. WANG; D. TWEEDIE; N. GREIG. *Grad. Inst. of Med. Sci. TMU, Natl. Inst. on Aging, NIH.*
- 1:00 V14 **217.13** ● Anti-glioma nanoparticles for brain targeted delivery. H. DOU*; L. ZOU; G. PAYNE; T. THOMAS. *Texas Tech. Univ. Hlth. Sci. Ctr. - El Paso Campus.*
- 2:00 V15 **217.14** ● Mri and neuropsychological assessment outcomes following cognitive rehabilitation training in traumatic brain injury: A multiple case study. A. L. MOORE*; C. LEDBETTER; D. M. CARPENTER, III. *Gibson Inst. of Cognitive Res., LSU Hlth. Sci. Ctr. - Shreveport, Univ. of Colorado Colorado Springs.*
- 3:00 V16 **217.15** Dexamethasone-PEG hydrogel reduces secondary injury and promote motor function after TBI. J. LEE*; D. JEONG; S. BAE; C. MACKS; J. WHITAKER; M. LYNN; K. WEBB. *Clemson Univ., Greenville Hlth. Syst.*
- 4:00 V17 **217.16** ▲ A prospective, randomized, blinded, and placebo-controlled study of Cerebrolysin dose response effects on long-term functional outcomes in rats with mild traumatic brain injury. Y. ZHANG*; M. CHOPP; Z. ZHANG; Y. ZHANG; L. ZHANG; M. LU; T. ZHANG; S. WINTER; H. BRANDSTÄTTER; A. MAHMOOD; Y. XIONG. *Henry Ford Hosp., Henry Ford Hosp., Oakland Univ., Henry Ford Hosp., EVER Pharma GmbH.*
- 1:00 V18 **217.17** ▲ Adaptation of virtual environment for training of wheelchair users with visual impairments supported by electroencephalography. E. S. SOUZA*, SR; E. LAMOUNIER; A. CARDOSO. *UNIVERSIDADE FEDERAL DE UBERLÂNDIA, UNIVERSIDADE FEDERAL DE UBERLÂNDIA, UNIVERSIDADE FEDERAL DE UBERLÂNDIA.*
- 2:00 V19 **217.18** Nrf2 signaling as a therapeutic target against Traumatic Brain Injury. M. ABDUL MUNEER PERINGADY*; R. K. PATEL; N. BRISKI; D. HALDAR. *JFK Med. Ctr.*
- 3:00 V20 **217.19** Inhibition of c-Jun N-terminal kinase protects against brain damage and improves learning and memory after traumatic brain injury in adult mice. M. KIM*; S. U. REHMAN; T. ALI; G. YOON. *Dept. of Biol.*
- 4:00 V21 **217.20** Pharmacological inhibitors of chemokine receptors type 4 and 5 (CXCR4 and CCR5) stimulate recovery from traumatic brain injury. Y. FRIEDMAN-LEVI*; E. L. KESNER; D. SHABASHOV-STONE; G. GINCBERG; S. LIRAZ-ZALTSMAN; A. SILVA; E. SHOHAMI. *Hebrew Univ., Hebrew university, Sheba Med. Ctr., UCLA Med. Ctr.*
- 1:00 V22 **217.21** Human induced pluripotent stem cell-derived neural cell grafts survive and modulate gliosis following cortical contusion injury in the mouse. M. D. NIEVES; O. FURMANSKI*; M. DEWAN; Q. ZHOU; M. L. DOUGHTY. *Uniformed Services Univ. of Hlth. Sci., Uniformed Services Univ. of Hlth. Sci.*
- 2:00 V23 **217.22** N-Docosahexaenoyl ethanolamine (synaptamide) suppresses astrocyte and microglial activation after repetitive mild traumatic brain injury. H. CHEN*. *NIAAA/NIH.*
- 3:00 V24 **217.23** Effect of ultrasound treatment in traumatic brain injury mice. W. SU*; C. WU; S. CHEN; F. YANG. *Natl. Yang-Ming Univ., Natl. Def. Med. Ctr., Cheng Hsin Gen. Hosp., Natl. Def. Med. Ctr.*
- 4:00 V25 **217.24** Deletion or inhibition of soluble epoxide hydrolase protects against brain damage and reduces microglia-mediated neuroinflammation in traumatic brain injury. C. WU*; T. HUNG; S. SHYUE; C. CHEN; C. LIN; C. CHANG; S. CHEN. *Natl. Def. Med. Ctr., Chang Gung Mem. Hosp. at Taipei and Col. of Medicine, Chang Gung Univ., Academia Sinica, Cheng Hsin Gen. Hosp., Yale Univ. Sch. of Med., Natl. Def. Med. Ctr.*
- 1:00 V26 **217.25** ● A quantitative motor assessment for TBI: Toward linking results to underlying neural injury. P. K. JOHNSON*; C. J. KINCAID; N. M. MUNCY; S. K. CHARLES. *Brigham Young Univ., Brigham Young Univ., Brigham Young University.*
- 2:00 W1 **217.26** ▲ Risk of concussion associated with progressive body checking for Bantam (13-14 year olds) hockey players. G. LAVOIE*; D. ELLEMBERG. *Univ. De Montréal, Univ. De Montréal.*
- 3:00 W2 **217.27** Dimethyl fumarate attenuates neuroinflammation and neurobehavioral deficits induced by experimental traumatic brain injury. G. CASILI; M. CAMPOLO; I. PATERNITI*; M. LANZA; A. FILIPPONE; S. CUZZOCREA; E. ESPOSITO. *Univ. of Messina, Univ. of Messina.*
- 4:00 W3 **217.28** The self-inactivating KamiCas9 system for the editing of CNS disease genes. G. VACHEY; N. MERIENNE; L. DE LONGPREZ; C. MEUNIER; V. ZIMMER; G. PERRIARD; M. CANALES; A. MATHIAS; L. HERRGOTT; T. BELTRAMINELLI; T. DEQUESNE; C. PYTHOUD; M. REY; L. PELLERIN; E. BROUILLET; A. PERRIER; R. DU PASQUIER; N. DEGLON*. *Lausanne Univ. Hosp. (CHUV), CEA, Inst. of Biol. Francois Jacob (IBFJ), Univ. of Lausanne, Lausanne Univ. Hosp. (CHUV), Inst. Natl. de la Santé et de la Recherche Médicale (INSERM).*
- 1:00 W4 **217.29** Nilvadipine ameliorates repetitive mild TBI-induced memory impairment in aged mice. A. MORIN*; B. C. MOUZON; S. FERGUSON; D. PARIS; F. C. CRAWFORD. *Roskamp Inst., Open Univ., James A. Haley Veterans' Hosp.*
- 2:00 W5 **217.30** Trehalose; a natural compound with neuroprotective properties for neurodegeneration. S. D. PORTBURY*; C. SGAMBELLONI; K. PERRONNES; A. J. PORTBURY; D. FINKELSTEIN; P. A. ADLARD. *Florey Inst. of Neurosci. and Mental Hlth.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

POSTER

218. Spinal Cord Injury: Models and Mechanisms

Theme C: Neurodegenerative Disorders and Injury

Sun. 1:00 PM – Walter E. Washington Convention Center, Halls A-C

- 1:00 DP04/W6 **218.01** (Dynamic Poster) Contrast-enhanced ultrasound to visualize and quantify local blood perfusion after spinal cord injury. Z. Z. KHAING*; L. N. CATES; D. M. DEWEES; M. F. BRUCE; A. HANNAH; C. TREMBLAY-DARVEAU; C. P. HOFSTETTER. *Univ. of Washington, Univ. of Washington, Phillips Med. Systems, Dept of Neurolog. Surgery, Univ. of Washington.*
- 2:00 W7 **218.02** Combing constitutively-active Rheb expression and chondroitinase treatment promotes functional axonal regeneration following a cervical level 2 hemisection. D. WU*; M. C. KLAU; N. G. KHOLODILOV; R. E. BURKE; T. M. CONNORS; M. COTE; V. J. TOM. *Drexel Univ. Col. of Med., Columbia Univ., Columbia Univ.*
- 3:00 W8 **218.03** A new microtubule-based approach for augmenting nerve regeneration. A. J. MATAMOROS*; D. WU; V. J. TOM; L. BAKER; D. SHARP; P. W. BAAS. *Drexel Col. of Med., Drexel Univ. Col. of Med., Albert Einstein Col. of Med.*
- 4:00 W9 **218.04** Identification of stimulating/inhibitors factors in OEGs using nanotechnology. M. Y. SANCHEZ-MOLINA; R. M. GOMEZ*; O. CHAPARRO; M. F. QUIROZ-PADILLA; R. H. BUSTOS. *FUNDACION DE NEUROREGENERACION DE COLOMBIA, Univ. Nacional De Colombia, Univ. de la Sabana, Univ. de la Sabana.*
- 1:00 W10 **218.05** • Neural and synaptic guidance by molecular machines. J. GIRON*; N. ZILONY; H. SCHORI; O. SHEFI; I. BACHELET. *Augmanity, Bar-Ilan Univ.*
- 2:00 W11 **218.06** Neuronal delivery of Y27632 ROCK inhibitor using nanocarriers. S. SEBASTIAN*; R. AMMASSAM VEETIL; D. HYNDS; S. GHOSH. *Texas Woman's Univ., Southeast Missouri State Univ.*
- 3:00 W12 **218.07** IL-4 releasing biomaterials reduce inflammation to promote regeneration after spinal cord injury. A. D'AMATO*; A. M. ZIEMBA; D. L. PUHL; T. MACEWAN; A. KOPPE; R. KOPPE; M. LENNARTZ; R. J. GILBERT. *Rensselaer Polytechnic Inst., Northeastern Univ., Albany Med. Col.*
- 4:00 W13 **218.08** The effect of fiber diameter on astroglial morphology and glutamate transporter production. C. JOHNSON*; R. J. GILBERT. *Rensselaer Polytechnic Inst.*
- 1:00 W14 **218.09** Microglia and complement mediate loss of premotor cholinergic innervation in spinal cord deprived of corticospinal projection. Y. JIANG*; A. SARKAR; J. H. MARTIN. *The City Col. of the City Univ. of New York, City Col. of New York/ CUNY, CUNY Sch. of Med.*
- 2:00 W15 **218.10** Evaluating the temporal sequence of cell death in a rodent SCI model with extended morphine treatment. M. N. TERMINEL*; M. ACEVES; M. HOOK. *Texas A&M Hlth. Sci. Ctr., Texas A&M Univ. Hlth. Sci. Ctr.*
- 3:00 W16 **218.11** Spinal cord injury causes selective loss of gastrin releasing peptide in spinal ejaculation generator in rats. J. W. WIGGINS; G. G. WILSON; L. M. COOLEN*. *Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr.*
- 4:00 W17 **218.12** Diclofenac induces L-selectin shedding on circulating and infiltrated neutrophils and non-classical monocytes, implicating multiple roles for L-selectin in inflammation following spinal cord injury. D. A. MCCREEDY*; S. D. ROSEN; L. J. NOBLE-HAEUSSLEIN. *UCSF, J. David Gladstone Inst., Univ. of California, Univ. California.*
- 1:00 W18 **218.13** Structural and functional features of spinal cord meningeal lymphatic vessels. J. HERZ*; M. DONG; I. SMIRNOV; A. LOUVEAU; J. KIPNIS. *Univ. of Virginia, Univ. of Virginia, Ctr. For Brain Immunol. and Glia.*
- 2:00 W19 **218.14** Novel survival factor for infiltrating macrophages in the injured spinal cord. A. J. ROLFE*; L. SUN; Y. CHI; X. SUN; Y. REN. *Florida State Univ., Jinan Univ.*
- 3:00 W20 **218.15** Differential effects of IL-4 and IL-13 after spinal cord contusion in mice. J. AMO-APARICIO*; R. LÓPEZ-VALES. *Univ. Autonoma De Barcelona.*
- 4:00 W21 **218.16** ▲ F11 and Neuro2a cell line-derived neurons in an *in vitro* model of the glial scar. J. G. BRACAMONTE*; A. DIAZ; A. L. HAWTHORNE. *Univ. of Central Florida, Univ. of Central Florida.*
- 1:00 W22 **218.17** Cell targeting of surface functionalized nanoparticles in neuronal cells. C. MENGJIE*; D. L. HYNDS; R. AMMASSAM VEETIL; S. GHOSH; T. MCALLISTER. *TEXAS WOMAN'S UNIVERSITY, Texas Woman's Univ., Texas Woman's Univ., Southeast Missouri State Univ.*
- 2:00 W23 **218.18** Modeling the dynamics of the neural circuitry controlling micturition. V. GUNTU*; C. GARROW; D. SCHULZ; S. NAIR. *Univ. of Missouri, Univ. of Missouri, Univ. of Missouri.*
- 3:00 W24 **218.19** Myelin modulates macrophage responses after spinal cord injury. T. J. KOPPER*; B. ZHANG; J. C. GENSEL. *Univ. of Kentucky, Univ. of Kentucky, Univ. of Kentucky.*
- 4:00 W25 **218.20** ▲ Differential neurite outgrowth of F11- and Neuro2a-derived neurons on inhibitory and growth-promoting substrates. J. K. KING*; L. M. WILSON; A. W. HOARD; B. Y. AINUZ; A. L. HAWTHORNE. *Univ. of Central Florida, Univ. of Central Florida.*
- 1:00 W26 **218.21** Neuropeptide Y facilitates locomotor recovery and regeneration after spinal cord injury in adult zebrafish. L. WANG; P. ZHAO; C. CUI; X. CHEN; H. ZHAO; C. LIU; S. PENG; S. HUANG; Y. SHEN*. *China.*
- 2:00 W27 **218.22** Synaptic connectivity between host and neural progenitor cell-derived neurons after spinal cord injury. S. L. CETO*; K. J. SEKIGUCHI; A. NIMMERJAHN; M. H. TUSZYNSKI. *Univ. of California - San Diego, Salk Inst. for Biol. Studies, Univ. of California - San Diego.*
- 3:00 W28 **218.23** • Chondroitinase improves anatomical and functional outcomes after primate spinal cord injury. E. S. ROSENZWEIG*; E. A. SALEGIO; J. J. LIANG; J. L. WEBER; C. WEINHOLTZ; J. H. BROCK; R. MOSEANKO; S. HAWBECKER; R. PENDER; J. F. IACI; A. O. CAGGIANO; A. R. BLIGHT; B. HAENZI; J. R. HUIE; L. A. HAVTON; Y. S. NOUT-LOMAS; J. W. FAWCETT; A. R. FERGUSON; M. S. BEATTIE; J. C. BRESNAHAN; M. H. TUSZYNSKI. *Univ. of California San Diego Dept. of Neurosciences, Univ. of California, Davis, VAMC, Acorda Therapeutics, Inc., Cambridge Univ., Brain and Spinal Injury Ctr. (BASIC), UCSF, UCLA, Colorado State Univ.*
- 4:00 W29 **218.24** Associations between motoneuron discharge and afterhyperpolarization properties following incomplete spinal cord injury. V. V. TURKIN*; D. O'NEILL; T. M. HAMM. *Barrow Neurolog Inst.*

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 * Indicates abstract's submitting author

- 1:00 W30 **218.25** Alterations in postsynaptic Ca²⁺-activated K⁺ channels in rat hindlimb motoneurons following incomplete spinal cord injury. S. H. ROMER; A. S. DEARDORFF; V. V. TURKIN; D. O'NEILL; R. E. W. FYFFE; T. M. HAMM*. *Wright State Univ., Barrow Neurolog. Inst.*
- 2:00 W31 **218.26** Short-term blood pressure regulation after complete and incomplete spinal cord injury. S. WANG*; S. C. ASLAN; D. LORENZ; A. V. OVECHKIN; G. HIRSCH; S. J. HARKEMA. *Univ. of Louisville, Frazier Rehab Institute, Kentucky One Hlth., Univ. of Louisville, Univ. of Louisville.*
- 3:00 W32 **218.27** Acute experimental spinal cord injury provokes luminal hypoxia and tissue remodeling within the colon. A. R. WHITE*; E. N. BLANKE; E. M. BESECKER; G. M. HOLMES. *Penn State Univ. Col. of Med., Gettysburg Col.*
- 4:00 W33 **218.28** Cervical hemisection increases upper airway activity in breathing and swallow. A. HUFF*; C. GREENE; K. CHEFFER; W. O'STEEN; D. HOWLAND; T. PITTS. *Univ. of Louisville Sch. of Med., Univ. of Louisville Sch. of Med.*
- 1:00 W34 **218.29** Spinal contusion at T10 in the cat : Recovery of locomotion. H. DELIVET-MONGRAIN*; M. DEA; J. GOSSARD; S. ROSSIGNOL. *Univ. de Montreal, Univ. De Montréal, Univ. de Montreal, Univ. Montreal Fac Med.*
- 2:00 W35 **218.30** Spinal contusion at T10 in the cat : Histological assessment. M. DEA*; H. DELIVET-MONGRAIN; S. ROSSIGNOL; J. GOSSARD. *Univ. De Montréal, Univ. de Montreal, Univ. Montreal Fac Med., Univ. de Montreal.*
- POSTER**
- 219. Somatosensation: TRP Channels**
- Theme D: Sensory Systems**
- Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*
- 1:00 W36 **219.01** MiRNA let-7b induces chronic itch via TLR7 and TRPA1. Q. HAN*; R. JI. *Duke Univ. Med. Ctr.*
- 2:00 X1 **219.02** ● Evaluation of anti-pruritic effect of TRPA1 inhibitor. Y. MAJIMA*; M. KONNO; K. SERIZAWA; M. MORIYAMA; N. YUZAWA; K. NAKANAGA; T. SUZUKI; M. KAINOH. *Toray Industries, Inc.*
- 3:00 X2 **219.03** Lidocaine derivative QX-314 permeates TRPM8 channels to produce long lasting cold specific local anesthesia. S. ONGUN*; D. D. MCCOY; R. PALKAR; Y. YANG; S. YAMAKI; D. D. MCKEMY. *USC, USC, USC.*
- 4:00 X3 **219.04** Agonism of tacrolimus, an immunosuppressant macrolide, on thermally gated TRPM8 channels. J. ARCAS; A. GOMIS; F. VIANA*. *Inst. de Neurociencias UMH-CSIC.*
- 1:00 X4 **219.05** Protein kinase C negatively modulates TRPM8 channel activity. B. O. RIVERA*; SR; R. MADRID; M. CAMPOS; B. LAVANDEROS; M. PERTUSA. *Univ. De Santiago De Chile.*
- 2:00 X5 **219.06** Monitoring plasticity and regeneration of individual intraepithelial corneal cold nerves in the adult living mouse. A. ÍNIGO-PORTUGUÉS; F. BORRAS*; L. RINCON-FRUTOS*; G. EXPOSITO; J. GALLAR*; C. BELMONTE; V. M. MESEGUER. *Inst. De Neurociencias/UMH-CSIC, Univ. Miguel Hernández.*
- 3:00 X6 **219.07** Tacrolimus, a calcineurin inhibitor, promotes capsaicin-induced colonic pain in mice. K. MATSUI*; Y. TERADA; M. TSUBOTA; A. KAWABATA. *Kindai Univ.*
- 4:00 X7 **219.08** Effects of TRPV1 long term antagonism on orthodontic force induced pain. N. HASEGAWA*; A. SASAKI; T. TSUCHIYA; N. SUDA; K. ADACHI. *Meikai Univ. Sch. of Dent., Meikai Univ. Sch. of Dent.*
- 1:00 X8 **219.09** Involvement of TRPV4 and local osmolarity in incisional pain in the rat. K. KIDO*; E. MASAKI; Y. SHINDO; S. TODA. *Tohoku Univ. Hospital, Dept. of Dent. Anesthesia.*
- 2:00 X9 **219.10** Role of TRPA1 channel in formalin-induced chronic nociception. V. A. MARTINEZ-ROJAS*; J. MURBARTIAN. *Cinvestav Sede Sur, Cinvestav, Sede Sur.*
- 3:00 X10 **219.11** Role of high omega-6 diet as risk factor for pain through increased TRPV1 activity. J. T. BOYD*; K. M. HARGREAVES. *UT Hlth. - San Antonio.*
- 4:00 X11 **219.12** NSAIDs attenuate TRPA1 and TRPV1 channels activated by their agonists. M. G. TSAGARELI*; I. NOZADZE; N. TSIKLAURI; G. GURTSKAIA; E. ABZIANIDZE. *Ivane Beritashvili Exptl. Biomedicine Ctr.*
- 1:00 X12 **219.13** TRPA1 regulates colonic motility through prostaglandin release from colon fibroblasts in rats. Y. YANG; S. WANG; K. KOBAYASHI; Y. KOGURE; H. YAMANAKA; S. YAMAMOTO; K. NOGUCHI; Y. DAI*. *Hyogo Univ. of Hlth. Sci., Hyogo Col. of Med., Chinese Med. Confucius Inst. at Hyogo Col. of Med.*
- 2:00 X13 **219.14** Noradrenaline suppresses TRPV1 currents by activation of α₂ adrenergic receptors in sensory neurons. Y. MATSUSHITA*; M. MANABE; N. KITAMURA; I. SHIBUYA. *Lab. Vet. Physiol., Fac. Agr., Tottori Univ.*
- 3:00 X14 **219.15** 7-dehydrocholesterol photosensitizes TRPA1 and TRPA1 - relevant targets for the Smith-Lemli-Opitz syndrome. C. I. CIOTU; A. BABES; T. I. KICHKO; T. SELESCU; S. K. SAUER; P. W. REEH; M. J. FISCHER*. *Med. Univ. of Vienna, Univ. of Bucharest, Univ. Erlangen-Nuremberg, Univ. of Erlangen.*
- 4:00 X15 **219.16** ▲ Mechanical stretch stimulus activates extracellular signal-regulated kinase via TRP channels and P2X receptor in dorsal root ganglion neurons. T. SUGIMOTO*; J. MATSUYAMA; T. ISHIDA; E. OKUDA-ASHITAKA. *Osaka Inst. of Technol.*
- 1:00 X16 **219.17** Potential roles of the fatty acid receptor and its agonists in modulating TRPV1 in primary sensory neurons. X. WEN*; M. JEONG; S. PARK; T. KANG; J. KANG; H. CHO. *Sungkyunkwan Univ.*
- 2:00 X17 **219.18** Identification of an expression determining interaction in a putative transmembranous assembly domain of the TRPV1 channel. V. GRASSO; M. BERNHARD; K. LANGER; B. LAUBE*. *TU Darmstadt.*
- 3:00 X18 **219.19** Exploring a structure-based pharmacophore for the transient potential melastatin 8 (TRPM8) ion channel using flexible docking and e-pharmacophore modeling. V. B. JOURNIGAN*; C. E. HEFFNER; N. BACHTTEL. *Marshall Univ.*

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POSTER

220. Inflammatory Pain

Theme D: Sensory Systems

Sun. 1:00 PM – Walter E. Washington Convention Center, Halls A-C

- 1:00 X19 **220.01** ● Thrombin-dependent inhibition of HMGB1-induced mechanical allodynia by thrombomodulin in mice. Y. HAYASHI*; M. MATSUNAMI; R. TSUJITA; G. HONDA; A. KAWABATA. *Kindai Univ., Asahi Kasei Pharma.*
- 2:00 X20 **220.02** Allosteric small molecule antagonists of protease-activated receptor 2 (PAR2) inhibit PAR2 induced rat paw inflammation. D. G. BROWN*; L. SUNDSTROM; S. GESCHWINDER; A. SNIJDER; H. SOUTER; D. TROAST; C. DUMELIN; G. BROWN; R. K. Y. CHENG; C. FIEZ-VANDAL; O. SCHLENKER; R. COOKE; R. PRIHANDOKO; B. TEHAN; G. WIGGIN; A. ZHUKOV; M. CONGREVE; B. TEOBALD; N. DEKKER; Y. JIANG; R. LOHMAN; D. FAIRLIE. *Astrazeneca R&D Boston, AstraZeneca, X-Chem Inc, Heptares Therapeut. Ltd, 4Heptares Therapeut. Ltd, Univ. of Queensland.*
- 3:00 X21 **220.03** Modulation of inhibitory postsynaptic currents at spinal cord excitatory neurons in VGAT-ChR2-eYFP mice studied in different pain models. P. ADAMEK*; J. PALECEK. *Inst. of Physiology, Czech Acad. of Sci., Fac. of Science, Charles Univ.*
- 4:00 X22 **220.04** Local P2X3 receptor mediates moxibustion-induced analgesia. L. M. HUANG*; X. SHI; C. ZUO; H. YIN; S. YU; Y. TANG. *Chengdu Univ. of Traditional Chinese Med., Chengdu Univ. of Traditional Chinese Med.*
- 1:00 X23 **220.05** Effect of TNBS-induced inflammatory colitis on intestinal epithelial cells and enteric nervous system. S. DAS*; K. E. MILLER. *Ctr. For Hlth. Sci, Oklahoma State Univ., Oklahoma State Univ. Ctr. for Hlth. Sci.*
- 2:00 X24 **220.06** Regulation of static plasma membrane tension and Piezo2 channel activity by Rho-associated protein kinase in DRG neurons. H. KANDA*; V. VIATCHENKO-KARPINSKI; J. LING; J. GU. *Univ. of Alabama At Birmingham.*
- 3:00 X25 **220.07** COX2-PGE2-EP4 signaling is involved in repeated restraint stress induced prolongation of sensitization pain evoked by subsequent PGE2 challenge. W. MA*; L. LI; S. XING. *McGill Univ.*
- 4:00 X26 **220.08** Macrophages and NF-κB signaling mediate peripheral HMGB1-induced mechanical allodynia in mice. R. DOMOTO*; K. NAKASHIMA; M. TSUBOTA; F. SEKIGUCHI; A. KAWABATA. *Kindai Univ.*
- 1:00 X27 **220.09** Acute and transient biphasic effects of caffeine on chronic pain in rodent inflammatory joint pain model. T. TAKANO*; T. FUJITA. *Univ. Rochester, Univ. Rochester.*
- 2:00 X28 **220.10** A potential new contributor to pain processing in the dorsal horn in an animal model of multiple sclerosis. E. MIRABELLI; V. KHARIV; L. NI; R. F. HEARY; S. ELKABES*. *New Jersey Med. School-Rutgers.*
- 3:00 X29 **220.11** Synthetic peptides inhibit mechanosensitive (MS) ion channels and reduce mechanical pain. Z. ZHANG; S. KE; P. DONG; M. TANG; H. LI; X. DU; Z. ZHONG; Q. TANG*. *Xuzhou Med. Univ., Dept. of Pathology, The Affiliated Hosp. of Southwest Med. Univ., Xuzhou Med. Univ., Xuzhou Med. Univ.*
- 4:00 X30 **220.12** Intra-epidermal nerve fiber reconstruction and quantification in three-dimensions. M. B. ANDERSON*; K. MILLER. *Oklahoma State Univ.*
- 1:00 X31 **220.13** ▲ tramadol may counteract pronociception induced by toluene in rat formalin test. M. A. TORRES-SANTANA; C. CERVANTES-DURAN; M. Y. GAUTHEREAU-TORRES; L. F. ORTEGA-VARELA*. *Facultad de Químico Farmacobiología, Facultad de Ciencias Médicas y Biológicas "Dr. Ignacio Chávez", UMSNH, Morelia, Mexico, Univ. Michoacana De San Nicolas De Hidalgo.*
- 2:00 X32 **220.14** Effects of selective deletion of Pip5k1c in the sensory ganglia on nociception and inflammatory sensitization. L. LOO*; M. ZYLKA. *The Univ. of North Carolina.*
- 3:00 X33 **220.15** Scaffolded up-regulation of peripheral calcium-permeable ampa receptors. Y. ZHANG*; N. A. JESKE. *Univ. of Texas Hlth. Sci. Ctr.*
- 4:00 Y1 **220.16** Blocking tonic activation of neuronal MR suppresses inflammatory pain by rapid non-genomic effects. S. A. MOUSA; M. SCHAEFER*. *Dep. of Anesthesiology, Charite Univ., Dep. of Anesthesiol & Intensive Care Medicine, Charité Univ. Berlin, CVK.*
- 1:00 Y2 **220.17** Neurons of the superficial spinal dorsal horn that show phosphorylated histone 3 at serine 10 upon tissue injury-associated pain. A. VARGA; M. SIVADO; B. GAAL; T. BACSKAI; E. KOKAI; I. NAGY*; P. SZUCS. *MTA-DE-NAP B-Pain Control Res. Group, Univ. of Debrecen, Univ. of Debrecen, Imperial Col. London.*
- 2:00 Y3 **220.18** Calcitonin gene-related peptide promotes pain specifically in females in hyperalgesic priming and neuropathic pain. C. A. PAIGE*; G. PRADHAN; P. M. PRADHAN; G. DUSSOR; T. J. PRICE. *Univ. of Texas At Dallas, Univ. of Texas at Dallas, UTD.*
- 3:00 Y4 **220.19** Modulation of eicosanoid signaling contributes to the anti-nociceptive effect of ABHD6 inhibitor WWL70 in the chronic constriction injury mouse model. J. WEN*. *Uniformed Services Univ.*
- 4:00 Y5 **220.20** Peripheral inflammation alters N-arachidonoylphosphatidylethanolamine (20:4-NAPE) induced modulation of nociceptive spinal cord synaptic transmission. P. ADAMEK; V. NERANDZIC; P. MROZKOVA; D. SPICAROVA; I. NAGY; J. PALECEK*. *Inst. of Physiology, Czech Acad. of Sci., Fac. of Science, Charles Univ., Imperial Col. London.*
- 1:00 Y6 **220.21** A pan-Trk inhibitor exerts an analgesic effect through inhibiting peripheral TrkA phosphorylation in a osteoarthritis pain model. T. YASUHIRO*; A. KAMIYA; S. KATSUMATA; Y. HIROTA. *ONO Pharmaceut. CO.,LTD.*
- 2:00 Y7 **220.22** Spinal IL6 contributes to central sensitisation and persistent pain hypersensitivity in a model of juvenile idiopathic arthritis. C. H. KWOK*; A. LEAROYD; Y. IOANNOU; M. FITZGERALD. *Univ. of Calgary, Univ. Col. London, Arthritis Res. UK Ctr. for Adolescent Rheumatology.*
- 3:00 Y8 **220.23** Expression of nerve growth factor in adjuvant-induced arthritis (AIA): A temporal study. V. GUJAR*; K. E. MILLER. *Oklahoma State University, Ctr. For Hlth. Scien, Oklahoma State Univ. Ctr. for Hlth. Sci.*
- 4:00 Y9 **220.24** ● ▲ Characterization of pain associated behaviors in a rat model of temporomandibular joint osteoarthritis. S. SANNAJUST*; J. HEATH; I. IMBERT; T. E. KING. *Univ. of New England, Univ. of New England.*

- 1:00 Y10 **220.25** Forced walking results in pain-related changes in a rat model of inflammatory arthritis. S. LOCKE*; M. MANNARINO; N. YOUSEFPOUR; A. RIBEIRO-DASILVA. *McGill Univ., McGill Univ.*
- 2:00 Y11 **220.26** Chemokine receptor 2 (CCR2) mediates mechanical and cold hypersensitivity in sickle cell disease pain. K. SADLER*; K. J. ZAPPIA; A. D. WEYER; C. O'HARA; C. A. HILLERY; C. L. STUCKY. *Med. Col. of Wisconsin, Univ. of Pittsburgh.*
- 3:00 Y12 **220.27** Peripheral persistent inflammation increases c-fos expression in the basolateral amigdala in the rat. J. C. MORALES-MEDINA*; G. SERRANO-BELLO. *Ctr. for Res. and Advanced Studies, Univ. Autónoma de Tlaxcala.*
- 2:00 Z4 **221.10** GDNF differentially regulates neuronal excitability in DRGs from normal and diabetic mice. E. CIGLIERI*; F. FERRINI; C. SALIO. *Univ. Degli Studi Di Torino.*
- 3:00 Z5 **221.11** Elucidation of various inflammatory pathways in experimental paradigms of streptozotocin induced diabetic neuropathy. R. MITTAL*, SR; A. KUMAR. *Panjab Univ., Panjab Univ.*
- 4:00 Z6 **221.12** DREADD mediated reversal of small fiber degeneration and neuropathic pain in a mouse model of painful diabetic neuropathy. S. HACKELBERG*; N. D. JAYARAJ; B. J. BHATTACHARYYA; A. A. BELMADANI; D. REN; C. A. RATHWELL; R. J. MILLER; D. M. MENICHELLA. *Northwestern Univ.*

POSTER

221. Mechanisms of Diabetic Neuropathic Pain

Theme D: Sensory Systems

Sun. 1:00 PM – Walter E. Washington Convention Center, Halls A-C

- 1:00 Y13 **221.01** The mechanism of pregabalin on pain in streptozotocin-induced diabetic neuropathy model rats. Y. SAKURAI*; R. TAMANO; M. MATSUO; T. KANOU; K. MINAMI; M. HASEGAWA; T. ASAKI. *Shionogi & CO., LTD.*
- 2:00 Y14 **221.02** Diabetes-induced amplification of action potential output of nociceptive DRG neurons by upregulation of somatic T-type Ca²⁺ current. P. V. BELAN*; M. MATVEENKO; N. I. KONONENKO; D. DUZHYY; N. VOITENKO; S. M. KOROGOD. *Bogomoletz Inst. of Physiol.*
- 3:00 Y15 **221.03** AMPK-regulated neuronal TRPA1 plasma membrane expression in painful diabetic neuropathy. S. WANG*; K. KOBAYASHI; Y. KOGURE; H. YAMANAKA; S. YAMAMOTO; H. YAGI; K. NOGUCHI; Y. DAI. *Hyogo Univ. of Hlth. Sci., Chinese Med. Confucius Inst. at Hyogo Col. of Med., Hyogo Col. of Med., Hyogo Col. of Med.*
- 4:00 Y16 **221.04** Expression of agrin isoforms in diabetic neuropathic rats. J. CUI*; D. ERASSO; G. TENDER; G. CHEN; F. CULICCHIA; S. ABDI. *MD ANDERSON CANCER CENTER, The university of Miami, LSU HSC.*
- 1:00 Y17 **221.05** Evaluation of the potential antinociceptive effect of cannabidiol on neuropathic pain associated with experimental diabetes. J. M. CUNHA*; C. H. A. JESUS; D. D. B. REDIVO; A. T. GASPARIN; K. D. S. GENARO; J. A. S. CRIPPA; J. M. ZANOVELLI. *Federal Univ. of Parana, Univ. Sao Paulo.*
- 2:00 Y18 **221.06** Nile rats as a novel model of protracted type-2 diabetes-induced peripheral sensory neuropathy. J. SINGH*; S. YOUSUF; P. SHELEMEY; T. JOY; H. MACANDILI; B. KERR; K. JONES; Y. SAUVÉ; K. BALLANYI; C. A. WEBBER. *Univ. of Alberta, Univ. of Alberta, Univ. of Alberta, Univ. of Alberta, Univ. of Alberta.*
- 3:00 Z1 **221.07** Visualize nociceptor changes in mice with diabetes neuropathy. H. CHI; R. CHEN*; C. YEN. *Natl. Taiwan Univ.*
- 4:00 Z2 **221.08** Macrophage migration inhibitory factor affects pain signal pathway in diabetic neuropathy. S. NOH*; Y. LEE. *Med. Res. Institute, Sungkyunkwan Univ., Med. Res. Institute, Kangbuk Samsung Hospital, Sungkyunkwan Univ.*
- 1:00 Z3 **221.09** Spinal matrix metalloproteinase-9 contributes to diabetic neuropathic pain in rodents. X. DENG; P. MA; M. WU; L. CHENG; X. SONG*. *Southern Univ. of Sci. and Technol.*

POSTER

222. Cancer Pain and Chemotherapy-Evoked Pain

Theme D: Sensory Systems

Sun. 1:00 PM – Walter E. Washington Convention Center, Halls A-C

- 1:00 Z7 **222.01** ▲ Cannabinoid agonists (cp55,940, acea and am1241) following chronic administration cause changes in the estrus cycle in an optimized chemotherapy-induced neuropathic pain model. K. DONCKELS; H. BLANTON; D. MEDINA; J. LILLEY; I. CASTRO; K. PRUITT; J. GUINDON*. *Texas Tech. Univ., Texas Tech. Univ. Hlth. Sci. Ctr., Texas Tech. Univ. Hlth. Sci. Ctr.*
- 2:00 Z8 **222.02** Cisplatin modulates PPAR γ and TNF α gene expression in a Chemotherapy Induced Peripheral Neuropathy model *in vitro*. H. R. DE OLIVEIRA*; C. L. LIMA; M. S. COELHO; D. B. DUARTE. *Univ. of Brasilia.*
- 3:00 Z9 **222.03** Comparisons of anti-cancer platinum compounds in chemotherapy-induced peripheral neuropathy. P. J. SHORTLAND*; E. GEBREMEDHN; J. ALDRICH-WRIGHT; D. A. MAHNS. *Western Sydney Univ., Western Sydney Univ.*
- 4:00 Z10 **222.04** Losartan alleviates mechanical hyperalgesia in a rat model of chemotherapy-induced peripheral neuropathy. E. KIM*; H. KIM; S. H. KIM; S. ABDI; H. KIM. *Pusan Natl. Univ. Hosp., Pusan Natl. Univ., MD Anderson Cancer Ctr.*
- 1:00 Z11 **222.05** The $\alpha 7$ nicotinic acetylcholine receptors (nAChRs) regulate the development and maintenance of chemotherapy induced peripheral neuropathy (CIPN) induced by paclitaxel in a mouse model. W. TOMA*; S. L. KYTE; D. BAGDAS; J. MEADE; G. THAKUR; J. BIGBEE; D. GEWIRTZ; M. I. DAMAJ. *Virginia Commonwealth Univ., Northeastern Univ., Virginia Commonwealth Univ.*
- 2:00 Z12 **222.06** Direct impairment of Schwann cells by taxanes and platinum derivatives is associated with etiologic mechanisms underlying chemotherapy-induced peripheral neuropathy. M. KOYANAGI*; S. IMAI; Y. NAKAZATO; M. MATSUMOTO; T. OGIHARA; T. NAKAGAWA; K. MATSUBARA. *Kyoto Univ. Hosp., Kyoto Univ. Hosp.*
- 3:00 Z13 **222.07** The critical role of Ca_v3.2 T-type calcium channels in the peripheral neuropathy induced by bortezomib, a proteasome-inhibiting chemotherapy agent, in mice. A. KAWABATA*; S. TOMITA; T. DEGUCHI; F. SEKIGUCHI; M. TSUBOTA; S. YOSHIDA. *Fac. of Pharmacy, Kindai Univ., Fac. of Sci. and Engineering, Kindai Univ.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 4:00 Z14 **222.08** Genetic dissection of chemotherapy induced peripheral neuropathy identifies TrpA1 as a conserved target of anti-cancer drugs in sensory nociceptors. E. MONTANO*; N. BOIKO; G. MEDRANO; K. M. HARGREAVES; J. D. STOCKAND; B. A. EATON. *UT Hlth. San Antonio, UT Hlth. San Antonio.*
- 1:00 Z15 **222.09** Tempol decreases inflammatory cytokines and superoxide levels in the dorsal root ganglia in chemotherapy-induced neuropathic pain in rats. H. KIM*; S. HWANG; E. KIM; S. ABDI. *MD Anderson Cancer Ctr.*
- 2:00 Z16 **222.10** Global transcriptomic profile of dorsal root ganglion and physiological correlates of cisplatin-induced peripheral neuropathy reveal differences across inbred mouse strains. C. B. LASSITER*; V. CAROZZI; S. LESSANS; B. SHALABY; P. HEINDEL; N. OGGIONI; A. CHIORAZZI; C. THOMPSON; M. A. WAGNER; J. E. HOLDEN; E. J. RAHN; J. D. SWEATT; G. CAVALETTI; C. L. RENN; S. G. DORSEY. *Univ. of Maryland, Baltimore, Univ. of Milan Bicocca, Univ. of Maryland Sch. of Nursing, Univ. of Michigan, Univ. of Alabama at Birmingham, Vanderbilt Univ. Sch. of Med.*
- 3:00 Z17 **222.11** Analgesic effects of cannabidiol and a novel cannabidiol analog in a murine model of cisplatin-induced neuropathy; synergistic effects with sub-analgesic doses of morphine. H. M. HARRIS*; W. GUL; M. A. ELISOHLI; K. J. SUFKA. *Univ. of Mississippi, Univ. of Mississippi, Univ. of Mississippi.*
- 4:00 Z18 **222.12** Schwann cell-derived exosomes contribute to cisplatin-induced hyperalgesia. A. H. KIM; I. KHASABOVA*; N. LUONG; J. K. OLSON; D. A. SIMONE. *Univ. of Minnesota.*
- 1:00 Z19 **222.13** Strain specific gut microbiota in the onset of paclitaxel-induced allodynia in C57BL6 and SV129 mice. J. A. CORLETO*; C. RAMAKRISHNA; J. BORNEMAN; E. CANTIN; D. D. MCKEMY. *USC, City of Hope, Univ. of California, Riverside.*
- 2:00 Z20 **222.14** The neuroprotective effects of P7C3-A20 require NAMPT to prevent paclitaxel-induced peripheral neuropathy in rats. H. R. SMITH; P. M. LOCOCO; J. C. ZAMORA; T. A. CHAVERA; K. A. BERG; W. P. CLARKE*. *Univ. Texas Hlth. Sci. Ctr.*
- 3:00 Z21 **222.15** Cytokines production and MAPK signaling downstream to TLR4 contributes to paclitaxel-induced peripheral sensory neuron hyperexcitability *in vitro* culture. Y. LI*; R. Y. NORTH; C. A. JOHANSSON, 77030; P. M. DOUGHERTY. *The Univ. of Texas MD Anderson Cancer Ctr., Baylor Col. of Med., The Univ. of Texas Hlth. Sci. Ctr., The Univ. of Texas MD Anderson Cancer Ctr.*
- 4:00 Z22 **222.16** ● PF22688 a pan-Trk inhibitor with analgesic properties in cancer pain. J. MARTEL*; L. DE VRIES; F. CACHOUX; L. BARDIN; I. RAULY-LESTIENNE; S. GATTI-MCARTHUR. *Inst. De Recherche Pierre Fabre, Inst. De Recherche Pierre Fabre, Inst. De Recherche Pierre Fabre, Inst. De Recherche Pierre Fabre.*
- 1:00 Z23 **222.17** The role of osteoclasts in cancer induced bone pain. L. DE CLAUSER*; S. SANTANA-VARELA; J. WOOD; S. SIKANDAR. *Univ. Col. London.*
- 2:00 Z24 **222.18** Exosomes derived from cerebral endothelial cells mitigate oxaliplatin-induced peripheral neuropathy. Y. ZHANG*; M. CHOPP; C. LI; X. WANG; Z. ZHANG. *HENRY FORD HOSPITAL, Dept. of Physics.*

POSTER

223. Barrel Cortex: Tactile Discrimination

Theme D: Sensory Systems

Sun. 1:00 PM – Walter E. Washington Convention Center, Halls A-C

- 1:00 Z25 **223.01** Mechanisms underlying perceptual constancy in the whisker somatosensory system. R. AZOUZ*; H. SHARMA. *Ben-Gurion Univ., Ben-Gurion Univ. of the Negev.*
- 2:00 Z26 **223.02** A behavioral paradigm that challenges mice to identify objects by complex conjunctions of sensory features. R. RABINOVICH*; C. RODGERS; R. M. BRUNO. *Columbia Univ., Columbia Univ. Med. Ctr.*
- 1:00 DP05/Z27 **223.03** (Dynamic Poster) The sensorimotor strategies mediating curvature discrimination by active whisker touch. C. RODGERS*; B. C. PIL; R. M. BRUNO. *Columbia Univ. Med. Ctr., Columbia Univ.*
- 4:00 Z28 **223.04** How mice use whiskers to locate and respond to behaviorally relevant objects. G. M. PIERCE*; A. K. KINNISCHTZKE; H. C. MACOMBER; B. C. PIL; R. M. BRUNO. *Columbia Univ., Columbia Univ.*
- 1:00 Z29 **223.05** Bilateral whisker movement predicts decision-making in mice solving Air-Track plus maze. M. A. NASHAAT*; S. DOMINIAC; A. NASR; K. SEHARA; H. ORABY; M. LARKUM; R. SACHDEV. *Neurocure Cluster of Excellence, Humboldt Universi, Humboldt Univ. zu Berlin.*
- 2:00 Z30 **223.06** The spatial-temporal dynamics of whisker and whisker pad motion in a touch task. S. DOMINIAC*; K. SEHARA; M. A. NASHAAT; H. ORABY; M. E. LARKUM; R. N. SACHDEV. *Humboldt-Universität zu Berlin.*
- 3:00 Z31 **223.07** Cell-type specific dendritic activation of layer 5 pyramidal neurons in sensory perception. N. TAKAHASHI*; S. NIERWETBERG; M. LARKUM. *Humboldt Univ. of Berlin, Charité - Universitätsmedizin Berlin.*
- 4:00 Z32 **223.08** Representation of object position in somatosensory cortex during object localization. J. A. CHEUNG*; P. S. MAIRE; J. KIM; E. CHANG-SING; S. A. HIRES. *USC.*
- 1:00 AA1 **223.09** Two-photon all-optical interrogation of mouse barrel cortex during a sensory discrimination task. O. M. GAULD*; A. M. PACKER; L. E. RUSSELL; M. HAUSSER. *Univ. Col. London (UCL).*
- 2:00 AA2 **223.10** Manipulating behavior with targeted two-photon optogenetic activation of different functional sub-classes of cortical neurons in mouse barrel cortex. H. W. DALGLEISH*; A. M. PACKER; L. E. RUSSELL; M. HAUSSER. *Univ. Col. London.*
- 3:00 AA3 **223.11** Learning and recognition of tactile temporal sequences by mice and humans. M. BITZIDOU; M. BALE; A. PITAS; M. MARAVALL*. *Univ. of Sussex, Inst. de Neurociencias CSIC-UMH.*

POSTER

224. Somatosensation: Stimulus Features and Response Properties**Theme D: Sensory Systems**

Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*

- 1:00 AA4 **224.01** Demixing the perception of duration and intensity in vibrotactile behavior. A. TOSO*; A. FASSIHIZAKERI; F. PULECCHI; S. SORELLA; M. E. DIAMOND. *SISSA, SISSA, SISSA, Intl. Sch. for Advanced Studies.*
- 2:00 AA5 **224.02** Integration of bilateral tactile stimuli in the somatosensory cortex of the awake mouse. A. PALA*; B. CHEN; C. J. WHITMIRE; G. B. STANLEY. *Georgia Inst. of Technol.*
- 3:00 AA6 **224.03** Pushing the perceptual boundary towards optimal performance in a detection task with changing stimulus statistics. C. WAIBLINGER*; P. Y. BORDEN; M. F. BOLUS; G. B. STANLEY. *Georgia Inst. of Technol.*
- 4:00 AA7 **224.04** A predictive framework to define the spatial and temporal scale of local cortical state in the awake animal from multi-electrode array recordings in mouse somatosensory cortex. A. J. SEDERBERG*; A. PALA; G. B. STANLEY. *Georgia Inst. of Technol.*
- 1:00 AA8 **224.05** Neuronal correlates of socio-sexual behavior in the somatosensory cortex of freely interacting rats. K. HARTMANN*; M. BRECHT. *BCCN Berlin.*
- 2:00 AA9 **224.06** Whiskers in airflow: Bending, vibrations, and the responses of trigeminal ganglion neurons to sustained airflow in the rat whisker system. Y. S. YU*; N. E. BUSH; M. J. Z. HARTMANN. *Northwestern Univ., Northwestern Univ.*
- 3:00 AA10 **224.07** Encoding of 3D mechanics in primary sensory neurons of the rat vibrissal-trigeminal system. N. E. BUSH*; A. RESULAJ; S. A. SOLLA; M. J. HARTMANN. *Northwestern Univ., Northwestern Univ., Northwestern Univ., Northwestern Univ., Northwestern Univ.*
- 4:00 AA11 **224.08** Human low-threshold mechanoafferent responses to pure changes in friction during sliding motion produced by the StimTac device. M. DIONE*; R. WATKINS; E. VEZZOLI; B. LEMAIRE-SEMAIL; J. WESSBERG. *Univ. of Gothenburg, L2EP Univ. Lille1.*
- 1:00 AA12 **224.09** Computational modeling of mechanotransduction currents in Merkel cell-neurite complexes. E. A. LUMPKIN*; G. J. GERLING; L. WAN; Y. WANG; B. U. HOFFMAN. *Columbia Univ. Physicians & Surgeons, Univ. Of Virginia, Univ. of Virginia, Columbia Univ.*
- 2:00 AA13 **224.10** Human tactile afferents are sensitive to the onset of active exploration on flat surfaces. D. GUEORGUIEV*; M. DIONE; R. H. WATKINS; A. MOURAUX; J. THONNARD; J. WESSBERG. *Univ. Catholique De Louvain, INRIA Lille-Nord Europe, Univ. of Gothenburg.*
- 3:00 AA14 **224.11** Dorsal root ganglion neuronal population responses to tactile stimuli in rhesus monkey hand. M. F. LIU*; J. E. WINBERRY; T. W. SIMPSON; B. P. DELHAYE; E. R. OBY; A. D. DEGENHART; M. A. URBIN; A. P. BATISTA; R. A. GAUNT; L. E. FISHER; S. J. BENSMAIA; D. J. WEBER. *Univ. of Pittsburgh, Univ. of Chicago, Univ. of Pittsburgh, Univ. of Chicago, Univ. of Pittsburgh, Univ. of Pittsburgh.*

- 4:00 AA15 **224.12** Illusory motion reversal in touch. Y. HSU*; C. HUNG; C. HUNG; C. YEH; Y. PEI. *Natl. Yang-Ming Univ., Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ., Chang Gung Mem. Hosp., Chang Gung Univ., Natl. Yang Ming Univ., Dept. of Neuroscience, Georgetown Univ. Med. Ctr., US Army Res. Lab.*
- 1:00 AA16 **224.13** Effects of morphometric variables and epidermal peeling on the mechanical impedance of rat glabrous skin. C. GOK; B. GUCLU*. *Bogazici Univ., Max Delbrück Centrum for Mol. Med.*
- 2:00 AA17 **224.14** Simulating temporal spiking patterns of slowly adapting afferents for constant tactile pressing stimuli. J. PARK*; S. JUNG; T. YANG; S. KIM. *Ulsan Natl. Inst. of Sci. and Technol., Hanyang Univ.*
- 3:00 AA18 **224.15** Neural contributions to firing behavior of Ia muscle spindle afferents. S. N. HOUSLEY; P. NARDELLI*; T. J. BURKHOLDER; T. C. COPE. *Georgia Inst. of Technol., Georgia Inst. of Technol., Georgia Inst. of Technol., Georgia Inst. of Technol.*

POSTER

225. Auditory and Vestibular Systems: Periphery**Theme D: Sensory Systems**

Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*

- 1:00 AA19 **225.01** LIN28B/let-7 gradient is critical for tonotopic specialization of auditory hair cells. M. PRAJAPATI*; E. J. GOLDEN; A. DOETZLHOFFER. *Johns Hopkins University, Sch. of Med., Univ. of Colorado, Denver.*
- 2:00 AA20 **225.02** • The g-secretase inhibitor NXT596 increases auditory hair cells and restores function *in vivo*. M. M. POON*; C. DESPONTS; A. DEARIE; S. GELLAR; K. STEBBINS; G. CABRERA; K. I. LORRAIN; C. LEE; J. SEIDERS; J. ROPPE; C. CHAPMAN; J. WALDHAUS; J. WICHMANN; S. HELLER; R. K. JAGASIA; P. PRASIT; D. LORRAIN. *Inception Sci., Inception Sciences, Inc., Stanford Univ., F. Hoffmann-La Roche, F. Hoffmann - La Roche Ltd. Pharma Res. and Early Development, Neurosci., Inception Sci.*
- 3:00 AA21 **225.03** Comprehensive analysis of N-glycans in the stria vascularis of the rat cochlea. Y. NONOMURA*; S. SAWAMURA; T. HIGUCHI; F. NIN; S. UETSUKA; S. OKUDA; A. HORII; S. TAKAHASHI; S. NATSUKA; H. HIBINO. *Niigata Univ., Osaka Univ.*
- 4:00 AA22 **225.04** Stereological estimation of total capillary length in the human stria vascularis. S. PILLUTLA; T. G. JACOB; A. THAKAR; D. N. BHARDWAJ; T. ROY*. *All India Inst. of Med. Sci. New Delhi, All India Inst. of Med. Sci. New Delhi, All India Inst. Med. Sci.*
- 1:00 AA23 **225.05** Pulsed infrared stimulation modulates endoplasmic reticulum calcium cycling in spiral ganglion neurons. S. RAJGURU*; S. RINCON; J. SINGH; E. BARRETT; J. BARRETT. *Univ. of Miami, Univ. of Miami, Univ. of Miami.*
- 2:00 AA24 **225.06** Stereological investigation and morphometric classification of spiral ganglion neuron in the human cochlea. C. KAUR*; P. KUMAR; T. G. JACOB; A. THAKAR; D. BHARDWAJ; T. C. NAG; T. ROY. *All India Inst. of Med. Sci., All India Inst. of Med. Sci., All India Inst. of Med. Sci., All India Inst. of Med. Sci.*

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* Indicates abstract's submitting author

- 3:00 AA25 **225.07** Eye movement-related eardrum oscillations (EMREOs): A biomarker for visual-auditory spatial integration in the auditory periphery? D. L. MURPHY*; K. G. GRUTERS; D. W. SMITH; C. A. SHERA; J. M. GROH. *Duke Univ., Univ. of Florida, USC.*
- 4:00 AA26 **225.08** Vestibular afferent discharge in otoferlin-null mice. L. F. HOFFMAN*; T. J. PRINS; M. G. PAULIN; F. E. SCHWEIZER. *UCLA Sch. Med., Univ. of Otago.*
- 1:00 AA27 **225.09** Selective modulation of vestibular afferent activity via thermal inhibition of efferents. V. RAGHU*; R. SALVI; S. MANOHAR; S. G. SADEGHI. *Univ. At Buffalo SUNY.*
- 2:00 AA28 **225.10** Cholinergic and GABAergic modulation of membrane properties of vestibular afferent calyx terminal. S. G. SADEGHI*; Y. RAMAKRISHNA. *State Univ. of New York at Buffalo.*
- 3:00 AA29 **225.11** ▲ Spike time regularity of horizontal canal afferent fibers as decisive factor for motion encoding in *Xenopus laevis* tadpoles. K. D. GENSBERGER*; M. WUEHR; L. F. HOFFMAN; M. G. PAULIN; H. STRAKA. *LMU Muenchen, LMU Munich - German Ctr. for Vertigo and Balance Disorders, UCLA Sch. Med., Univ. of Otago, LMU Munich - Biocenter Martinsried.*
- 4:00 AA30 **225.12** Vestibular function analysis in calcium and integrin binding protein 2 (CIB2) mice, a model for Usher syndrome type I gene. T. MAKISHIMA*; A. GIESE; N. SHIMIZU; B. VANDIVER; R. AURICH; Z. AHMED. *Univ. of Texas Med. Br. at Galveston, Univ. of Maryland, Univ. of Texas Med. Br.*
- 1:00 AA31 **225.13** Reduced vestibular function following noise exposure in rats. C. E. STEWART*; A. KANICKI; D. S. BAUER; T. D. JOSHI; C. O. HADLEY; H. K. HAQUE; R. A. ALTSCHULER; W. M. KING. *Univ. of Michigan, Univ. of Michigan.*

POSTER

226. Auditory Processing: Neural Coding, Experiment, and Theory

Theme D: Sensory Systems

Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*

- 1:00 AA32 **226.01** High accuracy categorization of macaque monkey identities and call types with convolutional neural networks. C. D. MÁRTON*; M. FUKUSHIMA; S. S. SCHULTZ; B. B. AVERBECK. *Neural Coding Lab, Imperial Col. London, Section on Learning & Decision Making, NIH/NIMH, RIKEN Brain Sci. Inst., Consumer Neuroscience, The Nielsen Co.*
- 2:00 AA33 **226.02** The significance of nominally non-responsive activity in auditory perception and behavior. M. INSANALLY*; I. CARCEA; B. F. ALBANNA; R. FROEMKE. *New York Univ., Fordham Univ.*
- 3:00 AA34 **226.03** Cortical map plasticity as a function of the duration of vagus nerve stimulation paired with an auditory stimulus. E. BUELL*; K. LOERWALD; M. BORLAND; C. KELLY; J. BUELL; M. FRECH; E. JENSEN; J. KURVARI; C. CHANDLER; M. P. KILGARD. *Univ. of Texas At Dallas, Univ. of Texas at Dallas, Univ. of Texas At Dallas.*
- 4:00 AA35 **226.04** Long-term activity dynamics of neuronal ensembles in mouse auditory cortex. D. F. ASCHAUER*; B. EPPLER; L. EWIG; M. KASCHUBE; S. RUMPEL. *Johannes Gutenberg-University, FIAS, Goethe Univ.*
- 1:00 AA36 **226.05** How does structural volatility affect cortical representations? J. EPPLER*; D. F. ASCHAUER; L. EWIG; S. RUMPEL; M. KASCHUBE. *FIAS, Johannes Gutenberg-University.*
- 2:00 BB1 **226.06** Reticulothalamic and intrareticular synaptic microarchitectures determine oscillatory and propagative properties of thalamocortical waves. J. W. BROWN*; A. TAHERI; R. V. KENYON; T. BERGER-WOLF; D. A. LLANO. *Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Chicago, Univ. of Illinois at Urbana-Champaign.*
- 3:00 BB2 **226.07** Auditory fear conditioning drives changes in frequency representation and functional organisation of neuronal populations in auditory cortex. K. WOOD*; R. BETZEL; C. F. ANGELONI; M. AIZENBERG; D. BASSETT; M. N. GEFFEN. *Univ. of Pennsylvania, Univ. of Pennsylvania.*
- 4:00 BB3 **226.08** Intrinsic electrophysiological properties shape physiologically relevant firing patterns in the avian cochlear nucleus. D. H. BROWN*; R. L. HYSON. *Florida State Univ.*
- 1:00 BB4 **226.09** Decoding neural responses to complex sounds: An evaluation of pattern classification approaches in a secondary auditory region of a songbird. M. MACEDO-LIMA*; A. A. KRENTZEL; D. M. VAHABA; D. POLLAK; V. LEE; L. REMAGE-HEALEY. *Univ. of Massachusetts Amherst, CAPES Foundation, Ministry of Educ. of Brazil, Univ. of Massachusetts Amherst.*
- 2:00 BB5 **226.10** Sound texture coding in single auditory cortical neurons. S. S. CAIN*; T. Q. GENTNER. *Univ. of California San Diego, Univ. of California San Diego, Univ. of California San Diego.*
- 3:00 BB6 **226.11** fMRI and EEG evidence for perceptual decoupling in rhythm induced trance. M. HOVE*; A. HABIBI; J. STELZER; B. R. CAHN. *Fitchburg State University, USC, Universitaetsklinik Tuebingen, Neuroimaging.*
- 4:00 BB7 **226.12** Differential organization of the mouse auditory cortex to tone onset and offset revealed using automated image segmentation. J. LIU*; M. R. WHITEWAY; D. A. BUTTS; P. O. KANOLD. *Univ. of Maryland, Univ. of Maryland.*
- 1:00 BB8 **226.13** Nonlinear population cortical responses after midbrain stimulation in the auditory colliculo-thalamocortical mouse brain slice. B. A. IBRAHIM*; D. A. LLANO. *Beckman Inst., Univ. of Illinois at Urbana-Champaign.*
- 2:00 BB9 **226.14** Spatial organization of functional properties in layer 2/3 of auditory cortex. Z. BOWEN*; D. E. WINKOWSKI; W. LOSERT; P. O. KANOLD. *Univ. of Maryland, Univ. of Maryland, Univ. of Maryland.*
- 3:00 BB10 **226.15** Linguistic information of distracting speech modulates selective neural entrainment to target speech. B. DAI*; A. KÖSEM; J. M. MCQUEEN; O. JENSEN; P. HAGOORT. *Max Planck Inst. for Psycholinguistics, Donders Inst. for Brain, Cognition and Behaviour, Radboud Univ., Univ. of Birmingham.*

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* Indicates abstract's submitting author

- 4:00 BB11 **226.16** ● Predicting the neural responses to speech in human auditory cortex using deep neural network models. H. AKBARI*; B. KHALIGHINEJAD; J. L. HERRERO; A. D. MEHTA; N. MESGARANI. *Columbia Univ., Mortimer B. Zuckerman Mind Brain Behavior Institute, Columbia Univ., The Feinstein Inst. For Med. Res., Lab. of Human Brain Mapping, Feinstein Inst. for Med. Res.*
- 1:00 BB12 **226.17** Amplification of auditory brainstem response by simultaneous infrared laser stimulation to cochlea. K. HORINOCHI*; Y. TAMAI; S. HIRYU; K. I. KOBAYASHI. *Doshisha Univ., Doshisha Univ., Doshisha Univ.*
- 2:00 BB13 **226.18** Current focusing improves auditory cortical responses to intracochlear electrical stimulation in awake primate. K. LIM*; K. HAGEMAN; C. DELLA SANTINA; X. WANG. *Johns Hopkins Sch. of Med.*
- 3:00 BB14 **226.19** Reconstructing speech from human auditory cortex using deep neural network models. L. K. LONG*; H. AKBARI; B. KHALIGHINEJAD; J. L. HERRERO; A. D. MEHTA; N. MESGARANI. *Columbia Univ., Columbia Univ., Columbia Univ., Feinstein Inst. For Med. Res., Hofstra Northwell Sch. of Med.*
- 4:00 BB15 **226.20** *In vivo* sharp electrode and whole-cell recordings from octopus cells in the gerbil ventral cochlear nucleus. H. LU*; T. P. FRANKEN; M. SAYLES; B. FONTAINE; P. H. SMITH; P. X. JORIS. *KU Leuven, Univ. of Wisconsin.*
- 1:00 BB16 **226.21** 3D-landscape of single-neuron function in a cortical microcolumn. C. H. TISCHBIREK*; T. NODA; M. TOHMI; A. BIRKNER; I. NELKEN; A. KONNERTH. *Tech. Univ. Munich, Hebrew Univ.*
- 2:00 BB17 **226.22** Integrating behavioral context into auditory encoding models. S. V. DAVID*; Z. P. SCHWARTZ; L. A. SHAHEEN. *Oregon Hlth. & Sci. Univ., Oregon Hlth. & Sci. Univ., Oregon Hlth. and Sci. Univ.*
- 3:00 BB18 **226.23** Representation of attentional effects in neural responses in a cocktail party model in the ferret auditory cortex. N. H. JOSHI*; D. DUQUE; J. B. FRITZ; S. A. SHAMMA. *Univ. of Maryland, Univ. of Maryland.*
- 4:00 BB19 **226.24** Effects of behavioral performance on task-related gain changes in the auditory midbrain. D. SADERI*; S. V. DAVID. *Oregon Hlth. & Sci. Univ.*
- 1:00 BB20 **226.25** A theoretical study of cortical neural dynamics for the generation of auditory continuity illusion. M. MIYASHITA*; T. ENDO; S. TANAKA. *Natl. Inst. of Technol., The Univ. of Electro-Communications.*
- 2:00 BB21 **226.26** Deducing the role of nitric oxide in the american bullfrog inferior colliculus. A. W. STAFFORD*; J. HALL. *Univ. of Tennessee, Univ. of Tennessee.*
- 2:00 BB23 **227.02** Serotonin decreases the gain of the visual responses in awake macaque V1. L. SEILLIER*; C. LORENZ; K. KAWAGUCHI; T. OTT; A. NIEDER; P. POURRIANI; H. NIENBORG. *Ctr. For Integrative Neuroscience, Uni Tuebingen, Animal Physiology, Inst. of Neurobio.*
- 3:00 BB24 **227.03** Response variability of V1 neurons in awake primate. J. DOOSTMOHAMMADI*; H. SHABANI; M. NEJATBAKHSHEFAHANI; A. YOONESSI; R. LASHGARI. *Inst. for Res. in Fundamental Sci., Tehran Univ. of Med. Sci.*
- 4:00 BB25 **227.04** Figure-ground signaling in the mouse visual system. F. LUONGO*; L. LIU; D. Y. TSAO. *Caltech.*
- 1:00 BB26 **227.05** Dendritic spikes determine visual processing in layer 4 cortical neurons *in vivo*. Y. CHEN*; Y. ZHANG; B. SONG; A. KONNERTH. *Inst. of Neuroscience, TUM.*
- 2:00 BB27 **227.06** Cholinergic shaping of neural correlations, and effect on neural encoding. V. H. MINCES*; L. PINTO; Y. DAN; A. A. CHIBA. *UCSD, Princeton Univ., Univ. of California, Berkeley, UCSD.*
- 3:00 CC1 **227.07** Noradrenergic tone modulates visual awareness and visually-evoked activity. E. MAGIDOV*; H. GELBARD-SAGIV; H. SHARON; T. HENDLER; Y. NIR. *Tel Aviv Univ., Tel Aviv Sourasky Med. Ctr., Tel Aviv Sourasky Med. Ctr., Tel Aviv Univ.*
- 4:00 CC2 **227.08** Stimulus direction biases arousal and responses in the mouse visual system. K. Z. SOCHA*; V. BONIN. *Neuro-Electronics Res. Flanders, KU Leuven, Vlaams Inst. voor Biotechnologie (VIB).*
- 1:00 CC3 **227.09** Altered gain modulation in primary visual cortex in an animal model of schizophrenia. A. SCHIELKE*; B. KREKELBERG. *Rutgers Univ. - Newark, Rutgers Univ.*
- 2:00 CC4 **227.10** Correlations between perceptual and neural effects of target-background orientation similarity on target detection in primate V1. S. C. CHEN*; Y. Y. CHEN; W. S. GEISLER; E. SEIDEMANN. *Univ. of Texas At Austin, Univ. of Texas at Austin, Univ. Texas Austin.*
- 3:00 CC5 **227.11** Neural gain enhancement following an artificial scotoma. M. GANNON*; S. M. LONG; A. RODRIGUEZ; N. A. PARKS. *Univ. of Arkansas.*
- 4:00 CC6 **227.12** Most calbindin-immunoreactive neurons, but few calretinin-immunoreactive neurons, express the m1 acetylcholine receptor in macaque MT. J. J. COPPOLA*; A. A. DISNEY. *Vanderbilt Univ.*
- 1:00 CC7 **227.13** Repetition suppression In macaque inferotemporal cortex is selective for feature conjunctions. N. P. WILLIAMS*; C. R. OLSON. *Carnegie Mellon Univ.*
- 2:00 CC8 **227.14** Locomotion impacts early visual response amplitudes but not their tuning. C. AYDIN*; J. COUTO; K. FARROW; M. GUIGLIANO; V. BONIN. *Neuroelectronics Res. Flanders, Vlaams Inst. voor Biotechnologie, Katholieke Univ. Leuven, Theoretical Neurobio. and Neuroengineering Lab., Brain Mind Inst., Univ. of Sheffield.*
- 3:00 CC9 **227.15** Seeing what you think you see: The influence of auditory and retrosplenial cortex input on coding in primary visual cortex during associative learning. A. R. GARNER*; G. B. KELLER. *Friedrich Miescher Inst. for Biomed. Resear.*
- 4:00 CC10 **227.16** Optogenetic stimulation in V4 modulates visual responses in primate area V1. M. A. GIESELMANN*; M. BOYD; A. THIELE. *Newcastle Univ.*

POSTER

227. Visual System: Response Modulation and Adaptation

Theme D: Sensory Systems

Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*

- 1:00 BB22 **227.01** Fear conditioning specifically alters neuronal response properties in monkey primary visual cortex. L. ZHIHAN*; K. GUO; W. LI. *Beijing Normal Univ., Sch. of Psychology, Univ. of Lincoln.*

• Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 1:00 CC11 **227.17** Repetitive visual stimulation suppresses spiking responses across V1 laminae. J. A. WESTERBERG*; M. A. COX; K. DOUGHERTY; A. MAIER. *Vanderbilt Univ.*
- 2:00 CC12 **227.18** Modifying the response to repetitive visual stimuli. C. L. LANTZ*; S. MURASE; E. M. QUINLAN. *Univ. of Maryland, Univ. of Maryland at Col. Park Dept. of Biol.*
- 3:00 CC13 **227.19** Information redistribution after orientation adaptation in macaque V1. Y. LIN*; D. J. THENGONE; J. D. VICTOR. *Weill Cornell Med. Col., Weill Cornell Med. Col.*
- 4:00 CC14 **227.20** Temporal characteristics of contrast adaption in ferret visual cortex. S. PUSDEKAR; J. SCHUMMERS*. *Max Planck Florida Inst.*
- 1:00 CC15 **227.21** Co-ordinated adaptive changes of layer 2/3 and layer 5/6 multiunit activity (MUA) orientation tuning in the cat visual cortex. N. CHANAURIA*; V. BHARMAURIA; L. BACHATENE; F. ETINDELE SOSSO; J. ROUAT; S. MOLOTCHNIKOFF. *Univ. of Montreal, York Univ., Univ. of Sherbrooke, Univ. de Sherbrooke, Univ. de Montreal.*
- 2:00 CC16 **227.22** Origin of correlated variability in primate cerebral cortex. L. NURMINEN*; M. BIJANZADEH; A. ANGELUCCI. *Univ. of Utah, Univ. of Utah, Univ. of California.*
- 3:00 CC17 **227.23** Effects of optogenetic stimulation of feedback on the coordination of macaque V1 activity. S. S. SOLOMON*; A. ASCHNER; A. KOHN. *Albert Einstein Col. of Med., Albert Einstein Col. of Med., Albert Einstein Coll Med.*
- 4:00 CC18 **227.24** Selectivity of contextual modulation in macaque V1 and V2. C. M. ZIEMBA*; R. K. PEREZ; E. P. SIMONCELLI; J. A. MOVSHON. *New York Univ., Howard Hughes Med. Inst.*
- 1:00 CC19 **227.25** Difference of visual evoked magnetic fields with mental arithmetic tasks and verbal fluency task. Y. GOTO*. *Intl. Univ. of Hlth. and Welfare.*
- 1:00 CC24 **228.05** An inhomogeneous direction selective map in the superior colliculus. D. DE MALMAZET*; K. FARROW. *Neuro-Electronics Res. Flanders (NERF), KU Leuven, VIB, Imec.*
- 2:00 CC25 **228.06** Spatio-temporal characterization of the feedback signals mediating stimulus selection in the optic tectum of the pigeon. B. REYNAERT*; L. LOPEZ-JURY; J. LETELIER; J. MPODOZIS; G. MARÍN. *Facultad De Ciencias, Univ. De Chile, Facultad de Medicina, Univ. Finis Terrae.*
- 3:00 CC26 **228.07** The collicular visual pathway is sufficient for the identification of visual threats. Z. TURAN*; D. J. ANDERSON; M. MEISTER. *Caltech.*
- 4:00 CC27 **228.08** Experience-dependent plasticity of cortico-collicular interactions in visual perception. S. RUEDIGER*; M. SCANZIANI. *Univ. of California San Francisco, Howard Hughes Med. Inst.*
- 1:00 CC28 **228.09** Distinct neural encoding in the superficial and deeper layers of mouse superior colliculus. K. LEE*; A. TRAN; M. MEISTER. *Caltech.*
- 2:00 CC29 **228.10** The SNc/VTA responds to saliency while modulating D1 and D2 expressing neurons in the lamprey tectum. J. PÉREZ-FERNANDEZ*; A. A. KARDAMAKIS; D. G. SUZUKI; B. ROBERTSON; S. GRILLNER. *Karolinska Inst.*
- 3:00 CC30 **228.11** Monosynaptic inputs into GABAergic intermediate layer superior colliculus neurons. T. K. DOYKOS*; A. L. PERSON; G. FELSEN. *Univ. of Colorado Sch. of Med., Univ. of Colorado Sch. of Med.*
- 4:00 CC31 **228.12** The impact of feeding state on receptive field in zebrafish tectum neurons. L. XU; Z. LIU*. *Inst. Biophysics, CAS, The Innovation Ctr. of Excellence on Brain Science, Chinese Acad. of Sci., Univ. of Chinese Acad. of Sciences, 19A Yuquan Road, Beijing 100049, China.*
- 1:00 CC32 **228.13** An inter-hemispheric neural circuit in the zebrafish optic tectum required for efficient prey hunting. C. GEBHARDT*; T. O. AUER; K. DUROURE; I. H. BIANCO; F. DEL BENE. *Inst. Curie, UCL.*

POSTER

228. Superior Colliculus: Sensory and Motor Functions

Theme D: Sensory Systems

Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*

- 1:00 CC20 **228.01** Disruption of visual circuit organization and function in the superior colliculus of fragile X mice. R. B. KAY; N. GABRESKI; J. W. TRIPLETT*. *Children's Natl. Med. Ctr.*
- 2:00 CC21 **228.02** Feedforward inhibitory circuits within the mouse superior colliculus. K. L. WHYLAND; S. P. MASTERSON; A. S. SLUSARCZYK; G. GOVINDAIAH; W. GUIDO; M. E. BICKFORD*. *Univ. of Louisville Sch. of Med.*
- 3:00 CC22 **228.03** Neural population representation of visual features in mouse superior colliculus. Y. LI*; M. MEISTER. *Caltech.*
- 4:00 CC23 **228.04** Neurons in the mouse superior colliculus encode orientation/direction through suppression and extract selective visual features. S. ITO*; D. A. FELDHEIM; A. M. LITKE. *Univ. of California, Santa Cruz, Univ. of California, Santa Cruz.*
- 2:00 CC33 **228.14** A causal study of movement generation using multi-channel recording and patterned microstimulation. U. K. JAGADISAN*; N. J. GANDHI. *Univ. of Pittsburgh.*
- 3:00 DD1 **228.15** Removal of inhibition reveals latent motor potential in superior colliculus preparatory activity. N. J. GANDHI*; U. K. JAGADISAN. *Univ. of Pittsburgh.*
- 4:00 DD2 **228.16** Tectal microcircuits mediates the behavioral switch between orienting and avoidance movements. D. G. SUZUKI*; A. KARDAMAKIS; T. WIBBLE; J. PÉREZ-FERNANDEZ; S. GRILLNER. *Karolinska Institutet.*
- 1:00 DD3 **228.17** A reversal pattern of the local field potential in the superior colliculus reveals a dynamic control of the ongoing saccadic activity. C. MASSOT*; N. J. GANDHI. *Univ. of Pittsburgh, Univ. of Pittsburgh.*
- 2:00 DD4 **228.18** Depth profile of visual and saccade-related response field characteristics in the primate superior colliculus. X. TIAN*; Z. M. HAFED. *Physiol. of Active Vision.*

POSTER

229. Limb Brain-Machine Interfaces

Theme E: Motor Systems

Sun. 1:00 PM – Walter E. Washington Convention Center, Halls A-C

- 1:00 DD5 **229.01** Co-modulation of joint angles in control of a kinematically redundant brain-machine interface. A. YOU*; V. R. ATHALYE; S. GOWDA; P. KHANNA; H. G. MOORMAN; J. M. CARMENA. *Univ. of California, Berkeley, Univ. of California, Berkeley, Univ. of California, Berkeley.*
- 2:00 DD6 **229.02** Withdrawn.
- 3:00 DD7 **229.03** Towards non-invasive decoding of cortical patterns induced by goal directed movement intentions and artificial sensory feedback in humans. G. R. MUELLER-PUTZ*; J. PEREIRA; R. KOBLER; C. LOPES DIAS; L. HEHENBERGER; A. SBURLEA. *Graz Univ. of Technol., Graz Univ. of Technol.*
- 4:00 DD8 **229.04** ● EEG-controlled noninvasive grasp neuroprosthesis for individuals with high spinal cord injury - decoding of multiple single limb movements and multi-pad electrodes for closed-loop grasp pattern control. R. RUPP*; M. SCHNEIDERS; B. HESSING; R. MURRAY-SMITH; A. RAMSAY; A. SCHWARZ; J. PEREIRA; P. OFNER; A. PINEGGER; G. MUELLER-PUTZ. *Heidelberg Univ. Hosp., Heidelberg Univ. Hosp., Univ. of Glasgow, Graz Univ. of Technol.*
- 1:00 DD9 **229.05** Low dimensional representation of human arm movement for efficient neuroprosthetic control by individuals with tetraplegia. I. IOSSIFIDIS*; C. KLAES. *Ruhr West Univ. of Applied Sci., Ruhr-University Bochum.*
- 1:00 DP06/DD10 **229.06** (Dynamic Poster) Gaze-based Cognition-Machine Interface for simultaneous control of exoskeleton reaching & grasping in severely paralysed. A. A. FAISAL*; S. DZIEMIAN; C. KONNARIS. *Imperial Col. London, Imperial Col. London, Imperial Col. London.*
- 3:00 DD11 **229.07** Dimensionality Reduction techniques for different shaping of motor hand representations. C. KONNARIS*; A. A. FAISAL. *Imperial Col. London, Imperial Col. London.*
- 4:00 DD12 **229.08** ● Brain-computer interface with transcutaneous functional electrical stimulation for upper limb fine motor control. S. COLACHIS, IV; M. A. BOCKBRADER*; P. B. SEDERBERG; N. ANNETTA; D. FRIEDENBERG; M. A. SCHWEMMER; M. ZHANG; G. SHARMA; H. BRESLER; W. MYSIW; A. REZAI. *The Ohio State Univ., Battelle Mem. Inst., The Ohio State Univ., Ohio State Univ. Col. of Med., The Ohio State Univ.*
- 1:00 DD13 **229.09** Peripheral optogenetic stimulation of motor function in non-human primates toward restoration of volitional motor control in a brain-machine interface. J. J. WILLIAMS*; A. VAZQUEZ; A. M. WATSON; A. B. SCHWARTZ. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh Dept. of Neurobio.*
- 2:00 DD14 **229.10** Motion reconstruction system for trans-humeral amputees without motion tracking. J. FERNANDEZ-VARGAS; K. KITA*; W. YU. *Chiba Univ.*
- 3:00 DD15 **229.11** A brain-machine interface for a sequence movement control of a robotic arm. R. ABIRI*; J. KILMARX; S. BORHANI; X. ZHAO; Y. JIANG. *The Univ. of Tennessee, Knoxville, Univ. of Kentucky Chandler Med. Ctr.*

- 4:00 DD16 **229.12** Extracting much more information from field potentials on the micro and macro scale. D. M. TAYLOR*; T. JOHNSON. *Cleveland Clin. Lerner Res. Inst., Cleveland VA Med. Ctr., Case Western Reserve Univ.*
- 1:00 DD17 **229.13** ● Embedding real-time closed-loop algorithms on an ambulatory processor. E. L. BARCIKOWSKI; A. WILDER; R. ROUNDY; D. R. MERRILL*; D. MCDONNALL. *Ripple.*
- 2:00 DD18 **229.14** ▲ A portable multichannel electrical stimulator for neuromuscular stimulation. G. LI*; X. HU. *Univ. of North Carolina At Chapel Hill, UNC Chapel Hill.*
- 3:00 DD19 **229.15** Grasp force encoding in human primary motor cortex during attempted isometric grasping. A. J. HERRERA*; J. E. DOWNEY; J. M. WEISS; M. L. BONINGER; R. A. GAUNT; J. L. COLLINGER. *Univ. of Pittsburgh, Ctr. for the Neural Basis of Cognition, Univ. of Pittsburgh, DVA.*
- 4:00 DD20 **229.16** Cortical plasticity observed in an electrocorticography-based motor brain-machine interface task. T. KAIJU*; M. INOUE; M. YOKOTA; M. HIRATA; T. SUZUKI. *Osaka Univ., Natl. Inst. of Information and Communications Technol., Osaka Univ.*

POSTER

230. Limb Brain-Machine Interfaces: Neurophysiology

Theme E: Motor Systems

Sun. 1:00 PM – Walter E. Washington Convention Center, Halls A-C

- 1:00 DD21 **230.01** Decoding of fingertip position from motor cortex in Rhesus macaque using a ReFIT Kalman Filter. A. VASKOV*; Z. T. IRWIN; C. S. NU; P. P. VU; S. R. NASON; A. J. BULLARD; P. G. PATIL; C. A. CHESTEK. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*
- 2:00 DD22 **230.02** System identification of the human primary motor cortex. D. C. CROWDER*; W. D. MEMBERG; B. A. MURPHY; J. A. SWEET; J. MILLER; B. WALTER; L. R. HOCHBERG; A. B. AJIBOYE; R. F. KIRSCH. *Case Western Reserve Univ., Louis Stokes Cleveland Dept. of VA Med. Ctr., UH Cleveland Med. Ctr., CWRU Sch. of Med., UH Cleveland Med. Ctr., CWRU Sch. of Med., Dept. of VA Med. Ctr., Brown Univ., Massachusetts Gen. Hosp., Harvard Med. Sch., Brown Univ.*
- 3:00 DD23 **230.03** Assessment of discrete state selection strategies for intracortical brain-computer interface applications. M. VILELA*; J. G. CIANCIBELLO; T. HOSMAN; J. SAAB; D. M. BRANDMAN; B. FRANCO; J. KELEMEN; J. D. SIMERAL; L. R. HOCHBERG. *Brown Univ., Brown Univ., Dept. of VA Med. Ctr., Brown Univ., Brown Univ., Massachusetts Gen. Hosp., Harvard Med. Sch.*
- 4:00 DD24 **230.04** Noise-robust closed-loop neural decoding using an intracortical brain computer interface in a person with paralysis. D. BRANDMAN*; M. C. BURKHART; J. SAAB; T. HOSMAN; B. FRANCO; J. KELEMEN; M. T. HARRISON; L. R. HOCHBERG. *Brown Univ., Brown Univ., Brown Univ., Dept. of VA Med. Ctr., Brown Univ., Massachusetts Gen. Hosp., Harvard Med. Sch.*

Sun. PM

• Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 1:00 DD25 **230.05** • Wireless intracortical BCI cursor control by a person with tetraplegia. J. SAAB*; T. HOSMAN; M. YIN; D. A. BORTON; B. FRANCO; J. KELEMEN; D. M. BRANDMAN; M. VILELA; J. G. CIANCIBELLO; L. LARSON; D. M. ROSLER; J. D. SIMERAL; A. V. NURMIKKO; L. R. HOCHBERG. *Brown Univ., Dept. of VA Med. Ctr., Brown Univ., Massachusetts Gen. Hosp., Brown Univ., Harvard Med. Sch.*
- 2:00 DD26 **230.06** • A mobile high-performance intracortical BCI with integrated antenna-receiver. C. D. HEELAN*; J. KOMAR; A. V. NURMIKKO; J. D. SIMERAL. *Brown Univ., Brown Univ., Brown Inst. for Brain Science, Brown Univ., VA Ctr. for Neurorestoration and Neurotechnology, Rehab R&D Service.*
- 3:00 DD27 **230.07** Evaluation of neural modulation during attempted force production across multiple hand grasp configurations in intracortical BCI users with chronic tetraplegia. A. RASTOGI*; F. R. WILLETT; B. A. MURPHY; W. D. MEMBERG; B. L. WALTER; J. P. MILLER; J. A. SWEET; J. SAAB; B. FRANCO; J. N. KELEMEN; C. E. VARGAS-IRWIN; L. R. HOCHBERG; R. F. KIRSCH; A. B. AJIBOYE. *Case Western Reserve Univ., Louis Stokes Cleveland Dept. of VA Med. Ctr., UH Case Med. Ctr., UH Case Med. Ctr., Brown Univ., Dept. of VA Med. Ctr., Brown Univ., Massachusetts Gen. Hosp., Brown Univ., Brown Univ., Harvard Med. Sch.*
- 4:00 DD28 **230.08** Neural population activity in the decoder's null space observed in people controlling a brain-computer interface. F. WILLETT*; D. R. YOUNG; B. MURPHY; W. D. MEMBERG; C. H. BLABE; J. SAAB; B. JAROSIEWICZ; J. KELEMEN; D. M. BRANDMAN; B. WALTER; J. A. SWEET; J. P. MILLER; J. M. HENDERSON; K. V. SHENOY; J. D. SIMERAL; L. R. HOCHBERG; R. F. KIRSCH; A. B. AJIBOYE. *Case Western Reserve Univ., Louis Stokes Cleveland Dept. of VA Med. Ctr., Stanford Univ., Brown Univ., Dept. of VA Med. Ctr., Brown Univ., Brown Univ., Present affiliation: Stanford Univ. Sch. of Med., Massachusetts Gen. Hosp., UH Cleveland Med. Ctr., CWRU Sch. of Med., UH Cleveland Med. Ctr., Stanford Univ. Dept. of Neurosurg., Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Howard Hughes Med. Inst. at Stanford Univ., Brown Univ. Sch. of Engin., Harvard Med. Sch.*
- 1:00 DD29 **230.09** Replay of neural firing sequences in human motor cortex during rest following a sequenced brain-computer interface task. B. JAROSIEWICZ*; J. EICHENLAUB; J. SAAB; B. FRANCO; J. KELEMEN; E. HALGREN; L. R. HOCHBERG; S. S. CASH. *Brown Univ., Dept. of VA Med. Ctr., Brown Univ., Present affiliation: Stanford Univ. Sch. of Med., Massachusetts Gen. Hosp., Harvard Med. Sch., Brown Univ., Univ. of Calif. San Diego.*
- 2:00 DD30 **230.10** Representation of motor commands, position, and angle in neural activity recorded from human posterior parietal cortex during a pole-balancing task. S. KELLIS*; D. HANDELMAN; K. KATYAL; M. ARMENTA SALAS; L. BASHFORD; M. JAFARI; H. JO; K. SHANFIELD; K. PEJSA; D. KRAMER; B. LEE; C. LIU; R. A. ANDERSEN. *Caltech, Keck Sch. of Med. of USC, The Johns Hopkins Univ. Applied Physics Lab., Rancho Los Amigos Natl. Rehabil. Hosp.*
- 3:00 DD31 **230.11** Mapping human primary somatosensory cortex with intracortical microstimulation for brain-machine interface applications. L. BASHFORD*; M. ARMENTA SALAS; S. KELLIS; M. JAFARI; H. JO; K. PEJSA; B. LEE; C. LIU; R. A. ANDERSEN. *Caltech, USC.*
- 4:00 DD32 **230.12** Discriminating and using somatosensory percepts in brain-machine tasks with a tetraplegic subject. M. ARMENTA SALAS*; L. BASHFORD; S. KELLIS; M. JAFARI; H. JO; D. KRAMER; B. LEE; K. PEJSA; K. SHANFIELD; M. AISEN; C. LIU; R. A. ANDERSEN. *Caltech, USC, Rancho Los Amigos Natl. Rehabil. Ctr., USC.*
- 1:00 DD33 **230.13** Volitional control of single-channel spike firing rates for bridging cortical areas with bidirectional brain-machine interfaces. H. JO*; S. KELLIS; M. ARMENTA SALAS; L. BASHFORD; M. JAFARI; K. PEJSA; D. KRAMER; B. LEE; C. LIU; E. E. FETZ; R. A. ANDERSEN. *Caltech, Neurorestoration Ctr. and the Departments of Neurolog. Surgery, Univ. of Southern California, Rancho Los Amigos Natl. Rehabil. Ctr., Univ. of Washington.*
- 2:00 DD34 **230.14** Training a decoder on low-dimensional population dynamics in primary motor cortex produces stable control signals. J. GALLEGO*; M. G. PERICH; A. FARSHCHIANSADEGH; P. M. TOSTADO; K. L. BODKIN; S. N. NAUFEL; E. J. PERREAULT; S. A. SOLLA; F. A. MUSSA-IVALDI; L. E. MILLER. *Ctr. De Automatica Y Robotica, Northwestern Univ., Shirley Ryan AbilityLab, Northwestern Univ., Northwestern Univ., Northwestern Univ.*
- 3:00 DD35 **230.15** Decoding of real, 3D reach goals from monkey area V6A. M. FILIPPINI*; R. BREVEGLIERI; K. HADJIDIMITRAKIS; A. BOSCO; P. FATTORI. *Univ. of Bologna - Pharm. and Biotech., Monash Univ.*
- 4:00 DD36 **230.16** Learning the dependencies between spikes and fields in multiscale modeling. H. ABBASPOURAZAD*; M. M. SHANECHI. *USC.*
- 1:00 EE1 **230.17** Multiscale decoding of spike-field activity to improve brain-machine interface robustness and longevity. H. HSIEH*; Y. WONG; B. PESARAN; M. M. SHANECHI. *USC, Monash Univ., New York Univ. Ctr. for Neural Sci., USC.*

POSTER

231. Posture and Gait: Afferent Control

Theme E: Motor Systems

Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*

- 1:00 EE2 **231.01** The impact that six-weeks of mindfulness-based training has on postural control in NCAA Division 1 athletes. K. S. THOMAS*; C. FRELIGH. *Norfolk State Univ., Old Dominion Univ.*
- 2:00 EE3 **231.02** Learning postural balancing in a dynamic destabilizing environment. A. CHERIF*; I. LORAM; H. GOLLEE; J. ZENZERI. *Fondazione Inst. Italiano Di Tecnologia, Inst. for Biomed. Res. into Human Movement and Health, Manchester Metropolitan Univ., Dept. of Mechanical Engineering, Ctr. for Systems and Control, Univ. of Glasgow.*
- 3:00 EE4 **231.03** Wearable technology to enhance mobility in Parkinson's disease. E. D. THOMPSON*; H. REIMANN; T. D. FETTROW; P. AGADA; S. WEISS; W. WRIGHT; J. J. JEKA. *Temple Univ., Univ. of Delaware, Temple Univ., Temple Univ., Temple Univ.*
- 4:00 EE5 **231.04** Interaction between visual flow and tendon vibration during postural control. R. KABBALIGERE*; B. LEE; C. S. LAYNE. *Univ. of Houston, Univ. of Houston, Univ. Houston.*

- 1:00 EE6 **231.05** Estimating the proprioceptive contribution to balance: Validation with measures of stretch reflex function. J. A. HERNANDEZ-SARABIA; J. M. DEFREITAS*; A. BARRERA-CURIEL; Z. K. POPE; R. J. COLQUHOUN; M. A. MAGRINI. *Oklahoma State Univ.*
- 2:00 EE7 **231.06** Hypothyroidism and neurocardiogenic syncope: A bedside to the bench study. K. FATIMA SHAD*; S. KHAN. *Univ. of Technol. Sydney, Univ. of Brunei Darussalam.*
- 3:00 EE8 **231.07** Closed-loop control of a transtibial prosthesis with active ankle joint and sensory feedback. H. PARK*; M. S. ISLAM; M. A. GROVER; S. P. DEWEERTH; B. I. PRILUTSKY. *Georgia Inst. of Technol., Georgia Inst. of Technol., Georgia Inst. of Technol.*
- 4:00 EE9 **231.08** Frontal plane dynamics of quadrupedal locomotion on a split-belt treadmill. E. M. LATASH; H. PARK; W. H. BARNETT; A. N. KLISHKO; B. I. PRILUTSKY; Y. I. MOLKOV*. *Georgia State Univ., Georgia Inst. of Technol., Georgia Inst. of Technol., Georgia Inst. of Technol.*
- 1:00 EE10 **231.09** Effects of stretch-reflex removal from ankle and knee extensors on mechanics and EMG activity during locomotion in the cat. A. N. KLISHKO; K. OH; T. R. NICHOLS; R. J. GREGOR; B. I. PRILUTSKY*. *Georgia Inst. Technol.*
- 2:00 EE11 **231.10** Bipedal robot locomotion with feedback compensation of foot contact by a cerebellar model. D. ICHIMURA*; T. YAMAZAKI. *The Univ. of Electro-Communications, Heisei Ougi Hosp.*
- 3:00 EE12 **231.11** Swing movement during walking is an aimed movement controlled by proprioceptive feedback from the muscle spindles. W. P. MAYER; A. J. MURRAY; W. G. TOURTELLOTTE; T. AKAY*. *Dalhousie Univ., Univ. Col. London, Cedars Sinai Med. Ctr.*
- 4:00 EE13 **231.12** Postural responses to skin stretch stimuli around the leg joints during quiet standing. K. FUJIWARA*; N. KIYOTA; F. SATO; H. TOYAMA; T. NAKAMURA; A. HYODO. *Kanazawa Gakuin Univ., Japan Hlth. Care Col., Kanazawa Univ.*
- 1:00 EE14 **231.13** Genetic and functional characterization of rubral pathways. G. RIZZI*; A. MERLI; K. TAN. *Univ. of Basel, Univ. of Basel.*
- 2:00 EE15 **231.14** Voltage-gated sodium channel expression by muscle-spindle receptors in a rat model of chemotherapy induced peripheral neuropathy (CIPN). D. I. CARRASCO*; P. NARDELLI; T. C. COPE. *Georgia Inst. Of Technol., Georgia Inst. Of Technol.*
- 3:00 EE16 **231.15** The effect of painful peripheral neuropathy on gait for adults with Type 2 diabetes. E. JENKINS*; S. MORRISON. *Old Dominion Univ.*
- 4:00 EE17 **231.16** Altered muscle spindle function in murine models of muscular dystrophy. L. GERWIN*; S. ROSSMANITH; C. HAUPT; H. BRINKMEIER; R. BITTNER; S. KRÖGER. *Ludwig-Maximilians-Universität München, German Res. Ctr. for Environ. Hlth., Ernst-Moritz-Arndt-Universität Greifswald, Med. Univ. of Vienna.*
- 1:00 EE18 **231.17** ▲ Positive force feedback may ameliorate muscle weakness. H. SHI; M. A. LYLE; C. TUTHILL; T. NICHOLS*. *Georgia Inst. of Technol., Georgia Inst. of Technol., Georgia Inst. of Technol.*
- 2:00 EE19 **231.18** ▲ The effect of pairing startling acoustic stimuli with displacements of a light touch reference on balance corrective responses. S. D. C. CHODAN; K. K. FENRICH; J. E. MISIASZEK*. *Univ. of Alberta, Univ. of Alberta.*
- 3:00 EE20 **231.19** A neuromusculoskeletal model of rhesus macaque muscle spindle activity during locomotion. R. DARIE*; D. A. BORTON. *Brown Univ., Brown Inst. for Brain Sci., Dept. of Veterans Affairs, Providence Med. Center, Ctr. for Neurorestoration and Neurotechnology.*
- 4:00 EE21 **231.20** Transient responses in muscle activations during perturbed treadmill walking. F. EHTEMAM*; H. WANG; A. J. VAN DEN BOGERT; T. KIEMEL. *Univ. of Maryland, Cleveland State Univ.*
- 1:00 EE22 **231.21** Balance responses to visual perturbations during walking. H. REIMANN*; T. D. FETTROW; E. D. THOMPSON; J. J. JEKA. *Univ. of Delaware, Univ. of Delaware, Temple Univ.*
- 2:00 EE23 **231.22** Balance control strategies due to sensory perturbation during walking in children with cerebral palsy: preliminary results. S. HWANG*; C. FRANKLIN; B. LIPA; C. TUCKER; J. J. JEKA. *Univ. of Maryland Eastern Shore, Shriners Hosp. for Children, Temple Univ., Univ. of Delaware.*
- 3:00 EE24 **231.23** Adapting to perturbations during rhythmic arm and leg movements. H. J. HUANG*; S. SHIRAZI. *Univ. of Central Florida.*
- 4:00 EE25 **231.24** The effects of orthotics and increased plantar sole mechanoreceptor activation on turning performance in individual's with Parkinson's disease. K. A. ROBB*; S. D. PERRY. *Wilfrid Laurier Univ.*
- 1:00 EE26 **231.25** Vestibular habituation and balance training protocol for sensory reweighting. W. WRIGHT*; K. O. APPIAH-KUBI. *Temple Univ.*
- 2:00 EE27 **231.26** Does startle impair or support balance during postural disturbances? X. ZONG*; C. F. HONEYCUTT. *Arizona State Univ.*

POSTER

232. Motor Systems: Sensory Input and Descending Control

Theme E: Motor Systems

Sun. 1:00 PM – Walter E. Washington Convention Center, Halls A-C

- 1:00 EE28 **232.01** action potentials are present in dorsal roots containing spinal cord interneuron axons in the neonatal mouse. L. P. OSUNA CARRASCO*; J. R. LOPEZ RUIZ; B. DE LA TORRE; J. M. DUENAS JIMENEZ; S. H. DUENAS JIMENEZ. *CINVESTAV, CINVESTAV, Univ. de Guadalajara, Univ. of Guadalajara, Univ. De Guadalajara.*
- 2:00 EE29 **232.02** Pharmacological analysis of the modulating inhibitory effects produced by activation of D₂-like receptors on pathways mediating PAD in the mouse spinal cord. J. J. MILLA CRUZ*; D. L. GARCÍA-RAMÍREZ; J. R. CALVO; C. M. VILLALON; S. HOCHMAN; J. N. QUEVEDO. *CINVESTAV-IPN, CINVESTAV-IPN (sede Sur), Emory Univ. Sch. Med.*

• Indicated a real or perceived conflict of interest, see page 137 for details.
 ▲ Indicates a high school or undergraduate student presenter.
 * Indicates abstract's submitting author

- 3:00 FF1 **232.03** The role of α_1 -, α_2 - and β -adrenoceptors in the modulatory depressant actions of noradrenaline on synaptic transmission of myelinated afferents and pathways mediating PAD in the *in vitro* mouse spinal cord. E. MENA-AVILA; J. J. MILLA-CRUZ; J. R. CALVO; C. M. VILLALON; S. HOCHMAN; J. A. ARIAS-MONTANO; J. N. QUEVEDO*. *CINVESTAV, Farmacobiología, Cinvestav-IPN (Sede Sur), Emory Univ. Sch. Med., CINVESTAV del IPN.*
- 4:00 FF2 **232.04** Mapping connectivity of sensory neurons linking cerebrospinal fluid to motor circuits in vertebrates. M. WU; K. FIDELIN; A. PRENDERGAST; P. TSENG; P. GARNERET; C. WYART*. *Inst. Cerveau Et Moelle Epiniere, Inst. du Cerveau et de la Moelle épinère, Inst. du Cerveau et de la Moelle Épinère, Inst. du Cerveau et de la Moelle Epinière.*
- 1:00 FF3 **232.05** Incising CPG modulates load duration and peak force inversely with incising frequency in non-pain and pain states. C. G. WIDMER*; J. MORRIS-WIMAN. *Univ. of Florida, West Virginia Sch. of Osteo. Med.*
- 2:00 FF4 **232.06** Amino acids act on dorsal roots to trigger limb central pattern generators. J. T. HACKETT*. *Universoty of Virginia.*
- 3:00 FF5 **232.07** Spinal Shox2 interneurons preferentially receive proprioceptive input from flexor afferents. E. Z. LI*; D. L. GARCIA-RAMIREZ; L. YAO; K. J. DOUGHERTY. *Drexel Univ. Col. of Med.*
- 4:00 FF6 **232.08** An excitatory midbrain motor circuit for evoking freezing behavior. R. LEIRAS*; H. GOÑI-ERRO; D. MASINI; V. CAGGIANO; G. FISONE; O. KIEHN. *Karolinska Institutet.*
- 1:00 FF7 **232.09** The role of the superior colliculus in vibrissa movement. M. KANESHIGE*; K. SHIBATA; J. MATSUBAYASHI; A. MITANI; T. FURUTA. *Human Hlth. Sciences, Kyoto Univ., Morphological Brain Science, Kyoto Univ.*
- 2:00 FF8 **232.10** Birthtime-related hierarchical organization among descending neurons in larval zebrafish. M. TANIMOTO; A. PUJALA; M. KOYAMA*. *HHMI Janelia Res. Campus.*
- 3:00 FF9 **232.11** Serotonergic modulation of locomotor outputs induced by sacral dorsal root stimulation in the isolated neonatal rat spinal cord preparation. Z. OUEGLANI*; F. M. LAMBERT; G. COURTAND; L. CARDOIT; F. MASMEJEAN; J. CAZALET; G. BARRIÈRE. *INCIA - UMR5287.*
- 4:00 FF10 **232.12** Sensory-motor interaction in the Parabrachial nucleus for relationship between body movement and respiration. A. ARATA*; S. IWANO; T. NOMA; S. TONOMURA; A. TAMAKI. *Hyogo Col. of Med., Hyogo Univ of Helth Sci., Hyogo Coll of Med.*
- 1:00 FF11 **232.13** • Differences in phasic burst activity *in vivo* revealed by axonal projection-specific characterization of DA neurons within the medial substantia nigra. N. FARASSAT*; K. M. COSTA; M. SOMAYAJI; G. SCHNEIDER; J. ROEPER. *Goethe Univ., Columbia Univ., Goethe Univ.*
- 2:00 FF12 **232.14** Molecular characterization of a spinal sacral interneuron population with long ascending propriospinal projections to high lumbar locomotor regions. D. A. DESKA-GAUTHIER*; Y. ZHANG. *Dalhousie Univ.*

POSTER

233. Respiratory Rhythm and Pattern Generation

Theme E: Motor Systems

Sun. 1:00 PM – Walter E. Washington Convention Center, Halls A-C

- 1:00 FF13 **233.01** Inhibitory interactions in the brainstem respiratory circuits: Insights from optogenetic studies and computational modeling. J. AUSBORN*; H. KOIZUMI; W. H. BARNETT; T. JOHN; R. ZHANG; Y. I. MOLKOV; J. C. SMITH; I. A. RYBAK. *Drexel Univ. Col. of Med., Cell. & Systems Neurobio. Sec., NINDS, NIH, Georgia State Univ.*
- 2:00 FF14 **233.02** Optogenetic inhibition of Dbx1 preBötzing complex neurons perturbs breathing in vagus-intact adult mice. N. C. VANN; F. D. PHAM; K. DORST; C. A. DEL NEGRO*. *Col. of William and Mary Dept. of Applied Sci.*
- 3:00 FF15 **233.03** Imaging and spatial mapping of the rhythmic glutamatergic neuron population by genetically-encoded calcium sensor within the pre-Botzinger complex of neonatal transgenic mouse. N. KOSHIYA*; H. KOIZUMI; T. JOHN; Y. CHEN; R. ZHANG; J. C. SMITH. *Natl. Inst. of Neurolog. Disorders and Stroke.*
- 4:00 FF16 **233.04** Transcriptome of neonatal preBötzing complex neurons in Dbx1 reporter mice. J. A. HAYES*; A. KOTTICK; M. D. PICARDO; A. D. HALLERAN; R. D. SMITH; G. D. SMITH; M. S. SAHA; C. A. DEL NEGRO. *The Col. of William and Mary, Col. of William and Mary, Col. of William and Mary, The Col. of William & Mary, Col. of William and Mary, The Col. of William & Mary, Col. of William and Mary, Col. of William and Mary Dept. of Applied Sci.*
- 1:00 FF17 **233.05** Identification of respiratory modulated astrocytes in the ventrolateral medulla of the isolated brainstem-spinal cord by confocal calcium imaging. Y. OKADA*; I. YAZAWA; S. OKAZAKI; S. YOKOTA; K. TAKEDA; H. SOMEYA; Y. TAMURA; H. ONIMARU. *Murayama Med. Ctr., Hoshi Univ. Sch. of Pharm. & Pharmaceut. Sc, Waseda Univ., Shimane Univ. Sch. of Med., Fujita Hlth. Univ., Tokai Univ., The Inst. of Statistical Mathematics, Showa Univ. Sch. of Med.*
- 2:00 FF18 **233.06** Neuronal type-dependent stochastic activation sequence among inspiratory neurons during rhythmic burst in the pre-Bötzing complex of the mice medulla slice. Y. OKE*; F. MIWAKEICHI; Y. OKU; S. BESSER; J. HIRRLINGER; S. HÜLSMANN. *Hyogo Col. of Med., The Inst. of Statistical Mathematics, The Grad. Univ. for Advanced Studies, Univ. of Leipzig, Max Planck Inst. of Exptl. Med., Univ. Med. Ctr. Göttingen, DFG Res. Ctr. for Nanoscale Microscopy and Mol. Physiol. of the Brain (CNMPB).*
- 3:00 FF19 **233.07** ▲ Diversity of glycinergic neurons in the PreBotzinger complex of mice. S. L. RODRIGUEZ*; V. GARCIA; R. A. PEREZ; M. MIRANDA. *Univ. of Texas At El Paso.*
- 4:00 FF20 **233.08** Inhibition is critical for permitting rapid dynamic respiratory rhythms. N. A. BAERTSCH*; J. M. RAMIREZ. *Seattle Children's Hosp., Seattle Children's Hosp.*
- 1:00 FF21 **233.09** Characterization of the retrotrapezoid nucleus by mRNA expression. R. L. STORNETTA*; Y. SHI; D. S. STORNETTA; S. ONENGUT-GUMUSCU; E. FARBER; S. D. TURNER; D. A. BAYLISS; P. G. GUYENET. *Univ. of Virginia, Univ. of Virginia, Univ. of Virginia.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 2:00 FF22 **233.10** Local glutamatergic transmission in the RTN/pFRG is critical for active expiration and sympathetic overactivity during hypercapnia. W. H. BARNETT*; Y. I. MOLKOV; E. LEMES; B. FALQUETO; E. COLOMBARI; A. T. TAKAKURA; T. S. MOREIRA; D. B. ZOCCAL. *Georgia State Univ., São Paulo State Univ., Dept of Pharmacology, Inst. of Biomed. Science, Univ. of Sao Paulo, Univ. of Sao Paulo.*
- 3:00 GG1 **233.11** Adenosine inhibits activity of chemosensitive neurons in the retrotrapezoid nucleus. S. JAMES*; V. E. HAWKINS; B. FALQUETTO; L. M. OLIVEIRA; A. T. TAKAKURA; T. S. MOREIRA; D. K. MULKEY. *Univ. of Connecticut, Univ. of Sao Paulo, Univ. of São Paulo, Dept of Pharmacology, Inst. of Biomed. Science, Univ. of Sao Paulo, Univ. of Sao Paulo, Univ. Connecticut.*
- 4:00 GG2 **233.12** Regulators of G-protein signaling regulate opioid-induced respiratory depression. G. MONTANDON*; J. DANAF; H. LIU; R. L. HORNER. *St. Michael's Hosp., Univ. of Toronto, Univ. of Toronto, Univ. of Toronto.*
- 1:00 GG3 **233.13** The effect of 5-HT₂ and 5-HT₇ receptor antagonists on baseline breathing and the hypercapnic ventilatory response in mice *in vivo*. R. J. LECHTENBERG; C. A. MASSEY; G. B. RICHERSON*. *Univ. of Iowa.*
- 2:00 GG4 **233.14** Adrenergic receptors β 1 and β 2 are not required for maintenance of baseline ventilation or for the hypercapnic and hypoxic reflexes in adult mice. J. SUN*; R. RAY. *Baylor Col. of Med.*
- 3:00 GG5 **233.15** Mechanism of D-serine release from caudal brainstem astrocytes. M. J. OLIVARES*; S. BELTRÁN-CASTILLO; R. CONTRERAS; G. ZUÑIGA; R. VON BERNHARDI; J. EUGENIN. *Univ. de Santiago de Chile, Pontificia Univ. Católica de Chile.*
- 4:00 GG6 **233.16** Role of KCC2a in mammalian respiratory at birth. M. THOBY BRISSON*; P. UVAROV; M. MARKKANEN; M. S. AIRAKSINEN; J. SIMMERS. *Univ. De Bordeaux, CNRS UMR 5287, Univ. of Helsinki.*
- 1:00 GG7 **233.17** D-serine, a novel component in the central chemosensory control of breathing. S. BELTRAN-CASTILLO*; M. J. OLIVARES; I. LLONA; R. VON BERNHARDI; J. EUGENIN. *Univ. De Santiago De Chile, Univ. de Santiago de Chile, USACH, Pontificia U Católica De Chile, Fac Med., Univ. de Santiago, USACH.*
- 2:00 GG8 **233.18** Inhibition of pedunculopontine tegmental nucleus generates active expiration. J. N. SILVA; T. S. M. MOREIRA*; A. C. TAKAKURA. *Univ. of Sao Paulo, Univ. of Sao Paulo, Univ. of Sao Paulo.*
- 3:00 GG9 **233.19** Functional and anatomical mapping of amygdalar circuitry in breathing. V. MARTINEZ*; J. SUN; R. RAY. *Baylor Col. of Med., Baylor Col. of Med.*
- 2:00 GG11 **234.02** Spinal cord injury alters synaptic inputs and serotonergic modulation of Shox2 neurons in mouse. D. GARCIA-RAMIREZ*; S. BIBU; N. HA; L. YAO; K. J. DOUGHERTHY. *Drexel Univ. Col. of Med.*
- 3:00 GG12 **234.03** Deep brain stimulation of the mesencephalic locomotor region in freely moving vs. anesthetized minipigs. I. OPRIS*; S. CHANG; F. D. BENAVIDES; F. J. SANCHEZ; L. M. VILLAMIL; A. J. SANTAMARIA; Y. NUNEZ-GOMEZ; J. P. SOLANO; J. D. GUEST; B. R. NOGA. *Univ. of Miami Miller Sch. of Med., Univ. of Miami, Miller Sch. of Med., Univ. of Miami.*
- 4:00 GG13 **234.04** Locomotor activity facilitated by chemogenetic activation of grafted serotonergic neurons in paraplegic rats. M. NAZZAL*; U. SLAWINSKA; L. M. JORDAN. *Univ. of Manitoba, Nencki Inst. of Exptl. Biol.*
- 1:00 GG14 **234.05** Changes in inhibitory force feedback pathways following lateral hemisection in cats. E. KAJTAZ*; M. A. LYLE; K. A. CHEFFER; D. R. HOWLAND; T. R. NICHOLS. *Georgia Inst. of Technol., Georgia Inst. of Technol., Georgia Inst. of Technol., Kentucky Spinal Cord Injury Res. Ctr., Robley Rex VA Med. Ctr., Univ. of Louisville, Georgia Inst. of Technol.*
- 2:00 GG15 **234.06** Adapting motor strategies to the demands of slopes and steps post-SCI. K. A. CHEFFER*; E. KAJTAZ; M. A. LYLE; W. A. O'STEEN; T. R. NICHOLS; D. R. HOWLAND. *Kentucky Spinal Cord Injury Res. Ctr., Univ. of Louisville, Univ. of Louisville, Robley Rex VA Med. Ctr., Georgia Inst. of Technol., Univ. of Louisville.*
- 3:00 GG16 **234.07** Locomotor adaptation in persons with incomplete spinal cord injury during split-belt treadmill walking. Y. THIBAUDIER*; D. M. PETERS; K. BOVA; S. GARDON; H. GOESCH; S. HARTFORD; L. SMITH; T. M. KESAR; R. D. TRUMBOWER. *Emory Univ.*
- 1:00 DP07/GG17 **234.08** (Dynamic Poster) Functional ultrasound (fus) imaging of vascular changes evoked by spinal cord electrical stimulation and spinal cord transection. P. SONG; R. ISLAM; C. CUELLAR; P. GRAHN*; K. LEE; S. CHEN; I. LAVROV. *Mayo Clin., Mayo Clin., Mayo Clin.*
- 1:00 GG18 **234.09** Subfunctional neural connections in motor complete paralysis and implications for their role in epidural stimulation enabled motor function. J. S. CALVERT*; I. LAVROV; P. GRAHN; D. SAYENKO; M. VAN STRAATEN; M. GILL; J. STROMMEN; D. DRUBACH; L. BECK; M. LINDE; A. THORESON; C. LOPEZ; D. VEITH; Y. GERASIMENKO; R. EDGERTON; K. ZHAO; K. LEE. *Mayo Clin., UCLA.*
- 2:00 GG19 **234.10** Engaging hindlimb central pattern generators via lumbosacral epidural stimulation to induce stepping in healthy adult rodents. C. A. CUELLAR*; R. ISLAM; B. KNUDSEN; J. SILVERNAIL; T. E. RICCELLI; J. S. CALVERT; H. WEN; P. J. GRAHN; K. H. LEE; I. A. LAVROV. *Mayo Clin., Mayo Clin., Mayo Clin., The Second Xiangya Hosp. of Central South Univ., Inst. of Fundamental Med. and Biol.*
- 3:00 GG20 **234.11** Integrated system for evaluating behavior and locomotion during neuromodulation therapy in rodents. R. ISLAM*; B. FELMLEE; C. CUELLAR; J. SILVERNAIL; T. RICCELLI; H. WEN; B. KNUDSEN; J. CALVERT; P. GRAHN; K. LEE; I. LAVROV. *Mayo Clin., The Second Xiangya Hosp. of Central South Univ., Mayo Clin.*
- 4:00 GG21 **234.12** Functional contribution of the mesencephalic locomotor region to locomotor recovery after spinal cord injury. M. ROUSSEL*; N. JOSSET; D. LAFRANCE-ZOUBGA; M. LEMIEUX; F. BRETZNER. *Ctr. Hospitalier De L'Université Laval.*

POSTER

234. Spinal Cord Injury: Posture and Locomotion

Theme E: Motor Systems

Sun. 1:00 PM – Walter E. Washington Convention Center, Halls A-C

- 1:00 GG10 **234.01** Interneuronal activity in spinal felines treated with BDNF delivered intrathecally to the lumbar spinal cord. M. A. LEMAY*; F. MARCHIONNE; A. J. KRUPKA. *Temple Univ. Col. of Engin.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

1:00 GG22 **234.13** Examining sensorimotor integration in the trunk motor cortex in adult rats. B. NANDAKUMAR*; G. H. BLUMENTHAL; K. A. MOXON. *Drexel Univ. Sch. of Biomed. Engin. Sci. and Hlth. Systems, Drexel Univ. Sch. of Biomed. Engin. Sci. and Hlth. Systems, Univ. of California Davis.*

POSTER

235. Neuromodulation and New Approaches in Monitoring Vocal Learning

Theme F: Integrative Physiology and Behavior

Sun. 1:00 PM – Walter E. Washington Convention Center, Halls A-C

1:00 GG23 **235.01** The role of dopamine in sensorimotor adaptation in songbirds. V. SARAVANAN*; L. A. HOFFMANN; A. L. JACOB; S. J. SOBER. *Emory Univ.*

2:00 GG24 **235.02** Dopaminergic input to Bengalese finch song system nuclei. A. L. JACOB*; A. N. WOOD; S. J. SOBER. *Emory Univ.*

3:00 GG25 **235.03** Cerebellothalamic and thalamostriatal projections in a songbird. D. A. NICHOLSON*; T. F. ROBERTS; S. J. SOBER. *Emory Univ., UT Southwestern Med. Ctr., Emory Univ.*

4:00 GG26 **235.04** Somatosensory-driven vocal learning in adult songbirds. J. N. MCGREGOR*; P. I. JAFFE; M. S. BRAINARD; S. J. SOBER. *Emory Univ., UCSF, UCSF Ctr. For Integrative Neurosci, Emory Univ.*

1:00 GG27 **235.05** ▲ Basal forebrain sends performance error signals to VTA in singing birds. A. PODURY*; R. CHEN; P. A. PUZEREY; K. MAHER; J. H. GOLDBERG. *Cornell Univ.*

2:00 GG28 **235.06** Ventral tegmental area to basal ganglia pathway bi-directionally guides skill learning. L. XIAO*; G. CHATTREE; F. GARCIA-OSCO; M. CAO; T. F. ROBERTS. *Univ. of Texas Southwestern Med. Ctr., UT Southwestern Med. Ctr.*

3:00 GG29 **235.07** Imaging basal ganglia activity associated with learned vocalizations. J. SINGH ALVARADO*; M. BEN-TOV; M. G. KEARNEY; R. D. MOONEY. *Duke Univ., Duke Univ., Hosp.*

4:00 GG30 **235.08** The cholinergic projections from basal forebrain to vocal motor cortex is required for song learning but not vocal babbling in juvenile birds. P. A. PUZEREY*; K. MAHER; N. PRASAD; J. H. GOLDBERG. *Cornell Univ., Cornell Univ.*

1:00 GG31 **235.09** Aberrant burst firing in the songbird cortical-basal ganglia circuit drives both spectral and sequential changes in learned song. S. MOORMAN*; M. H. KAO. *Tufts Univ.*

2:00 GG32 **235.10** Shifts in auditory processing across development and in response to neuromodulatory estrogens in juvenile male songbirds. D. M. VAHABA*; M. MACEDO-LIMA; L. REMAGE-HEALEY. *Univ. of Massachusetts Amherst, CAPES Fndn., Univ. of Massachusetts Amherst, Univ. of Massachusetts Amherst.*

3:00 GG33 **235.11** Androgens in the anterior forebrain maintain song stereotypy in adult male canaries. G. F. BALL*; B. A. ALWARD. *Univ. of Maryland, Univ. of Maryland, Stanford Univ.*

4:00 HH1 **235.12** ▲ Dynamics of neuronal birth, addition, and survival in a sensorimotor circuit responsible for song production during transition into breeding condition. R. HU*; B. SETIJONO; Y. TOKAREVA; Y. SUN; E. A. BRENOWITZ; T. LARSON. *Univ. of Washington, Univ. of Washington Dept. of Psychology, Univ. of Virginia.*

1:00 HH2 **235.13** The songbird VTA integrates opponent evaluative signals for vocal learning. M. G. KEARNEY*; E. HISEY; R. MOONEY. *Duke Univ., Duke Univ., Duke Univ.*

2:00 HH3 **235.14** Species-specificity and individual difference of muscarinic acetylcholine receptor expression in the song circuits. C. N. ASOGWA*; M. SANCHEZ-VAPUESTA; S. HAYASE; C. MORI; K. WADA. *Hokkaido University, Sapporo, Hokkaido Univ., The Univ. of Tokyo, Hokkaido Univ.*

3:00 HH4 **235.15** Instructive auditory experience shapes a songbird premotor cortex via midbrain dopamine neurons to guide song learning. M. TANAKA*; R. MOONEY. *Duke Univ., Duke Univ.*

4:00 HH5 **235.16** Characterization of mating posture and modulatory nuclei in a female songbird. A. PERKES*; C. MESSIER; D. IPPOLITO; M. WILD; M. SCHMIDT. *Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Auckland.*

1:00 DP08/HH6 **235.17** ● (Dynamic Poster) Basal ganglia damage can cause unexpected transient alterations in a songbird's brain. K. LUKACOVA*; J. HAMAIDE; A. VAN DER LINDEN; L. NIEDEROVA-KUBIKOVA. *Ctr. of Biosciences, Inst. of Animal Biochem, Univ. of Antwerp.*

2:00 HH7 **235.18** Cholinergic modulation of song motor control in adult songbirds. P. I. JAFFE*; M. S. BRAINARD. *UCSF, UCSF, UCSF, UCSF.*

3:00 HH8 **235.19** Singing-related activity in an evaluative cortico-basal ganglia circuit of juvenile songbirds during sensorimotor learning. R. C. YUAN*; S. W. BOTTJER. *USC.*

4:00 HH9 **235.20** ▲ Neural specializations for audition in the spectacular tui. P. MILLER*. *Salisbury Univ.*

1:00 HH10 **235.21** Telencephalic song nuclei of the anesthetized zebra finch brain exhibit functional homotopy in the absence of known direct white matter projections. E. A. LAYDEN*; K. E. SCHERTZ; M. G. BERMAN; S. E. LONDON. *The Univ. of Chicago.*

2:00 HH11 **235.22** Monitoring of social interactions in laboratory animals by a 3D tracking opto-ultrasonic system. A. L. VYSSOTSKI*; D. L. VYSSOTSKI. *Inst. of Neuroinformatics, Univ. of Zurich and ETH Zurich, Evolocus LLC.*

3:00 HH12 **235.23** Neurotensin and neurotensin receptor 1 mRNA expression in song-control regions changes during development in male zebra finches. D. P. MERULLO*; C. N. ASOGWA; M. SANCHEZ-VALPUESTA; K. WADA; L. V. RITERS. *Univ. of Wisconsin-Madison, Hokkaido Univ.*

4:00 HH13 **235.24** Individual difference in early vocalization predicts the propensity for imitative vocal learning in zebra finches. T. HAYASHI*; D. LIPKIND; J. HYLAND BRUNO; O. TCHERNICHOVSKI. *Hunter College, City Univ. of New York.*

1:00 HH14 **235.25** Further resolution of hypotheses on convergent brain regions for learned song in songbirds and speech in humans. G. GEDMAN*; A. R. PFENNING; M. WIRTHLIN; J. AUDET; E. D. JARVIS. *Rockefeller Univ., Carnegie Mellon Univ., Carnegie Mellon Univ.*

2:00 HH15 **235.26** The effect of alcohol on activation of zebra finch vocal control circuitry. C. R. OLSON*; S. R. FRIEDRICH; A. E. RYABININ; C. V. MELLO. *Midwestern Univ., Oregon Hlth. & Sci. Univ., Oregon Hlth. and Sci. Univ., Oregon Hlth. and Sci. Univ. Sch. of Med.*

POSTER

236. Microbiota, Immunity, and Behavior

Theme F: Integrative Physiology and Behavior

Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*

- 1:00 HH16 **236.01** Effects of stress on the human gut microbiome. J. JOHNSON; A. SHOSKES; Z. REHMAN; L. YUAN*. *Des Moines Univ., Des Moines Univ.*
- 2:00 HH17 **236.02** Investigating the gut-immune-brain axis in stress and depression. C. P. ADDINGTON*; I. A. MARIN; J. KIPNIS; A. GAULTIER. *Univ. of Virginia, Stanford Univ.*
- 3:00 HH18 **236.03** Depression associated alterations in the maternal microbiome during pregnancy: Implications for infant gut microbiome assembly. K. L. TOGHER*; A. S. KHASHAN; L. C. KENNY; C. STANTON; I. CARAFA; K. MURPHY; G. W. O'KEEFFE; C. A. RYAN; J. CRYAN; T. G. DINAN; G. CLARKE. *Univ. Col. Cork, Univ. Col. Cork, Univ. Col. Cork, Univ. Col. Cork, Univ. Col. Cork, Univ. Col. Cork, Univ. Col. Cork, Univ. Col. Cork.*
- 4:00 HH19 **236.04** Brain volume changes in germ free mice. S. L. THOMPSON*; J. ELLEGOOD; K. MCVEY NEUFELD; J. A. FOSTER; J. P. LERCH. *McMaster Univ., Hosp. For Sick Children, McMaster Univ.*
- 1:00 HH20 **236.05** Targeting the gut microbiome to reverse age-related deficits in learning and stress-induced immune priming. M. BOEHME*; M. VAN DE WOUW; K. V. SANDHU; A. V. GOLUBEVA; K. A. SCOTT; C. STANTON; T. G. DINAN; H. SCHELLEKENS; J. F. CRYAN. *Univ. Col. Cork, Univ. Col. Cork, Teagasc Food Res. Ctr.*
- 2:00 HH21 **236.06** ● Sex differences in the rat microbiome and addiction-related behaviors. V. L. PETERSON*; J. B. RICHARDS; P. MEYER; R. CABRERA-RUBIO; O. POLESSKAYA; A. CHITRE; J. A. TRIPI; F. CRISPIE; T. G. DINAN; P. D. COTTER; A. A. PALMER; J. F. CRYAN. *Univ. Col. Cork, Univ. Col. Cork, Univ. Col. Cork, Res. Inst. On Addictions, Univ. At Buffalo, Teagasc Food Res. Ctr., UCSD, Univ. Col. Cork, Univ. Col. Cork.*
- 3:00 HH22 **236.07** ● Stress gone viral: Chronic social stress induces marked changes in the gut virome in mice. J. CRYAN*; V. L. PETERSON; A. BUROKAS; L. DRAPER; M. DALMASSO; R. CABRERA-RUBIO; F. CRISPIE; P. D. COTTER; T. G. DINAN; C. HILL. *Univ. Col. Cork, Univ. Col. Cork, Univ. Col. Cork, Teagasc Food Res. Ctr., Univ. Col. Cork.*
- 4:00 HH23 **236.08** ● The microbiome and transcriptional regulation of amygdala-dependent fear recall. G. CLARKE*; A. E. HOBAN; R. M. STILLING; G. MOLONEY; F. SHANAHAN; T. G. DINAN; J. F. CRYAN. *Univ. Col. Cork, Univ. Col. Cork, Univ. Col. Cork, Univ. Col. Cork.*

1:00 HH24 **236.09** ● A gut feeling about autism: Alterations across the microbiota-gut-brain axis in a mouse model of autism spectrum disorders. E. SHERWIN*; A. GOLUBEVA; S. JOYCE; G. MOLONEY; A. BUROKAS; S. ARBOLEYA; K. MURPHY; K. REA; N. P. HYLAND; C. STANTON; G. CLARKE; C. GAHAN; T. G. DINAN; J. CRYAN. *APC Microbiome Inst., Univ. Col. Cork, Univ. Col. Cork, Teagasc Food Res. Ctr., Univ. Col. Cork.*

2:00 HH25 **236.10** Host genetic effect on intestinal barrier function and microbiome composition. R. G. HORNE*; J. ST. PIERRE; S. ODEH; J. A. FOSTER. *McMaster Univ.*

3:00 HH26 **236.11** An integrated analysis of microbiota composition on brain structure and social behaviour in mice. C. FRANCELLA*; J. ELLEGOOD; J. K. Y. LAI; K. C. RILETT; B. DARWIN; J. P. LERCH; J. A. FOSTER. *McMaster Univ., Hosp. for Sick Children.*

4:00 HH27 **236.12** Host genetics influence on microbiota composition and behaviour. J. A. FOSTER*; J. LAI; K. RILETT; A. BHARWANI; J. ELLEGOOD; J. LERCH. *McMaster Univ., McMaster Univ., Hosp. For Sick Children.*

1:00 HH28 **236.13** ▲ Social and cognitive deficits induced by early-life microbiota-gut-brain axis disruption are reversed by co-housing with control mice. L. H. MORAIS*; A. VENTURA-SILVA; S. ARBOLEYA; P. D. COTTER; C. STANTON; T. DINAN; J. F. CRYAN. *Univ. Col. Cork, APC Microbiome Institute, UCC, Teagasc Food Res. Centre, Moorepark, Fermoy, Univ. Col. Cork, Univ. Col. Cork.*

2:00 HH29 **236.14** Effects of probiotic and antibiotic treatment on the behavioral response to social defeat stress in Syrian hamsters. K. A. PARTRICK*; L. Q. BEACH; D. C. CHOI; B. CHASSAING; K. L. HUHMANN. *Georgia State Univ.*

3:00 HH30 **236.15** ● Disturbances to the microbiota-gut-brain axis in early life leads to an increase in monocyte trafficking to the brain. E. MORELLI*; M. BOEHME; L. H. MORAIS; R. O'CONNOR; T. M. BECKER; B. CHRUSCICKA; C. STANTON; T. DINAN; J. F. CRYAN. *APC Microbiome Institute, Univ. Col. Cork, Teagasc.*

4:00 HH31 **236.16** The gut microbiome is involved in producing vulnerability to the effects of social defeat in rats. J. PEARSON-LEARY*; K. BITTINGER; C. ZHAO; D. EACRET; C. TANES; S. LUZ; G. DAYANIM; S. BHATNAGAR. *Children's Hosp. of Philadelphia, Children's Hosp. of Philadelphia, Univ. of Pennsylvania, Univ. Pennsylvania, Children's Hosp Philadelphia.*

POSTER

237. Circadian: Synchronization

Theme F: Integrative Physiology and Behavior

Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*

1:00 HH32 **237.01** Life in the fast lane: Exceptionally short-period circadian clocks in orb-weaving spiders. D. MOORE*; N. A. AYOUB; A. MAH; N. TOPORIKOVA; T. C. JONES. *East Tennessee St Univ., Washington and Lee Univ.*

2:00 HH33 **237.02** ▲ Computational model of circadian rhythms predicts adaptive value of exceptionally short period spider clock via flexible entrainment. A. MAH; N. AYOUB; T. C. JONES; D. MOORE; N. TOPORIKOVA*. *Washington and Lee Univ., Washington and Lee Univ., East Tennessee State Univ.*

• Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 3:00 HH34 **237.03** ▲ Behavioral effects following ablation of retinalganglion cells in diurnal grass rats. G. FOGO; A. J. GALL*. *Hope Col.*
- 4:00 HH35 **237.04** Low density receptor-related protein 1 influences SCN circadian clock phase shifting via NMDA receptor interactions. J. COOPER*; R. A. PROSSER. *Univ. of Tennessee, Univ. of Tennessee.*
- 1:00 HH36 **237.05** Effect of short photoperiod regime on ventral subicular lesion-induced anxiety-like behavior in Wistar rats. D. SUBHADEEP*; B. N. SRIKUMAR; B. S. SHANKARANARAYANA RAO; B. M. KUTTY. *Natl. Inst. of Mental Hlth. and Neuro Scie.*
- 2:00 II1 **237.06** *In vivo* circadian rhythms and light responses of VIPergic neurons of the suprachiasmatic nucleus. J. JONES*; E. D. HERZOG. *Washington Univ. in St. Louis.*
- 3:00 II2 **237.07** Using optogenetics to explore the role of VIP+ SCN neurons in circadian rhythms. M. TACKENBERG*; D. G. MCMAHON. *Vanderbilt Univ., Vanderbilt Univ.*
- 4:00 II3 **237.08** Using optogenetics to determine the role of the suprachiasmatic nucleus in mood-like behaviors. C. A. VADNIE*; C. N. HEISLER; R. W. LOGAN; L. A. EBERHARDT; D. BECKER-KRAIL; M. A. HILDEBRAND; C. A. MCCLUNG. *Univ. of Pittsburgh, Univ. of Pittsburgh.*
- 1:00 II4 **237.09** A long photoperiod affects core body temperature, anxiety-like behaviors, and monoaminergic neurotransmitters in rat brains. A. KAWATA*; Y. KANEDA; M. YASUMATSU; T. ISHIWATA. *Rikkyo Univ.*
- 2:00 II5 **237.10** Misalignment of sleep and behavioral activity rhythms in a T21 light-dark phase advance paradigm. M. TATSUNO*; R. ROTA; H. W. STEENLAND; S. H. DEIBEL; K. ALI; B. L. MCNAUGHTON; R. J. MCDONALD. *Univ. Lethbridge, NeuroTek Innovative Technol. Inc., Univ. of California at Irvine.*
- 3:00 II6 **237.11** Sodium lighting alters cardiovascular circadian rhythms in mouse. X. CHEN*; G. J. DEMARCO. *Pfizer Inc., UMASS Mem. Med. Sch.*
- 4:00 II7 **237.12** ▲ Circadian disruption increases alcohol intake associated with Δ FosB in corticolimbic brain areas. M. RESÉNDIZ*; C. ESCOBAR. *Natl. Autonomous Univ. of Mexico.*
- 1:00 II8 **237.13** Osmo and thermosensitive OVLN neurons regulate SCN vasopressin neurons in horizontal slices of mouse hypothalamus. C. GIZOWSKI*; C. ZAELZER; C. W. BOURQUE. *McGill Univ. Hlth. Ctr., McGill Univ. Hlth. Ctr., McGill Univ.*
- 2:00 II9 **237.14** Intracellular calcium in the suprachiasmatic nucleus and the resetting of circadian phase, a potential role for CRAC channels. J. C. WALTON*; J. K. MCNEILL, IV; A. M. ROSENHAUER; H. E. ALBERS. *Georgia State Univ.*
- 3:00 II10 **237.15** Conditional gene targeting defines dual roles for Zfhx3 in SCN development and in setting the pace of behavioural rhythms in adults. A. G. WILCOX*; G. BANKS; P. L. OLIVER; P. M. NOLAN. *MRC Harwell Inst., Univ. of Oxford.*
- 4:00 II11 **237.16** Effects of LD cycle after LL exposure during lactation on the SCN and locomotor activity. M. PALMA*; I. OSNAYA RAMIREZ; C. ESCOBAR. *UNAM.*
- 1:00 II12 **237.17** An increased hypothalamic kisspeptin signaling is associated with the non breeding to breeding season switch in free ranging adult male rhesus monkeys. T. ANWAR*; M. SHAHAB. *Xuzhou Med. Univ., Qaid i Azam Univ.*
- 2:00 II13 **237.18** Jet lag induces a transient misalignment of circadian timing of sleep stages in the mouse. R. SANCHEZ*; I. L. BUSSI; M. BEN-HAMO; H. O. DE LA IGLESIA. *The Univ. of Washington, Univ. of Washington, Univ. of Washington, Univ. of Washington.*
- 3:00 II14 **237.19** Travel in collegiate varsity student athletes: Relationship to mood within season competition. E. VILLEGAS*, JR; M. HOLLIDAY; M. B. MCQUEEN; T. D. HERNÁNDEZ. *Univ. of Colorado Boulder, Univ. of Colorado Boulder, Univ. of Colorado Boulder.*
- 4:00 II15 **237.20** ▲ Spatial statistical analysis of artificial light at night in select rural and suburban wildlife. S. JOHNSON; F. JEFFERSON*. *Fort Valley State Univ.*
- 1:00 II16 **237.21** Opioids inhibit melanopsin ganglion cell signaling via Kv1.2. A. M. CLEYMAET*; A. S. HOAG; J. VIGH. *Colorado State Univ., Colorado State Univ.*

POSTER

238. Circadian: Cellular and Molecular Mechanisms

Theme F: Integrative Physiology and Behavior

Sun. 1:00 PM – Walter E. Washington Convention Center, Halls A-C

- 1:00 II17 **238.01** Aberrant Bmal1 proteostasis underlies circadian abnormalities in tuberous sclerosis complex. J. O. LIPTON*; L. M. BOYLE; E. D. YUAN; K. HOCHSTRASSER; F. CHIFAMBA; F. DAVIS; P. TSAI; M. SAHIN. *Children's Hosp. Boston/Harvard Med. Sch., Northeastern Univ., UT Southwestern.*
- 2:00 II18 **238.02** Exploring the molecular clock in sympathetic preganglionic neurons. C. NATHAN*; J. ASPDEN; S. DEUCHARS; J. DEUCHARS. *Univ. of Leeds, Univ. of Leeds, Univ. of Leeds.*
- 3:00 II19 **238.03** Circadian clock regulates neuronal excitability in dopaminergic neurons of the substantia nigra. J. R. PAUL*; L. J. MCMEEKIN; S. FOX; S. D. YATES; R. M. COWELL; K. L. GAMBLE. *Univ. of Alabama At Birmingham, Univ. of Alabama At Birmingham, Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham, UAB Med. Ctr.*
- 4:00 II20 **238.04** Mapping clock genes expression in dopamine receptor-bearing neuronal subtypes. N. DE ZAVALIA*; J. GOLDSMITH; S. AMIR. *Concordia Univ.*
- 1:00 II21 **238.05** Modeling sundowning syndrome in mouse models of Alzheimer's disease. S. NAGARAJ*; A. YUNUS; D. GULICK. *Univ. of South Florida Morsani Col. of Med., Univ. of South Florida Morsani Col. of Med.*
- 2:00 II22 **238.06** Hippocampal circadian disruption in early senescence mouse model. J. DAVIS*; H. MUNIR; M. MOKASHI; D. MOUNT; S. D. YATES; D. ALLISON; M. YOUNG; K. L. GAMBLE. *Univ. of Alabama At Birmingham, Univ. of Alabama at Birmingham, Univ. of Alabama At Birmingham, Univ. of Alabama at Birmingham, UAB Med. Ctr.*
- 3:00 II23 **238.07** Withdrawn

- 4:00 II24 **238.08** MicroRNAs as modulators of circadian gene Period2 oscillation. I. PARK*; K. KU; J. KIM; D. KIM; H. CHOE; Y. CHOE; K. KIM. *Daegu Gyeongbuk Inst. of Sci. and Technol. (DGIST), Seoul Natl. Univ., Seoul Natl. Univ., Korea Brain Res. Inst. (KBRI), Korea Brain Res. Inst. (KBRI)*.
- 1:00 II25 **238.09** Transcription of D site of Albumin promoter binding protein(Dbp) is controlled by a position dependent motif sequence. P. K. KWON*; J. KANG; K. KIM. *POSTECH*.
- 2:00 II26 **238.10** Physiological role of sub-threshold Kv12-encoded K⁺ channels in regulating the excitability of mouse SCN neurons. T. HERMANSTYNE*; D. GRANADOS-FUENTES; E. D. HERZOG; J. M. NERBONNE. *Washington University, St. Louis Sch. of Med., Washington Univ., Washington Univ. In St. Louis, Washington Univ.*
- 3:00 II27 **238.11** Whole-brain mapping of direct inputs of the GABAergic neurons in the parvocellular reticular nucleus. Y. SU*; X. FENG. *The Inst. of Neurosci.*
- 4:00 JJ1 **238.12** Extracellular plasticity in the suprachiasmatic nucleus (SCN): Investigating the acute effects of matrix metalloproteinase (MMP) inhibition on neuronal activity and synaptic adhesion molecule expression. K. ABRAHAMSSON*; R. A. PROSSER. *Univ. of Tennessee, Univ. of Tennessee*.
- 1:00 JJ2 **238.13** Characterizing a novel circadian peptide, cerebellin-short, in the rat suprachiasmatic nucleus. J. L. CHU*; J. W. MITCHELL; M. U. GILLETTE. *Univ. Illinois Urbana-Champaign, Univ. of Illinois Urbana-Champaign, Univ. of Illinois Urbana-Champaign*.
- 2:00 JJ3 **238.14** The effect of P2X7 receptor blockers on ATP release from rat hypothalamic slices. A. BHATTACHARYA*; I. SVOBODOVÁ; Z. BENDOVIĆ; H. ZEMKOVÁ. *Inst. of Physiology, ASCR V.v.i, Charles Univ. in Prague, Fac. of Sci.*
- 3:00 JJ4 **238.15** F-spondin is essential for maintaining circadian rhythms. G. L. CARRILLO*; J. SU; A. MONAVARFESHANI; M. A. FOX. *Virginia Tech. Carilion Res. Inst.*
- 4:00 JJ8 **239.04** Physiological characterization of a novel selective melatonin mt₁ receptor agonist. M. LOPEZ-CANUL; S. MIN; L. POSA; T. SASSON; D. DE GREGORIO; R. OCHOA-SANCHEZ; S. COMAI; G. GOBBI*. *McGill Univ., Vita-Salute San Raffaele Univ.*
- 1:00 JJ9 **239.05** ▲ Role of 5-HT_{2A} receptors in acidosis-induced arousal from sleep. C. M. GINAPP*; N. K. LEIBOLD; N. M. BODE; G. F. BUCHANAN. *Univ. of Iowa, Univ. of Iowa Carver Col. of Med., Univ. of Iowa Carver Col. of Med.*
- 2:00 JJ10 **239.06** ● Overriding sleep homeostatic regulation by activation of basal forebrain purinergic P2 receptors. C. YANG*; A. KALINCHUK; K. A. JACOBSON; S. WINSTON; J. T. MCKENNA; R. W. MCCARLEY; R. E. STRECKER; R. BASHEER; R. E. BROWN. *Harvard Med. School/Va Boston Healthcare Syst., Natl. Inst. of Diabetes and Digestive and Kidney Dis.*
- 3:00 JJ11 **239.07** Sedative effect of herbal formula on 5-HT_{2c} Receptor binding affinity and EEG. S. LEE*; H. LEE; I. KANG; I. SHIM. *Grad. School, Col. of Korean Medicine, Kyung, Col. of Natural Science, and BioChip Res. Center, Hoseo Univ.*
- 4:00 JJ12 **239.08** Dorsal raphe serotonergic neurons mediate CO₂-induced arousal from sleep. N. K. LEIBOLD*; H. R. SMITH; D. A. RAPPOPORT; C. M. GINAPP; B. S. PURNELL; E. AUDERO; C. T. GROSS; G. F. BUCHANAN. *Univ. of Iowa Carver Col. of Med., Maastricht Univ., Yale Univ. Sch. of Med., Univ. of Iowa Carver Col. of Med., Univ. of Iowa Grad. Col., European Mol. Biol. Lab.*
- 1:00 JJ13 **239.09** Impact of sleep-wake activity on dopamine terminal neurotransmission. I. P. ALONSO*; D. L. BERNSTEIN; R. A. ESPAÑA. *Drexel Univ.*
- 2:00 JJ14 **239.10** ▲ The blocker of FAAH and the transient receptor potential cation channel subfamily V member 1, N-arachidonoyl-serotonin (AA-5-HT) promotes sleep in rats. M. E. DE LA CRUZ DELGADO*; E. MURILLO-RODRÍGUEZ; N. BARBOSA ROCHÁ; H. BUDDE; S. MACHADO. *Univ. Anáhuac Mayab, Univ. Anáhuac Mayab, Polytechnic Inst. of Porto, Med. Sch. Hamburg, Inst. of Psychiatry Federal Univ. of Rio de Janeiro*.
- 3:00 JJ15 **239.11** ▲ Social interaction promotes cataplexy in orexin knock out mice. D. M. HAWRYLUK*; C. E. MAHONEY; T. E. SCAMMELL. *Beth Israel Deaconess Med. Ctr.*
- 4:00 JJ16 **239.12** Dynamic sleep modulation in mice through ambient temperature control. A. AJWAD; D. HUFFMAN; F. YAGHOUBY; H. WANG; B. F. O'HARA; S. SUNDERAM*. *Univ. of Kentucky, Univ. of Kentucky*.
- 1:00 JJ17 **239.13** Temperature modulates sleep spindle frequency *in vivo* and *in silico*. M. CSERNAI*; K. KOCIS; D. BURKA; S. BORBELY; Z. FEKETE; V. BALOGH; S. KALI; Z. EMRI; P. BARTHO. *RCNS, Hungarian Acad. of Sci., Pázmány Péter Catholic Univ., Corvinus Univ. of Budapest, ER, Hungarian Acad. of Sci., ER, Hungarian Acad. of Sci., IEM, Hungarian Acad. of Sci., Eszterhazy Karoly Univ.*
- 2:00 JJ18 **239.14** Optogenetic activation of glutamatergic neurons in the PPT promotes arousal. D. KROEGER*; J. A. THUNDERCLIFFE; L. ZHU; E. ARRIGONI; T. E. SCAMMELL. *BIDMC / Harvard Univ., BIDMC / Harvard Univ.*

POSTER

239. Sleep: Regulators

Theme F: Integrative Physiology and Behavior

Sun. 1:00 PM – Walter E. Washington Convention Center, Halls A-C

- 1:00 JJ5 **239.01** Arc function in sleep. A. SUZUKI*; R. W. GREENE. *UT Southwestern Med. Ctr., UTSW & VAMC*.
- 2:00 JJ6 **239.02** ▲ Effects of histone demethylation or histone methylation inhibition in sleep in rats. M. J. FRANCO-TORMO*; N. BARBOSA-ROCHA; H. BUDDE; S. MACHADO; E. MURILLO-RODRÍGUEZ. *Escuela De Medicina, Univ. Anáhuac Mayab, Intercontinental Neurosci. Res. Group, Intercontinental Neurosci. Res. Group, Escuela de Medicina, Univ. Anáhuac Mayab*.
- 3:00 JJ7 **239.03** Effects of ghrelin on the locus coeruleus neurons in rats. J. KIM*; D. SHIMA; Y. IKAI; T. TAJIMA; K. NAKAJIMA. *Univ. of Toyama*.

* Indicated a real or perceived conflict of interest, see page 137 for details.
 ▲ Indicates a high school or undergraduate student presenter.
 * Indicates abstract's submitting author

- 3:00 JJ19 **239.15** • Optogenetic excitation of parvalbumin containing GABAergic neurons in the mouse thalamic reticular nucleus: A comparison of laser protocols to induce naturalistic sleep spindles. F. KATSUKI*; J. M. MCNALLY; S. THANKACHAN; D. S. UYGUN; J. T. MCKENNA; R. E. BROWN; R. E. STRECKER; R. BASHEER; R. W. MCCARLEY. *VA Boston Healthcare System/Harvard Med. Sch.*
- 4:00 JJ20 **239.16** • Activation of inhibitory inputs to TRN modulates sleep spindles and NREM sleep: An optogenetic investigation into basal forebrain parvalbumin neurons role in the control of TRN parvalbumin neurons. S. THANKACHAN*; J. M. MCNALLY; F. KATSUKI; J. T. MCKENNA; R. E. STRECKER; R. E. BROWN; R. BASHEER; R. W. MCCARLEY. *VA Boston Healthcare Sys. & Harvard Med. Sch.*
- 1:00 JJ21 **239.17** • Optogenetic inhibition of basal forebrain parvalbumin GABA neurons implicates these cells as a therapeutic target for treating sleep disturbance in sleep apnea. D. S. UYGUN*; J. M. MCNALLY; J. T. MCKENNA; F. KATSUKI; R. E. STRECKER; R. W. MCCARLEY. *Harvard Med. Sch., VABHS, Harvard Med. Sch., VA Boston Healthcare System/Harvard Med. Sch., VA Boston Healthcare System/Harvard Med. Sch., VABHS & Harvard Med. Sch., VA Boston Healthcare Syst. & Harvard Med. Sch.*
- 2:00 JJ22 **239.18** Bidirectional chemogenetic control of GABA neurons in the tail of the ventral tegmental area modulates arousal in mice. K. VLASOV*; J. PEI; N. E. TAYLOR; C. J. VAN DORT; J. A. GUIDERA; E. N. BROWN; K. SOLT. *MIT, Massachusetts Gen. Hosp., Harvard Med. Sch., MIT.*
- 3:00 JJ23 **239.19** Developmental ethanol induced sleep fragmentation, behavioral hyperactivity, and parvalbumin cell loss are prevented by lithium co-treatment. M. SAITO*; M. ILINA; J. BETZ; K. MASIELLO; M. HUI; D. A. WILSON. *Nathan S Kline Inst., NYU school of medicine, NYU school of medicine.*
- 4:00 JJ24 **239.20** Preventing locus coeruleus silences during sleep alters learning and sleep spindle density. K. SWIFT*; B. A. GROSS; G. R. POE. *UCLA, UCLA, UCLA.*
- 1:00 JJ25 **239.21** Activation of layer 1 neurogliaform cells promotes sleep slow waves. K. PEELMAN*; C. M. FUNK; W. MARSHALL; C. CIRELLI; G. TONONI. *Univ. of Wisconsin - Madison.*
- 2:00 JJ26 **239.22** Hypothalamic arcuate nucleus neurons that regulate energy homeostasis can also influence sleep/wake behavior. N. GOLDSTEIN; K. LOY; B. LEVINE; O. MEYERSON; W. DUKE; A. JAMNIK; M. CARTER*. *Williams Col.*
- 3:00 JJ27 **239.23** Discrete roles for SuM neuronal subpopulations in the regulation of sleep-wake and EEG activity in mice. N. P. PEDERSEN*; A. VENNERS; L. FERRARI; E. ARRIGONI; C. B. SAPER; P. M. FULLER. *Emory Univ., Harvard Med. Sch., Beth Israel Deaconess Med. Ctr. - Harvard Med. Sch., Harvard Med. Sch. Dept. of Neurol., Harvard Med. Sch. Dept. of Neurol., Harvard Med. Sch.*
- 4:00 JJ28 **239.24** Subject-specific parameters may be of importance in improving the performance of an automatic sleep spindle detector. J. CHOI*; S. HAN; M. KWON; H. SEO; S. JANG; K. WON; S. C. JUN. *Gwangju Inst. of Sci. and Technol., Gwangju Inst. of Sci. and Technol.*
- 1:00 JJ29 **239.25** MicroRNAs are cross-species markers of sleep loss in humans and rats. N. GOEL*; D. M. TAYLOR; T. ABEL; W. D. S. KILLGORE; J. PEARSON-LEARY; S. BHATNAGAR. *Univ. Pennsylvania Sch. Med., Children's Hosp. of Philadelphia, Univ. of Iowa, Univ. of Arizona, Children's Hosp. of Philadelphia, Univ. Pennsylvania, Children's Hosp Philadelphia.*
- 2:00 JJ30 **239.26** Presynaptic cholinergic suppression of parahypoglossal glutamatergic input to hypoglossal motoneurons. L. ZHU*; L. FERRARI; D. PARK; N. CHAMBERLIN; E. ARRIGONI. *Beth Israel Deaconess Med. Center/ Harvard Med. Sch.*

POSTER

240. Sleep: Systems

Theme F: Integrative Physiology and Behavior

Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*

- 1:00 KK1 **240.01** Sleep deprivation increases alcohol-induced sensitivity and mortality in *Drosophila*. A. K. DENOBREGA*; E. J. NOAKES; A. P. MELLERS; L. C. LYONS. *Florida State Univ.*
- 2:00 KK2 **240.02** State-dependent brain cFos expression in perinatal chickens. M. POMPEIANO*; D. MARTINEZ-GONZALEZ; A. CHAN; S. SALAHUDDIN; A. YIP; Y. LIN; G. WANG; N. C. RATTENBORG; E. BALABAN. *Dept. Psychology, McGill Univ., Max Planck Inst. for Ornithology.*
- 3:00 KK3 **240.03** Selective arousal patterns evoked by somatosensory and midline thalamic stimulations. G. S. KOMLOSI*; F. MATYAS; P. BARTHO; A. JASZ; K. KOCSIS; B. BARSY; V. KANTI; A. MAGYAR; L. ACSADY. *Inst. of Exptl. Med. HAS, Inst. of Cognitive Neurosci. and Psychology, Res. Ctr. for Natural Sci., Res. Ctr. For Natural Sci., Roska Tamás Doctoral Sch. of Sci. and Technology, Fac. of Information Technol. and Bionics, Pázmány Péter Catholic Univ., János Szentágothai Sch. of Neurosciences, Semmelweis Univ.*
- 4:00 KK4 **240.04** Brain structures and sleep transitions: Comparing EEG and LFP recordings. C. N. OYANEDEL*; E. DURÁN; N. NIETHARD; M. INOSTROZA; J. BORN. *Univ. of Tübingen, Intl. Max Planck Res. Sch., Pontificia Univ. Católica de Chile, Univ. of Tübingen.*
- 1:00 KK5 **240.05** Corticothalamic effect on thalamic neurons. V. BALOGH*; S. BORBÉLY; M. CSERNAI; P. BARTHÓ. *RCNS, Hungarian Acad. of Sci.*
- 2:00 KK6 **240.06** Cortical layer 6 regulates network state. S. BORBÉLY*; V. BALOGH; M. CSERNAI; D. BURKA; P. BARTHÓ. *RCNS, Hungarian Acad. of Sci.*
- 3:00 KK7 **240.07** GABAergic neurons in the preoptic hypothalamus project to midbrain structures involved in arousal state control. K. HSIEH; S. KUMAR; M. H. CHASE; R. S. SZYMUSIAK*. *V.A. Greater Los Angeles Healthcare Syst., VA Greater Los Angeles Healthcare Syst., Webosciences Intl., UCLA/VA Greater Los Angeles.*
- 4:00 KK8 **240.08** Neuronal firing of mesopontine tegmental area regulating initiation and termination of paradoxical sleep. Y. KOYAMA*; C. SEI; S. MATSUDA; K. TAKAHASHI. *Fukushima Univ., Fukushima Med. Univ.*

- 1:00 KK9 **240.09** Understanding Sleep: Sleep-Wake cycle-dependent discharge patterns from simultaneous Multi-site Multi-modal recordings of NREM, REM, and Wake regulatory structures in freely behaving animals. F. BAHARI*; M. W. BILLARD; J. KIMBUGWE; K. D. ALLOWAY; B. J. GLUCKMAN. *Pennsylvania State Univ., Pennsylvania State Univ.*
- 2:00 KK10 **240.10** Understanding sleep: Methodology for simultaneous multi-site multi-modal recordings from NREM, REM, and wake regulatory structures in freely-behaving animals. M. W. BILLARD*; F. BAHARI; J. KIMBUGWE; K. D. ALLOWAY; B. J. GLUCKMAN. *Penn State, Penn State.*
- 3:00 KK11 **240.11** Decline of long-range temporal correlations during sustained wakefulness in the human brain. K. BAILEY*; P. ACHERMANN; D. PLENZ; C. MEISEL. *Natl. Inst. of Mental Hlth., Univ. of Zurich, Natl. Inst. of Mental Health, NIH, NIMH.*
- 4:00 KK12 **240.12** A dichotomous interplay between long- and short-range temporal correlations shapes cortex dynamics across vigilance states. C. MEISEL*; V. VYAZOVSKIY; D. PLENZ; C. MEISEL. *NIMH, Univ. of Oxford, Natl. Inst. of Mental Health, NIH.*
- 1:00 KK13 **240.13** Sleep-wake state dependence of Ca-permeable AMPA receptor expression in the rat cortex. A. KARASHIMA*; Y. MASUDA; A. NAKAMURA; H. TSUBOKAWA; N. KATAYAMA; M. NAKAO. *Tohoku Inst. of Technol., Tohoku Univ., Tohoku Fukushi Univ.*
- 2:00 KK14 **240.14** Development and evaluation of an automated sleep spindle detection procedure for rodent EEG recordings. R. E. STRECKER*; J. M. MCNALLY; F. KATSUKI; D. UYGUN; S. THANKACHAN; D. D. AGUILAR; R. E. BROWN; R. BASHEER; R. W. MCCARLEY. *VABHS & Harvard Med. Sch., VABHS, Harvard Med. Sch.*
- 3:00 KK15 **240.15** ▲ Noradrenergic termination patterns on pontomedullary hypoglossal premotor neurons. C. BOYLE; A. PARKAR; L. KUBIN*. *Univ. of Pennsylvania.*
- 4:00 KK16 **240.16** Brain state dependent firing rate modulation in single neurons of naturally sleeping rats. D. I. KAPLAN; G. DORON*; J. SHIN; J. SEIBT; M. E. LARKUM. *Humboldt Univ. of Berlin, Univ. of Surrey.*
- 1:00 KK17 **240.17** Characterizing network dynamics differentiating fast and slow cortical spindles using electrocorticography (ECoG). K. GANGULY*; E. F. CHANG; N. NATRAJ. *UCSF, UCSF, Univ. of California, San Francisco, Mission B.*
- 2:00 KK18 **240.18** Self-monitoring of myoclonic twitches by the inferior olive and lateral reticular nucleus: Evidence of corollary discharge. D. MUKHERJEE*; G. SOKOLOFF; M. S. BLUMBERG. *Univ. of Iowa.*
- 3:00 KK19 **240.19** Myoclonic twitches during active sleep drive coordinated activity in the newborn rat cortico-hippocampal network. C. DEL RIO BERMUDEZ*; J. KIM; G. SOKOLOFF; M. S. BLUMBERG. *Univ. of Iowa.*
- 4:00 KK20 **240.20** Transient prefrontal delta activities and their dynamics during REM sleep in mice. B. KIM*; J. CHOI. *Korea Inst. of Sci. and Technol., Korea Inst. of Sci. and Tech. (KIST).*
- 1:00 KK21 **240.21** Oxytocin neurons promote wake in a mouse model of Prader-Willi Syndrome. C. E. MAHONEY*; D. M. HAWRYLUK; V. GRINEVICH; T. E. SCAMMELL. *Beth Israel Deaconess Med. Ctr., German Cancer Res. Ctr.*
- 1:00 DP09/KK22**240.22** (Dynamic Poster) Visualizing MCH neurons and their projections using CLARITY. P. J. SHIROMANI*; S. LUO; C. A. BLANCO-CENTURION; M. LIU; C. F. ELIAS. *Ralph H Johnson VA Med. Ctr., Cornell Univ., MUSC, MUSC, Univ. of Michigan.*
- 3:00 KK23 **240.23** An instrumented volume for continuous neurobehavioral tracking system in unrestrained non-human primates. S. QIAO*; A. L. ORSBORN; A. P. DORA; J. KLEINBART; B. PESARAN. *New York Univ., New York Univ.*
- 1:00 DP10/KK24**240.24** (Dynamic Poster) Automatic sleep stage classification using only electrocardiography (ECG) data, deep learning, and a novel and robust R wave detection algorithm. A. M. JONES*; B. R. SHETH. *UTHealth, Univ. of Houston.*
- 1:00 KK25 **240.25** Network topology of slow wave propagation during NREM sleep: Evidence from human intracranial EEG. L. D. HARRIGER*; S. T. HORAN; B. A. MANDER; M. A. YASSA; J. S. LOWENGRUB; R. T. KNIGHT; M. P. WALKER; J. J. LIN. *Univ. of California, Irvine, Univ. of California Irvine, Univ. of California, Berkeley, Univ. of California Irvine Dept. of Neurobio. and Behavior, Univ. of California Irvine, Univ. of California Berkeley, Univ. of California Berkeley, Univ. of California, Irvine.*
- 2:00 KK26 **240.26** Distorted insular responses to the Valsalva maneuver in Obstructive sleep apnea. A. M. AGUILA*; J. A. OGREN; R. AYSOLA; R. KUMAR; R. M. HARPER; P. M. MACEY. *UCLA, UCLA, UCLA, Univ. of California at Los Angeles, UCLA, Univ. of California at Los Angeles, Univ. of California at Los Angeles.*
- 3:00 KK27 **240.27** ● Rise time changes in delta power after sleep restriction. S. J. MORTON*; C. M. DEPNER; E. L. MELANSON; J. R. GUZZETTI; K. P. WRIGHT, Jr. *Univ. of Colorado Boulder, Univ. of Colorado Boulder, Univ. of Colorado Anschutz Med. Campus, Univ. of Colorado Anschutz Med. Campus.*
- 4:00 KK28 **240.28** Regional pattern of high-density electroencephalographic activity in REM sleep behavior disorder. A. VALOMON*; S. G. JONES; B. A. RIEDNER; R. GOODPASTER; G. TONONI; R. M. BENCA; D. T. PLANTE; M. BOLY. *Univ. of Madison Wisconsin, Univ. of Wisconsin Madison, Univ. of Wisconsin Madison, Univ. of Wisconsin Med. Fndn., Univ. of California Irvine, Univ. of Madison Wisconsin, Univ. of Madison Wisconsin.*

POSTER

241. Sleep: Behavior

Theme F: Integrative Physiology and Behavior

Sun. 1:00 PM – Walter E. Washington Convention Center, Halls A-C

- 1:00 KK29 **241.01** Conserved neuropeptides drive stress-induced sleep in *C. elegans*. R. D. NATH*; P. W. STERNBERG. *Caltech.*
- 2:00 KK30 **241.02** ▲ Dopaminergic modulation of sleep is independent of feeding in *Drosophila*. M. DRISCOLL*; V. COLEMAN; D. SITARAMAN. *Univ. of San Diego.*
- 3:00 KK31 **241.03** Sleep in crayfish: Relationships between brain electrical activity and autonomic variables. M. OSORIO-PALACIOS; K. MENDOZA-ANGELES*; J. HERNÁNDEZ-FALCÓN. *Univ. Nacional Autónoma De México.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 4:00 KK32 **241.04** The best-fitted: Sensory responses in crayfish depend on its hierarchical level. E. G. IBARRA CORONADO*; K. MENDOZA-ANGELES; J. HERNANDEZ-FALCON. *Inst. De Investigaciones Biomedicas, UNAM, Univ. Nacional Autónoma De México, Univ. Nacional Autónoma De México.*
- 1:00 DP11/KK33 **241.05** (Dynamic Poster) Functional brain imaging in zebrafish during sleep and wake. A. ANDREEV*; S. E. FRASER; T. V. TRUONG. *Translational Imaging Ctr., USC, USC.*
- 2:00 KK34 **241.06** Identification of two sleep states in the tegu lizard, *Salvator merianae*. P. LIBOUREL*; B. BARILLOT; S. ARTHAUD; B. MASSOT; A. MOREL; O. BEUF; A. HERREL; P. LUPPI. *CRNL, INL, CREATIS, MNHN.*
- 3:00 KK35 **241.07** A parrot species has complex sleep structure in common with mammals and songbirds. S. CANAVAN*; D. MARGOLIASH. *Univ. of Chicago, Univ. of Chicago, Univ. of Chicago, Univ. of Chicago.*
- 4:00 KK36 **241.08** Spiny mice (*Acomys cahirinus*) have distinct activity patterns and sleep with their eyes open. C. WANG*; L. E. GUERRIERO; K. JUNG; A. A. AJWAD; D. M. HUFFMAN; J. E. GILES; S. SUNDERAM; M. E. KLEINMAN; A. W. SEIFERT; B. F. O'HARA. *Univ. of Kentucky, Univ. of Kentucky, Univ. of Kentucky.*
- 1:00 LL1 **241.09** • Effect of GAD67 deletion in the thalamic reticular nucleus on sleep spindle activity. H. MIWA*; R. BASHEER; H. BOUAOUA; D. S. UYGUN; J. T. MCKENNA; J. M. MCNALLY; R. E. STRECKER; R. W. MCCARLEY; R. E. BROWN. *Harvard medical Sch.*
- 2:00 LL2 **241.10** Basal forebrain cholinergic neurons are vital for cortical desynchronization and behavioral arousal observed after nicotine consumption. A. SHARMA*; R. SHARMA; C. MACKEY; P. SAHOTA; M. THAKKAR. *Univ. of Missouri/Va Med. Ctr.*
- 3:00 LL3 **241.11** Gender differences in sleep homeostasis: Chemogenetic approach to examine the role of melanin concentrating hormone. R. SHARMA*; A. SHARMA; C. MACKEY; P. SAHOTA; M. THAKKAR. *Univ. of Missouri/Va Med. Ctr., Univ. of Missouri/VA Med. Ctr.*
- 4:00 LL4 **241.12** Chronic REM sleep restriction alters body weight and food intake in male rats. A. K. LEON-OLGUIN; N. MENDOZA-ELIZALDE; J. VELAZQUEZ-MOCTEZUMA; A. JIMENEZ-ANGUIANO*. *Univ. Autonoma Metropolitana-Iztapalapa.*
- 1:00 LL5 **241.13** The essential role of microglia in regulating sleep structure in mice. H. LIU*; X. LIANG; Q. XIONG. *SUNY At Stony Brook.*
- 2:00 LL6 **241.14** Characterizing sleep state respiration changes after spinal cord injury using non-contact electric field sensors. H. KLOEFKORN*; C. MACDOWELL; M. SAWCHUK; B. GOOLSBY; M. HALDER; S. HOCHMAN. *Emory Univ.*
- 3:00 LL7 **241.15** The role of M1 intrinsically photosensitive retinal ganglion cells in the light induction of sleep in mice. M. REN*; J. LI; F. TUREK; T. M. SCHMIDT. *Northwestern Univ.*
- 4:00 LL8 **241.16** Cortical firing dynamics during consolidation of sleep-dependent visual plasticity. B. C. CLAWSON*; J. DURKIN; A. K. SURESH; C. BROUSSARD; E. J. PICKUP; S. J. ATON. *Univ. of Michigan, Univ. of Michigan, Univ. of Chicago, Univ. of Michigan.*
- 1:00 LL9 **241.17** The effects of circadian disruption by inappropriately-timed melatonin influences sleep quality, cognitive control and changes in diffusion tensor imaging (DTI). J. F. DESOUZA*; C. G. H. STEEL; S. E. LEUNG. *York Ctr. For Vision Res., York Univ.*
- 2:00 LL10 **241.18** • ▲ Cognitive and sleep/wake architecture abnormalities in *Cntnap2* and *Fmr1* knockout rat models of autism spectrum disorders. C. K. JONES*; L. S. SCHMIDT; C. S. BERTSCH; M. BUBSER; B. GUNTER; R. W. GOULD. *Vanderbilt Univ. Med. Ctr., Vanderbilt Univ. Med. Ctr., Vanderbilt Univ. Med. Ctr.*
- 3:00 LL11 **241.19** Mycobacterium vaccae enhances sleep and counteracts effects of stress and sleep disruption in mice. S. LAMBERT*; S. J. BOWERS; C. J. OLKER; E. SONG; K. P. WRIGHT; M. FLESHNER; C. A. LOWRY; M. VITATERNA; F. W. TUREK. *Northwestern Univ., Univ. of Colorado Boulder.*
- 4:00 LL12 **241.20** Sleep deprivation and voluntary alcohol consumption in adult rats. C. M. COWAN*; N. MACK; S. SEQUEIRA; K. PONDER; D. HOLT; J. DYCHE. *James Madison Univ., James Madison Univ., James Madison Univ.*
- 1:00 LL13 **241.21** Hypocretin (Orexin) signaling is critical in sustaining theta/gamma-rich waking behaviors. A. VASSALLI*; P. FRANKEN; S. LI; M. TAFTI. *Univ. of Lausanne.*
- 2:00 LL14 **241.22** A causal role for sleep in resilience to chronic social defeat stress. C. L. GRAY*; B. BUSH; J. SANCHEZ; K. N. PAUL; J. C. EHLEN. *Morehouse Sch. of Med., UCLA.*
- 3:00 LL15 **241.23** Implication of 4E-BP1 and 4E-BP2 in sleep architecture and electroencephalographic activity. C. C. AREAL*; R. CAO; N. SONENBERG; V. MONGRAIN. *Hôpital Du Sacré-Coeur De Montréal, Univ. de Montréal, Univ. of Minnesota Med. Sch., McGill Univ., Hôpital du Sacré-Coeur de Montréal.*
- 4:00 LL16 **241.24** Sleep quantity influences stress perception, daytime sleepiness, and depressive symptoms. R. WILLIAMSMORRIS*; T. RAMBANA; R. ROBERTS. *Southern Adventist Univ., Southern Adventist Univ.*
- 1:00 LL17 **241.25** A nap but not quiet rest prevents local EEG changes induced by intensive training with a motor adaptation task. A. B. NELSON*; R. MEHRARAM; S. RICCI; E. TATTI; P. PANDAY; M. BOSSINI-BAROGGI; B. ARULEBA; G. TONONI; C. CIRELLI; M. F. GHILARDI. *CUNY Med. Sch., Univ. of Genoa, Univ. of Wisconsin-Madison.*
- 2:00 LL18 **241.26** Intensive training with a visual learning task induces local increases of EEG low frequencies during a test with similar characteristics. E. TATTI*; S. RICCI; A. B. NELSON; J. LIN; P. PANDAY; M. GADALLA; J. BORKOWSKI; G. TONONI; C. CIRELLI; M. F. GHILARDI. *CUNY Sch. of Med., Univ. of Wisconsin-Madison.*
- 3:00 LL19 **241.27** Intensive practice induces progressive task-specific changes in the spontaneous EEG during rest. S. RICCI*; A. B. NELSON; J. LIN; P. PANDAY; R. MEHRARAM; B. O. THOMSON; H. CHEN; C. CIRELLI; G. TONONI; M. F. GHILARDI. *CUNY Med. Sch., Dept. of Informatics, Bioengineering, Robotics and Syst. Engineering, Univ. of Genoa, Univ. of Wisconsin-Madison.*
- 4:00 LL20 **241.28** The effect of previous night sleep on the psychomotor vigilance boost following meditation. L. E. GUERRIERO*; S. S. JOSHI; W. NOWAK; B. F. O'HARA. *Univ. of Kentucky.*

- 1:00 LL21 **241.29** What is in your sleep? Test-retest reliability, age and gender differences in sleep stages and their potential consequences for brain health. S. B. DEMIRAL*; K. KE*; T. SRIVASTAVA*; A. ZEHRA*; V. RAMIREZ*; C. FREEMAN*; C. WEIRS*; G. B. WANG*; N. D. VOLKOW. *NIH, NIH/NIDA*.
- 2:00 LL22 **241.30** Consequences of the extreme nocturnality of the Uruguayan youth. A. SILVA*; I. ESTEVAN; D. SIMÓN; B. PANNUNZIO; B. TASSINO. *Lab. De Neurociencias, Facultad De Ciencias, 2Programa de Neuropsicología y Neurobiología, Facultad de Psicología, Udelar, Lab. de Evolución y Organización del Genoma, Facultad de Ciencias, Udelar, Sección Etología, Facultad de Ciencias, Udelar*.
- POSTER**
- 242. Appetitive and Incentive Learning and Memory I**
- Theme G: Motivation and Emotion**
- Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*
- 1:00 LL23 **242.01** Temporally-defined optogenetic activation of the infralimbic cortex attenuates the renewal of Pavlovian sucrose-seeking. F. R. VILLARUEL*; N. CHAUDHRI. *Concordia Univ.*
- 2:00 LL24 **242.02** Increased sign-tracking behavior and incentive salience in adolescent rats. N. E. DEANGELI*; S. B. MILLER; H. C. MEYER; D. J. BUCCI. *Dartmouth Col., Weill Cornell Med.*
- 3:00 LL25 **242.03** Theophylline blocks the acquisition of inverse incentive learning in rodents. J. F. ROCCA*; R. J. BENINGER. *Queen's Univ.*
- 4:00 LL26 **242.04** Blocking NMDA receptors in the nucleus accumbens interferes with appetitive conditioning: What are the specific effects on learning and learning-related neuronal activity? M. VEGA VILLAR*; J. C. HORVITZ; S. M. NICOLA. *The Grad. Center, CUNY, Albert Einstein Coll Med., City Col.*
- 1:00 LL27 **242.05** Striatal action-value neurons reconsidered. L. ELBER-DOROZKO*; Y. LOEWENSTEIN. *Hebrew Univ.*
- 2:00 LL28 **242.06** Resolving ambiguity to facilitate extinction learning in sign-trackers and goal-trackers. C. CARR*; T. E. ROBINSON. *Univ. of Michigan, Univ. of Michigan Dept. of Psychology.*
- 3:00 LL29 **242.07** Chemogenetic activation/inhibition of dorsal vagal complex (DVC) regulates feeding and energy homeostasis in ChAT-cre mice. C. NAMKOONG*; H. SONG; M. KIM; Y. LEE; J. LEE; D. CHEON; H. SONG; J. SOHN; S. SEONG; H. CHOI. *Seoul Natl. Univ. College of Med., Neurosci. Res. Inst., BK21Plus Biomed. Sci. Project Team, KAIST, Wide River Inst. of Immunol.*
- 4:00 LL30 **242.08** Changes in appetitive associative strength modulates nucleus accumbens, but not orbitofrontal cortex neuronal ensemble excitability. E. KOYA*; S. HESSLER; M. C. SIEBURG; G. MARGETTS-SMITH; H. S. CROMBAG; J. J. ZIMINSKI. *Univ. of Sussex.*
- 1:00 LL31 **242.09** The glycine alpha 2 receptor is required for adequate reward-motivated behavior. E. PICCART*; J. DEVOGHT; R. J. HARVEY; J. RIGO; B. BRONE. *Uhasselt, UCL Sch. of Pharm.*
- 2:00 LL32 **242.10** Stop the clock: Optogenetic activation of the GABAergic nigroretinal pathway resets interval timing. K. TODA*; N. A. LUSK; G. D. WATSON; D. LU; W. H. MECK; H. H. YIN. *Duke Univ., Natl. Inst. of Advanced Industrial Sci. and Technol., Japan Society for the Promotion of Sci., Duke Univ.*
- 3:00 LL33 **242.11** Role of lateral habenula in the process that reward prediction error in Pavlovian appetitive conditioning. D. KIM*; B. CHOI; J. HAN. *Konkuk Univ.*
- 4:00 MM1 **242.12** Role of dopamine (DA) on honey bee foraging decisions. F. NOEL*, SR; T. GIRAY; A. PADILLA; J. AGOSTO R.; C. SEIDE; S. FELICIANO; J. ALEMÁN RÍOS; W. NORZE; M. PEREZ TORRES. *Univ. of Puerto Rico.*
- 1:00 MM2 **242.13** Characterising the effects of devaluation on cue-evoked neuronal ensemble activity and its underlying excitability properties in the nucleus accumbens. M. C. SIEBURG*; G. MARGETTS-SMITH; L. S. BREBNER; J. J. ZIMINSKI; H. S. CROMBAG; E. KOYA. *Univ. of Sussex.*
- 2:00 MM3 **242.14** Role of dissociable basolateral amygdala pathways in sign- And goal-tracking behaviors. H. M. NASSER*; E. N. LESSER; D. S. LAFFERTY; S. Z. BACHARACH; D. J. CALU. *Univ. of Maryland.*
- 3:00 MM4 **242.15** CB1 receptor activation is required for sign- and goal-tracking behaviors early in Pavlovian lever autoshaping. S. Z. BACHARACH*; H. M. NASSER; H. M. DANTRASSY; N. E. ZLEBNIK; J. F. CHEER; D. J. CALU. *Univ. of Maryland Sch. of Med.*
- 4:00 MM5 **242.16** Alternative splicing of KCNIP4 in dopamine VTA neurons controls the dynamics of learning from reward omission. K. M. COSTA*; J. ROEPER. *Goethe Univ., Max Planck Inst. for Brain Res.*
- 1:00 MM6 **242.17** Nucleus Accumbens D1 receptor expressing neurons control autoshaping behavior. T. MACPHERSON*; T. HIKIDA. *Kyoto Univ., Osaka Univ.*
- 2:00 MM7 **242.18** Basolateral amygdala-medial prefrontal cortex circuitry regulates behavioral flexibility during Pavlovian appetitive reversal learning, but not during discriminative conditioning or conditioned taste aversion. S. E. KEEFER*; G. D. PETROVICH. *Boston Col.*
- 3:00 MM8 **242.19** Glutamatergic projections to the nucleus accumbens shell regulate response strategy selection. J. M. BARKER*; K. G. BRYANT; A. MONTIEL-RAMOS; L. CHANDLER. *Med. Univ. of South Carolina, Med. Univ. of South Carolina, Univ. Of Puerto Rico Med. Sci. Campus, Med. Univ. S Carolina.*
- 4:00 MM9 **242.20** Infralimbic cortex regulation of reduced outcome expectancy. A. USYPCHUK, H4B 1R6; M. NICOLOSSI; B. P. LAY; M. D. IORDANOVA*. *Concordia Univ., Concordia University, Concordia Univ.*
- 1:00 MM10 **242.21** Characterising medial prefrontal cortex neuronal ensemble recruitment patterns during appetitive conditioning. L. S. BREBNER*; T. G. HEINTZ; L. LAGNADO; J. HIRRLINGER; C. N. HALL; E. KOYA. *Univ. of Sussex, Univ. of Leipzig.*
- 2:00 MM11 **242.22** Preadolescent treatment with MK-801 and effect on adolescent operant acquisition and extinction. M. R. HOLAHAN*; K. GOHEEN; K. HUDAK. *Carleton Univ., Carleton Univ.*
- 3:00 MM12 **242.23** Molecular profiling of an insular - amygdala circuit in feeding behavior. S. A. STERN*; E. P. AZEVEDO; K. DOERIG; J. M. FRIEDMAN. *Rockefeller Univ., Howard Hughes Med. Inst.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

4:00 MM13 **242.24** Neural correlates in basolateral and central amygdala during responding for reward in the face of punishment. Y. PELLOUX*; B. F. SADACCA; A. M. MINIER-TORIBIO; Y. SHAHAM; G. SCHOENBAUM. *NIDA IRP, NIDA IRP.*

POSTER

243. Fear and Aversive Learning and Memory: Acquisition

Theme G: Motivation and Emotion

Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*

- 1:00 MM14 **243.01** Chemogenetic interrogation of cell type specific translation in fear memories. P. SHRESTHA*; P. AYATA; P. M. HERRERO-VIDAL; F. LONGO; A. GASTONE; N. HEINTZ; E. KLANN. *NYU, Mount Sinai, New York Univ., New York Univ., NYU, Rockefeller Univ.*
- 2:00 MM15 **243.02** ASIC1A in neurons is critical for fear-related behaviors. R. J. TAUGHER*; Y. LU; R. FAN; A. GHOBBEH; C. J. KREPLE; F. M. FARACI; J. A. WEMMIE. *Univ. of Iowa, Dept. of Veterans Affairs Med. Ctr., Univ. of Iowa, The Univ. of Iowa, Univ. of Iowa, The Univ. of Iowa, The Univ. of Iowa, The Univ. of Iowa.*
- 3:00 MM16 **243.03** Neural responses to aversive conditioned stimuli at ultra-high field. A. X. GORKA*; S. TORRISI; M. ERNST; C. GRILLON. *NIH, Natl. Inst. of Mental Hlth., NIMH-NIH, Natl. Inst. of Mental Hlth.*
- 4:00 MM17 **243.04** Attachment primes reduce the acquisition of fear-potentiated startle. M. KOKKINOS*; B. J. LIDDELL; R. A. BRYANT. *Univ. of New South Wales.*
- 1:00 MM18 **243.05** Unconditioned fear and contextual conditioning of syrian hamsters exposed to natural predator odors. C. M. MARKHAM*; M. EDWARD; M. SMITH; J. BEST; J. BYRD; T. LACEY. *Morehouse Col., Spelman Col., Morehouse Col.*
- 2:00 MM19 **243.06** Microinfusion of serotonin 5-HT_{2C} receptor antagonist at the RMTg blocks cocaine conditioned avoidance. Y. S. CHAO*; M. EID; D. PULLMANN; H. LI; T. JHOU. *Med. Univ. of South Carolina.*
- 3:00 MM20 **243.07** Encoding of discriminative fear memory by input-specific LTP in the amygdala. J. CHO; W. KIM. *Univ. of California.*
- 4:00 MM21 **243.08** Infralimbic cortex is involved in encoding operant overtraining in the fear incubation task. A. PAJSER*; B. GAEDDERT; H. FISHER; C. LONG; P. KALLENBERGER; A. LIMOGES; C. L. PICKENS. *Kansas State Univ.*
- 1:00 MM22 **243.09** Conditioned fear modulates sensory responsiveness: Neural mechanisms revealed by simultaneous EEG-fMRI. S. YIN*; Y. LIU; M. DING; A. KEIL. *Univ. of Florida, Univ. of California Davis Ctr. for Mind and Brain, Univ. Florida.*
- 2:00 NN1 **243.10** MicroRNA expression in the dorsal striatum after tone fear conditioning task. J. C. SOARES*; J. FERNANDES; T. L. FERREIRA; M. G. M. OLIVEIRA. *Univ. Federal de São Paulo, Univ. Federal de São Paulo, Univ. Federal do ABC.*
- 3:00 NN2 **243.11** The study of the amygdalar and hippocampal functions in zebrafish. K. KAWAKAMI*; H. TANABE; P. LAL. *Natl. Inst. of Genet., SOKENDAI (The Grad. Univ. for Advanced Studies), Norwegian Univ. of Sci. and Technol.*

4:00 NN3 **243.12** Spatial information acquired during training is critical to the inhibitory avoidance learning under dexmedetomidine-induced anesthesia in rats. H. HSIAO*; D. CHEN. *Natl. Cheng Kung Univ.*

1:00 NN4 **243.13** Differential effects of NMDA receptors activation in the insular cortex during inhibitory avoidance and its latent inhibition. M. J. OLVERA-CALTZONTZIN*; M. MIRANDA. *Univ. Nacional Autonoma De Mexico Facultad De Medicina, Univ. Nacional Autonoma De Mexico.*

POSTER

244. Motivation: Neural Circuits I

Theme G: Motivation and Emotion

Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*

- 1:00 NN5 **244.01** Role of lateral septum input to lateral hypothalamus orexin neurons in cocaine demand. C. PANTAZIS*; B. S. BENTZLEY; M. H. JAMES; G. S. ASTON-JONES. *Rutgers Univ., Stanford Univ., Brain Hlth. Inst.*
- 2:00 NN6 **244.02** Chemogenetic activation of a retinal circuit that activates locus coeruleus neurons prevents the development of light-deprivation induced depression-like behavior. H. E. BOWREY*; M. H. JAMES; A. MOHAMMADKHANI; M. OMRANI; G. KANE; G. ASTON-JONES. *Rutgers Univ., Brain Hlth. Inst.*
- 3:00 NN7 **244.03 ▲** Sex differences in motivation for cocaine: Role of oxytocin. B. LIN*; A. S. KOHTZ; G. S. ASTON-JONES. *Rutgers Univ., Brain Hlth. Inst., Rutgers Univ.*
- 4:00 NN8 **244.04** Inhibiting orexin-1 receptor signaling in ventral pallidum decreases demand for the opioid remifentanyl. A. MOHAMMADKHANI*; C. PANTAZIS; G. ASTON-JONES. *Inst. For Res. In Fundamental Sci. (IPM), Rutgers Univ.*
- 1:00 NN9 **244.05** The role of medial hypothalamus orexin circuits in prescription opioid abuse. J. E. FRAGALE*; K. A. PORTER-STRANSKY; A. MOHAMMADKHANI; C. PANTAZIS; M. H. JAMES; G. S. ASTON-JONES. *Rutgers Univ., Emory Univ., Inst. For Res. In Fundamental Sci. (IPM), Rutgers Univ., Brain Hlth. Inst.*
- 2:00 NN10 **244.06** Attenuating locus coeruleus norepinephrine signaling on extinction day 1 prevents cocaine relapse in female rats. A. S. KOHTZ*; J. F. CATUZZI; G. ASTON-JONES. *Brain Hlth. Inst.*
- 3:00 NN11 **244.07** Dorsal raphe dual serotonin-glutamate neurons drive dopamine release and reward. H. WANG*; J. QI; R. CACHOP; C. MEJIAS-APONTE; C. PALADINI; J. GOMEZ; G. BEAUDOIN; J. F. CHEER; M. F. MORALES. *IRP/NIDA/NIH, NIDA/NIH, Univ. of Maryland Sch. of Med., Univ. of Texas at San Antonio, Univ. of Maryland Sch. of Med., IRP, NIDA, NIH.*
- 4:00 NN12 **244.08** Electrophysiological and pharmacological characterization of Dorsal Raphe glutamatergic neurons. J. A. MIRANDA-BARRIENTOS*; M. F. MORALES. *NIDA, Natl. Inst. on Health, Natl. Inst. on Drug Abuse, IRP, NIDA, NIH.*
- 1:00 NN13 **244.09** Dual serotonin-glutamate neurons establish synapses on ventral tegmental area dopamine neurons that innervate the nucleus accumbens. S. ZHANG*; H. WANG; M. F. MORALES. *Natl. Inst. of Health, Natl. Inst. on Drug Abuse, IRP, IRP/NIDA/NIH, IRP, NIDA, NIH.*

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* Indicates abstract's submitting author

- 2:00 NN14 **244.10** Diverse functions of ventral tegmental area VGluT2 neurons. D. H. ROOT*; R. J. JUZA; M. MORALES. *Natl. Inst. on Drug Abuse Intramural Res. Program.*
- 3:00 NN15 **244.11** Optogenetic stimulation of the medial amygdala generates motivation for natural and drug rewards. E. E. NAFFZIGER*; S. M. WARLOW; K. C. BERRIDGE. *Univ. of Michigan.*
- 4:00 NN16 **244.12** Dangerous desire: Optogenetic central amygdala stimulation amplifies attraction towards rewarding and aversive stimuli. S. M. WARLOW*; E. E. NAFFZIGER; K. C. BERRIDGE. *Univ. of Michigan.*
- 1:00 NN17 **244.13** Optogenetic excitation of the ventral pallidum promotes motivation towards natural rewards. J. OLNEY*; K. C. BERRIDGE. *Univ. of Michigan.*
- 2:00 NN18 **244.14** Investigating corticotropin releasing factor in mediating appetitive behavior. H. M. BAUMGARTNER*; J. J. OLNEY; S. M. WARLOW; J. SCHULKIN; K. C. BERRIDGE. *Univ. of Michigan, Georgetown Univ.*
- 3:00 NN19 **244.15** Red nucleus to VTA glutamatergic pathway: A newfound link between motor and reward circuits. Y. HE*; G. MADEO; H. SHEN; H. ZHANG; G. BI; E. GARDNER; A. BONCI; Z. XI. *Natl. Inst. on Drug Abuse Intramural Res. Program.*
- 4:00 NN20 **244.16** Operant responding for optogenetic excitation of LDTg inputs to the VTA requires D1 and D2 dopamine receptor activation in the NAcc. S. STEIDL*; S. O'SULLIVAN; D. PILAT; N. BUBULA; J. BROWN; P. VEZINA. *Loyola Univ. Chicago, Univ. of Chicago.*
- 1:00 NN21 **244.17** Impairments in laterodorsal tegmentum to VTA projections underlie glucocorticoid triggered reward deficits. B. COIMBRA*; C. SOARES-CUNHA; S. BORGES; N. A. VASCONCELOS; N. SOUSA; A. J. RODRIGUES. *Life and Hlth. Sci. Res. Inst. (ICVS), ICVS/3B's-PT Government Associate Lab.*
- 2:00 NN22 **244.18** Playback of ultrasonic vocalizations modulates firing patterns of single neurons recorded in VTA of male rats. M. VAN WINGERDEN*; M. VAN BERKEL; S. VAN GURP. *Heinrich-Heine Univ. Düsseldorf.*
- 3:00 NN23 **244.19** Systemic and intra-VTA administration of leptin enhances social behavior. J. LIU; X. ZHOU; X. LU*. *Univ. of Texas Hlth. Sci. Ctr. at San Antonio.*
- 4:00 NN24 **244.20** Overconsumption of high-fat diet leads to chow devaluation. W. FOBBS*; A. KRAVITZ. *NIH.*
- 1:00 NN25 **244.21** Optogenetic activation of the lateral preoptic area excites dopamine neurons, supports self-stimulation, and elicits "positive affect" ultrasonic vocalizations. A. G. GORDON; V. RAMACHANDRA; N. MITTAL; C. L. DUVAUCHELLE; M. MARINELLI*. *Univ. of Texas at Austin, Univ. of Texas at Austin.*
- 2:00 NN26 **244.22** Mechanisms of the rostromedial tegmental nucleus (RMTg) responses to aversive stimuli. H. LI*; P. VENTO; D. PULLMANN; M. EID; T. JHOU. *Med. Univ. of South Carolina.*
- 3:00 NN27 **244.23** Addiction-linked drug history results in compulsive appetite for food in males and female rats. A. LAQUE*; A. MATZEU; G. E. WAGNER; G. DE NESS; T. KERR; A. CARROLL; T. C. JHOU; R. C. RITTER; F. WEISS; N. SUTO. *The Scripps Res. Inst., Med. Univ. of South Carolina, Washington State Univ.*
- 4:00 NN28 **244.24** A circuit-based mechanism underlying familiarity signaling and the preference for novelty. S. MOLAS*; R. ZHAO-SHEA; L. LIU; S. DEGROOT; P. D. GARDNER; A. R. TAPPER. *Univ. of Massachusetts Med. Sch.*
- 1:00 NN29 **244.25** ▲ Changes in the activity of ventral tegmental area glutamatergic neurons associated to copulation. N. YAÑEZ RECENDIS*; E. SANCHEZ JARAMILLO; G. RODRIGUEZ-MANZO. *Inst. Nacional De Psiquiatría, Cinvestav-Sede Sur, IPN.*
- 2:00 NN30 **244.26** A novel lateral habenula microcircuit mediating appetitive aggression. M. FLANIGAN*; H. ALEYASIN; B. A. MATIKAINEN-ANKNEY; A. TAKAHASHI; E. S. CALIPARI; S. A. GOLDEN; C. MENARD; M. L. PFAU; G. E. HODES; S. RUSSO. *Icahn Sch. of Med. At Mount Sinai, Univ. of Tsukuba, Natl. Inst. on Drug Abuse, Virginia Polytechnic Inst. and Univ.*

POSTER

245. Affective Disorders: Human Studies

Theme G: Motivation and Emotion

Sun. 1:00 PM – Walter E. Washington Convention Center, Halls A-C

- 1:00 NN31 **245.01** ▲ Cerebrospinal fluid progranulin in depressive disorder. L. FRÖMEL; V. BITTNER; H. HEINZE; P. KÖRTVELYESSY; D. M. BITTNER*. *Otto-von-Guericke Univ. Magdeburg.*
- 1:00 DP12/NN32 **245.02** ● (Dynamic Poster) Relating cortical thickness, serotonin 1a receptor density, and structural connectivity: A multimodal imaging study. R. L. PILLAI*; R. PILLAI*; A. MALHOTRA; D. D. RUPERT; B. WESCHLER; J. C. WILLIAMS; M. ZHANG; J. YANG; J. MANN; M. A. QUENDO; R. V. PARSEY; C. DELORENZO. *Stony Brook Univ., Stony Brook Univ., Stony Brook Univ., Stony Brook Univ., Stony Brook Univ., Columbia Univ.*
- 3:00 NN33 **245.03** A comparison of sleep spindles in major depressive disorder and healthy adults. B. A. GROSS*; G. R. POE; L. M. SWANSON; J. ARNETT. *UCLA, UCLA, Univ. of Michigan, Univ. of Michigan.*
- 4:00 OO1 **245.04** Structural connectivity of the optimal tractography - guided area within subcallosal cingulate cortex of patients with severe major depression treated with electroconvulsive therapy. E. TSOLAKI*; K. NARR; G. HELLEMANN; R. ESPINOZA; N. POURATIAN. *Univ. of California Los Angeles, UCLA, UCLA, UCLA.*
- 1:00 OO2 **245.05** Fronto-limbic connectivity alterations in patients with major depressive disorder. J. W. RUTLAND*; J. W. MURROUGH; R. O'HALLORAN; P. BALCHANDANI. *Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai.*
- 2:00 OO3 **245.06** Examining insula activity during interoceptive recall among individuals diagnosed with major depressive disorder. D. DEVILLE*; J. A. AVERY; K. L. KERR; K. BURROWS; J. BODURKA; M. P. PAULUS; K. SIMMONS. *Laureate Inst. For Brain Res., Univ. of Tulsa, Laureate Inst. for Brain Res., Univ. of Oklahoma, Univ. of Tulsa.*

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* Indicates abstract's submitting author

- 3:00 OO4 **245.07** Present bias in decision making and suicidal ideation among bipolar patients: An fMRI study. J. M. FELICIONE*; S. WALSH; J. LERNER; A. S. WIDGE; Y. LI; F. OR; R. MONTANA; R. FRANKLIN; T. DECKERSBACH; A. NIERENBERG. *Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., Harvard Univ., Univ. of California, Riverside, Harvard Univ., Massachusetts Gen. Hosp.*
- 4:00 OO5 **245.08** A cohort study on the relationship between the risk of mental health disorders and life habits. Y. MASHIO*; T. YOSHIZAKI; M. OTA; H. KAWAGUCHI. *Toyo Univ.*
- 1:00 OO6 **245.09** Psychological health and ADHD profile of adolescent hockey players are influenced by history of concussion and age. W. ARCHAMBAULT*; J. LEPINE; R. D. MOORE; G. LAZANIS; D. ELLEMBERG. *Univ. of Montreal, Univ. of Montreal, Univ. of South Carolina.*
- 2:00 OO7 **245.10** Functional connectivity between the substantia nigra and ventromedial prefrontal cortex is associated with cognitive function in major depressive disorder. S. KOIKE*; Y. NAKAMURA; N. OKADA; K. KASAI. *Univ. of Tokyo, Univ. of Tokyo, Univ. of Tokyo.*
- 3:00 OO8 **245.11** A comparative study of resting-state functional connectivity in first-episode drug-naïve adolescents with major depressive disorder. J. LEE*; Y. LEE; S. PARK; E. SUH; J. LEE; J. KIM; S. SUH; M. LEE. *Dept. of Psychiatry, Korea Univ. Guro Hosp., Dept. of Neurology, Korea Univ. Guro Hosp., Dept. of Radiology, Korea Univ. Guro Hosp.*
- 4:00 OO9 **245.12** A study of network changes during depressive self-referential processing in never-depressed individuals. L. HIMES*; N. HUBBARD; M. P. TURNER; C. ROBINSON; C. ELLISON; R. OPPENHEIMER; B. P. RYPMA. *Univ. of Texas At Dallas, MIT, Univ. of Texas at Dallas, Univ. of Texas at Dallas, Univ. of Texas at Dallas.*
- 1:00 OO10 **245.13** Abnormalities of the fronto-limbic circuit during negative emotion processing in depression. S. TAK*; C. PARK; E. CHEONG; J. SEOK; J. SOHN; C. CHEONG. *Korea Basic Sci. Inst., Chungnam Natl. Univ., Honam Univ.*
- 2:00 OO11 **245.14** Differential alterations of visual and multiple-demand network functional connectivity in major depressive disorder. T. M. LE*; H. LEUNG. *Stony Brook Univ., SUNY Stony Brook.*
- 3:00 OO12 **245.15** Short-term and long-term influences of serotonergic medication on intrinsic functional connectivity. H. T. HAMADA*; Y. SHIMIZU; J. ZENG; K. HIKISHIMA; N. TAKATA; K. F. TANAKA; K. DOYA. *Okinawa Inst. of Sci. & Technol., Keio Univ. Sch. of Med. Dept. of Neuropsychiatry.*
- 4:00 OO13 **245.16** ● Neuronal and peripheral markers of plasticity dynamics, change concomitantly after sub-anesthetic dose of ketamine in humans. L. COLIC; C. W. MCDONNELL; M. LI; O. SPECK; B. H. SCHOTT; M. BIANCHI*; M. WALTER. *Clin. Affective Neuroimaging Lab., Transpharmation Ireland Limited, Dept. of Psychiatry and Psychotherapy, Otto von Guericke Univ. of Magdeburg, Dept. of Behavioral Neurology, Leibniz Inst. for Neurobio., Dept. of Biomed. Magnetic Resonance, Otto von Guericke Univ., Ctr. for Behavioral Brain Sci., Dept. of Psychiatry and Psychotherapy, Charité Universitätsmedizin Berlin, Eberhard Karls Univ. Tuebingen, Max Planck Inst. for Biol. Cybernetics.*
- 1:00 OO14 **245.17** Neuroinflammatory gene expression in hippocampus in major depressive disorder. G. J. MAHAJAN; E. J. VALLENDER; M. R. GARRETT; L. CHALLAGUNDLA; J. C. OVERHOLSER; G. J. JURJUS; L. DIETER; H. BENGHUZZI; C. A. STOCKMEIER*. *Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr., Case Western Reserve Univ., Louis Stokes Cleveland VA Med. Ctr., Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr., Case Western Reserve Univ.*
- 2:00 OO15 **245.18** Epigenetic regulation of glucocorticoid receptor exon 1f in teenage suicide. H. S. RIZAVI*; D. R. GRAYSON; H. ZHANG; G. N. PANDEY. *Univ. Illinois Chicago.*
- 3:00 OO16 **245.19** Neuropeptide processing enzymes of the regulated secretory pathway are decreased in the anterior hippocampus of postmortem depressed subjects. M. WASELUS*; A. MEDINA; C. A. TURNER; W. E. BUNNEY JR; R. M. MYERS; A. F. SCHATZBERG; J. D. BARCHAS; H. AKIL; S. J. WATSON, Jr. *Univ. of Michigan, Univ. of California Irvine Dept. of Psychiatry and Human Behavior, HudsonAlpha Inst. for Biotech., Stanford Univ., Weill Cornell Med. Col.*
- 4:00 OO17 **245.20** Clinical subgroups of patients with bipolar disorder and white matter microstructure: An enigma bipolar disorder fractional anisotropy dti working group mega-analysis. M. E. PAULING*; C. HENRY; S. SARRAZIN; J. HOUENOU. *Neurospin (CEA), INSERM, Hôpitaux Universitaires Mondor, NeuroSpin- CEA.*
- 1:00 OO18 **245.21** Concordant alterations of brain cell-type specific genes in four cohorts of neuropsychiatric patients. L. TOKER*; O. B. MANCARCI; S. TRIPATHY; P. PAVLIDIS. *Univ. of British Columbia.*
- 2:00 OO19 **245.22** Olfactory impairment and sleep disorder may provide early indication of neurodegeneration. Y. MASAOKA*; M. KAWAMURA; M. YOSHIDA; N. KOIWA; A. YOSHIKAWA; M. IDA; K. ONO; A. PHILLIPS; M. IZUMIZAKI. *Showa Univ. Sch. of Med., Showa Univ. Sch. of Med., Jikei Univ. Sch. of Med., Univ. of Human Arts and Sci., Showa Univ. Sch. of Med., Comprehensive Stroke Center, Ebara Hosp., Djavad Mowafaghian Ctr. for Brain Health, Univ. of British Columbia, Showa Univ. Sch. of Med.*
- 3:00 OO20 **245.23** Pharmacological MRI platform for pre-clinical CNS drug discovery. A. SHATILLO*; T. MIETTINEN; J. KEINÄNEN; A. J. NURMI. *Charles River Discovery.*
- 4:00 OO21 **245.24** ▲ Orbitofrontal gray matter and sulcogyral pattern differences in bipolar disorder. B. BLASS*; V. TROIANI. *Geisinger-Bucknell Autism & Developmental Med., Bucknell Univ.*

POSTER

246. Animal Models for Affective Disorders: Mechanisms II

Theme G: Motivation and Emotion

Sun. 1:00 PM – Walter E. Washington Convention Center, Halls A-C

- 1:00 OO22 **246.01** Selectively bred high responder and low responder rats show sex differences in the development of novelty seeking and adult emotional reactivity. E. K. HEBDA-BAUER*; A. V. STEFANOV; S. J. WATSON, Jr.; H. AKIL. *Univ. of Michigan.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

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* Indicates abstract's submitting author

- 2:00 OO23 **246.02** Modulation of neuroligin-2 in the nucleus accumbens alters stress and dominance behaviors. M. HESHMATI*; H. ALEYASIN; C. MENARD; D. J. CHRISTOFFEL; M. FLANIGAN; M. L. PFAU; P. H. GOFF; G. E. HODES; A. TAKAHASHI; A. LEPACK; L. BICKS; R. CHANDRA; M. LOBO; I. MAZE; S. A. GOLDEN; S. J. RUSSO. *Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. At Mount Sinai, Stanford Univ., Icahn Sch. of Med. at Mount Sinai, Univ. of Maryland Baltimore, Univ. of Maryland Sch. of Med., Icahn Sch. of Med. At Mount Sinai, Natl. Inst. on Drug Abuse.*
- 3:00 OO24 **246.03** Modulation of anxiety- and depression-like behaviors by $\alpha 7$ subunit-containing nicotinic acetylcholine receptors in GABAergic neurons of the basolateral amygdala. S. T. PITTENGER*; T. N. MOSE; Y. S. MINEUR; M. R. PICCIOTTO. *Yale Sch. of Med.*
- 4:00 OO25 **246.04** • Effects and underlining mechanisms of short photoperiod on emotions of rats. S. LI*; M. YUAN; L. LU. *Natl. Inst. On Drug Dependence, Peking Univ., Natl. Inst. on Drug Dependence, Peking University, Beijing, China, Inst. of Mental Health, Natl. Clin. Res. Ctr. for Mental Disorders, Key Lab. of Mental Hlth. and Peking Univ. Sixth Hospital, Peking University, Beijing, China; Natl. Inst. on Drug Dependence, Peking University, Beijing; Peking-Tsinghua Ctr. for Life Sci. and PKU-IDG/McGovern Inst. for Brain Research, Peking University, Beijing, China.*
- 1:00 OO26 **246.05** Effects of short-term inhibition of kappa-opioid receptor on prevention and reversal of depression-like behavior. A. WILLIAMS*; A. LAMAN-MAHARG; C. V. ARMSTRONG; B. C. TRAINOR. *Univ. of California Davis, Univ. of California Davis, Univ. of California Davis.*
- 2:00 OO27 **246.06** Gadd45b mediate depressive-like role through DNA demethylation. Y. JEONG*; B. LABONTÉ; O. ENGMANN; O. ISSER; R. BAGOT; K. CHO; E. NESTLER; J. KOO. *Korea Brain Res. Inst., Laval university, Icahn Sch. of Med. at Mount Sinai.*
- 3:00 OO28 **246.07** Establishment of a repeated social defeat stress model in female mice. J. CHUNG*; A. TAKAHASHI; S. ZHANG; H. ZHANG; Y. GROSSMAN; H. ALEYASIN; M. FLANIGAN; M. PFAU; C. MENARD; D. DUMITRIU; G. HODES; B. MCEWEN; E. NESTLER; S. J. RUSSO; M. HAN. *Icahn Sch. of Med. At Mount Sinai, Univ. of Tsukuba, The Rockefeller Univ.*
- 4:00 OO29 **246.08** Bilateral transection of hypoglossal nerves increased anxiety- and depression-like behaviors in rats. J. JAHNG*; S. CHUNG; D. KIM; J. LEE. *Seoul Natl. Univ. Sch. Dent.*
- 1:00 OO30 **246.09** Murine model of depression: Astroglial glutamate transporter knockdown in infralimbic cortex induces a depressive phenotype. N. FULLANA; F. ARTIGAS*; E. RUIZ-BRONCHAL; A. FERRÉS-COY; A. BORTOLOZZI. *IIBB(CSIC)-IDIBAPS-CIBERSAM, IDIBAPS ESQ5856414G, IDIBAPS-IIBB(CSIC)-CIBERSAM, IIBB(CSIC)-CIBERSAM.*
- 2:00 OO31 **246.10** Molecular biological analysis of the *de novo* mutations found in the bipolar disorder patients. T. NAKAMURA*; K. NAKAJIMA; T. TSUBOI; T. KATO. *RIKEN Brain Sci. Inst., The Univ. of Tokyo.*
- 3:00 OO32 **246.11** Orphan receptor GPR158 modulates intrinsic excitability of layer 2/3 neurons in prelimbic cortex by regulating A-type potassium current. C. SONG*; C. ORLANDI; L. P. SUTTON; K. A. MARTEMYANOV. *The Scripps Res. Inst.*
- 4:00 OO33 **246.12** Selective activation of estrogen receptors alpha and beta under chronic stress: Implications for depressive-like phenotypes. R. MAHMOUD*; J. A. CHAITON; C. CHOW; S. E. LIEBLICH; L. A. M. GALEA. *Univ. of British Columbia.*
- 1:00 OO34 **246.13** Brain expression of 5-HT₆ receptor in adolescent male mice susceptible or resilient to the effects of prolonged social defeat stress. S. CHIAVEGATTO*; L. S. RESENDE; M. A. METZGER; J. F. S. CARRILLO; P. E. N. S. VASCONCELOS. *Biomed. Sci. Inst. - Univ. of Sao Paulo.*
- 2:00 OO35 **246.14** Circadian modulation of the paraventricular thalamic nucleus in susceptibility to repeated social stress. H. ZHANG*; M. SCHNEEBERGER; Y. ZHU; X. LIU; Z. CHEN; A. R. NECTOW; N. RENIER; D. CHAUDHURY; P. J. KENNY; J. FRIEDMAN; M. HAN; J. CAO. *Xuzhou Med. Univ., The Rockefeller Univ., Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Princeton Univ., The Rockefeller Univ., New York Univ. Abu Dhabi, ICAHN Sch. of Med. At Mount Sinai, Rockefeller Univ., Xuzhou Med. Univ.*
- 3:00 OO36 **246.15** Extrinsic modulation of midbrain dopamine neurons in stress-induced depression. S. M. KU*; C. MOREL; H. ZHANG; B. JUAREZ; R. E. MESIAS; K. DEVARAKONDA; J. J. WALSH; D. CHAUDHURY; A. K. FRIEDMAN; M. HAN. *Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Stanford Univ., New York Univ. Abu Dhabi, Hunter College, City Univ. of New York.*
- 4:00 PP1 **246.16** Sex and coping strategy dependent plasticity of midbrain dopamine neurons mediates response to repeated variable social stress. M. SHANLEY*; A. SEIDENBERG; M. VAYSBLAT; T. FUNG; C. GUEVARA; A. K. FRIEDMAN. *Hunter College, CUNY, Grad. Center, City Univ. of New York, Columbia Univ.*
- 1:00 PP2 **246.17** Sex-specific effects of brain extracellular matrix genes in major depressive disorder. E. M. PARISE*; L. F. ALCANTARA; Z. S. LORSCH; P. J. HAMILTON; B. LABONTÉ; C. A. BOLANOS-GUZMAN; E. J. NESTLER. *Ichan Sch. of Med. At Mount Sinai, Texas AM: Psychology, Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. At Mount Sinai, Dept. of neuroscience and psychiatry, faculty of medicine, Laval university, Texas A&M Univ., Icahn Sch. of Med. At Mount Sinai.*
- 2:00 PP3 **246.18** Loss of prefrontal cortex 5-HT_{1A} during adolescence results in an adult depression but not anxiety-like phenotype. A. GARCIA*; I. ALY; A. DRANOVSKY; E. LEONARDO. *Columbia University, New York Psychiatry Inst., Columbia University/New York Psychiatry Insitute.*
- 3:00 PP4 **246.19** Neuroinflammation and dorsal raphe neuronal activity associated with depression after spinal cord injury. K. FARRELL*; M. R. DETLOFF; J. D. HOULE. *Drexel Univ. Col. of Med., Drexel Univ. Col. of Med.*
- 4:00 PP5 **246.20** • Network alterations following immune-induced glutamate dysregulation. E. HAROON*; X. CHEN; Z. LI; X. P. HU; J. C. FELGER; A. H. MILLER. *Emory Univ. Sch. of Med., Emory University, Shenzhen Univ., Univ. of California, Emory Univ. - Sch. of Med., Emory Univ. Sch. Med.*
- 1:00 PP6 **246.21** Glucocorticoid signaling regulates activation of hippocampal MKP-1 during stress. C. LANGRECK; D. NERLAND; B. LAMB; L. SEMKE*; E. WAUSON; V. DURIC. *Des Moines Univ.*

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* Indicates abstract's submitting author

- 2:00 PP7 **246.22** Parallel effects of cyclical corticosterone administration on depression-like behaviour and the downregulation of reelin in the rat hippocampus. J. ALLEN; K. A. LEBEDEVA; R. ROMAY-TALLON; E. Y. FENTON; H. J. CARUNCHO*; L. E. KALYNCHUK. *Univ. of Saskatchewan, Ctr. for Drug Res. and Develop., Univ. of Saskatchewan.*
- 3:00 PP8 **246.23** Decreased daytime illumination impairs male copulatory behavior in a diurnal rodent model of Seasonal Affective Disorder. L. YAN*; K. LINNING-DUFFY; J. S. LONSTEIN. *Michigan State Univ., Michigan State Univ.*
- 4:00 PP9 **246.24** Generation of a humanized mouse model of rs6295: Assessing the direct contribution of a promoter polymorphism to serotonin 1a receptor expression. A. M. CUNNINGHAM; Z. R. DONALDSON*; V. GUTZEIT; T. SANTOS; R. HEN. *Univ. of Colorado Boulder, Univ. of Colorado, Boulder, Weill Cornell Med., Hofstra Northwell Sch. of Med., Columbia Univ., Res. Fndn. for Mental Hyg.*
- 1:00 PP10 **246.25** MicroRNA profiling of the ventral hippocampus in stress-resilient and stress-susceptible mice. S. UCHIDA*; H. YAMAGATA; T. SEKI; K. HARA; A. KOBAYASHI; Y. WATANABE. *Yamaguchi Univ. Graduate Sch. of Med.*
- 2:00 PP11 **246.26** Connective tissue growth factor mediates functional lateralization of mPFC in chronic stress. J. HONG*; S. CHAE; K. KANG; D. KIM. *KAIST, KAIST Inst. for BioCentury, Dankook Univ., KAIST.*
- 3:00 PP12 **246.27** Increase in activated GABA neurons co-localized with 5HT1aR in the lateral septum of helpless rats is associated with development of stress and depressive-like behavior. C. E. ROSE*; M. SADOWSKI; M. MIRRIONE. *Quinnipiac Univ., Univ. of Connecticut.*
- 4:00 PP13 **246.28** Functional proteomics of AMPA receptor complex with the mouse model of depressive spectrum disorder. M. KANG*. *Inst. For Basic Sci. (IBS), KAIST.*
- 1:00 PP14 **246.29** piRNA binding proteins PIWIL1 and 2: Potential role in chronic stress-induced neural, neurogenic and behavioral changes in mouse models of depression and anxiety. A. KUMAR*; N. KHANDELWAL; P. K. SANT; S. KOOTAR; S. CHAKRAVARTY. *CSIR- Ctr. For Cell. and Mol. Biol. (CCMB), Acad. of Scientific and Innovative Res., Indian Inst. of Chem. Technol. (CSIR-IICT).*
- 2:00 PP15 **246.30** Role of TREK-1 twin pore K⁺ channel in the photoperiodic programming of the dorsal raphe serotonin neurons. M. A. GIANNONI GUZMAN*; N. GREEN; D. G. MCMAHON; H. IWAMOTO. *Vanderbilt Univ.*

POSTER

247. Animal Models of Trauma, Stress, and Anxiety II

Theme G: Motivation and Emotion

Sun. 1:00 PM – Walter E. Washington Convention Center, Halls A-C

- 1:00 PP16 **247.01** ▲ Genome-wide mapping of conditioned fear in the diversity outbred mouse population. K. E. WILSON; D. GATTI; T. WILCOX; E. F. BUSCH; S. FLYNN; S. KASPAREK; D. KREUZMAN; B. MANSKY; S. MASNEUF; E. SAGALYN; K. SHARIF; D. TATERRA; W. TAYLOR; M. THOMAS; E. J. CHESLER; A. HOLMES; C. C. PARKER*. *Middlebury Col., The Jackson Lab., NIAAA.*
- 2:00 PP17 **247.02** ▲ Fluoxetine does not prevent increased voluntary ethanol consumption in a predator-based psychosocial stress model of PTSD. K. L. ROBINSON*; R. M. ROSE; B. A. KOHLS; M. E. HEIKKILA; B. J. HERTENSTEIN; K. E. MUCHER; M. R. HUNTLEY; P. A. D'ALESSIO; W. C. MCCABE; P. R. ZOLADZ. *Ohio Northern Univ.*
- 3:00 PP18 **247.03** Toll-like receptor 4 (TLR4) activation alters anxiety-like behavior in an animal model of post-traumatic stress disorder (PTSD). S. J. NIETO*; C. QUAVE; T. A. KOSTEN. *Univ. of Houston.*
- 4:00 PP19 **247.04** ● Ketamine metabolite (2R,6R)-HNK reverses behavioral despair symptoms produced by adolescent trauma. G. I. ELMER*; C. L. MAYO; P. ZANOS; T. D. GOULD. *Maryland Psychiatric Res. Ctr., Univ. of Maryland, Baltimore, Univ. of Maryland, Baltimore.*
- 1:00 PP20 **247.05** Gene expression based measures of chronic stress exposure. D. MCKINNON*; M. L. JACOBSON; B. ROSATI. *Stony Brook Univ., Dept. of Veterans Affairs Med. Ctr., Stony Brook Univ., Stony Brook Univ.*
- 2:00 PP21 **247.06** A quest for the neurobiological underpinnings of PTSD-like symptoms in traumatic stress susceptible rats. M. B. L. CAREAGA*; C. E. N. GIRARDI; D. SUCHECKI. *Univ. Federal de Sao Paulo, Univ. Federal de Sao Paulo.*
- 3:00 PP22 **247.07** Open hardware/open source acoustic startle device. M. L. JACOBSON*; D. MCKINNON; B. ROSATI. *Stony Brook Univ., Veterans Affairs Med. Ctr., Stony Brook Univ.*
- 4:00 PP23 **247.08** ● Chronic opiate administration produces a long-term potentiation of fear and anxiety in a model of post-traumatic stress disorder. Z. T. PENNINGTON*; K. D. LI; C. J. EVANS; W. M. WALWYN; M. S. FANSELOW. *UCLA, UCLA.*
- 1:00 PP24 **247.09** Traumatic brain injury leads to long term enhanced auditory fear learning and stimulus generalization. A. N. HOFFMAN*; E. HSIEH; N. CHAVDA; J. LAM; D. A. HOVDA; C. C. GIZA; M. S. FANSELOW. *UCLA, UCLA.*
- 2:00 PP25 **247.10** ● Acute traumatic stress in a rodent model of PTSD (SEFL) produces fear sensitization, increased anxiety and a long-lasting increase in GLUA1 protein levels in the basolateral amygdala. A. K. RAJBHANDARI*; S. T. GONZALEZ; J. PERUSINI; V. MAKHIJANI; Y. HUANG; A. N. HOFFMAN; J. WASCHEK; M. S. FANSELOW. *Univ. of California Los Angeles, Columbia University- NYSPI, UNC-CH, Univ. of California San Diego, Univ. of California Los Angeles.*
- 3:00 PP26 **247.11** Chronic stress during adolescence evokes a resilient phenotype after single prolonged stress: Implications for PTSD study. E. M. COTELLA*; P. LEMEN; N. BEDEL; J. HERMAN. *Univ. of Cincinnati.*
- 4:00 PP27 **247.12** Progression of changes in anxiety and gene expression in locus coeruleus in rat PTSD model. L. I. SEROVA*; N. MOLINA; E. L. SABBAN. *New York Med. Col.*
- 1:00 PP28 **247.13** Cardiovascular responses to intranasal neuropeptide Y in SPS rodent PTSD model. E. L. SABBAN*; R. CAMP; C. STIER; L. SEROVA; J. MCCLOSKEY; J. EDWARDS. *New York Med. Col., New York Med. Col., New York Med. Col.*
- 2:00 PP29 **247.14** ▲ Pre-extinction activation of the orbitofrontal cortex impairs fear extinction learning in rats. Y. CHANG*; C. CHANG. *Natl. Tsing Hua Univ.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 3:00 QQ1 **247.15** ● A novel orally active triple reuptake inhibitor for the treatment of post-traumatic stress disorder (PTSD): D-578 attenuates abnormal fear behavior in a rodent model of traumatic stress. M. J. LISIESKI*; A. HARUTYUNYAN; B. DAS; I. LIBERZON; F. P. BYMASTER; M. E. REITH; S. A. PERRINE; A. K. DUTTA. *Wayne State Univ. Sch. of Med., Wayne State Univ., Wayne State Univ., Univ. of Michigan Hlth. Syst., Euthymics Biosci. Inc., New York Univ. Sch. of Med., Wayne State Univ.*
- 4:00 QQ2 **247.16** ▲ Propranolol is ineffective at blocking the cardiovascular consequences of a predator-based psychosocial stress model of PTSD. B. A. KOHLS*; R. M. ROSE; T. S. STOOPS; M. E. HEIKKILA; B. J. HERTENSTEIN; K. L. ROBINSON; K. E. MUCHER; M. R. HUNTLEY; P. A. D'ALESSIO; P. R. ZOLADZ; B. R. RORABAUGH. *Ohio Northern Univ., Ohio Northern Univ.*
- 1:00 QQ3 **247.17** ▲ Active vs. passive coping across paradigms: Sex differences in trait-like behaviors and neural markers. J. COLOM-LAPETINA; R. SHANSKY*; A. LI; W. KUWAMOTO. *Northeastern Univ., Northeastern Univ.*
- 2:00 QQ4 **247.18** Strategies for post-stress intervention against the delayed effects of stress on the amygdala. P. CHAKRABORTY*; S. CHATTARJI. *Natl. Ctr. For Biol. Sci., Natl. Ctr. for Biol. Sci.*
- 3:00 QQ5 **247.19** Modulation of fear behavior and neurocircuitry by interoceptive threat: relevance to comorbid panic and PTSD. K. M. MCMURRAY*; J. SCHURDAK; R. SAH. *Univ. of Cincinnati, Univ. of Cincinnati, Univ. Cincinnati.*

POSTER

248. Cortical Circuits and Behavior

Theme H: Cognition

Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*

- 1:00 QQ6 **248.01** Brain states and behavior: Insights from dorsolateral prefrontal cortex of freely moving monkeys. R. MILTON*; N. SHAHIDI; V. DRAGOI. *Univ. of Texas Hlth. Sci. Ctr. At Houst, Univ. of Texas, Med. Sch. At Houston, Univ. of Texas at Houston Dept. of Neurobio. and Anat.*
- 2:00 QQ7 **248.02** The role of prefrontal cortex in social behaviors. Y. ZHANG*; B. XING; C. YAN; W. GAO. *Xi'an Jiaotong Univ., Drexel Univ. Col. of Med., Xi'an Jiaotong Univ., Drexel Univ. Col. Med.*
- 3:00 QQ8 **248.03** Functional modulation of frontal and parietal cortices by claustrum. M. G. WHITE*; C. MU; B. N. MATHUR. *Univ. of Maryland, Sch. of Med.*
- 4:00 QQ9 **248.04** Changes in macaque V4 during visual task learning. J. D. YOUNG*; V. DRAGOI; B. AAZHANG. *Rice Univ., Univ. of Texas at Houston Dept. of Neurobio. and Anat.*
- 1:00 QQ10 **248.05** Molecular mechanisms of tone detection learning in primary auditory cortex. A. I. VAZDARJANOVA*; W. GUO; D. TALLEY; D. T. BLAKE. *Charlie Norwood VA Med. Ctr., Augusta Univ., Med. Coll Georgia/Augusta Univ.*
- 2:00 QQ11 **248.06** Hippocampal CA3 hyperactivity may contribute to psychosis-like behaviors in mice. D. SCOTT*; C. TAN; C. A. TAMMINGA. *UT Southwestern.*
- 3:00 QQ12 **248.07** Modulation of neural activity in anterior cingulate cortex by the locus coeruleus. S. JOSHI*; J. LEVINE; J. I. GOLD. *Univ. of Pennsylvania, Univ. of Pennsylvania.*

- 4:00 QQ13 **248.08** Inactivation of the prelimbic and infralimbic cortices differentially affects minimally and extensively trained actions. M. L. SHIPMAN*; S. TRASK; M. E. BOUTON; J. T. GREEN. *Univ. of Vermont, The Univ. of Vermont, Univ. Vermont, Univ. of Vermont.*
- 1:00 QQ14 **248.09** Cognitive tasking capability in the siamang (*Symphalangus syndactylus*; Hylobatidae). G. M. VAIRA; P. M. NEALEN*. *Indiana Univ. Pennsylvania.*
- 2:00 QQ15 **248.10** Orbitofrontal cortex neurons signal associations underlying model-based inference. B. F. SADACCA*; H. WIED; Y. MARRERO-GARCIA; J. CONROY; N. LOPATINA; D. NEMIROVSKY; G. SCHOENBAUM. *Natl. Inst. On Drug Abuse.*
- 3:00 QQ16 **248.11** Nitrous oxide reduces corticocortical information transfer at sub-anesthetic doses without loss of consciousness. C. S. NU*; K. E. SCHROEDER; S. R. NASON; E. J. WELLE; P. G. PATIL; G. A. MASHOUR; C. A. CHESTEK. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan Dept. of Neurosurg., Univ. of Michigan.*
- 4:00 QQ17 **248.12** ▲ Habituation and spatial memory in the context of emotional regulation: Behavioral and genetic mechanism underlying context information-processing and de-arousal grooming. M. ROJAS*; O. A. RODRÍGUEZ-VILLAGRA; A. SEQUEIRA-CORDERO; J. F. C. FORNAGUERA; J. C. BRENES. *Univ. of Costa Rica, Univ. of Costa Rica, Univ. of Costa Rica, Univ. of Costa Rica.*
- 1:00 QQ18 **248.13** ● Development of functional connectivity of macaque cerebral cortical networks: Comparison of infants fed breast milk or formulas with low or high carotenoid content and synthetic or natural α -tocopherol. O. MIRANDA DOMINGUEZ*; S. D. CARPENTER; E. FECZKO; L. RENNER; J. W. ERDMAN, Jr; M. J. KUCHAN; M. NEURINGER; D. A. FAIR. *Oregon Hlth. and Sci. Univ., Oregon Hlth. and Sci. Univ., Oregon Hlth. and Sci. Univ., Univ. of Illinois at Urbana-Champaign, Abbott Nutr., Oregon Hlth. Sci. Univ.*

POSTER

249. Prefrontal Cortex: Physiology of Decision Making

Theme H: Cognition

Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*

- 1:00 QQ19 **249.01** Modeling of preference reversal in a temptation task. T. RAHIMI-MOGHADDAM*; J. HWANG; E. E. EMERIC; V. STUPHORN. *Johns Hopkins Univ.*
- 2:00 QQ20 **249.02** Neural mechanism underlying multi-attribute decision making in primates. Y. YANG*; K. JUSTUS; E. NIEBUR; V. STUPHORN. *Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ.*
- 3:00 QQ21 **249.03** Conditional GSK3 β KO in GABAergic parvalbumin interneurons differentially affects behaviors in adult male and female mice. S. MONACO*; A. J. MATAMOROS; G. HAN; E. M. BLACK; R. A. ESPAÑA; W. GAO. *Drexel Univ. Col. of Med.*
- 4:00 QQ22 **249.04** Role of the superior colliculus in value-base decisions during a saccade foraging task. B. ZHANG*; J. Y. KAN; M. DORRIS. *Inst. of Neurosci., Queen's Univ.*
- 1:00 RR1 **249.05** Effects of estrogen on attention and monoamines in the prefrontal cortex of the female rat. D. J. MOKLER*; S. C. CHEN; S. KOLANGARA; T. NEWELL; J. A. MCGAUGHY. *Univ. of New England, Univ. of New England, Univ. of New Hampshire.*

• Indicated a real or perceived conflict of interest, see page 137 for details.
 ▲ Indicates a high school or undergraduate student presenter.
 * Indicates abstract's submitting author

- 2:00 RR2 **249.06** ▲ Effects of a “junk-food” diet and a high fat diet on working memory and prefrontal cortex protein expression in Sprague Dawley rats. D. OBIRI-YEBOAH; C. L. WINGROVE; P. J. VOLLBRECHT*. *Hope Col.*
- 3:00 RR3 **249.07** Unsupervised nonlinear dimensionality reduction of large-scale neural recordings in prefrontal cortex. M. R. WHITEWAY*; R. BARTOLO; B. B. AVERBECK; D. A. BUTTS. *Univ. of Maryland, NIMH/NIH, Univ. of Maryland, Univ. of Maryland.*
- 4:00 RR4 **249.08** Dimensionality reduction and dynamic encoding in PFC during context-dependent decision making. M. C. AOI*; V. MANTE; J. PILLOW. *Princeton Univ., Inst. of Neuroinformatics.*
- 1:00 RR5 **249.09** Instability of neural trajectories in medial frontal cortex predicts individual differences in perceptual decision making. T. KURIKAWA*; T. HANDA; T. FUKAI. *RIKEN, Brain Sci. Inst., Dept. Behavior and Brain Organization, Caesar, RIKEN.*
- 2:00 RR6 **249.10** How much do changes in movement or spatial location impact anterior cingulate cortex (ACC) neurons? A. HARATIKIA*; A. LINDSAY; N. J. POWELL; J. SEAMANS. *Univ. of British Columbia, Univ. of British Columbia, Univ. of British Columbia.*
- 3:00 RR7 **249.11** The medial prefrontal cortex modulates spatial working memory in the T-maze through strategic neuronal encoding. Y. YANG*; R. B. MAILMAN. *Penn State Univ.*
- 4:00 RR8 **249.12** ▲ Prefrontal cortex GIRK channel function in cognitive deficits associated with chronic stress and depression. S. LOKE*; D. GOMEZ; E. MARRON FERNANDEZ DE VELASCO; K. WICKMAN; M. C. HEARING. *Marquette Univ., Marquette Univ., Univ. of Minnesota, Marquette Univ.*
- 1:00 RR9 **249.13** Noradrenergic modulation of premotor cortex during decision execution. E. M. RODBERG*; C. R. DEN HARTOG; M. A. KELBERMAN; E. M. VAZEY. *Univ. of Massachusetts Amherst.*
- 2:00 RR10 **249.14** Npas4-deficient mice lack cellular resilience against mild stress in adolescence and show impaired cognitive flexibility in adulthood. C. PAGE*; J. ALEXANDER; L. COUTELLIER. *The Ohio State Univ., The Ohio State Univ., The Ohio State Univ.*
- 3:00 RR11 **249.15** Adapting choice behavior and neural value coding in monkey orbitofrontal cortex. J. ZIMMERMANN*; P. W. GLIMCHER; K. LOUIE. *New York Univ., New York Univ.*
- 4:00 RR12 **249.16** Neuronal activity in orbitofrontal cortex during economic decisions under sequential offers. S. N. BALLESTA*; C. PADOA-SCHIOPPA. *Washington Univ.*
- 1:00 RR13 **249.17** Confidence representations across sensory modalities in orbitofrontal cortex. T. OTT*; P. MASSET; J. HIROKAWA; A. KEPECS. *Cold Spring Harbor Lab., Watson Sch. of Biol. Sci.*
- 2:00 RR14 **249.18** Top-down attention modulates activity of value-encoding orbitofrontal neurons. Z. ZHANG*; Y. XIE; T. YANG. *Inst. of Neuroscience, Chinese Acad. of Scie.*
- 3:00 RR15 **249.19** Functional assessment of large scale cortical networks during multi-sensory decision-making. S. MUSALL*; S. GLUF; A. K. CHURCHLAND. *Cold Spring Harbor Lab.*
- 4:00 RR16 **249.20** Prefrontal nicotinic- and NMDA-receptor activity is necessary for performance in a task of cognitive flexibility in rats. D. PHENIS*; V. VALENTINI; J. P. BRUNO. *The Ohio State Univ., Univ. of Cagliari.*
- 1:00 RR17 **249.21** Fine patterns of prefrontal connections mapped by electrical microstimulation and fMRI in the macaque. R. XU*; N. P. BICHOT; P. K. WEIGAND; A. TAKAHASHI; R. DESIMONE. *MIT.*
- 2:00 RR18 **249.22** Action-outcome encoding in dorsomedial prefrontal cortex. B. A. BARI; C. D. GROSSMAN; R. K. NIYOGI; J. Y. COHEN*. *Johns Hopkins Univ.*
- 3:00 RR19 **249.23** Neural signature of Bayesian interval timing in dorsomedial frontal cortex. H. SOHN*; D. NARAIN; M. JAZAYERI. *MIT, MIT.*
- 4:00 RR20 **249.24** Neonatal Ventral Hippocampal Lesioned (NVHL) rats show attentional deficits on a delayed alternation task. N. J. POWELL*; J. K. SEAMANS. *Univ. of British Columbia, UBC.*

POSTER

250. Prefrontal Cortex and Reward

Theme H: Cognition

Sun. 1:00 PM – Walter E. Washington Convention Center, Halls A-C

- 1:00 RR21 **250.01** Adolescent binge-like ethanol exposure differentially affects probabilistic reversal learning in Long-Evans versus Sprague-Dawley rats. S. C. GARR*; J. T. GASS; S. B. FLORESCO; L. CHANDLER. *Med. Univ. of South Carolina, Med. Univ. South Carolina, Univ. British Columbia, Med. Univ. S Carolina.*
- 2:00 RR22 **250.02** Local-field oscillatory activity in the medial prefrontal cortex responds to the execution of effortful behavior but not to the anticipation of effort or reward. L. CROWN*; D. A. NITZ; S. L. COWEN. *Univ. of Arizona, Univ. of California San Diego, Univ. of Arizona.*
- 3:00 RR23 **250.03** Amygdala input differentially influences prefrontal local field potential and single neuron encoding of reward-based decisions. F. M. STOLL*; C. P. MOSHER; S. TAMANG; E. A. MURRAY; P. H. RUDEBECK. *Icahn Sch. of Med. At Mount Sinai, NIMH, NIH.*
- 4:00 RR24 **250.04** Representation of reward risk by primate frontal eye field neurons. X. CHEN*; M. ZIRNSAK; T. MOORE. *Stanford Univ. Sch. of Med., Howard Hughes Med. Institute, Stanford Univ. Sch. of Medicine, Stanford.*
- 1:00 RR25 **250.05** Neurons in orbitofrontal cortex adapt differently to changes in maximum and minimum value. K. CONEN*; C. PADOA-SCHIOPPA. *Washington Univ. In St Louis, Washington Univ. In St Louis.*
- 2:00 RR26 **250.06** Reinforcement learning drives overrepresentation of subjective value in frontostriatal brain networks. E. B. KNUDSEN*; J. D. WALLIS. *Univ. of California Berkeley.*
- 3:00 RR27 **250.07** Value-based decision making in the nematode *Caenorhabditis elegans*. S. R. LOCKERY*; A. KATZEN; P. W. GLIMCHER; W. HARBAUGH. *Univ. of Oregon, New York Univ. Ctr. for Neural Sci.*

- 4:00 RR28 **250.08** Differential routing of reinforcement signals from orbitofrontal cortex to striatum depending on environmental uncertainty. J. HIROKAWA*; S. LI; A. VAUGHAN; J. L. PIE; L. DESBAN; Y. OSAKO; T. OHNUKI; H. MANABE; Y. SAKURAI; A. KEPECS. *Doshisha Univ., Cold Spring Harbor Lab.*
- 1:00 RR29 **250.09** Differential effects of dorsal and ventral mPFC inactivation are driven by reward availability. J. P. CABALLERO*; D. E. MOORMAN. *Univ. of Massachusetts Amherst, Univ. of Massachusetts Amherst.*
- 2:00 RR30 **250.10** Neural circuits for working memory and reinforcement learning in primate prefrontal and parietal cortex. S. K. MURRAY*; D. LEE; H. SEO. *Yale Univ., Yale Sch. of Med., Yale Sch. of Med.*
- 3:00 RR31 **250.11** • Modeling the dynamic effects of reward and temporal uncertainty in perceptual decision making. M. SHINN*; H. SEO; D. EHRlich; D. LEE; J. D. MURRAY. *Yale Univ., Yale Sch. of Med., Yale Sch. of Med.*
- 4:00 RR32 **250.12** Reinforcement learning of motor sequences on motor primitives acquired in the convolutional network-based neocortical model. H. KURASHIGE*; T. YAMAZAKI. *The Univ. of Electro-Communications.*
- 1:00 RR33 **250.13** Neuronal ensembles in monkey dorsolateral prefrontal and inferior parietal cortices track reward predictions and outcomes in a probabilistic non-decision paradigm. N. C. FOLEY*; N. M. SINGLETARY; J. GOTTLIEB. *Columbia Univ.*
- 2:00 RR34 **250.14** Robust encoding of reward expectation in low beta band power in monkey dorsolateral prefrontal and inferior parietal lobe. M. NEJATBAKHSH; H. R. NASRABADI; V. DAVOODNIA; E. ZABEH; N. C. FOLEY; R. LASHGARI; J. P. GOTTLIEB*. *Inst. for research in Fundamental Sci. (IPM), Columbia Univ., Columbia Univ. Med. Ctr.*
- 3:00 RR35 **250.15** Dynamics of the reward signal in the primary motor cortex. A. TARIGOPPULA*; J. P. HESSBURG; D. B. MCNIEL; J. S. CHOI; J. T. FRANCIS. *SUNY Downstate Med. Ctr., New York Univ., Uni. of Houston.*
- 4:00 RR36 **250.16** Distinguishing between the contributions of depletion of processing resources and increases in opportunity costs to decline in attentional performance. K. B. PHILLIPS*; M. SARTER. *Univ. of Michigan, Univ. of Michigan Dept. of Psychology.*
- 1:00 SS1 **250.17** Interactions of attentional capture and craving in smokers during a perceptual decision task. J. A. HARRIS*; S. E. DONOHUE; K. LOEWE; H. HEINZE; M. G. WOLDORFF; M. A. SCHOENFELD. *Otto-von-guericke-Universität Magdeburg, Otto-von-Guericke Univ., Otto-von-Guericke Univ., Duke Univ., Kliniken Schmieder.*
- 2:00 SS3 **251.02** Neural mechanisms mediating cooperation. W. S. ONG*; M. L. PLATT. *Univ. of Pennsylvania, Univ. of Pennsylvania.*
- 3:00 SS4 **251.03** • modeling behavior of non-human primates in an iterative chicken game. X. LI*; W. S. ONG; C. CAMERER; M. L. PLATT. *Caltech, Univ. of Pennsylvania, Caltech, Univ. of Pennsylvania.*
- 4:00 SS5 **251.04** Dorsal prefrontal cortex tracks projected outcomes in a dynamic competitive game. J. M. PEARSON*; S. N. IQBAL; C. B. DRUCKER; J. GARIEPY; M. L. PLATT. *Duke Univ., Duke Univ., Univ. of Pennsylvania.*
- 1:00 SS6 **251.05** Pupil size supports a comparison-to-reference choice mechanism in a sequential gambling task. T. CASH-PADGETT*; H. AZAB; S. YOO; B. Y. HAYDEN. *Univ. of Rochester, Univ. of Rochester.*
- 1:00 DP13/SS7 **251.06** (Dynamic Poster) Using Generative Adversarial Networks to estimate agent goals in a Pac-man-like virtual hunting experiment. S. YOO*; S. IQBAL; B. Y. HAYDEN; J. M. PEARSON. *Univ. of Rochester, Duke Univ., Univ. of Rochester.*
- 3:00 SS8 **251.07** Evidence for a comparison-to-reference mechanism of economic choice in the dorsal anterior cingulate cortex. H. AZAB*; B. Y. HAYDEN. *Univ. of Rochester.*
- 4:00 SS9 **251.08** • A scalar sampling race model predicts risk preference in primates. B. R. EISENREICH*; B. Y. HAYDEN. *Univ. of Rochester, Univ. of Rochester.*
- 1:00 SS10 **251.09** Strategic value encoding in ventromedial prefrontal cortex guides foraging behavior. P. MEHTA*; B. Y. HAYDEN. *Univ. of Rochester Brain and Cognitive Scienc.*
- 2:00 SS11 **251.10** Understanding the common underlying neural principles between neuroeconomic decisions and stopping. P. BALASUBRAMANI*; B. Y. HAYDEN. *Univ. of Rochester, Univ. of Rochester.*
- 3:00 SS12 **251.11** The avian prefrontal cortex revisited. K. VON EUGEN*; S. TABRIK; F. STRÖCKENS; O. GÜNTÜRKÜN. *Ruhr-University Bochum.*
- 4:00 SS13 **251.12** Distinct fronto-parietal communication channels for separating targets and distractors in working memory. S. N. JACOB*; D. HÄHNKE; A. NIEDER. *Technische Univ. München, Univ. Tuebingen.*
- 1:00 SS14 **251.13** The mediodorsal thalamus contributes to decision making after abstract rule switches. A. S. MITCHELL*; S. CHAKRABORTY; A. BELL; J. SALLET; D. J. MITCHELL; S. MASON; M. BUCKLEY; Z. OUHAZ. *Univ. of Oxford, MRC Cognition and Brain Sci. Unit.*
- 2:00 SS15 **251.14** Anterior cingulate cortex lesions abolish budget effects on demand elasticities in rat consumers. T. KALENSCHER*; S. SCHÄBLE; M. VAN WINGERDEN; Y. HU. *Univ. of Duesseldorf.*
- 3:00 SS16 **251.15** Piglets exhibit different discriminative strategies to choose an object in a novel test method to evaluate inference by exclusion. P. PAREDES-RAMOS*. *Facultad de Medicina Veterinaria y Zootecnia.*
- 4:00 SS17 **251.16** Contributions of the lateral orbital area to economic decisions in mice. M. KUWABARA*; N. KANG; G. BLACK; T. HOLY; C. PADOA-SCHIOPPA. *Washington Univ. In St Louis.*

POSTER

251. Prefrontal Cortex and Decision Making

Theme H: Cognition

Sun. 1:00 PM – Walter E. Washington Convention Center, Halls A-C

- 1:00 SS2 **251.01** Predicting strategic behavior in a competitive two-player game from gaze patterns and neuronal activity in the superior temporal sulcus. Y. JIANG; M. L. PLATT*. *Univ. of Pennsylvania, Univ. of Pennsylvania.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 1:00 SS18 **251.17** What, if anything, is the rodent prefrontal cortex? T. K. SWANSON*; S. R. WHITE; A. T. DEMARCO; S. P. WISE; M. LAUBACH. *American Univ., American Univ., Georgetown Univ., NIMH Retired, American Univ.*
- 2:00 SS19 **251.18** Spatial and temporal distribution of value-related and the visual information in the macaque lateral prefrontal cortex. S. TANAKA*; K. KAWASAKI; I. HASEGAWA; T. SUZUKI; M. KAWATO; M. SAKAGAMI. *Tamagawa Univ. Brain Sci. Inst., Niigata Univ. Med. Sch., Niigata Univ. Sch. of Med., Natl. Inst. of Information and Communications Technol., ATR BICR.*
- 3:00 SS20 **251.19** The dynamics of expectation build-up and its integration with stimulus evidence during perceptual discrimination. A. HERMOSO MENDIZABAL*; A. HYAFIL; P. E. RUEDA-OROZCO; S. JARAMILLO; D. M. ROBBE; J. DE LA ROCHA. *IDIBAPS, Ctr. for Brain and Cognition, Inst. De Neurobiología, UNAM, Univ. of Oregon, Inst. de Neurobiologie de la Méditerranée.*
- 4:00 SS21 **251.20** Short-term influence by recent trial history depends on stimulus difficulty. W. JIANG*; J. LIU; D. ZHANG; H. YAO. *Inst. of Neuroscience, CAS.*
- 1:00 SS22 **251.21** Two distinct learning processes in rats, insight-like learning and trial-and-error learning. K. MAKINO*; Y. IKEGAYA. *Grad Sch. Pharma Sci, Univ. Tokyo.*
- 2:00 SS23 **251.22** Foveal and response field information are multiplexed in the frontal eye field to form a neural representation for eye movement planning and execution. K. MIRPOUR*; Z. BOLANDNAZAR; J. W. BISLEY. *UCLA, UCLA, UCLA.*
- 3:00 SS24 **251.23** Contributions of OFC and mPFC to certain vs uncertain reversal learning. P. MARTIN*; M. L. SHAPIRO. *Icahn Sch. of Med. At Mount Sinai, Mt. Sinai Sch. Med.*
- 4:00 SS25 **251.24** Risk-dependent choice affected by the lesion of lateral orbitofrontal cortex of the rat. Y. YANG; Y. CHANG; C. CHUANG; S. CHEN; R. LIAO*. *Natl. Cheng-Chi Univ., Natl. Cheng-Chi Univ., Natl. Cheng-Chi Univ., Natl. Cheng-Chi Univ., Natl. Cheng-Chi Univ.*
- 1:00 SS26 **251.25** Effect of cognitive load on self-paced periodic movements with different motor patterns. W. QI*; A. MIURA; K. KATO; K. KANOSUE. *Waseda Univ., Waseda Univ.*
- 4:00 SS30 **252.04** Impaired learning-related dynamics of local field potentials and evoked responses in Fmr1-null mice. D. DVORAK*; A. CHUNG; A. A. FENTON. *New York Univ.*
- 1:00 SS31 **252.05** How coordinated are representations of space in the MEC and hippocampus during navigation? E. PARK*; A. A. FENTON. *New York Univ.*
- 2:00 SS32 **252.06** Comprehensive classification and phenotyping of firing patterns in hippocampal neuron types. A. O. KOMENDANTOV*; S. VENKADESH; C. L. REES; D. W. WHEELER; D. J. HAMILTON; G. A. ASCOLI. *George Mason Univ.*
- 3:00 SS33 **252.07** Large-scale cellular count, distribution, and shape analysis in the mouse hippocampal formation from Allen Brain Atlas Nissl-stained images. S. M. ATTILI*; C. L. REES; M. F. M. SILVA; T. NGUYEN; D. W. WHEELER; G. A. ASCOLI. *George Mason Univ., George Mason Univ.*
- 4:00 SS34 **252.08** Dynamical properties of multi-behavior neurons in the hippocampus. S. VENKADESH*; A. KOMENDANTOV; D. WHEELER; E. BARRETO; G. ASCOLI. *George Mason Univ.*
- 1:00 SS35 **252.09** Hippocampome.org: Increasing open-access knowledge of rodent hippocampal neuron types and their properties. D. W. WHEELER*; C. M. WHITE; A. O. KOMENDANTOV; C. L. REES; D. J. HAMILTON; S. VENKADESH; K. MORADI; M. ATTILI; C. TECUATL; G. A. ASCOLI. *George Mason Univ.*
- 2:00 SS36 **252.10** Synapses in the clouds: augmenting Hippocampome.org with a knowledge base of glutamatergic and GABAergic signals. K. MORADI*; G. P. MADISON; C. L. REES; A. S. GAWADE; D. J. HAMILTON; G. A. ASCOLI. *George Mason Univ.*
- 3:00 SS37 **252.11** DREADD inactivation of dorsal hippocampus impairs object recognition memory in C57BL/6J mice. D. A. CINALLI*, JR; R. W. STACKMAN, JR. *Florida Atlantic Univ., Florida Atlantic Univ.*
- 4:00 SS38 **252.12** Differences in glutamatergic, GABAergic and dopaminergic receptor densities along the longitudinal axis of the mouse hippocampal formation. C. HEROLD*; J. DEITERSEN; K. AMUNTS; K. ZILLES. C. & O. Vogt-Institute of Brain Res., Inst. of Neurosci. and Med. INM-1, Res. Ctr. Jülich, Dept. of Psychiatry, Psychotherapy and Psychosomatics, RWTH Aachen University, and JARA – Translational Brain Med.

POSTER

252. Learning and Memory: Hippocampal Circuits

Theme H: Cognition

Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*

- 1:00 SS27 **252.01** Out-of-context activation of memory: Limits of stress-induced memory enhancement. B. B. LEE*; A. A. FENTON. *SUNY Downstate Med. Ctr., New York Univ.*
- 2:00 SS28 **252.02** Place learning induces persistent input-specific hippocampus circuit function changes in the freely-behaving mouse. A. CHUNG*; A. A. FENTON. *New York Univ.*
- 3:00 SS29 **252.03** Dendritic compartment specific morphological alterations in the dorsal hippocampus of the MAM model of neurodevelopmental insult. K. C. O'REILLY*; A. V. PATINO; A. A. FENTON. *New York Univ.*
- 1:00 SS39 **252.13** Spine imaging reveals direct synaptic inputs to CA1 neurons during navigation. C. DOMNISORU*; D. W. TANK. *Princeton Univ.*
- 2:00 SS40 **252.14** Mapping of activated synapses in the hippocampus after context exploration with a new optogenetic reporter for spine potentiation. F. GOBBO; L. MARCHETTI; B. PINTO; A. JACOB; C. ALIA; S. LUIN; L. CANCEDDA; A. CATTANEO*. *Scuola Normale Superiore, CNI@NEST, Inst. Italiano di Tecnologia, Inst. Italiano di Tecnologia, Consiglio Nazionale delle Ricerche.*
- 3:00 SS41 **252.15** Pharmacological blocking of C-C chemokine receptor 5 (CCR5) enhances learning and memory. M. ZHOU*; L. CHIU; M. MIYASHIRO; H. SEKHON; C. ZHOU; Y. CAI; S. HUANG; T. SILVA; A. SILVA. *Univ. of California Los Angeles.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 4:00 SS42 **252.16** Hotspots of dendritic spine turnover facilitate learning-related clustered spine addition and network sparsity. S. HUANG*; A. FRANK; M. ZHOU; A. GDALYAHU; G. KASTELLAKIS; P. POIRAZI; X. WEN; T. SILVA; J. TRACHTENBERG; A. SILVA. *UCLA, Tel Aviv Univ., IMBB-FORTH, UCLA.*
- 1:00 SS43 **252.17** Anatomical connectivity and physiological characteristics of the fasciola cinereum in the hippocampus. S. PARK*; S. YOO; H. JUNG; I. LEE. *Seoul Natl. Univ.*
- 2:00 SS44 **252.18** Topographic organization of canonical and non-canonical circuit inputs to hippocampal CA1 revealed by monosynaptic rabies tracing. Y. SUN*; X. XU. *Univ. of California Irvine Dept. of Anat. and Neurobio., Univ. California, Irvine.*
- 3:00 SS45 **252.19** Reconstruction and simulation of a full-scale model of rat hippocampus CA1. A. ROMANI*; N. ANTILLE; L. L. BOLOGNA; J. COURCOL; A. DEVRESSE; A. ECKER; J. FALCK; C. P. H. FAVREAU; M. GEVAERT; A. GULYAS; J. V. HERNANDO; S. JIMENEZ; S. KALI; L. KANARI; J. G. KING; S. LANGE; C. LUPASCU; A. MERCER; M. MIGLIORE; R. MIGLIORE; A. POVOLOTSKIY; S. RAMASWAMY; M. W. REIMANN; C. A. ROSSERT; Y. SHI; A. M. THOMSON; W. VAN GEIT; L. VANHERPE; H. MARKRAM; E. B. MULLER. *Blue Brain Project, EPFL, Blue Brain Project, EPFL, Inst. of Biophysics, CNR, Sch. of Pharmacy, UCL, Inst. of Exptl. Medicine, MTA, Univ. of Westminster.*
- 4:00 SS46 **252.20** Egr1 expression in avian granule cells is consistent with pattern separation. N. MILLER*; C. C. DAMPHOUSSE; N. MICKS; E. KLEINHANDLER; D. F. MARRONE. *Wilfrid Laurier Univ., Univ. of Arizona.*
- 1:00 SS47 **252.21** Social preference alters Arc expression in the olfactory bulb. C. DAMPHOUSSE*; E. KLEINHANDLER; N. MICKS; N. MILLER; D. F. MARRONE. *Wilfrid Laurier Univ., Wilfrid Laurier Univ., Wilfrid Laurier Univ.*
- 2:00 SS48 **252.22** Altered immediate-early gene expression predicts memory impairment in Goto-Kakizaki rats. D. F. MARRONE*; C. DAMPHOUSSE; J. MEDEIROS; N. MICKS. *Wilfrid Laurier Univ., Wilfrid Laurier Univ.*
- 3:00 SS49 **252.23** Interactions between adult-born and developmentally-born neurons during learning. A. ASH*; J. CLEMANS-GIBBON; T. O'LEARY; E. CHAHLEY; D. SEIB; J. SNYDER. *Univ. of British Columbia, Univ. of British Columbia.*
- 4:00 SS50 **252.24** Extracts of *Ixeris dentata* improve cognitive function on Trimethyltin-Induced memory deficit in the rats. D. JANG*; S. LEE; J. OH; H. LEE; D. HAHM; I. SHIM. *Col. of Korean Medicine, Kyung Hee Univ., Col. of Korean Medicine, Kyung Hee Univ.*
- 1:00 SS51 **252.25** Early-life serotonin transporter blockade blunts adult serotonergic enhancement of hippocampal memory. A. A. MORGAN*; I. Z. DINCHEVA; C. M. TEIXEIRA; Z. ROSEN; M. HERSH; S. A. SIEGELBAUM; M. S. ANSORGE. *Columbia Univ., New York State Psychiatric Inst., Columbia Univ., Columbia Univ., Columbia Univ. Coll P & S, Columbia Univ.*
- 2:00 SS52 **252.26** The impact of fornix lesions on place vs response learning in the open-field tower maze. O. LIPATOVA*; M. M. CAMPOLATTARO; J. PICONE; V. CAGLE. *Christopher Newport Univ.*
- 3:00 SS53 **252.27** The effect of REV-ERB alpha in hippocampal synaptic plasticity. J. CHOI*; B. KAANG. *Seoul Natl. Univ.*
- 4:00 SS54 **252.28** Impaired spatial memory following post-synaptic deletion of DCC expression in the adult mouse hippocampus. E. WONG*; G. THOMPSON-STECKEL; S. D. GLASGOW; T. E. KENNEDY. *McGill Univ.*
- 1:00 SS55 **252.29** GHS-R1a signaling modulates synaptic function and memory. N. LI*. *Qingdao Univ.*

POSTER

253. Learning and Memory: Hippocampal Representations

Theme H: Cognition

Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*

- 1:00 SS56 **253.01** Hierarchical organization of memories in the prefrontal areas contrast with memory organizations in hippocampal regions. C. MIKKELSEN*; A. FAROVIK; M. D. BROCKMANN; S. MCKENZIE; H. EICHENBAUM. *Boston Univ., Ctr. For Memory and Brain, NYUMC.*
- 2:00 SS57 **253.02** Learning paradigm influences the organization of memory in the hippocampus. D. J. SHEEHAN*; J. W. RUECKEMANN; H. B. EICHENBAUM. *Boston Univ. Ctr. For Memory and Brain, Univ. of Washington, Boston Univ.*
- 3:00 SS58 **253.03** Dynamic representations of temporal context in hippocampal population coding. J. H. BLADON*; D. J. SHEEHAN; C. DE FREITAS; C. S. KEENE; H. B. EICHENBAUM. *Boston Univ., Boston Univ. Ctr. For Memory and Brain, Boston Univ., Boston Univ.*
- 4:00 SS59 **253.04** Large-scale hippocampal population representations: Coherent spatial maps that gradually evolve over time. N. R. KINSKY*; D. W. SULLIVAN; W. MAU; H. B. EICHENBAUM. *Boston Univ., Boston Univ., Boston Univ.*
- 1:00 SS60 **253.05** Temporal coding of hippocampal neurons across scales. W. MAU*; D. W. SULLIVAN; N. R. KINSKY; Z. TIGANJ; J. WEI; M. W. HOWARD; H. B. EICHENBAUM. *Boston Univ., Boston Univ., Boston Univ., Boston Univ.*
- 2:00 SS61 **253.06** Intrinsic circuitry sharpens hippocampal time cell firing patterns. R. J. PLACE*; J. W. RUECKEMANN; H. B. EICHENBAUM. *Boston Univ., Univ. of Washington, Boston Univ.*
- 3:00 SS62 **253.07** Cognitive maps of memories and space in large hippocampal neural ensembles. S. J. LEVY*; N. R. KINSKY; D. W. SULLIVAN; H. B. EICHENBAUM. *Boston Univ., Boston Univ., Boston Univ., Boston Univ.*
- 4:00 SS63 **253.08** TENASPIS: A fast, accurate, and improved tool for detecting ROIs and calcium transients from *in vivo* single photon fluorescence microscopy. D. W. SULLIVAN*; N. R. KINSKY; W. MAU; H. B. EICHENBAUM. *Boston Univ.*
- 1:00 SS64 **253.09** Firing patterns of the dorsal and ventral hippocampal neurons in representing place and its value. S. JIN*; J. SHIN; I. LEE. *Seoul Natl. Univ.*
- 2:00 SS65 **253.10** Neural correlates of visual contextual memory in CA3 following lesions in the dentate gyrus. C. LEE*; S. JEON; I. LEE. *Seoul Natl. Univ.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

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* Indicates abstract's submitting author

- 3:00 SS66 **253.11** Hippocampal LFP and single unit recording in juvenile rats during Barnes maze navigation. D. G. MCHAIL*; C. KIMBALL; N. COSTELLO; T. C. DUMAS. *George Mason Univ., George Mason Univ., George Mason Univ.*
- 4:00 TT1 **253.12** ▲ Optogenetic manipulation of hippocampal dorsal CA1 during an olfactory working-memory task. A. L. MYLAVARAPU*; J. TAXIDIS; K. SAMADIAN; E. HOFFBERG; N. SABOORI; M. BEDROSSIAN; T. TAIMOORAZY; B. NOSRATI; J. SADIK; P. GOLSHANI. *UCLA, UCLA.*
- 1:00 TT2 **253.13** Hippocampal spiking sequences during an olfactory working-memory task. J. TAXIDIS*; A. MYLAVARAPU; K. SAMADIAN; E. HOFFBERG; N. SABOORI; M. BEDROSSIAN; T. TAIMOORAZY; B. NOSRATI; J. SADIK; P. GOLSHANI. *UCLA, UCLA.*
- 2:00 TT3 **253.14** Comparing hippocampal oscillations in the macaque across free and constrained experimental contexts using wireless recordings. O. TALAKOUB*; P. SAYEGH; K. L. HOFFMAN. *York Univ., York Univ., Vanderbilt university.*
- 3:00 TT4 **253.15** Continuous neural recordings for long-term temporal dynamics in the rodent hippocampus. J. CHU*; E. ACKERMANN; S. DUTTA; C. KEMERE. *Rice Univ.*
- 4:00 TT5 **253.16** Latent variable models for hippocampal sequence analysis. E. ACKERMANN*; K. MABOUDI ASHMAN KAMACHALI; K. DIBA; C. KEMERE. *Rice Univ., Univ. of Wisconsin Milwaukee, Univ. of Wisconsin Milwaukee Dept. of Psychology, Rice Univ.*
- 1:00 TT6 **253.17** Low-latency, open-source, closed-loop system for sharp-wave ripple detection. S. DUTTA*; E. ACKERMANN; C. KEMERE. *Rice Univ.*
- 2:00 TT7 **253.18** Fiber photometry micro-drive array for recording neural activity of hippocampus of freely moving rat. Z. CHEN*; C. KEMERE. *Rice Univ., Rice Univ.*
- 3:00 TT8 **253.19** Functional lateralization of c-Fos expression in the mouse dorsal dentate gyrus. J. JORDAN*; M. R. SHANLEY; K. TINEO; M. KAHN; A. WINTER; R. MURATORE; C. PYTTE. *Grad. Center, The City Univ. of New York, Queens College, CUNY, Paul D. Schreiber High Sch.*
- 1:00 DP14/TT9 **253.20** (Dynamic Poster) Dedicated hippocampal inhibitory networks for locomotion and immobility. M. W. ARRIAGA*; E. B. HAN. *Washington Univ. In St. Louis Sch. of Med., Washington Univ. in St. Louis Sch. of Med.*
- 1:00 TT10 **253.21** Modeling replay and theta sequences in a 2-d recurrent neural network with plastic synapses. A. AZIZI; K. DIBA; S. CHENG*. *Ruhr Univ. Bochum, Univ. of Wisconsin-Milwaukee.*

POSTER

254. Learning and Memory: Limbic Circuits

Theme H: Cognition

Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*

- 1:00 TT11 **254.01** Complete erasure of memory trace from engram cells. K. M. ABDOU*; M. H. SHEHATA; Q. ZHAO; H. NISHIZONO; M. MATSUO; S. MURAMATSU; K. INOKUCHI. *Univ. of Toyama, Japan Sci. and Technol. Agency, CREST, Univ. of Toyama, Div. of Animal Exptl. Laboratory, Life Sci. Res. Center, Univ. of Toyama, Jichi Med. Univ.*
- 2:00 TT12 **254.02** Unraveling the dynamism of engram cells during contextual memory processing. K. GHANDOUR*; N. OHKAWA; C. FUNG; Y. SAITOH; T. TAKEKAWA; H. ASAI; R. OKUBO-SUZUKI; M. NOMOTO; S. SOYA; S. TSUJIMURA; H. NISHIZONO; M. MATSUO; M. SATO; M. OHKURA; J. NAKAI; Y. HAYASHI; T. SAKURAI; M. OSANAI; T. FUKAI; K. INOKUCHI. *Univ. of Toyama, CREST, PRESTO, RIKEN, Fac. of Informatics, WPI-IIS, Life Sci. Res. Center, University of Toyama, Grad. school of Sci. and Engin., Brain and Body Syst. Sci. institute, Grad. school of Med., Grad. school of Med., Grad. school of Biomed Eng.*
- 3:00 TT13 **254.03** ▲ Neuropotential role of taurine: Neurotransmitters, oxidative stress, mitochondrial dysfunctioning and histopathological evidences. M. BHARDWAJ*, SR. *Panjab Univ.*
- 4:00 TT14 **254.04** Genetically targeted expression of APP to subpopulations of hippocampal principal neurons leads to neuronal network dysfunction and impairment in hippocampus-dependent memory. S. VIANA DA SILVA*; M. G. HABERL; K. GAUR; M. LEDAKIS; M. FU; M. BRY; J. K. LEUTGEB; E. KOO; S. LEUTGEB. *UC San Diego, Kavli Inst. for Brain and Mind.*
- 1:00 TT15 **254.05** Spatial representations in medial entorhinal cortex remain stable over the course of hours in contrast to hippocampal CA1 and CA2 network ensembles. G. W. DIEHL*; O. J. HON; S. LEUTGEB; J. K. LEUTGEB. *UC-San Diego, Kavli Inst. for Brain and Mind.*
- 2:00 TT16 **254.06** CA3 cells remain informative about the current spatial location in medial entorhinal cortex lesioned rats. M. SABARIEGO*; A. SCHOWALD; B. L. BOUBLIL; D. T. ZIMMERMAN; N. GONZALEZ; J. K. LEUTGEB; R. E. CLARK; S. LEUTGEB. *UC San Diego, UC San Diego, Veterans Affairs San Diego Healthcare Syst., Kavli Inst. for Brain and Mind.*
- 3:00 TT17 **254.07** ● Ventral CA1 neurons store social memory. T. OKUYAMA*; T. KITAMURA; D. S. ROY; S. ITOHARA; S. TONEGAWA. *MIT, RIKEN Brain Sci. Inst. - Wako.*
- 4:00 TT18 **254.08** Basolateral to central amygdala neural circuits for appetitive behaviors. X. ZHANG*; J. KIM; S. MURALIDHAR; S. LEBANC; S. TONEGAWA. *The Picower Inst. For Learning and Memory, MIT.*
- 1:00 TT19 **254.09** Distinct neural circuits for the formation and retrieval of episodic memories. D. ROY*; T. KITAMURA; T. OKUYAMA; S. OGAWA-KITAMURA; C. SUN; Y. OBATA; A. YOSHIKI; S. TONEGAWA. *MIT, MIT, MIT, MIT, RIKEN BioResource Ctr., MIT.*

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* Indicates abstract's submitting author

- 2:00 TT20 **254.10** Dynamic changes of silent synapses and plasticity in the prefrontal-amygdala synapses: Witnessing others' fear augments plasticity whereas subsequent inhibitory avoidance training abolishes it. A. Y. MOROZOV*; W. ITO. *Virginia Tech. Carilion Res. Inst.*
- 3:00 TT21 **254.11** Suppression of the somatostatin, but not parvalbumin-expressing interneuron allows generating LTP in the prefrontal-amygdala synapses *in vitro* and *in vivo*. B. FUSCO*; A. Y. MOROZOV; W. ITO. *Virginia Tech. Carilion Sch. of Med., Virginia Tech. Carilion Res. Inst.*
- 4:00 TT22 **254.12** Disposable miniature LED light source for *in vivo* optogenetic stimulation reveals dynamic changes of synaptic transmission *in vivo* in dmPFC-BLA synapses during observational fear and subsequent inhibitory avoidance. W. ITO*; A. MOROZOV. *Virginia Tech. Carilion Res. Inst., Virginia Tech. Carilion Res. Inst.*
- 1:00 TT23 **254.13** Etomidate suppresses LTP in the CA1 region of the hippocampus *in vitro* by targeting $\alpha 5$ -GABA_A receptors on interneurons. A. G. FIGUEROA*; G. SURGÉS; D. A. RUHL; C. LOR; M. PERKINS; U. RUDOLPH; R. A. PEARCE. *Univ. of Wisconsin, Univ. of Wisconsin - Madison, McLean Hosp. / Harvard Med. Sch.*
- 2:00 TT24 **254.14** $\beta 2$ (N265M)-GABA_AR mice resist suppression of LTP by etomidate *in vitro*. G. SURGES*; A. FIGUEROA; C. LOR; M. PERKINS; N. KUNZ; G. E. HOMANICS; R. A. PEARCE. *Univ. of Wisconsin, Univ. Pittsburgh.*
- 3:00 TT25 **254.15** Differential activation of layers and neuronal subtypes of mouse neocortex in fear memory acquisition and retrieval. O. I. IVASHKINA*; K. TOROPOVA; T. KUNITSYNA; A. GRUZDEVA; K. ANOKHIN. *NRC Kurchatov Institute, NBICS-Center, Lomonosov Moscow Univ., Inst. of Normal Physiol.*
- 4:00 TT26 **254.16** Reorganization of memory engram over time: Cortical neuronal activity during fear memory formation and retrieval of recent and remote memory. A. GRUZDEVA*; O. IVASHKINA; K. TOROPOVA; K. ANOKHIN. *NRC Kurchatov Inst., Lomonosov Moscow Univ., Inst. of Normal Physiol.*
- 1:00 TT27 **254.17** Conditioning of contextual memory: Properties and imaging of neural circuitry in the mouse brain. N. VOROBYEVA*; O. IVASHKINA; K. TOROPOVA; K. ANOKHIN. *NRC Kurchatov Institute, Nbics-Center, Lab. for Neurobio. of Memory, Inst. of Normal Physiol., Ctr. for Neural and Cognitive Sciences, Lomonosov Moscow Univ.*
- 2:00 TT28 **254.18** Hippocampal phase precession results from cholinergic gating of entorhinal input. S. C. VENDITTO*; E. L. NEWMAN. *Princeton Neurosci. Inst., Indiana Univ. Bloomington.*
- 3:00 TT29 **254.19** Hippocampus required for retrieval practice induced memory improvements in rats. D. M. LAYFIELD*; N. P. SIDELL; A. T. ABDULLAHI; E. L. NEWMAN. *Indiana Univ.*
- 4:00 TT30 **254.20** Neural computation by strong connections in cortical networks. S. P. FABER*; N. M. TIMME; J. M. BEGGS; E. L. NEWMAN. *Indiana Univ., IUPUI.*
- 1:00 TT31 **254.21** Trial restricted silencing of ventral hippocampal communication with the amygdala during the formation of a trace fear memory. M. HERBST*; R. C. TWINING; M. R. GILMARTIN. *Marquette Univ., Marquette Univ., Marquette Univ.*
- 2:00 TT32 **254.22** Selective silencing of inputs to prefrontal cortex alter cortical encoding of trace fear memory. R. C. TWINING*; M. HERBST; D. DURIGAN; K. LEPAK; M. R. GILMARTIN. *Marquette Univ., Marquette Univ., Marquette Univ.*
- 3:00 TT33 **254.23** Prefrontal cortex communication with the basolateral amygdala in the formation of a trace fear memory. A. J. KIRRY*; A. ROTHWELL; H. GAINER; R. C. TWINING; M. R. GILMARTIN. *Marquette Univ.*
- 4:00 TT34 **254.24** Random activation of a small population of CA1 neurons disrupts memory retrieval. S. IWASAKI*; Y. IKEGAYA. *Univ. Tokyo.*
- 1:00 TT35 **254.25** Amygdala lesions do not disrupt familiarity memory in monkeys. B. M. BASILE*; C. L. KARASKIEWICZ; D. R. LUCAS; E. A. MURRAY. *Natl. Inst. of Mental Health, NIH.*
- 2:00 TT36 **254.26** Fear extinction regulated by GABAergic interneurons in basolateral amygdala. X. ZHANG*; Y. ZHOU; W. LI. *Shanghai Jiao Tong Univ., Bio-X Institutes, Shanghai Jiao Tong Univ.*

POSTER

255. Cognitive Control in a Clinical Population

Theme H: Cognition

Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*

- 1:00 TT37 **255.01** ● Water intake improves working memory and executive function in women. N. STACHENFELD*; S. MITCHELL; E. FREESE; C. LEONE; L. HARKNESS. *Yale Sch. of Med., The John B. Pierce Lab., PepsiCo, Inc.*
- 2:00 TT38 **255.02** ● Hemispheric asymmetry of reward activity in obesity. Y. ZHANG*; A. MICHAUD; K. LARCHER; A. DAGHER. *Montreal Neurolog. Institute, McGill Univ.*
- 3:00 TT39 **255.03** Arithmetic verification processing in children with dyscalculia. C. S. SONIA YANIN*, V; T. FERNANDEZ HARMONY; J. SILVA PEREYRA; D. PRIETO CORONA; S. CÁRDENAS SÁNCHEZ. *Univ. Autónoma De México, Univ. Autónoma De México, Univ. Autónoma De México.*
- 4:00 TT40 **255.04** TMS evoked potential over the right prefrontal cortex and response inhibition ERP provide a biomarker for ADHD. I. HADAS*; A. LAZEROVITZ; U. ALYAGON; A. ZANGEN. *Ben Gurion Univ. In the Negev, Life Sci. D, Ben Gurion Univ. in the Negev.*
- 1:00 TT41 **255.05** Oculomotor inhibition in psychostimulant dependents and its relationship with ADHD-like behaviors on childhood. E. J. NUNEZ MEJIA*; O. INOZEMTSEVA; J. JUAREZ; E. MATUTE VILLASEÑOR; Y. CHAMORRO. *Inst. De Neurociencias, Inst. Neurosci, Univ. Guadalajara, Inst. de Neurociencias, Inst. de Neurociencias.*
- 2:00 TT42 **255.06** Frontal lobe oxyhemoglobin levels in patients with depressive disorder and healthy controls during cognitive tasks assessed using the NIRSIT functional near-infrared spectroscopy (fNIRS) device. R. HO*. *Natl. Univ. of Singapore.*
- 3:00 TT43 **255.07** Functional networking differences in HIV infection, alcohol use disorder, and their comorbidity. T. SCHULTE*; E. V. SULLIVAN; A. PFEFFERBAUM; E. M. MÜLLER-OEHRING. *SRI Intl., Palo Alto Univ., Stanford Univ. Sch. of Med.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

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* Indicates abstract's submitting author

- 4:00 TT44 **255.08** Creativity and clinical markers of OCD. S. MEYER*; M. SELF; K. JUPITER; I. SOLIS; P. LESNIK; K. REWIN CIESIELSKI. *Univ. of New Mexico, MGH/MIT/HMS Athinoula A. Martinos Ctr., for Biomed. Imaging, Radiology.*
- 1:00 TT45 **255.09** Lesion-derived network mapping of patients with non-prefrontal damage helps explain impaired performance on the Wisconsin card sorting test. M. J. SUTTERER*; J. KAMM; J. BRUSS; D. TRANEL. *The Univ. of Iowa.*
- 2:00 TT46 **255.10** ● Stopping natural desires: the hypersexuality network in impulse control disorders in Parkinson's disease. I. OBESO*; J. PINEDA-PARDO; J. MOLINA; L. VELA; F. ALONSO; J. OBESO. *Fundación Hospitales Madrid- Puerta Del Sur, Hosp. Doce de Octubre.*
- 3:00 TT47 **255.11** ● Effects of the classic hallucinogen psilocybin and the dissociative hallucinogen dextromethorphan on cognition. F. S. BARRETT*; T. M. CARBONARO; M. W. JOHNSON; R. R. GRIFFITHS. *Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med.*
- 4:00 TT48 **255.12** Abnormal gray matter volume and executive control in young adults with internet gaming disorder. D. LEE; Y. JUNG*. *Yonsei Univ.*
- 1:00 TT49 **255.13** Functional connectivity changes in the brain following orthopedic surgery. H. HUANG*; J. TANNER; C. PRICE; M. DING. *Univ. of Florida.*
- 2:00 TT50 **255.14** Using an emotional saccade task to establish behavioural biomarkers in attention-deficit hyperactivity disorder and bipolar disorder. R. YEP*; D. C. BRIEN; B. C. COE; A. MARIN; D. P. MUNOZ. *Queen's Univ., Hotel Dieu Hosp.*
- 3:00 TT51 **255.15** Neuroanatomical correlates of cognitive function in type 2 diabetes and major depression. H. DENG; M. LAMAR; M. JEAN; S. YANG; A. KUMAR; O. A. AJILORE*. *Univ. of Illinois at Chicago, Rush Univ., Univ. of Illinois at Chicago.*
- 4:00 TT52 **255.16** Combined impact of HIV and cannabis use on insular functional connectivity. M. RIEDEL*; J. S. FLANNERY; R. GONZALEZ; A. R. LAIRD; M. T. SUTHERLAND. *Florida Intl. Univ., Florida Intl. Univ.*
- 1:00 TT53 **255.17** Inhibitory control task performance in patients with substance abuse is not associated with adherence to residential treatment. S. E. MORALES MONDRAGÓN*; O. INOZEMTSEVA; J. JUAREZ; E. MATUTE-VILLASEÑOR. *Univ. De Guadalajara, Inst. Neurosci, Univ. Guadalajara, Inst. de Neurociencias.*
- 3:00 TT56 **256.03** Perceptual discrimination of temporal duration based on ongoing motor behavior. W. ZHOU; A. DANIEL; W. M. JOINER*; M. WIENER. *George Mason Univ., George Mason Univ., George Mason Univ.*
- 4:00 TT57 **256.04** Distinct temporal processing schemes for speech and music. N. ZUK*; J. MURPHY; E. LALOR. *Univ. of Rochester, Trinity Col.*
- 1:00 TT58 **256.05** Feeling the beat engages auditory dorsal stream in early blind and sighted. J. PHILLIPS-SILVER*; J. W. VANMETER; J. R. RAUSCHECKER. *Georgetown Univ. Med. Ctr., Georgetown Univ. Med. Ctr., Georgetown Univ. Med. Ctr.*
- 2:00 TT59 **256.06** Accented metronome stabilizes auditory-motor coordination of whole-body rhythmic movement. T. ETANI*; A. MIURA; M. OKANO; H. TANOSAKI; M. SHINYA; K. KUDO. *The Univ. of Tokyo, Waseda Univ., Ritsumeikan Univ., The University of Tokyo, Hiroshima Univ., The Univ. of Tokyo.*
- 3:00 TT60 **256.07** ▲ Drum-playing modulates the post-auricular muscle response. Z. E. SWANN; P. A. SIMEN*. *Oberlin Col.*
- 4:00 TT61 **256.08** Neural oscillatory activities for processing dynamic auditory information: From intrapersonal to interpersonal entrainment. A. CHANG*; D. J. BOSNYAK; L. J. TRAINOR. *McMaster Univ.*
- 1:00 TT62 **256.09** Live music increases intersubject synchronization of audience members' brain rhythms. M. J. HENRY*; D. J. CAMERON; D. SWARBRICK; D. BOSNYAK; L. J. TRAINOR; J. A. GRAHN. *The Univ. of Western Ontario, McMaster Univ.*
- 2:00 TT63 **256.10** Subjective time estimation of music, noise, and pure tone sequences. J. HUANG*. *Johns Hopkins Univ.*
- 3:00 TT64 **256.11** Uncertainty of subjective temporal order without subjective simultaneity. S. YAMAMOTO*. *AIST.*
- 4:00 TT65 **256.12** The mechanisms of timing: An integrative theoretical approach. L. N. PANTLIN*; M. PRINCE; D. DAVALOS. *Colorado State Univ., Colorado State Univ., Colorado State Univ.*
- 1:00 TT66 **256.13** Causal role of beta oscillations in time estimation. M. WIENER*; A. PARIKH; A. KRAKOW; H. B. COSLETT. *George Mason Univ., Univ. of Pennsylvania, Johns Hopkins Univ., Hosp. of Univ. PA.*
- 2:00 UU1 **256.14** Cognitive functions of the brain: A perspective based on the time-dimension entanglement with information processing in neural circuits. D. S. GUPTA*; S. TEIXEIRA. *Camden County Col., Federal Univ. of Piauí (UFPI).*
- 3:00 UU2 **256.15** Increasing cortical dopamine tone improves time perception in humans. J. MITCHELL; T. VEGA; D. WEINSTEIN; A. S. KAYSER*. *UCSF: Dept. of Neurol., Univ. of California San Francisco.*

POSTER

256. Rhythm and Timing

Theme H: Cognition

Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*

- 1:00 TT54 **256.01** Perceptual priors on musical rhythm revealed by iterated reproduction. N. JACOBY*; J. MCDERMOTT. *Columbia Univ., MIT.*
- 2:00 TT55 **256.02** Beta-band response synchronizes and predicts rhythmic flashing visual stimuli. D. COMSTOCK*; R. BALASUBRAMANIAM. *Univ. of California - Merced.*

POSTER

257. Timing, Rhythm, and Sequencing

Theme H: Cognition

Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*

- 1:00 UU3 **257.01** ▲ Item-item and item-position strategy use in a cross-species sequence memory task. A. GUDMUNDSON*; S. M. STARK; C. E. STARK. *Univ. of California Irvine, Univ. of California, Irvine, Univ. of California Irvine.*
- 2:00 UU4 **257.02** Comparing human and nonhuman primate brain responses to auditory sequences using EEG. D. CAMERON*; L. PRADO; J. A. GRAHN; H. MERCHANT. *Georgetown Univ., Inst. de Neurobiologia UNAM, Univ. of Western Ontario.*
- 3:00 UU5 **257.03** Propofol sedation impedes stream of consciousness by prolonging temporal autocorrelation of intrinsic brain activity. Z. HUANG*; X. LIU; A. G. HUDETZ. *Univ. of Michigan Med. Sch., Med. Col. of Wisconsin.*
- 4:00 UU6 **257.04** Temporal recalibration in the visual modality requires spatial grouping. L. GU*; Y. HUANG; X. WU. *Sun Yat-Sen Univ.*
- 1:00 UU7 **257.05** ▲ Relative hemispheric alpha power during a temporal bisection task. A. CRUZ; M. I. LEON*. *California State University, Bakersfield, Cal State Univ, Bakersfield.*
- 2:00 UU8 **257.06** ● Integrating space, time and numerosity in a navigational context: An fMRI study. M. RIEMER*; E. KÜHN; J. SHINE; T. WOLBERS. *German Ctr. For Neurodegenerative Diseases(Dzne), Med. Fac. (FME), Otto-von-Guericke Univ., Ctr. for Behavioral Brain Sci. (CBBS).*
- 3:00 UU9 **257.07** ▲ The time-dependent effects of cardiovascular exercise on associative memory. A. R. PAHWA*; J. B. CAPLAN; D. F. COLLINS. *Univ. of Alberta.*
- 4:00 UU10 **257.08** An exploration of time perception in early-stage romantic relationships. J. C. LIU*; N. M. Y. KUEK. *Yale-NUS Col.*
- 1:00 UU11 **257.09** A fast recognition memory system: The temporal dynamics of perirhinal and hippocampal structures in visual recognition memory. E. DESPOUY*; J. CUROT; M. DEUDON; L. VALTON; J. SOL; J. LOTTERIE; M. DENUELLE; E. BARBEAU. *Ctr. De Recherche Cerveau Et Cognition (cerco), Explorations Neurophysiologiques, Hôpital Purpan.*
- 2:00 UU12 **257.10** Distinct role of the cerebellum in behavioral and neural expressions of rhythm-based and interval-based temporal predictions. A. BRESKA*; K. T. DUBERG; R. B. IVRY. *Univ. of California Berkeley.*
- 3:00 UU13 **257.11** Does sexual violence in the past alter temporal perspective in the present? E. M. MILLON*; H. M. CHANG; K. N. SCHRODER; T. J. SHORS. *Rutgers Univ.*
- 4:00 UU14 **257.12** Randomized response-stimulus intervals implicitly encoded as temporal probabilities in the human brain. F. N. YANG*; S. XU; T. LIU; H. RAO. *Univ. of Pennsylvania, Univ. of Pennsylvania, Carnegie Mellon Univ., Univ. of Pennsylvania.*
- 1:00 UU15 **257.13** A thalamocortical substrate for flexible motor timing. J. WANG*; M. JAZAYERI. *MIT McGovern Inst. For Brain Res., MIT.*

POSTER

258. Schizophrenia: Developmental Models

Theme H: Cognition

Sun. 1:00 PM – *Walter E. Washington Convention Center, Halls A-C*

- 1:00 UU16 **258.01** Hippocampal morphology of mice lacking Egr3. A. L. GALLITANO*; S. J. BRUNWASSER; M. CHARBEL; N. MICKS; K. MARBALLI; J. MEDEIROS; D. F. MARRONE. *Univ. of Arizona, Univ. of Arizona Col. of Med. - Phoenix, Washington Univ. Sch. of Med., Wilfrid Laurier Univ., Univ. of Arizona.*
- 2:00 UU17 **258.02** Alterations in dendritic spines morphology of corticolimbic neurons in rats after neonatal ventral hippocampus lesion. H. TENDILLA*; A. J. VÁZQUEZ-HERNÁNDEZ; R. A. VÁZQUEZ-ROQUE; L. GARCÉS-RAMÍREZ; G. FLORES. *Inst. De Fisiología, Benemérita Univ. Autónoma De Puebla, ENCB-IPN.*
- 3:00 UU18 **258.03** Blunted prefrontal dopamine release in a NMDA receptor hypofunction mouse model. K. NAKAO*; Y. FUJITA; K. JAUNARAJ; K. HASHIMOTO; K. NAKAZAWA. *Univ. of Alabama at Birmingham, Chiba Univ. Ctr. Forensic Men Hlth., Univ. of Alabama at Birmingham.*
- 4:00 UU19 **258.04** Synaptic remodeling of small dendritic spines over adolescent auditory cortex development. E. M. PARKER*; C. E. MOYER; J. T. NEWMAN; Z. P. WILLS; M. L. MACDONALD; R. A. SWEET. *Univ. of Pittsburgh, Univ. of California Santa Cruz, Univ. of Pittsburgh, Univ. of Pittsburgh Dept. of Psychiatry.*
- 1:00 UU20 **258.05** A schizophrenia-associated missense mutation in kalirin converges on multiple RhoA-dependent pathways involved in cytoskeletal morphology. M. J. GRUBISHA*; G. E. HOMANICS; P. PENZES; R. A. SWEET. *Univ. of Pittsburgh, Univ. Pittsburgh, Northwestern Univ. Feinberg Sch. Med., Univ. of Pittsburgh Dept. of Psychiatry.*
- 2:00 UU21 **258.06** Dominant expression of human mutant DISC1 in oligodendrocyte progenitors increases their proliferation by altering neuregulin signaling. P. L. KATSEL*; P. FAM; W. TAN; S. KHAN; Y. JOUROUKHIN; S. RUDCHENKO; M. PLETNIKOV; V. HAROUTUNIAN. *Icahn Sch. of Med. At Mount Sinai, Johns Hopkins Univ. Sch. of Med., Hosp. for Special Surgery, JJ Peters VAMC.*
- 3:00 UU22 **258.07** Altered sensorimotor gating, associative learning, and neurogenesis in a novel schizophrenia model using DISC1 and Reelin gene mutations. H. L. MAHONEY*; C. MORRIS; B. M. CAPRARO; A. YUNUS; C. CARDONA; E. J. PETERSON; H. S. JUSTIN; K. STEVANOVIC; A. L. LUSSIER; J. GAMSBY; E. J. WEEBER; D. GULICK. *Univ. of South Florida, Byrd Alzheimer's Inst., Natl. Inst. of Hlth., Univ. of British Columbia, Univ. of South Florida, Univ. of South Florida.*
- 4:00 UU23 **258.08** A novel Disc1 rat model of schizophrenia-like deficits. B. R. BARNETT*; E. A. SAWIN; C. D. RUBENSTEIN; V. P. BAKSHI; J. YU. *Univ. of Wisconsin, Madison, Univ. of Wisconsin, Madison, Univ. of Wisconsin, Madison, Univ. of Wisconsin, Madison, Univ. of Wisconsin, Madison.*
- 1:00 UU24 **258.09** ▲ Longitudinal evaluation of prepulse inhibition in DISC1 knockout rats reveals sexually dimorphic patterns of impairment across development. S. S. DESROCHERS*; M. J. GLENN; E. L. BAINBRIDGE. *Colby Col., Colby Col.*

Sun. PM

* Indicated a real or perceived conflict of interest, see page 137 for details.
 ▲ Indicates a high school or undergraduate student presenter.
 * Indicates abstract's submitting author

- 2:00 UU25 **258.10** The cognitive function of adolescent and adult male and female rats in the MAM animal model of schizophrenia. M. GHASEMZADEH*; R. DIDOMINICIS; C. ALBRECHT; L. KELBLE; D. KRAVTSOV. *Marquette Univ.*
- 3:00 UU26 **258.11** ● Raloxifene alters the effect of testosterone-removal on truncated tropomyosin receptor kinase B isoform gene expression in prefrontal cortex of adult male rats. T. RAHMAN*; T. D. PURVES-TYSON; C. SHANNON WEICKERT. *Neurosci. Res. Australia, Univ. of New South Wales.*
- 4:00 UU27 **258.12** The role of neuregulin 1 and basal forebrain cholinergic neurons in cognitive functions and behaviors. C. LEE*; L. SERVILIO; B. DOMINGUEZ; F. DE WINTER; K. LEE. *Salk Inst., Netherlands Inst. for Neurosci.*
- 1:00 UU28 **258.13** ● Abnormal development of nigral dopamine activities in a cytokine-induced schizophrenia model; implication for its postpubertal onset. H. NAMBA*; K. TOMIYAMA; H. NAWA. *Mol. Neurobiol., Brain Res. Inst., Niigata Univ.*
- 2:00 UU29 **258.14** NL-2 R215H mutant mouse model display GABAergic deficits and schizophrenia like behaviors. D. JIANG*. *Penn State Univ.*
- 3:00 UU30 **258.15** Neonatal exposure to epidermal growth factor leads to abnormal auditory responses in rats: Their implication in schizophrenia modeling. H. INABA*; I. NARIHARA; R. KAI; H. NAMBA; F. NIN; H. HIBINO; H. NAWA. *Brain Res. Institute, Niigata Univ., Niigata Univ. Sch. of Med., Niigata Univ. Sch. of Med.*
- 4:00 UU31 **258.16** Neuregulin 1 type III overexpressing mice possess an altered hippocampal transcriptome that implicates the Igf and PI3K pathways: A microarray study. J. C. OLAYA*; M. A. KONDO; D. SINCLAIR; M. M. MATSUMOTO; T. KARL; C. SHANNON WEICKERT. *Neurosci. Res. Australia, Univ. of Tasmania, Astellas Pharma Inc., Western Sydney Univ.*
- 1:00 UU32 **258.17** Juvenile *Toxoplasma gondii* infection in mice exacerbates spatial learning deficits and reduces anxiety related behavior. J. B. EELLS*; S. X. GUO-ROSS; C. SMITH; S. MIDDLEBROOKS; A. VARELA-STOKES. *Mississippi State Univ.*
- 2:00 UU33 **258.18** PTP1B effects on synaptic function in a mouse model of schizophrenia induced by maternal immune activation. P. COUTURE*; Z. T. QIN; H. CHEN. *Univ. of Ottawa, Ottawa Hosp. Res. Inst., Univ. of Ottawa, Univ. of Ottawa.*
- 3:00 UU34 **258.19** Prenatal kynurenine elevation in rats: Sleep disturbances and hippocampal-prefrontal mediated learning impairments. A. BARATTA*; S. A. BUCK; J. A. MONG; A. POCIVAVSEK. *Univ. of Maryland Sch. of Med., Univ. of Maryland Sch. of Med.*
- 4:00 UU35 **258.20** Abnormalities in cortical parvalbumin-positive interneuron density and distribution and auditory evoked potentials in a mouse model of 22q11.2 Deletion Syndrome. F. A. ZINNAMON; F. G. HARRISON; K. H. WANG*; J. F. LINDEN. *Natl. Inst. of Mental Hlth., Univ. Col. London.*
- 1:00 UU36 **258.21** The role of PDE11A4 in isolation-induced neuroinflammation and social deficits. K. PILARZYK; M. P. KELLY*. *Univ. of South Carolina Sch. of Med., Univ. of South Carolina Sch. of Med.*
- 2:00 UU37 **258.22** Neuronal avalanche dynamics in a developmental NMDAR hypofunction model of schizophrenia in mouse. K. O. GOEL*; S. SESHADRI; D. PLENZ. *Natl. Inst. of Mental Health, NIH.*
- 3:00 UU38 **258.23** Pairing of neonatal phencyclidine and adolescent stress as a model of schizophrenia. A. MOGHADAM*; L. R. VOSE; O. MIRY; P. K. STANTON. *New York Med. Col.*
- 4:00 UU39 **258.24** ● The impact of stress during adolescence or adulthood is dependent on critical-period-like stress sensitivity. X. ZHU*; F. V. GOMES; A. MADDE; A. A. GRACE. *Univ. of Pittsburgh.*
- 1:00 UU40 **258.25** Pomaglutmetad methionil normalizes increased DA neuron activity in the VTA in the methylazoxymethanol acetate developmental disruption model of schizophrenia. S. SONNENSCHNEIN*; A. A. GRACE. *Univ. of Pittsburgh.*
- 2:00 UU41 **258.26** Glutamatergic dysfunction within neonatal prefrontal circuitry in a gene-environmental model of mental disorders. M. CHINI*; C. LINDEMANN; J. A. PÖPPLAU; X. XU; J. AHLBECK; S. H. BITZENHOFER; I. L. HANGANU-OPATZ. *Univ. Med. Ctr. Hamburg-Eppendorf.*

POSTER

259. Mouse Connectomics

Theme I: Techniques

Sun. 1:00 PM – Walter E. Washington Convention Center, Halls A-C

- 1:00 UU42 **259.01** Mouse brain light sheet atlas with iDISCO+ in CCF space. K. UMADEVI VENKATARAJU; J. COLLINS; Z. KHAKU; K. JOSEPH; N. CAIN; P. OSTEN*. *Cold Spring Harbor Lab., Certerra, Inc., Allen Inst. for Brain Sci.*
- 2:00 UU43 **259.02** Whole-brain reconstruction and classification of spiny claustrum neurons of mice. Y. WANG*; H. GONG; Y. LI; X. KUANG; T. L. DAIGLE; L. MADISEN; H. GU; M. MILLS; L. GRAY; B. TASIC; A. LI; J. A. HARRIS; Q. LUO; C. KOCH; H. ZENG. *Allen Inst., Wuhan Natl. Lab. For Optoelectronics, Wenzhou Med. Univ., Allen Inst. For Brain Sci., Allen Inst. for Brain Sci., Allen Inst. For Brain Sci., Huazhong Univ. of Sci. and Technol., Huazhong Univ. of Sci. and Technol., Allen Inst. for Brain Sci.*
- 3:00 UU44 **259.03** The Allen Mouse Common Coordinate Framework: Providing spatial integration of data and knowledge on cells, circuits and function. D. FENG; J. A. HARRIS*; Q. WANG; S. DING; N. S. GRADDIS; P. LESNAR; Y. LI; J. ROYALL; S. M. SUNKIN; W. WAKEMAN; H. ZENG; C. KOCH; L. NG. *Allen Inst. For Brain Sci.*
- 4:00 UU45 **259.04** Anterograde tracing and anatomical template based brain-wide mapping of white matter fiber tracts in a 3-D common coordinate framework of mouse brain. S. DING*; J. ROYALL; P. LESNAR; Q. WANG; K. HIROKAWA; Y. LI; A. HO; C. KOCH; S. SUNKIN; H. ZENG; L. NG; J. A. HARRIS. *Allen Inst. For Brain Sci.*
- 1:00 UU46 **259.05** ● The Allen mouse common coordinate framework: A 3D delineation of the mouse gray matter with multi-modality references. Q. WANG*; J. ROYALL; P. LESNAR; S. DING; K. HIROKAWA; Y. LI; A. HO; W. WAKEMAN; N. GRADDIS; S. SUNKIN; C. KOCH; L. NG; H. ZENG; J. A. HARRIS. *Allen Inst. for Brain Sci., Allen Inst. for Brain Sci., Allen Inst. for Brain Sci., Allen Inst. for Brain Sci., Allen Inst. for Brain Sci., Allen Inst. for Brain Sci.*
- 2:00 UU47 **259.06** ● Vascular quantification of entire murine organs via knife-edge scanning microscopy. V. VEMURI*; N. FARAHANI; M. J. PESAVENTO. *3scan, 3Scan.*

• Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 3:00 UU48 **259.07** Alteration of amine neurotransmitters in Scrapper-knockout mice brain visualized by imaging mass spectrometry. F. ETO; T. MATSUDA; M. SETOU; I. YAO*. *Hamamatsu Univ. Sch. of Med., Hamamatsu Univ. Sch. of Med., Hamamatsu Univ. Sch. of Med.*
- 4:00 UU49 **259.08** Calcium imaging from two neuronal subtypes. J. A. LICHOLAI*; A. V. KRAVITZ. *NIDDK, Natl. Inst. of Hlth., NIDA, Natl. Inst. of Health.*
- 1:00 UU50 **259.09** Distinct components of stimulus-evoked high-frequency cortical surface electrical potentials may reflect spiking activity in different cortical layers. K. BOUCHARD*; M. E. DOUGHERTY; P. LEDOCHOWITSCH; M. M. MAHARBIZ; C. E. SCHREINER; E. F. CHANG. *LBNL/UCB, Lawrence Berkeley Natl. Lab., Allen Inst. for Brain Sci., UC Berkeley, Univ. California Sch. Med., UCSF.*
- 2:00 UU51 **259.10** ▲ The long-term effects of post-isoflurane exposure on quantitative electroencephalogram (eeg) in mice. H. RAFI*; C. G. WELLE; M. YE. *FDA, Univ. of Colorado, FDA.*
- 1:00 DP15/UU52 **259.11** (Dynamic Poster) Mouse Connectome Project at USC: Assembling global neural networks of the mammalian brain. H. DONG*; H. HINTIRYAN; M. S. BIENKOWSKI; N. FOSTER; I. BOWMAN; L. GOU; S. YAMASHITA; M. ZHU; M. Y. SONG; N. L. BENAVIDEZ; K. COTTER; M. BECERRA; D. LO; J. ABU-JABER; S. AZAM; H. XU; D. JOHNSON; H. VILLA-REUSENMANN; A. TAKAHASHI. *Keck Sch. of Med. of USC, USC.*
- 4:00 UU53 **259.12** Distinct hippocampal network connectivity to brain-wide systems controlling motivated behavior. M. S. BIENKOWSKI*; I. BOWMAN; M. Y. SONG; L. GOU; M. ZHU; N. BENAVIDEZ; S. YAMASHITA; J. ABU-JABER; S. AZAM; D. LO; N. N. FOSTER; H. HINTIRYAN; H. DONG. *Univ. of Southern California Keck Sch. of M.*
- 1:00 UU54 **259.13** Multi-scale modularity analysis of the hippocampus brain network. I. BOWMAN*; M. S. BIENKOWSKI; L. GOU; K. KOTTER; S. YAMASHITA; M. ZHU; S. AZAM; F. J. ABU-JABER; D. D. LO; M. Y. SONG; A. W. TOGA; H. DONG. *USC Stevens Neuroimaging and Informatics Inst.*
- 2:00 UU55 **259.14** Extrastriate connections of the mouse lateral geniculate thalamus. N. L. BENAVIDEZ*; M. S. BIENKOWSKI; L. GOU; K. WU; H. DONG. *USC Keck Sch. of Med., Neurosci. Grad. Program.*
- 3:00 UU56 **259.15** Neuroanatomical mapping of the mouse upper limb and orofacial networks. M. Y. SONG*; M. S. BIENKOWSKI; B. ZINGG; L. GOU; I. BOWMAN; K. COTTER; H. HINTIRYAN; H. DONG. *USC, Univ. of Southern California Keck Sch. of M., Keck Sch. of Med. of USC.*
- 4:00 UU57 **259.16** A slide-lock Neuroclip electrode for neuromodulation of small nerves. A. DESHMUKH*; A. KANNEGANTI; J. LEE; S. COGAN; M. ROMERO-ORTEGA. *The Univ. of Texas At Dallas, The Univ. of Texas At Dallas.*
- 1:00 UU58 **259.17** Robotic-assisted hand training for spinal cord injury driven by myoelectric pattern recognition. Z. LU*; K. TONG; A. STAMPAS; P. ZHOU. *Univ. of Texas (uthealth), The Chinese Univ. of Hong Kong, Guangdong Work Injury Rehabil. Ctr.*
- 2:00 UU59 **259.18** Quantification of spinal cord injury through circular scanning optical coherence tomography. H. KIM*; S. BAEK; Y. AHN; W. JUNG. *UNIST.*
- 3:00 UU60 **259.19** Anatomical properties of the cholinergic projection from the parabrachial nucleus to the superficial layer of superior colliculus. K. TOKUOKA*; M. KASAI; T. ISA. *Kyoto Univ., Kyoto Univ., Natl. Inst. for Physiological Sci., The Grad. Univ. for Advanced Studies.*

POSTER

260. Data Analysis and Statistics: Human Data I

Theme I: Techniques

Sun. 1:00 PM – Walter E. Washington Convention Center, Halls A-C

- 1:00 UU61 **260.01** ● Brain state during deep sedation in office-based anesthesia. P. KAHALIARDABILI*; S. NAGARAJ; F. SHAPIRO; S. CHAKRAVARTY; E. N. BROWN; P. L. PURDON; M. BRANDON WESTOVER. *Athinoula A. Martinos Ctr. For Biomed. Imagin, MIT, Massachusetts Gen. Hospital, Harvard Med. Sch., Beth Israel Deaconess Med. Center, Harvard Med. Sch., MIT, Massachusetts Gen. Hospital, Harvard Med. Sch., Picower Inst. for Learning and Memory, Massachusetts Inst. of Technol., MIT-Harvard Hlth. Sci. and Technol., Inst. of Med. Engin. and Science, Massachusetts Inst. of Technol., Massachusetts Gen. Hosp.*
- 2:00 UU62 **260.02** Robust optimal data representations for measuring distribution similarity. A. BRAMSON*. *Riken.*
- 3:00 UU63 **260.03** Identifying epileptogenic biomarkers after traumatic brain injury using diffusion component analysis. A. RIOS; D. DUNCAN*; A. W. TOGA; P. VESPA. *USC, USC, UCLA.*
- 4:00 UU64 **260.04** ● Using realistic, synthetic fMRI data to validate Topological Data Analysis as a tool for fMRI. J. D. COHEN*; M. LESNICK; B. KELLER; C. BALDASSANO; A. C. SCHAPIRO; C. T. ELLIS. *Princeton Univ., Intel Corp., Beth Israel Deaconess Med. Ctr. / Harvard Med., Yale Univ.*
- 1:00 UU65 **260.05** When temporal similarity is mistaken for representational similarity: A Bayesian approach to reduce bias in RSA of fMRI data. M. CAI*; N. W. SCHUCK; J. W. PILLOW; Y. NIV. *Princeton Univ., Princeton Univ.*
- 2:00 UU66 **260.06** ● Real-time fMRI analysis in the cloud. D. SUO*; J. HUTCHINSON; M. T. DEBETTENCOURT; A. C. MENNEN; Y. WANG; T. WILKE; N. B. TURK-BROWNE; K. NORMAN; J. D. COHEN; K. LI. *Princeton Univ., Northeastern Univ., Univ. of Chicago, Princeton Univ., Intel Corp., Intel Corp., Princeton Univ., Princeton Univ.*
- 3:00 UU67 **260.07** ● Brain imaging analysis kit: Advanced fmri analysis at scale. M. CAPOTA*; T. L. WILLKE; K. NORMAN; J. D. COHEN; N. B. TURK-BROWNE. *Intel Corp., Princeton Univ., Princeton Univ.*
- 4:00 UU68 **260.08** ● Multi-subject fmri data factor analysis using brainiak. H. ZHANG*; P. CHEN; P. J. RAMADGE. *Princeton Univ.*
- 1:00 UU69 **260.09** ● Matrix-variate models for fMRI analysis. M. SHVARTSMAN*; N. SUNDARAM; M. C. AOI; A. CHARLES; T. L. WILKE; J. D. COHEN. *Princeton Neurosci. Inst., Intel Corp., Princeton Univ., Princeton Univ.*
- 2:00 UU70 **260.10** Type 1 and type 2 error analysis for representational similarity analysis. P. S. JOHNSON*; M. SHVARTSMAN; J. D. COHEN. *Princeton Univ.*
- 3:00 UU71 **260.11** Neural traffic model of brain function. C. HENRY*; A. P. GEORGOPOULOS. *Univ. of Minnesota, Univ. Minnesota.*

* Indicated a real or perceived conflict of interest, see page 137 for details.

▲ Indicates a high school or undergraduate student presenter.

* Indicates abstract's submitting author

- 4:00 UU72 **260.12** Comparison of reproducibility of single voxel spectroscopy and whole brain magnetic resonance spectroscopy imaging. Y. ZHANG*; E. TAUB; N. SALIBI; G. USWATTE; A. MAUDSLEY; S. SHERIFF; B. WOMBLE; V. MARK; D. KNIGHT. *UAB, MR R&D, Physical Therapy, Radiology, UAB, Neurol.*
- 1:00 UU73 **260.13** Improving the temporal fidelity of fMRI by time-locking. R. O. ABDOLLAHI*; S. VISWANATHAN; B. A. WANG; C. GREFKES; S. DAUN; G. R. FINK. *Forschungszentrum Jülich, Univ. Hosp. Cologne, Univ. of Cologne.*
- 2:00 UU74 **260.14** Gender and age classification based on Long Short-Term Memory during resting state fMRI. J. PARK*; S. PARK; S. NAM; D. KIM. *KAIST, Korea Advanced Inst. of Sci. and Technol.*
- 3:00 UU75 **260.15** How reliable is the cerebellum as reference region in neuroreceptor modelling of MR/PET data: Impact of various attenuation correction strategies. E. ROTA KOPS; C. LERCHE; H. MÜLLER; N. J. SHAH; H. HAUTZEL*. *Forschungszentrum Jülich, Heinrich-Heine-University Düsseldorf, Heinrich-Heine Univ. Düsseldorf.*
- 4:00 UU76 **260.16** Feature learning for EEG-based emotion recognition. H. LEE*; T. CHOI; K. CHOI; B. CHAE. *Looxidlabs.*
- 1:00 UU77 **260.17** Epilepsy diagnosis with predictive EEG modeling. W. M. OTTE*; V. T. VAN HEES; M. R. T. SINKE; J. W. BUITENHUIS; F. VAN DER MAAS; L. RIDDER; E. VAN DIESEN. *Univ. Med. Ctr. Utrecht, Netherlands eScience Ctr., Reabilitação Baseada na Comunidade (RBC) Effata, Univ. Med. Ctr. Utrecht.*
- 2:00 UU78 **260.18** Four-class emotion classification using one-dimensional convolution neural networks - An EEG study. S. LEE*; S. HAN; S. JUN. *Gwangju Inst. of Sci. and Technol.*
- 3:00 UU79 **260.19** Multifractal analysis of human EEG: Link with sleep stages. L. SOUZA FRANCA*; Y. WANG; M. C. WALKER; J. G. V. MIRANDA; L. LEMIEUX. *Univ. Col. London, Newcastle Univ., Federal Univ. of Bahia.*
- 4:00 UU80 **260.20** Frequency dependent resting state oscillation network revealed by intracranial EEG recordings. Z. TAN*; W. J. ZHOU; L. WANG. *Inst. of Psychology, Chinese Acad. of Sci., Univ. of Chinese Acad. of Sci., Neurosurgery, Epilepsy Ctr. of Yuquan Hospital, Tsinghua Univ., CAS Ctr. for Excellence in Brain Sci. and Intelligence Technol.*
- 1:00 UU81 **260.21** Extracting single-trial time courses from EEG/MEG data using spatial filtering. O. HAUKE*; M. TREDER; D. NORRIS. *Med. Res. Council UK, Univ. of Birmingham, Med. Res. Council.*
- 2:00 UU82 **260.22** Reconstructing two-dimensional circular motions from EEG cortical currents during overt/covert visual pursuit tasks. K. MORISHIGE*; T. ISHIKAWA. *Toyama Prefectural Univ.*
- 3:00 UU83 **260.23** Beyond functional connectivity: Multivariate nonlinear dependence between brain regions. S. ANZELLOTTI*; E. FEDORENKO; D. S. HOULIHAN; R. R. SAXE. *MIT.*
- 4:00 VV1 **260.24** • Classification of clinical tremor ratings from smartwatch inertial measurement unit data. A. HADDOCK*; K. MITCHELL; A. MILLER; J. OSTREM; H. CHIZECK; S. MIOCINOVIC. *Univ. of Washington, Univ. of California San Francisco, Emory Univ.*
- 1:00 VV2 **260.25** Precision functional mapping of individual human brains. T. O. LAUMANN*; E. M. GORDON; A. W. GILMORE; D. J. NEWBOLD; D. J. GREENE; J. BERG; M. ORTEGA; C. HOYT-DRAZEN; C. GRATTON; H. SUN; J. HAMPTON; R. S. COALSON; A. NGUYEN; K. MCDERMOTT; J. SHIMONY; A. Z. SNYDER; B. L. SCHLAGGAR; S. E. PETERSEN; S. M. NELSON; N. U. F. DOSENBACH. *Washington Univ. Sch. of Med., Ctr. of Excellence for Res. on War Veterans, Lab. of Brain and Cognition, NIMH/NIH, Washington Univ. In St Louis, Washington Univ. Sch. of Med., New York Univ., Washington Univ. Sch. of Med., Washington Univ. Sch. of Med., Washington Univ. in St Louis, Washington Univ. Sch. of Med., Washington Univ. Sch. of Med., Washington Univ. Sch. of Med., Washington Univ. Sch. Med., Washington Univ. Sch. Med., Washington Univ. Sch. Med., Washington Univ. In St. Louis.*
- 2:00 VV3 **260.26** Interactive visualization of long-term behavioral data in Alzheimer's patients. K. SCHENK*; T. NGUYEN; S. J. BONASERA. *Randolph Col., Univ. of Nebraska Med. Ctr.*

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.

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| 94 | J.S. Takahashi: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); co-founder, Reset Therapeutics, Inc. F. Consulting Fees (e.g., advisory boards); AB, Reset Therapeutics, Inc. | 106.10 | N.C. Manley: A. Employment/Salary (full or part-time); Asterias Biotherapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Asterias Biotherapeutics. C.C. Case: A. Employment/Salary (full or part-time); Asterias Biotherapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Asterias Biotherapeutics. E.D. Wirth: A. Employment/Salary (full or part-time); Asterias Biotherapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Asterias Biotherapeutics. J.S. Lebkowski: A. Employment/Salary (full or part-time); Asterias Biotherapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Asterias Biotherapeutics. |
| 96 | O. Marin: F. Consulting Fees (e.g., advisory boards); Neurona Therapeutics. | | |
| 96.02 | J.L. Rubenstein: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neurona Therapeutics. F. Consulting Fees (e.g., advisory boards); Neurona Therapeutics. | | |
| 96.03 | O. Marin: F. Consulting Fees (e.g., advisory boards); Neurona Therapeutics. | | |
| 96.04 | A.R. Kriegstein: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neurona Therapeutics. F. Consulting Fees (e.g., advisory boards); Neurona Therapeutics. | 118.15 | N. Sunamura: A. Employment/Salary (full or part-time); ASUBIO PHARMA CO., LTD. S. Iwashita: A. Employment/Salary (full or part-time); ASUBIO PHARMA CO., LTD. K. Enomoto: A. Employment/Salary (full or part-time); ASUBIO PHARMA Co., Ltd. T. Kadoshima: A. Employment/Salary (full or part-time); ASUBIO PHARMA Co., Ltd. A. Okamoto: A. Employment/Salary (full or part-time); ASUBIO PHARMA Co., Ltd. F. Isono: A. Employment/Salary (full or part-time); ASUBIO PHARMA CO., LTD. |
| 97.07 | A. Berenyi: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Amplipex Ltd. | | |
| 98 | I.M. Chiu: 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.; Ipsen Pharmaceuticals. F. Consulting Fees (e.g., advisory boards); GlaxoSmithKline. | 118.19 | H.L. Bowling: A. Employment/Salary (full or part-time); Torch Biosciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Torch Biosciences, Inc. A. Bhattacharya: A. Employment/Salary (full or part-time); Torch Biosciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Torch Biosciences, Inc. E. Kiann: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Torch Biosciences, Inc. |
| 98.03 | S.E. Jordt: C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); GlaxoSmithKline Pharmaceuticals. F. Consulting Fees (e.g., advisory boards); Hydra Biosciences LLC (Cambridge, MA). | | |
| 98.06 | Y. Levine: A. Employment/Salary (full or part-time); Setpoint Medical Corporation. | | |
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| 103.02 | H. Okano: Other; SanBio Co.,Ltd., K-Pharma Inc. | | |
| 104.02 | C.E. Brown: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Mustang Bio. K.S. Aboody: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Therabiologics. | 120.13 | L.A. Gabel: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Provisional Patent 62/475,553. |
| 104.06 | Y. Okada: 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.; AMED 17ek0109243h0001. | 120.17 | M.E. Thomason: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Lumos Labs. F. Consulting Fees (e.g., advisory boards); Lumos Labs. |
| 104.09 | E. Swartz: F. Consulting Fees (e.g., advisory boards); Verge Genomics. | 121.03 | C. Deng: 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 Health and Medical Research Institute (NHMRC) Project Grant. |
| 105.08 | C.E. Leyns: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent: Anti-tau constructs. D.M. Holtzman: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent: Anti-tau constructs, Patent: Antibodies to tau. F. Consulting Fees (e.g., advisory boards); Co-founder and Advisor: C2N Diagnostics, Advisor: Proclara Biosciences, Consult: Genentech, Consult: Eli Lilly, Consult: AbbVie, Consult: AstraZeneca. | 122.06 | J.A. Chong: A. Employment/Salary (full or part-time); Hydra Biosciences. T.T. Strassmaier: A. Employment/Salary (full or part-time); Hydra Biosciences. R.J. Gallaschun: A. Employment/Salary (full or part-time); Hydra Biosciences. S. Just: A. Employment/Salary (full or part-time); Boehringer Ingelheim Pharma GmbH & Co. KG. C. Eickmeier: A. Employment/Salary (full or part-time); Boehringer Ingelheim Pharma GmbH & Co. KG. A. Sauer: A. Employment/Salary (full or part-time); Boehringer Ingelheim Pharma GmbH & Co. KG. N.T. Blair: A. |
| 106.01 | S.C. Cramer: F. Consulting Fees (e.g., advisory boards); Dart Neuroscience, Toyama, MicroTransponder. | | |

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| | Employment/Salary (full or part-time); Hydra Biosciences. C. Fanger: A. Employment/Salary (full or part-time); Hydra Biosciences. J. Witek: A. Employment/Salary (full or part-time); Hydra Biosciences. D. Del Camino: A. Employment/Salary (full or part-time); Hydra Biosciences. M.M. Moran: A. Employment/Salary (full or part-time); Hydra Biosciences. B.L. Chenard: A. Employment/Salary (full or part-time); Hydra Biosciences. | | lcagen. S. Han: A. Employment/Salary (full or part-time); Pfizer. V. Shanmugasundaram: A. Employment/Salary (full or part-time); Pfizer. K.E. Yoger: A. Employment/Salary (full or part-time); Icagen. B.M. Antonio: A. Employment/Salary (full or part-time); Icagen. D.C. Pryde: A. Employment/Salary (full or part-time); Curadev. A.C. Gerlach: A. Employment/Salary (full or part-time); Icagen. |
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| | | 124.02 | B. Henley: A. Employment/Salary (full or part-time); GW Pharma. 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.; GW Pharma. R.A. Gray: A. Employment/Salary (full or part-time); GW Pharma. G.L. Woodhall: 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.; GW Pharma. |
| | | 124.09 | N. Gonen: B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Supported by Teva's National Network of Excellence in Neuroscience scholarship. |
| | | 124.10 | D.S. Shin: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Provisional Patent Holder. |
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| 122.09 | G. Short: A. Employment/Salary (full or part-time); Flex Pharma. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Flex Pharma. B. Hegarty: A. Employment/Salary (full or part-time); Flex Pharma. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Flex Pharma. J. Szegda: A. Employment/Salary (full or part-time); Flex Pharma. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Flex Pharma. D. Cabral-Lilly: A. Employment/Salary (full or part-time); Flex Pharma. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Flex Pharma. J. Cermak: A. Employment/Salary (full or part-time); Flex Pharma. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Flex Pharma. C. Westphal: A. Employment/Salary (full or part-time); Flex Pharma. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Flex Pharma. T. Wessel: A. Employment/Salary (full or part-time); Flex Pharma. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Flex Pharma. | 124.14 | G.R. Stewart: A. Employment/Salary (full or part-time); Paimomix. 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.; Icagen. C.M. Maher: A. Employment/Salary (full or part-time); Paimomix, LLC. B.C. Gay: A. Employment/Salary (full or part-time); Paimomix, LLC. J.M. Andresen: A. Employment/Salary (full or part-time); Paimomix, LLC. A.C. Gerlach: 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.; Paimomix, LLC. S. Petrou: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Paimomix, LLC. D. Goldstein: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Paimomix, LLC. |
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| 122.18 | W. Tseng: A. Employment/Salary (full or part-time); Pfizer. K.M. Padilla: A. Employment/Salary (full or part-time); | | |

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| 126.13 | D. Ma: A. Employment/Salary (full or part-time); Euroimmun Medical Diagnostics Canada Inc. | 127.11 | E. Kurimoto: A. Employment/Salary (full or part-time); Takeda Pharmaceutical Company Limited. M. Nakashima: A. Employment/Salary (full or part-time); Takeda Pharmaceutical Company Limited. H. Kimura: A. Employment/Salary (full or part-time); Takeda Pharmaceutical Company Limited. M. Suzuki: A. Employment/Salary (full or part-time); Takeda Pharmaceutical Company Limited. |
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| 126.25 | S.W. Barger: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); receives royalties from MilliporeSigma Inc. for the sales of secreted amyloid precursor protein. | 127.14 | B.A. Bahr: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent Holder. |
| 127.04 | E.M. Sigurdsson: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); EMS is an inventor on patents on tau immunotherapy and related diagnostics that are assigned to New York University and licensed to H. Lundbeck A/S. F. Consulting Fees (e.g., advisory boards); H. Lundbeck A/S (within the last year), GlaxoSmithKline (within the last year). | 127.16 | A. Elharram: 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.; Retrotope Inc. N. Czegledy: 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.; Retrotope Inc. M. Golod: 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.; Retrotope Inc. G.L. Milne: 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.; Retrotope Inc. E. Pollock: 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.; Retrotope Inc. M.S. Shchepinov: A. Employment/Salary (full or part-time); Retrotope Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Retrotope Inc. B. Bennett: B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). |
| 127.05 | E. Van Der Kam: A. Employment/Salary (full or part-time); AbbVie. S.A. Farr: 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.; AbbVie. J.W. Brown: A. Employment/Salary (full or part-time); AbbVie. J. van Bergeijk: A. Employment/Salary (full or part-time); AbbVie. M.L. Niehoff: 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.; AbbVie. J.E. Morley: 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.; AbbVie. | | |
| 127.09 | T. Mandai: A. Employment/Salary (full or part-time); Takeda Pharmaceutical Company Limited. M. Kasahara: A. Employment/Salary (full or part-time); Takeda Pharmaceutical Company Limited. E. Kurimoto: A. Employment/Salary (full or part-time); Takeda Pharmaceutical Company Limited. M. Tanaka: A. Employment/Salary (full or part-time); Takeda Pharmaceutical Company Limited. M. Suzuki: A. Employment/Salary (full or part-time); Takeda Pharmaceutical Company Limited. A. Nakatani: A. Employment/Salary (full or part-time); Takeda | | |

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| | If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Retrotope Inc. | | (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx, Inc. C. Cearley : A. Employment/Salary (full or part-time); Aptinyx, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx, Inc. J.R. Moskal : A. Employment/Salary (full or part-time); Aptinyx, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx, Inc. |
| 127.17 | S. Kaniyappan : 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.; DZNE, MPG, and Tau Consortium. | | |
| 128.03 | J.B. Toledo : Other; Research support from Eli Lilly. | 129.02 | M. Loos : A. Employment/Salary (full or part-time); Sylics. |
| 128.05 | F.V. Chirila : A. Employment/Salary (full or part-time); NeuroDiagnostics LLC. J. Wallace : A. Employment/Salary (full or part-time); NeuroDiagnostics LLC. W. MacTurk : A. Employment/Salary (full or part-time); NeuroDiagnostics LLC. G. Xu : A. Employment/Salary (full or part-time); NeuroDiagnostics LLC. D. Alkon : A. Employment/Salary (full or part-time); NeuroDiagnostics LLC. | | M. Loos : A. Employment/Salary (full or part-time); Sylics. B. Koopmans : A. Employment/Salary (full or part-time); Sylics. E. Remmelink : A. Employment/Salary (full or part-time); Sylics. M. Verhage : F. Consulting Fees (e.g., advisory boards); Sylics. A.B. Smit : F. Consulting Fees (e.g., advisory boards); Sylics. |
| 128.13 | Y. Ding : A. Employment/Salary (full or part-time); Eli Lilly and Company. E. Zhen : A. Employment/Salary (full or part-time); Eli Lilly and Company. C. Ruble : A. Employment/Salary (full or part-time); Eli Lilly and Company. H. Vanderstichele : A. Employment/Salary (full or part-time); ADx NeuroSciences NV. E. Stoops : A. Employment/Salary (full or part-time); ADx NeuroSciences NV. J.L. Dage : A. Employment/Salary (full or part-time); Eli Lilly and Company. | 129.15 | D. Klakotskaia : A. Employment/Salary (full or part-time); Missouri Department of Health and Senior Services. |
| 128.14 | A. Chenna : A. Employment/Salary (full or part-time); Monogram Biosciences, LabCorp, Inc. C.J. Petropoulos : A. Employment/Salary (full or part-time); Monogram Biosciences, LabCorp Inc. J.W. Winslow : A. Employment/Salary (full or part-time); Monogram Biosciences, LabCorp, Inc. | 130.09 | S. Blom : A. Employment/Salary (full or part-time); The program is developed at the Fimmic that is private company. Sami Blom is an employee of the company. K. Pitkänen : A. Employment/Salary (full or part-time); The program is developed at the Fimmic that is private company. Kari Pitkänen is Director of Business Development, Co-founder of the company. |
| 128.18 | S. Small : F. Consulting Fees (e.g., advisory boards); Scientific advisory board member for Denali Therapeutics and Janssen Pharmaceuticals. | 131.02 | G. Porras : A. Employment/Salary (full or part-time); Motac neuroscience. E. Bezdard : 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.; Michael J Fox Foundation, Agence Nationale de la Recherche. |
| 128.19 | S. Matysiak : F. Consulting Fees (e.g., advisory boards); MyCartis. D. Minczakiewicz : A. Employment/Salary (full or part-time); MyCartis. S. Pereson : A. Employment/Salary (full or part-time); MyCartis. L. Demeyer : A. Employment/Salary (full or part-time); ADx neurosciences. H. Vanderstichele : F. Consulting Fees (e.g., advisory boards); MyCartis. J. She : A. Employment/Salary (full or part-time); MyCartis - Full-time. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); MyCartis. | 132.04 | N. Mammadova : A. Employment/Salary (full or part-time); Iowa State University. |
| 128.23 | J. Lucas : A. Employment/Salary (full or part-time); Duke University. M. Doraiswamy : A. Employment/Salary (full or part-time); Duke University. | 133.07 | J. Ara : 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.; Maria Figueiredo-Pereira. C. Corwin : 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.; Maria Figueiredo-Pereira. M.E. Figueiredo-Pereira : 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.; Maria Figueiredo-Pereira. |
| 128.24 | C.W. McDonnell : A. Employment/Salary (full or part-time); Transpharmation Ireland Ltd. T. Burke : A. Employment/Salary (full or part-time); Transpharmation Ireland Ltd. J.A. Prenderville : A. Employment/Salary (full or part-time); Transpharmation Ireland Ltd. M. Bianchi : A. Employment/Salary (full or part-time); Transpharmation Ireland Ltd. | 133.13 | J. VanKampen : A. Employment/Salary (full or part-time); Neurodyn Life Science. |
| 128.28 | A.J. Saporita : A. Employment/Salary (full or part-time); MilliporeSigma. C. Kornmeier : A. Employment/Salary (full or part-time); MilliporeSigma. J. Hwang : A. Employment/Salary (full or part-time); MilliporeSigma. | 133.17 | A.C. Morse : A. Employment/Salary (full or part-time); Dart Neuroscience. R. Hodgson : A. Employment/Salary (full or part-time); Charles River Discovery. R.O. Pussinen : A. Employment/Salary (full or part-time); Charles River Discovery. J. Korkalainen : A. Employment/Salary (full or part-time); Charles River Discovery. M. Suhonen : A. Employment/Salary (full or part-time); Charles River Discovery. A.J. Nurmi : A. Employment/Salary (full or part-time); Charles River Discovery. J.A. Vivian : A. Employment/Salary (full or part-time); Dart Neuroscience. |
| 129.01 | A.L. Gross : A. Employment/Salary (full or part-time); Aptinyx, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx, Inc. J. Dunning : A. Employment/Salary (full or part-time); Aptinyx, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx, Inc. E. Colechio : A. Employment/Salary (full or part-time); Aptinyx, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx, Inc. X. Zhang : F. Consulting Fees (e.g., advisory boards); Aptinyx, Inc. P.K. Stanton : F. Consulting Fees (e.g., advisory boards); Aptinyx, Inc. M.A. Khan : A. Employment/Salary (full or part-time); Aptinyx, Inc. E. Ownership Interest | 134.06 | J. Kim : 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.; KAIST. |
| | | 136.19 | D.F. Wong : C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Avid Pharmaceuticals. |
| | | 137.11 | A. Fatemi : E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, |

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| | excluding diversified mutual funds); Patent interest. M.V. Johnston: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent interest. R.M. Kannan: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ashvattha Therapeutics, LLC, Orpheris, Inc, patent interest. S. Kannan: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ashvattha Therapeutics, LLC, Orpheris, Inc, Patent interest. M. Wilson: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent interest. | | Pharmaceuticals, Inc. S. Lu: A. Employment/Salary (full or part-time); Azevan Pharmaceuticals, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Azevan Pharmaceuticals, Inc. C.F. Ferris: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Animal Imaging Research. |
| 138.13 | M.D. Abbinanti: A. Employment/Salary (full or part-time); BioAxe BioSciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BioAxe BioSciences. J. Ruschel: A. Employment/Salary (full or part-time); BioAxe BioSciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BioAxe BioSciences. F. Yang: A. Employment/Salary (full or part-time); BioAxe BioSciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BioAxe BioSciences. K.M. Rosen: A. Employment/Salary (full or part-time); BioAxe BioSciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BioAxe BioSciences. L.J. McKerracher: A. Employment/Salary (full or part-time); BioAxe BioSciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BioAxe BioSciences. | 139.24 | C.F. Ferris: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Animal Imaging Research. B. Switzer: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neuroscience Associates. |
| 138.14 | K.M. Rosen: A. Employment/Salary (full or part-time); Bioaxone Biosciences Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Bioaxone Biosciences Inc. J. Ruschel: A. Employment/Salary (full or part-time); Bioaxone Biosciences Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Bioaxone Biosciences Inc. T.S. Shishoian: C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Bioaxone Biosciences Inc. M.D. Abbinanti: A. Employment/Salary (full or part-time); Bioaxone Biosciences Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Bioaxone Biosciences Inc. M.S. Moritz: C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Bioaxone Biosciences Inc. R. Stockton: C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Bioaxone Biosciences Inc. L.J. McKerracher: A. Employment/Salary (full or part-time); Bioaxone Biosciences Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Bioaxone Biosciences Inc. | 139.26 | C.F. Ferris: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Animal Imaging Research. |
| 139.04 | X. Jiang: A. Employment/Salary (full or part-time); Pittsburgh Institute of Brain Disorder & Recovery and Department of Neurology, University of Pittsburgh School of Medicine, Pittsburgh, USA. Y. Gao: 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.; The research was also supported by the Chinese Natural Science Foundation grants 81529002, 81371306, 81571285, 81471332. | 140.07 | T. Sutula: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neurogenomex, Inc. |
| 139.23 | N.G. Simon: A. Employment/Salary (full or part-time); Azevan Pharmaceuticals, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Azevan | 140.13 | R. Shi: Other; Riyi Shi is a co-founder of Neuro Vigor, a company developing novel drug treatments and diagnostic approaches for neurodegenerative diseases and neurotrauma. |
| | | 140.17 | M.N. Wendzik: A. Employment/Salary (full or part-time); University of Georgia. E.W. Baker: A. Employment/Salary (full or part-time); University of Georgia. H.A. Kinder: A. Employment/Salary (full or part-time); University of Georgia. S.L. Wang: A. Employment/Salary (full or part-time); Emory University. H. Mao: A. Employment/Salary (full or part-time); Emory University. F.D. West: A. Employment/Salary (full or part-time); University of Georgia. |
| | | 143.14 | V. Edgerton: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroRecovery Technologies. Y. Gerasimenko: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroRecovery Technologies. |
| | | 143.15 | R.R. Roy: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroRecovery Technologies. Y. Gerasimenko: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroRecovery Technologies. D. Lu: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroRecovery Technologies. V. Edgerton: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroRecovery Technologies. |
| | | 143.16 | P. Gad: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroRecovery Technologies. V.R. Edgerton: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroRecovery Technologies. |
| | | 143.18 | Y.P. Gerasimenko: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neurorecovery Technologies. P. Gad: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neurorecovery Technologies. V. Edgerton: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neurorecovery Technologies. |
| | | 143.20 | D. Reinkensmeyer: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Flint Rehabilitation Devices, Hocoma. F. Consulting Fees (e.g., |

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| | advisory boards); Hocoma. M. Sarrafzadeh : E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); MediSens handgrip. Y. Gerasimenko : E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroRecovery Technologies. | | Roche. J. Veenstra-Vanderweele : C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Roche. S.E. Ahmari : C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Roche. |
| 143.21 | P. Gad : E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroRecovery Technologies. N. Terrafra : E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroRecovery Technologies. Y. Gerasimenko : E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroRecovery Technologies. D.C. Lu : E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroRecovery Technologies. | 165.09 | M.S. Saporito : A. Employment/Salary (full or part-time); Marinus Pharmaceuticals. A. Locci : 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.; University of Illinois. G. Pinna : 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.; University of Illinois. |
| 143.22 | A. Behrman : 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.; Kosair Charities, Helmsley Charitable Trust, Craig H. Neilsen Foundation, Coulter Translational Research Award. 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. | 165.17 | L.J. Blair : E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pending Patent on rTgFKBP5 transgenic mouse. |
| 145.05 | F. Amaya : 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.; Symbio Pharmaceuticals. | 166.02 | L.M. Allen : E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent Holder. T.A. Allen : E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent Holder. |
| 145.13 | P.V. Rauhala : A. Employment/Salary (full or part-time); Orion Pharma. E.A. Kalso : F. Consulting Fees (e.g., advisory boards); Pierre Fabre. | 166.17 | Y. Soudagar : E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neurex Inc. |
| 148.16 | Q. Perrenoud : A. Employment/Salary (full or part-time); Yale University. J.A. Cardin : A. Employment/Salary (full or part-time); Yale University. | 170.01 | S.A. Weiss : A. Employment/Salary (full or part-time); Thomas Jefferson University. |
| 156.01 | M. Someya : 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.; JSPS KAKENHI 15J02077, JSPS KAKENHI 16H06544. H. Ogawa : 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.; JSPS KAKENHI 15J02077, JSPS KAKENHI 16H06544. | 170.09 | H. Orser : A. Employment/Salary (full or part-time); Medtronic, Inc. G. Loxtercamp : A. Employment/Salary (full or part-time); Medtronic, Inc. D. Carlson : A. Employment/Salary (full or part-time); Medtronic, Inc. T. Denison : A. Employment/Salary (full or part-time); Medtronic, Inc. |
| 158.04 | H. Arakawa : A. Employment/Salary (full or part-time); Case Western Reserve University School of Medicine. | 172.03 | I. Kusumi : 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 Pharmaceutical, Astellas, Dainippon Sumitomo Pharma. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); Eli Lilly. F. Consulting Fees (e.g., advisory boards); Dainippon Sumitomo Pharma, Tanabe Mitsubishi Pharma. |
| 162.09 | P.P. Kulkarni : A. Employment/Salary (full or part-time); Ekam Solutions. C.F. Ferris : A. Employment/Salary (full or part-time); Animal Imaging Research, Ekam Solutions. | 173.09 | A.E. Kudwa : A. Employment/Salary (full or part-time); employee. D.E. Grigoriadis : A. Employment/Salary (full or part-time); employee. 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. |
| 163.14 | P. Coulombe : A. Employment/Salary (full or part-time); University of New Mexico. C. Tesche : A. Employment/Salary (full or part-time); University of New Mexico. | 173.11 | V. Duveau : A. Employment/Salary (full or part-time); SynapCell SAS. B. Pouyatos : A. Employment/Salary (full or part-time); SynapCell SAS. C. Touller : 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. C. Roucard : A. Employment/Salary (full or part-time); SynapCell SAS. Y. Roche : A. Employment/Salary (full or part-time); SynapCell SAS. |
| 164.02 | J.M. Kopelman : C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); | 173.16 | L. Asatryan : E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inventor on a patent for the use of ivermectin for treatment of alcohol use disorder. D.L. Davies : E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Daryl Davies is inventor on a patent for use of ivermectin for treatment of alcohol use disorder. |

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| 174.03 | <p>M.A. Kiebish: A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. P. Narain: A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. B. Schuele: 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.; BERG, LLC. S. Akmaev: A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. V. Vemulapalli: A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. J. Garren: A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. V. Tolstikov: A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. F. Gao: A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. K. Panagopoulos: A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. E. Chen: A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. L. Rees: 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.; BERG, LLC. F. Kausar: 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.; BERG, LLC. P. Tekumalla: A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. L. Rodrigues: A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. V. Vishnudas: A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. S. Gesta: A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. C. Barlow: 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.; BERG, LLC. N. Narain: A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. R. Sarangarajan: A. Employment/Salary (full or part-time); BERG, LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BERG, LLC. J. Langston: B. Contracted Research/Research</p> | | <p>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.; BERG, LLC.</p> |
| | | 175.22 | <p>S. Tappan: A. Employment/Salary (full or part-time); MBF Bioscience. A. Rodriguez: A. Employment/Salary (full or part-time); MBF Bioscience. M.A. Karim: A. Employment/Salary (full or part-time); MBF Bioscience. D. Hoppes: A. Employment/Salary (full or part-time); MBF Bioscience. C. Thomas: A. Employment/Salary (full or part-time); MBF Bioscience. P.J. Angstman: A. Employment/Salary (full or part-time); MBF Bioscience. 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.; R44MH099731. J.R. Glaser: A. Employment/Salary (full or part-time); MBF Bioscience.</p> |
| | | 176.03 | <p>W.L. Shew: A. Employment/Salary (full or part-time); University of Arkansas.</p> |
| | | 178.02 | <p>C.J. Woolf: 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. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Quartet, QurAlis. F. Consulting Fees (e.g., advisory boards); Abide Therapeutics.</p> |
| | | 182 | <p>D.J. Stone: A. Employment/Salary (full or part-time); Merck.</p> |
| | | 182.05 | <p>W. Marks: A. Employment/Salary (full or part-time); Verily Life Sciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Verily Life Sciences.</p> |
| | | 182.06 | <p>L. Mangravite: A. Employment/Salary (full or part-time); Sage BioNetworks.</p> |
| | | 187.06 | <p>L. Burkly: A. Employment/Salary (full or part-time); Employee and stockholder of Biogen.</p> |
| | | 188.06 | <p>J.M. Castellano: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Alkahest shareholder; co-inventor on patent applications. M.S. Angst: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Alkahest shareholder; co-inventor on patent applications. T. Wyss-Coray: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Alkahest co-founder and shareholder; co-inventor on patent applications.</p> |
| | | 189.04 | <p>R.A. Kern: A. Employment/Salary (full or part-time); International Stem Cell Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); International Stem Cell Corporation. I. Garitaonandia: A. Employment/Salary (full or part-time); International Stem Cell Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); International Stem Cell Corporation. R. Gonzalez: A. Employment/Salary (full or part-time); International Stem Cell Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); International Stem Cell Corporation. G. Sherman: A. Employment/Salary (full or part-time); International Stem Cell Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); International Stem Cell Corporation. A. Noskov: A. Employment/Salary (full or part-time); International Stem Cell Corporation. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); International Stem Cell</p> |

Corporation. **D. Cardiff:** A. Employment/Salary (full or part-time); International Stem Cell Corporation. **E. Ownership Interest** (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); International Stem Cell Corporation. **T. Christiansen-Weber:** A. Employment/Salary (full or part-time); International Stem Cell Corporation. **E. Ownership Interest** (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); International Stem Cell Corporation. **A. Semechkin:** A. Employment/Salary (full or part-time); International Stem Cell Corporation. **E. Ownership Interest** (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); International Stem Cell Corporation. **E. Braine:** 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.; International Stem Cell Corporation. **A. Shahrul:** 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.; International Stem Cell Corporation. **G. Nair:** 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.; International Stem Cell Corporation. **A.H. Evans:** 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.; International Stem Cell Corporation.

190.02 **S.W. Barger:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Dr. Barger receives royalties from MilliporeSigma Inc. for the sales of secreted amyloid precursor protein.

193.07 **S. De Santi:** A. Employment/Salary (full or part-time); Piramal Pharma Inc.

196.05 **E. Drabant Conley:** A. Employment/Salary (full or part-time); Emily Drabant Conley works for the commercial entity 23andMe, the company that genotyped the Duke Neurogenetics Study samples through research collaboration (no payment).

200.12 **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 Ltd. **S. Bertrand:** A. Employment/Salary (full or part-time); Hiqscreen. **D. Bertrand:** A. Employment/Salary (full or part-time); Hiqscreen.

203.04 **K.P. Mangan:** A. Employment/Salary (full or part-time); Cellular Dynamics International. **E. Enghofer:** A. Employment/Salary (full or part-time); Cellular Dynamics International. **C. Kannemeier:** A. Employment/Salary (full or part-time); Cellular Dynamics International. **M. McLachlan:** A. Employment/Salary (full or part-time); Cellular Dynamics International. **B. Meline:** A. Employment/Salary (full or part-time); Cellular Dynamics International. **C. McMahon:** A. Employment/Salary (full or part-time); Cellular Dynamics International. **E. Jones:** A. Employment/Salary (full or part-time); Cellular Dynamics International.

205.15 **M.J. Lehmkuhle:** A. Employment/Salary (full or part-time); Epitel, Inc. **E. Ownership Interest** (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Epitel, Inc. **M. Elwood:** A. Employment/Salary (full or part-time); Epitel, Inc. **E. Ownership Interest** (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Epitel, Inc. **J. Wheeler:** A. Employment/Salary (full or part-time); Epitel, Inc. **E. Ownership Interest** (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding

diversified mutual funds); Epitel, Inc. **J. Morrison:** A. Employment/Salary (full or part-time); Epitel, Inc. **R. Lingstuy:** A. Employment/Salary (full or part-time); Epitel, Inc. **E. Ownership Interest** (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Epitel, Inc. **M. Frankel:** A. Employment/Salary (full or part-time); Epitel, Inc. **F. Dudek:** F. Consulting Fees (e.g., advisory boards); Epitel, Inc.

208.01 **J. Zhou:** A. Employment/Salary (full or part-time); Wenzhou Medical University.

209.08 **B. Stutz:** A. Employment/Salary (full or part-time); Biogen. **E. Ownership Interest** (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Dia Lean.

210.02 **J. Wang:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Boston Scientific Neuromodulation, 25155 Rye Canyon Loop, Valencia, CA USA. **S. Kulkarni:** A. Employment/Salary (full or part-time); Boston Scientific Neuromodulation, 25155 Rye Canyon Loop, Valencia, CA USA. **A. Featherstone:** A. Employment/Salary (full or part-time); Boston Scientific Neuromodulation, 25155 Rye Canyon Loop, Valencia, CA 91355. **H. Bokil:** A. Employment/Salary (full or part-time); Boston Scientific Neuromodulation, 25155 Rye Canyon Loop, Valencia, CA USA.

210.09 **A. Michel:** A. Employment/Salary (full or part-time); UCB Biopharma. **J. Nicolas:** A. Employment/Salary (full or part-time); UCB Biopharma. **C. De Wolf:** A. Employment/Salary (full or part-time); UCB Biopharma. **F. Hustadt:** A. Employment/Salary (full or part-time); UCB Biopharma. **M. Citron:** A. Employment/Salary (full or part-time); UCB Biopharma. **P. Downey:** A. Employment/Salary (full or part-time); UCB Biopharma.

210.12 **B. Pouyatos:** A. Employment/Salary (full or part-time); SynapCell. **A. Evrard:** A. Employment/Salary (full or part-time); SynapCell. **R. Maury:** A. Employment/Salary (full or part-time); Synapcell. **C. Roucard:** A. Employment/Salary (full or part-time); Synapcell. **Y. Roche:** A. Employment/Salary (full or part-time); Synapcell. **V. Duveau:** A. Employment/Salary (full or part-time); Synapcell.

210.14 **E. Bezar:** 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.; Air Liquide Sante International. **D.W. Ko:** A. Employment/Salary (full or part-time); Motac neuroscience. **Q. Li:** A. Employment/Salary (full or part-time); Motac neuroscience. **A. Millet:** A. Employment/Salary (full or part-time); Air Liquide Santé International. **G. Farjot:** A. Employment/Salary (full or part-time); Air Liquide Santé International. **E. Pioli:** A. Employment/Salary (full or part-time); Motac neuroscience. **B. Bessiere:** A. Employment/Salary (full or part-time); Air Liquide Santé International.

210.18 **D. Charvin:** A. Employment/Salary (full or part-time); Prexton Therapeutics. **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.; MJFF. **T. Di Paolo:** 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.; Prexton Therapeutics. **E. Bezar:** 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.; Prexton Therapeutics. **C. Halldin:** 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.; Prexton Therapeutics. **G. Duvey:** A. Employment/Salary

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| | (full or part-time); Prexton Therapeutics. L. Grégoire: 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.; Prexton Therapeutics. A. Takano: 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.; Prexton Therapeutics. E. Pioli: 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.; Prexton Therapeutics. R. Medori: A. Employment/Salary (full or part-time); Prexton Therapeutics. F. Conquet: A. Employment/Salary (full or part-time); Prexton Therapeutics. | 211.09 | C.G. van Horne: C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Medtronic. |
| 210.29 | C.H. Chung: A. Employment/Salary (full or part-time); Proclara Biosciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Proclara Biosciences. E. Asp: A. Employment/Salary (full or part-time); Proclara Biosciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Proclara Biosciences. J. Levenson: A. Employment/Salary (full or part-time); Proclara Biosciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Proclara Biosciences. C. Rockwell-Postel: A. Employment/Salary (full or part-time); Proclara Biosciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Proclara Biosciences. K. McDowell: A. Employment/Salary (full or part-time); Proclara Biosciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Proclara Biosciences. M. Lulu: A. Employment/Salary (full or part-time); Proclara Biosciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Proclara Biosciences. J. Wright: A. Employment/Salary (full or part-time); Proclara Biosciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Proclara Biosciences. R. Krishnan: A. Employment/Salary (full or part-time); Proclara Biosciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Proclara Biosciences. R. Fisher: A. Employment/Salary (full or part-time); Proclara Biosciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Proclara Biosciences. | 211.12 | A. Barborica: A. Employment/Salary (full or part-time); FHC inc. |
| | | 211.21 | N.C. Swann: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); university has filed a preliminary patent related to this work. C. de Hemptinne: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); university has filed a preliminary patent related to this work. J. Ostrem: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); university has filed a preliminary patent related to this work. H.J. Chizeck: C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); donation from medtronic. P.A. Starr: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); university has filed a preliminary patent related to this work. |
| | | 213.05 | C. Anderson: A. Employment/Salary (full or part-time); University of Utah. A.D. Dorval: A. Employment/Salary (full or part-time); University of Utah. S.M. Pulst: A. Employment/Salary (full or part-time); University of Utah. |
| | | 216.08 | S.H. Scott: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Co-founder and Chief Scientific Officer of BKIN Technologies Ltd. (maker of the KINARM robot). |
| | | 216.15 | S.H. Scott: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BKIN Technologies Inc., Kingston, Canada. |
| | | 217.13 | H. Dou: 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.; TTUHSC Seed Grant, TTUHSC start-up fund. |
| | | 217.14 | A.L. Moore: A. Employment/Salary (full or part-time); Gibson Institute of Cognitive Research at LearningRx. |
| | | 217.25 | S.K. Charles: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); SK Charles is a scientific advisor to, and holds stock in, Vykon Technologies LLC. This company has licensed technology invented by SK Charles to develop markerless monitoring of movement disorders, i. |
| | | 218.05 | J. Giron: A. Employment/Salary (full or part-time); Augmanity. I. Bachelet: A. Employment/Salary (full or part-time); Augmanity. |
| | | 218.23 | J.F. Iaci: A. Employment/Salary (full or part-time); Acorda Therapeutics, Inc. A.O. Caggiano: A. Employment/Salary (full or part-time); Acorda Therapeutics, Inc. A.R. Blight: A. Employment/Salary (full or part-time); Acorda Therapeutics, Inc. J.W. Fawcett: F. Consulting Fees (e.g., advisory boards); Acorda Therapeutics, Inc. M.H. Tuszynski: F. Consulting Fees (e.g., advisory boards); Acorda Therapeutics, Inc. |
| 211.02 | H.C. Walker: A. Employment/Salary (full or part-time); University of Alabama at Birmingham. 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. | 219.02 | Y. Majima: A. Employment/Salary (full or part-time); Toray Industries, Inc. M. Konno: A. Employment/Salary (full or part-time); Toray Industries, Inc. K. Serizawa: A. Employment/Salary (full or part-time); Toray Industries, Inc. M. Moriyama: A. Employment/Salary (full or part-time); Toray Industries, Inc. N. Yuzawa: A. Employment/Salary (full or part-time); Toray Industries, Inc. K. Nakanaga: A. Employment/Salary (full or part-time); Toray Industries, Inc. T. Suzuki: A. Employment/Salary (full or part-time); Toray Industries, Inc. M. Kainoh: A. Employment/Salary (full or part-time); Toray Industries, Inc. |
| 211.07 | A. Oliviero: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Cofounder of Neurek SL and inventor on tSMS-related patents. G. Foffani: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Cofounder of Neurek SL and inventor on tSMS-related patents. | | |

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| 220.01 | M. Matsunami: C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Asahi Kasei Pharma. R. Tsujita: A. Employment/Salary (full or part-time); Asahi Kasei Pharma. G. Honda: A. Employment/Salary (full or part-time); Asahi Kasei Pharma. A. Kawabata: C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Asahi Kasei Pharma. | 226.16 | H. Akbari: A. Employment/Salary (full or part-time); Department of Electrical Engineering, Columbia University, New York, NY. B. Khalighinejad: C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Department of Electrical Engineering, Columbia University, New York, NY. J.L. Herrero: C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Feinstein Institute for Medical Research, 350 Community Dr., Manhasset, A.D. Mehta: C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Laboratory of Human Brain Mapping, Feinstein Institute for Medical Research; Department of Neurosurgery, Hofstra Northwell School of Medicine, Manhasset, NY. N. Mesgarani: 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 Electrical Engineering, Columbia University, New York, NY 10027, USA, Mortimer B. Zuckerman Mind Brain Behavior Institute, Columbia University, New York, NY. |
| 220.24 | S. Sannajust: A. Employment/Salary (full or part-time); University of New England. J. Heath: A. Employment/Salary (full or part-time); University of New England. I. Imbert: A. Employment/Salary (full or part-time); University of New England. T.E. King: A. Employment/Salary (full or part-time); University of New England. | 229.04 | R. Rupp: A. Employment/Salary (full or part-time); Heidelberg University Hospital. 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.; European Commission. M. Schneiders: A. Employment/Salary (full or part-time); Heidelberg University Hospital. 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.; European Commission. B. Hessing: A. Employment/Salary (full or part-time); Heidelberg University Hospital. 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.; Eurpean Commission. R. Murray-Smith: A. Employment/Salary (full or part-time); University of Glasgow. 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.; European Commission. A. Ramsay: A. Employment/Salary (full or part-time); University of Glasgow. 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.; European Commission. A. Schwarz: A. Employment/Salary (full or part-time); Technical University of Graz. 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.; European Commission. J. Pereira: A. Employment/Salary (full or part-time); Technical University of Graz. 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.; European Commission. P. Ofner: A. Employment/Salary (full or part-time); Technical University of Graz. 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.; European Commission. A. Pinegger: A. Employment/Salary (full or part-time); Technical University of Graz. 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.; European Commission. G. Mueller- |
| 222.16 | J. Martel: A. Employment/Salary (full or part-time); Institut de Recherche Pierre Fabre. L. De Vries: A. Employment/Salary (full or part-time); Institut de Recherche Pierre Fabre. F. Cachoux: A. Employment/Salary (full or part-time); Institut de Recherche Pierre Fabre. L. Bardin: A. Employment/Salary (full or part-time); Institut de Recherche Pierre Fabre. I. Raully-Lestienne: A. Employment/Salary (full or part-time); Institut de Recherche Pierre Fabre. S. Gatti-McArthur: A. Employment/Salary (full or part-time); Institut de Recherche Pierre Fabre. | | |
| 225.02 | M.M. Poon: A. Employment/Salary (full or part-time); Inception Sciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inception Sciences. C. Desponts: A. Employment/Salary (full or part-time); Inception Sciences. A. Dearie: A. Employment/Salary (full or part-time); Inception Sciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inception Sciences. S. Gellar: A. Employment/Salary (full or part-time); Inception Sciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inception Sciences. K. Stebbins: A. Employment/Salary (full or part-time); Inception Sciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inception Sciences. G. Cabrera: A. Employment/Salary (full or part-time); Inception Sciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inception Sciences. K.I. Lorrain: A. Employment/Salary (full or part-time); Inception Sciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inception Sciences. C. Lee: A. Employment/Salary (full or part-time); Inception Sciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inception Sciences. J. Seiders: A. Employment/Salary (full or part-time); Inception Sciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inception Sciences. J. Roppe: A. Employment/Salary (full or part-time); Inception Sciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inception Sciences. C. Chapman: A. Employment/Salary (full or part-time); Inception Sciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inception Sciences. J. Wichmann: A. Employment/Salary (full or part-time); F. Hoffmann-La Roche. R.K. Jagasia: A. Employment/Salary (full or part-time); F. Hoffmann-La Roche. P. Prasit: A. Employment/Salary (full or part-time); Inception Sciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inception Sciences. D. Lorrain: A. Employment/Salary (full or part-time); Inception Sciences. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inception Sciences. | | |

| PRESENTATION NUMBER | STATEMENT | PRESENTATION NUMBER | STATEMENT |
|---------------------|---|---------------------|--|
| | Putz: A. Employment/Salary (full or part-time); Technical University of Graz. 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.; European Commission. | | consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Science Foundation Ireland, Brain and Behaviour Research Foundation. F. Shanahan: B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Science Foundation Ireland. 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.; Science Foundation Ireland. 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.; Science Foundation Ireland. |
| 229.08 | S. Colachis: A. Employment/Salary (full or part-time); Battelle Memorial Institute. M.A. Bockbrader: A. Employment/Salary (full or part-time); The Ohio State University. N. Annetta: A. Employment/Salary (full or part-time); Battelle. D. Friedenberg: A. Employment/Salary (full or part-time); Battelle. M.A. Schwemmer: A. Employment/Salary (full or part-time); Battelle. M. Zhang: A. Employment/Salary (full or part-time); Battelle. G. Sharma: A. Employment/Salary (full or part-time); Battelle. H. Bresler: A. Employment/Salary (full or part-time); Battelle. W. Mysiw: A. Employment/Salary (full or part-time); Ohio State. A. Rezaei: A. Employment/Salary (full or part-time); Ohio State. | | |
| 229.13 | E.L. Barcikowski: A. Employment/Salary (full or part-time); Ripple LLC. A. Wilder: A. Employment/Salary (full or part-time); Ripple LLC. R. Roundy: A. Employment/Salary (full or part-time); Ripple LLC. D.R. Merrill: A. Employment/Salary (full or part-time); Ripple LLC. D. McDonnell: A. Employment/Salary (full or part-time); R. | 236.09 | T.G. Dinan: B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Mead Johnson, Cremo, 4D Pharma, Suntory Wellness, Nutricia. J. 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.; Nutricia, Suntory Wellness, Cremo, Mead Johnson, 4D Pharma. |
| 230.05 | M. Yin: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BWD: IP rights (licensed to Blackrock Microsystems). D.A. Borton: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BWD: IP rights (licensed to Blackrock Microsystems). A.V. Nurmikko: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BWD: IP rights (licensed to Blackrock Microsystems). | 236.15 | T. Dinan: B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Mead Johnson, Suntory Wellness, Nutricia, Cremo, 4D Pharma. J.F. Cryan: B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Cremo, 4D Pharma, Suntory Wellness, Nutricia, Mead Johnson. |
| 230.06 | C.D. Heelan: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ESPA (IP Rights). J. Komar: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ESPA (IP Rights). A.V. Nurmikko: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BWD (IP Rights). Licensed to Blackrock Microsystems). ESPA (IP Rights). J.D. Simeral: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BWD (IP Rights). Licensed to Blackrock Microsystems). ESPA (IP Rights). | 239.06 | J.T. McKenna: 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.; Merck MISP. |
| 232.13 | N. Farassat: A. Employment/Salary (full or part-time); Goethe Universität Frankfurt. | 239.15 | J.T. McKenna: 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.; Merck MISP. |
| 235.17 | K. Lukacova: Other; Grant support APVV-15- 0077, Grant support VEGA 2/0177/14. | 239.16 | J.T. McKenna: 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.; Merck MISP. |
| 236.06 | V.L. Peterson: A. Employment/Salary (full or part-time); APC Microbiome Institute. R. Cabrera-Rubio: A. Employment/Salary (full or part-time); APC Microbiome Institute. T.G. Dinan: A. Employment/Salary (full or part-time); APC Microbiome Institute. P.D. Cotter: A. Employment/Salary (full or part-time); APC Microbiome Institute. J.F. Cryan: A. Employment/Salary (full or part-time); APC Microbiome Institute. | 239.17 | J.T. McKenna: 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.; Merck MISP. |
| 236.07 | J. Cryan: A. Employment/Salary (full or part-time); APC Microbiome Institute. V.L. Peterson: A. Employment/Salary (full or part-time); APC Microbiome Institute. L. Draper: A. Employment/Salary (full or part-time); APC Microbiome Institute. R. Cabrera-Rubio: A. Employment/Salary (full or part-time); APC Microbiome Institute. P.D. Cotter: A. Employment/Salary (full or part-time); APC Microbiome Institute. T.G. Dinan: A. Employment/Salary (full or part-time); APC Microbiome Institute. C. Hill: A. Employment/Salary (full or part-time); APC Microbiome Institute. | 240.27 | K.P. Wright: 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, Office of Naval Research, PAC-12, Phillips Inc., CurAegis Technologies. F. Consulting Fees (e.g., advisory boards); NIH, CurAegis Technologies. Other; American College of Chest Physicians, The Obesity Society, Obesity Medicine Association. |
| 236.08 | G. Clarke: B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or | | |

| PRESENTATION NUMBER | STATEMENT | PRESENTATION NUMBER | STATEMENT |
|---------------------|---|---------------------|---|
| 241.09 | J.T. McKenna: 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.; Merck MISF. | | through the Center for Nutrition, Learning, and Memory at the University of Illinois. M.J. Kuchan: A. Employment/ Salary (full or part-time); Abbott Nutrition. M. Neuringer: 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.; Abbott Nutrition through the Center for Nutrition, Learning, and Memory at the University of Illinois. D.A. Fair: 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.; Abbott Nutrition through the Center for Nutrition, Learning, and Memory at the University of Illinois. |
| 241.18 | C.K. Jones: A. Employment/Salary (full or part-time); The authors declare the following competing financial interest(s): Over the past year, M.B. and C.K.J. received research/salary support from AstraZeneca and/or Bristol Myers Squibb. The remaining auth. M. Bubser: A. Employment/Salary (full or part-time); The authors declare the following competing financial interest(s): Over the past year, M.B. and C.K.J. received research/salary support from AstraZeneca and/or Bristol Myers Squibb. The remaining auth. | 250.11 | J.D. Murray: F. Consulting Fees (e.g., advisory boards); BlackThorn Therapeutics. |
| 245.02 | J. Mann: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Qualitas Health. Other; Research Foundation for Mental Hygiene. M.A. Oquendo: D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); Pfizer, Astra-Zeneca, Bristol Myers Squibb, Eli Lilly, Janssen, Otsuko, Sanofi-Aventis, Shire. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Bristol Myers Squibb. | 251.03 | X. Li: A. Employment/Salary (full or part-time); Humanity and Social Science, California Institute of Technology. |
| 245.16 | C.W. McDonnell: A. Employment/Salary (full or part-time); Transpharmation Ireland Limited. M. Bianchi: A. Employment/Salary (full or part-time); Transpharmation Ireland Limited. 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.; Transpharmation Ireland Limited. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Transpharmation Ireland Limited. | 251.08 | B.R. Eisenreich: A. Employment/Salary (full or part-time); University of Rochester. |
| 246.04 | S. Li: A. Employment/Salary (full or part-time); National Institute on Drug Dependence, Peking University, Beijing, China. | 254.07 | T. Okuyama: A. Employment/Salary (full or part-time); JFDP fellowship. |
| 246.20 | J.C. Felger: A. Employment/Salary (full or part-time); Emory University. F. Consulting Fees (e.g., advisory boards); Pfizer. | 255.01 | N. Stachenfeld: 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.; PepsiCo. S. Mitchell: A. Employment/Salary (full or part-time); PepsiCo, Inc. E. Freese: A. Employment/Salary (full or part-time); PepsiCo, Inc. L. Harkness: A. Employment/Salary (full or part-time); PepsiCo, Inc. |
| 247.04 | P. Zanos: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); PZ is listed as co-inventors on a patent application for the use of ketamine metabolites, (2R,6R)-hydroxynorketamine in the treatment of depression, anxiety, anhedonia, suicidal ideation and. T.D. Gould: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); TDG is listed as co-inventor on a patent application for the use of ketamine metabolites, (2R,6R)-hydroxynorketamine in the treatment of depression, anxiety, anhedonia, suicidal ideation and. | 255.02 | Y. Zhang: A. Employment/Salary (full or part-time); Montreal Neurological Institute, McGill University. A. Michaud: A. Employment/Salary (full or part-time); Montreal Neurological Institute, McGill University. K. Larcher: A. Employment/Salary (full or part-time); Montreal Neurological Institute, McGill University. A. Dagher: 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.; Montreal Neurological Institute, McGill University. |
| 247.08 | M.S. Fanselow: 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.; Neurovation Labs, Inc., Teva Pharmaceuticals. | 255.10 | I. Obeso: A. Employment/Salary (full or part-time); Fundación HM Hospitales. 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.; Instituto de Salud Carlos III, Contrato PostDoctoral Sara Borrell. |
| 247.10 | J. Perusini: Other; Neurovation Labs. M.S. Fanselow: Other; Neurovation Labs, Teva Pharmaceuticals. | 255.11 | R.R. Griffiths: Other; Heffter Research Institute. |
| 247.15 | F.P. Bymaster: Other; Chief Scientific Officer, TRImaran Pharma. A.K. Dutta: E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent for experimental compound. Other; Head of Scientific Advisory Board, TRImaran Pharma. | 257.06 | M. Riemer: A. Employment/Salary (full or part-time); Medical Faculty (FME), Otto-von-Guericke University, Magdeburg, Germany. |
| 248.13 | J.W. Erdman: 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.; Abbott Nutrition | 258.11 | C. Shannon Weickert: F. Consulting Fees (e.g., advisory boards); Member of an Advisory Board for Lundbeck Australia Pty Ltd. |
| | | 258.13 | H. Nawa: C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Higeta Shoyu Co., Ltd. |
| | | 258.24 | A.A. Grace: C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Johnson & Johnson, Lundbeck, Pfizer, GSK, Merck, Takeda, Dainippon Sumitomo, Otsuka, Lilly, Roche, Asubio, Abbott, Autofony, Janssen, Alkermes. |
| | | 259.05 | Q. Wang: A. Employment/Salary (full or part-time); Allen Institute for Brain Science. J. Royall: A. Employment/ Salary (full or part-time); Allen Institute for Brain Science. P. Lesnar: A. Employment/Salary (full or part-time); Allen Institute for Brain Science. S. Ding: A. Employment/Salary (full or part-time); Allen Institute for Brain Science. K. |

- Hirokawa:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **Y. Li:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **A. Ho:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **W. Wakeman:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **N. Graddis:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **S. Sunkin:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **C. Koch:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **L. Ng:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **H. Zeng:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science. **J.A. Harris:** A. Employment/Salary (full or part-time); Allen Institute for Brain Science.
- 259.06 **V. Vemuri:** A. Employment/Salary (full or part-time); 3Scan, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); 3Scan, Inc. **N. Farahani:** A. Employment/Salary (full or part-time); 3Scan, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); 3Scan, Inc. Other; Brain Preservation Foundation. **M.J. Pesavento:** A. Employment/Salary (full or part-time); 3Scan, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); 3Scan, Inc.
- 260.01 **E.N. Brown:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Masimo has licensed our algorithms for EEG monitoring. **P.L. Purdon:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Masimo has licensed our algorithms for EEG monitoring.
- 260.04 **B. Keller:** A. Employment/Salary (full or part-time); Intel Corporation.
- 260.06 **D. Suo:** A. Employment/Salary (full or part-time); Princeton University. **J. Hutchinson:** A. Employment/Salary (full or part-time); Northeastern University. **M.T. deBettencourt:** A. Employment/Salary (full or part-time); University of Chicago. **A.C. Mennen:** A. Employment/Salary (full or part-time); Princeton University. **Y. Wang:** A. Employment/Salary (full or part-time); Intel Corporation. **T. Wilke:** A. Employment/Salary (full or part-time); Intel Corporation. **N.B. Turk-Browne:** A. Employment/Salary (full or part-time); Yale University. **K. Norman:** A. Employment/Salary (full or part-time); Princeton University. **J.D. Cohen:** A. Employment/Salary (full or part-time); Princeton University. **K. Li:** A. Employment/Salary (full or part-time); Princeton University.
- 260.07 **M. Capota:** A. Employment/Salary (full or part-time); Intel Corporation. **T.L. Willke:** A. Employment/Salary (full or part-time); Intel Corporation.
- 260.08 **H. Zhang:** A. Employment/Salary (full or part-time); Princeton University. **P. Chen:** A. Employment/Salary (full or part-time); Princeton University. **P.J. Ramadge:** A. Employment/Salary (full or part-time); Princeton University.
- 260.09 **N. Sundaram:** A. Employment/Salary (full or part-time); Intel Corporation. **T.L. Wilke:** A. Employment/Salary (full or part-time); Intel Corporation.
- 260.24 **H. Chizeck:** 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.

NEUROSCIENCE 2017 — EXHIBITS AND POSTER SESSIONS

Walter E. Washington Convention Center: Halls A-C

Meeting Dates: Nov. 11–15

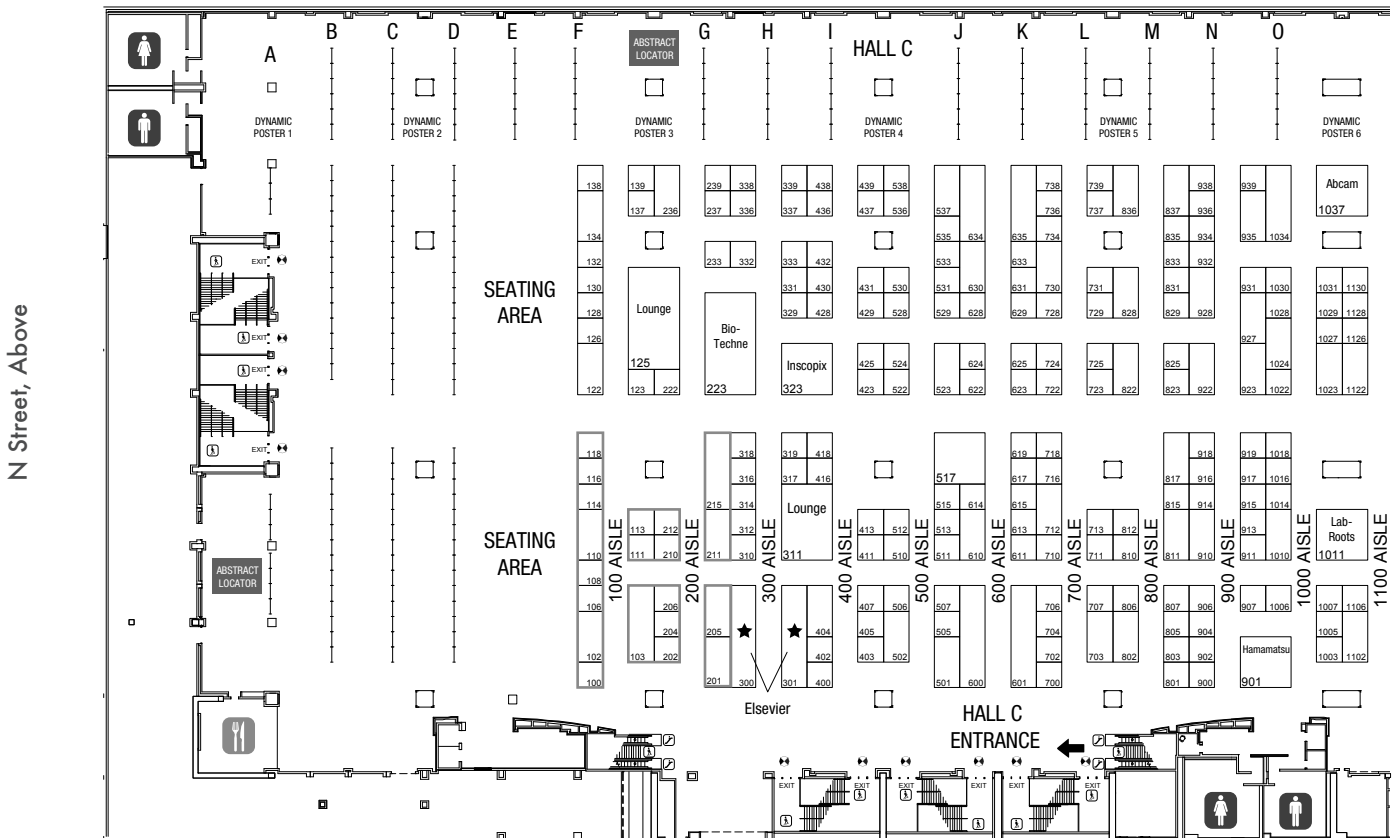
Exhibit Dates: Nov. 12–15

Entrances will open at noon on Saturday and at 7 a.m. Sunday through Wednesday for poster presenter setup only. Poster sessions are open for all attendees at 1 p.m. on Saturday and 8 a.m. Sunday through Wednesday.

Floor plans subject to change. For current floor plan, visit SfN.org/exhibits.

KEY

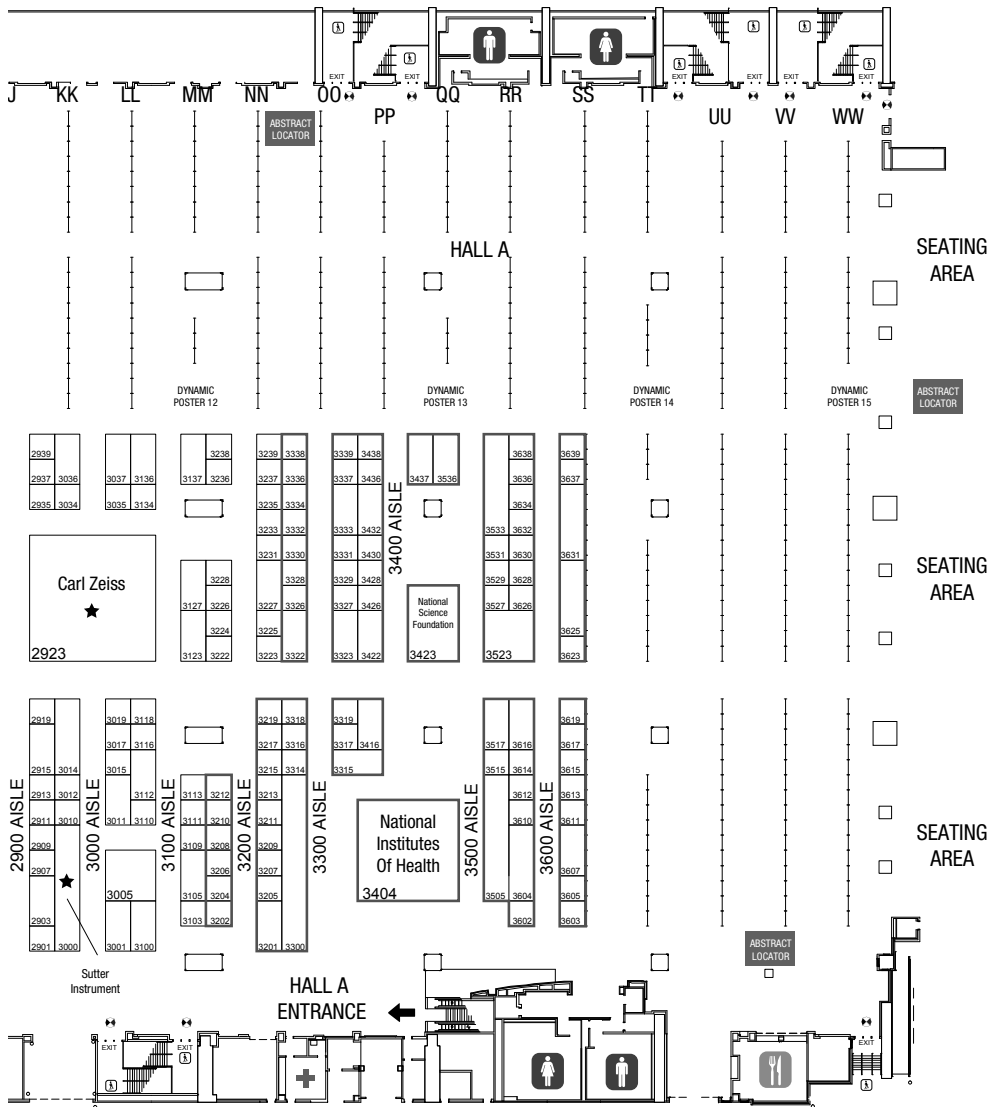
- Institutions / Nonprofits
- Publishers Row
- ★ Sustaining Associate Members
- Abstract Locators
- SfN Booth
- ⊕ First Aid Station
- Concession Areas
- Restrooms
- ⚡ Emergency Exit



KEY

- Institutions / Nonprofits
- Publishers Row
- ★ Sustaining Associate Members
- Abstract Locators
- SfN Booth
- ⊕ First Aid Station
- Concession Areas
- Restrooms
- ⊗ Emergency Exit

7TH ST., Above



Mt. Vernon Place, Above

9TH ST., Above

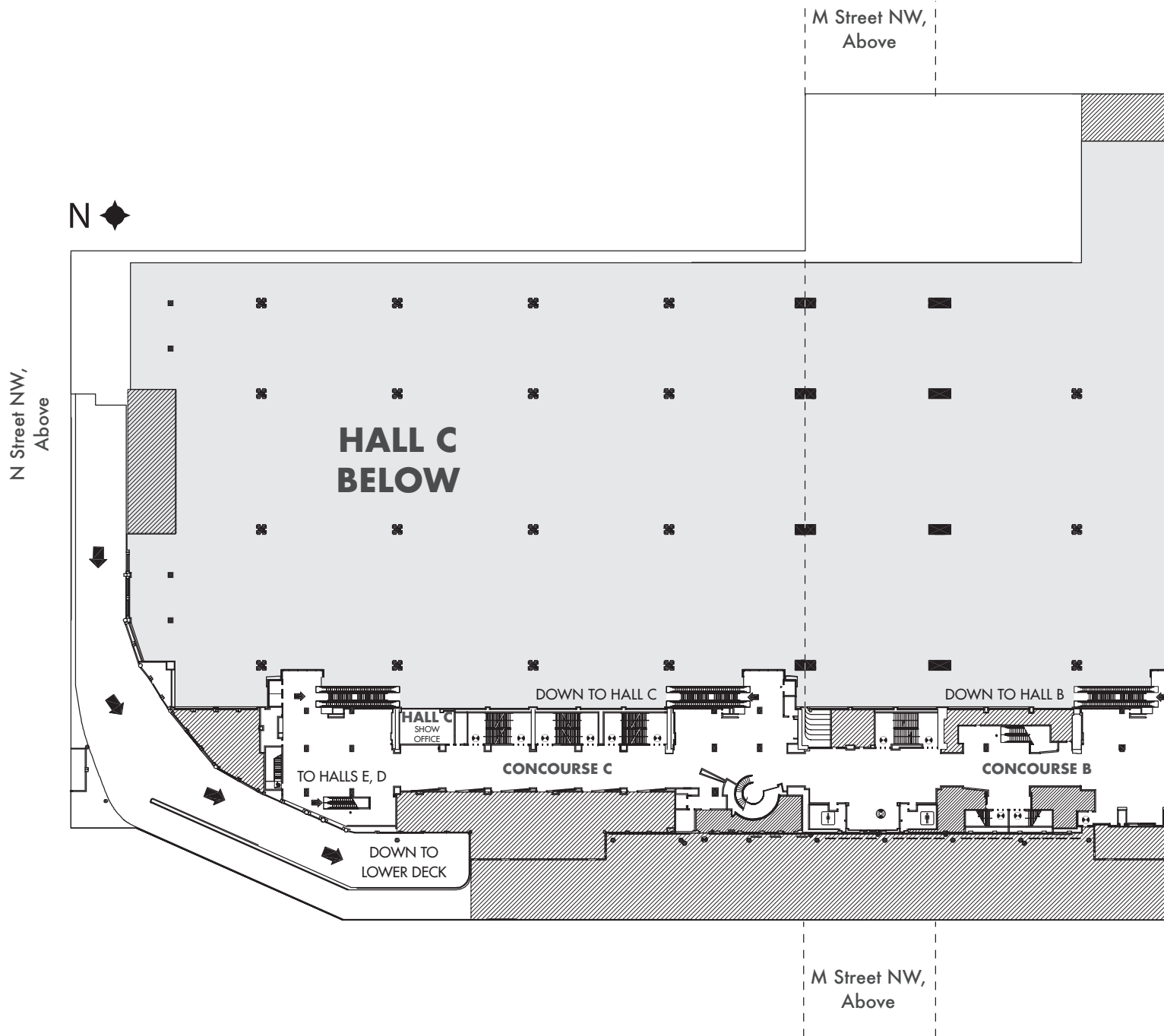
NOTE: Floor plans subject to change. For current floor plan, visit SfN.org/exhibits

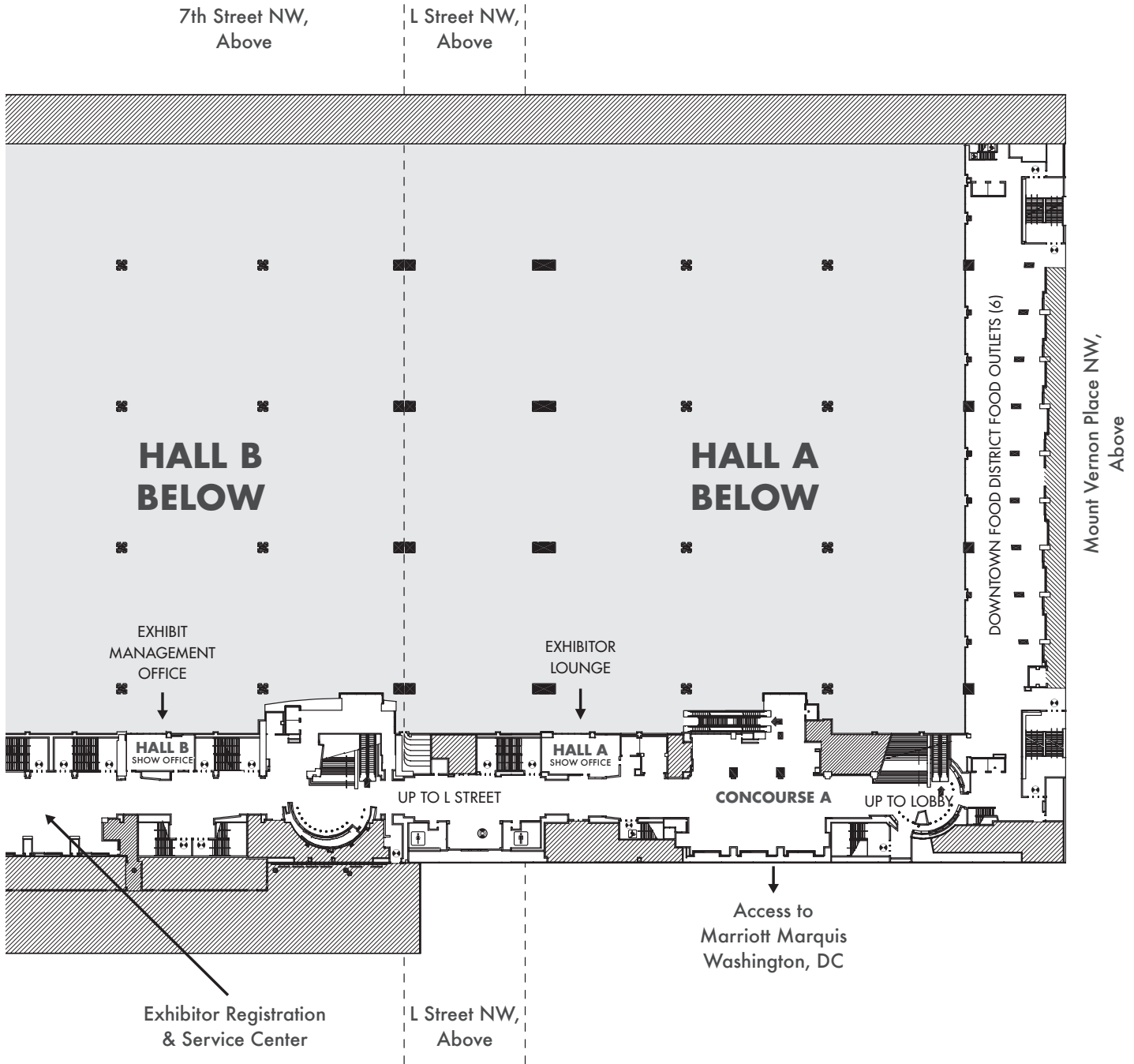
CONVENTION CENTER FLOOR PLANS

Concourse Level

Access to Exhibit Halls A-C

Show Offices A-C

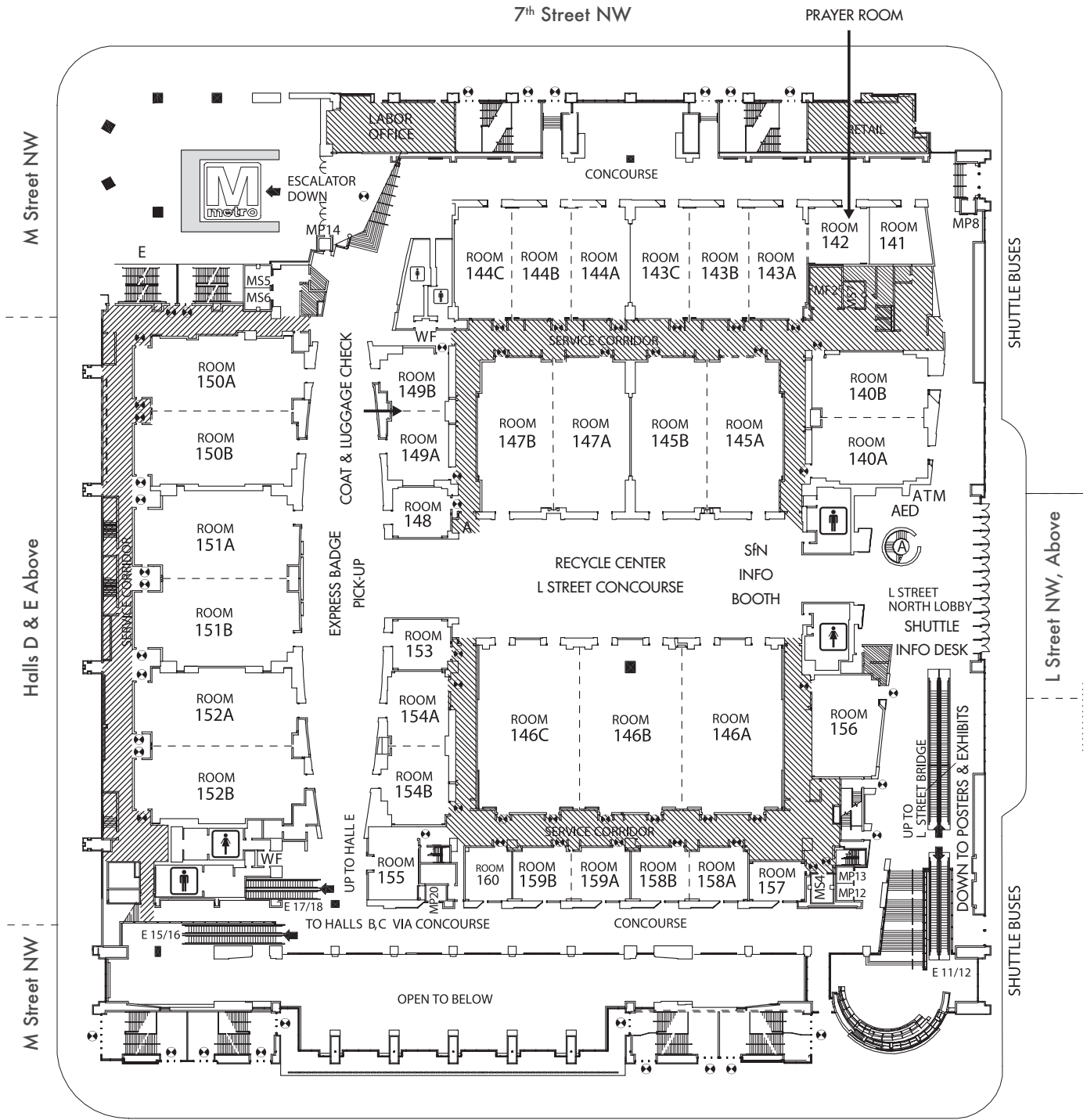


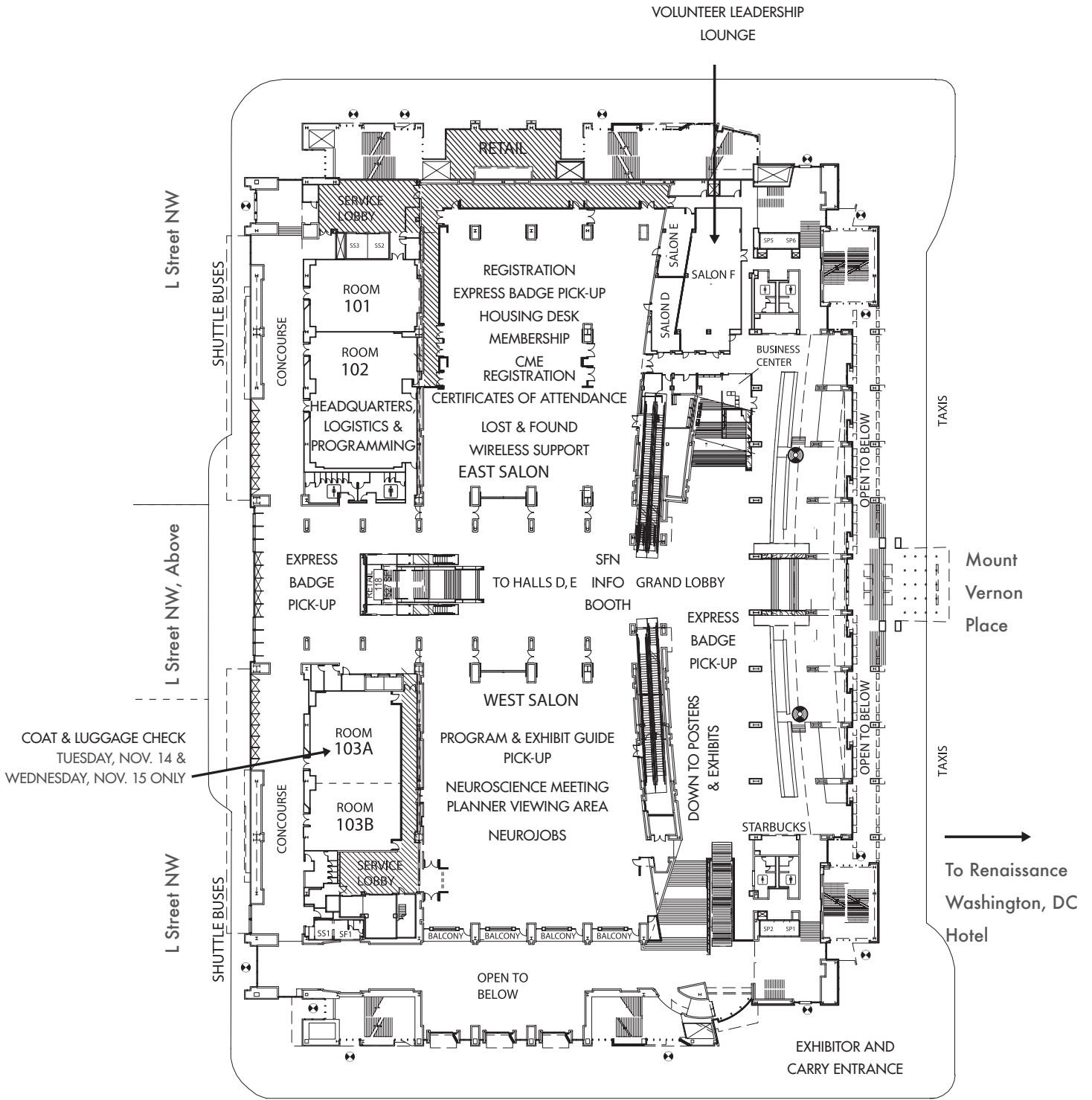


CONVENTION CENTER FLOOR PLANS

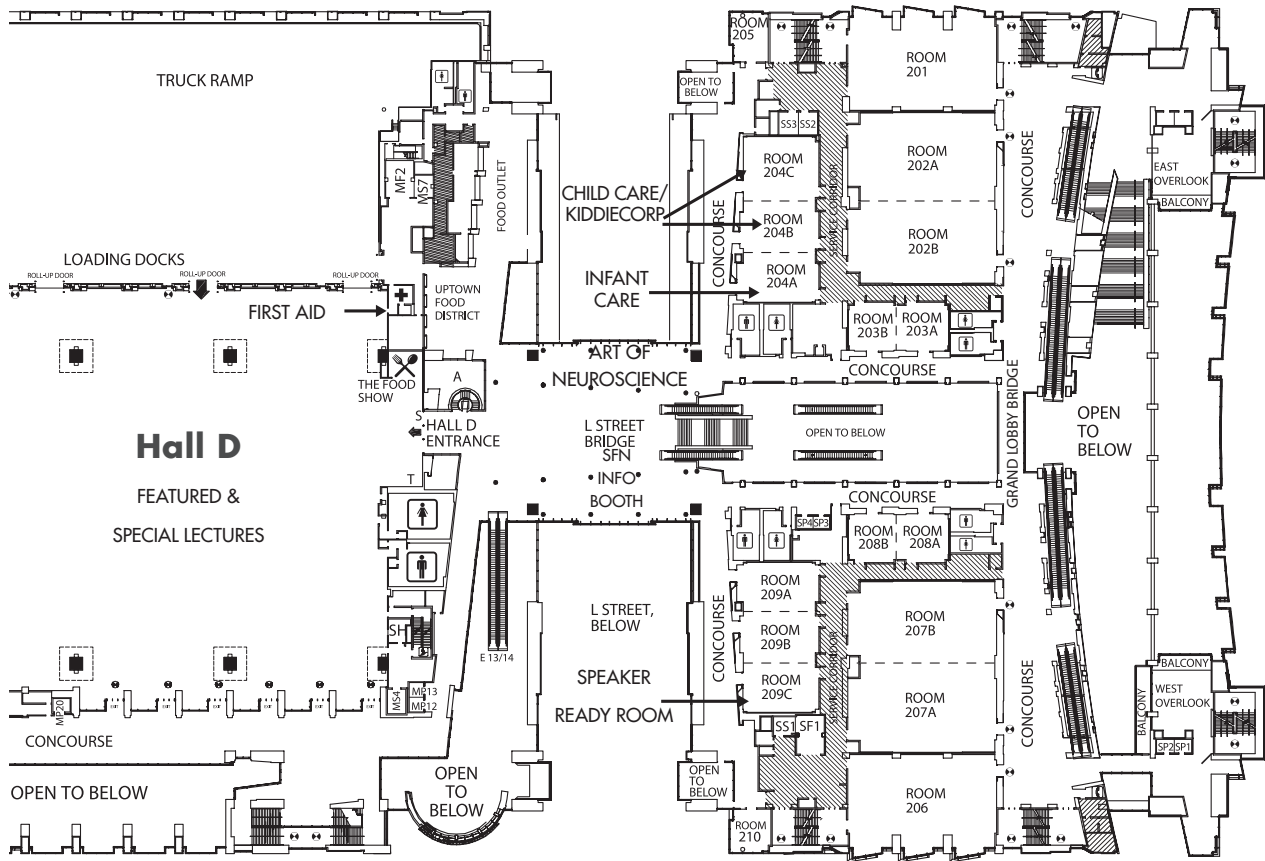
Lobby Level/Level 1

Meeting Rooms 101-103 & 140-160





7th Street NW, Below



Mount Vernon Place NW,
Below

9th Street NW, Below

MIDDLE BUILDING

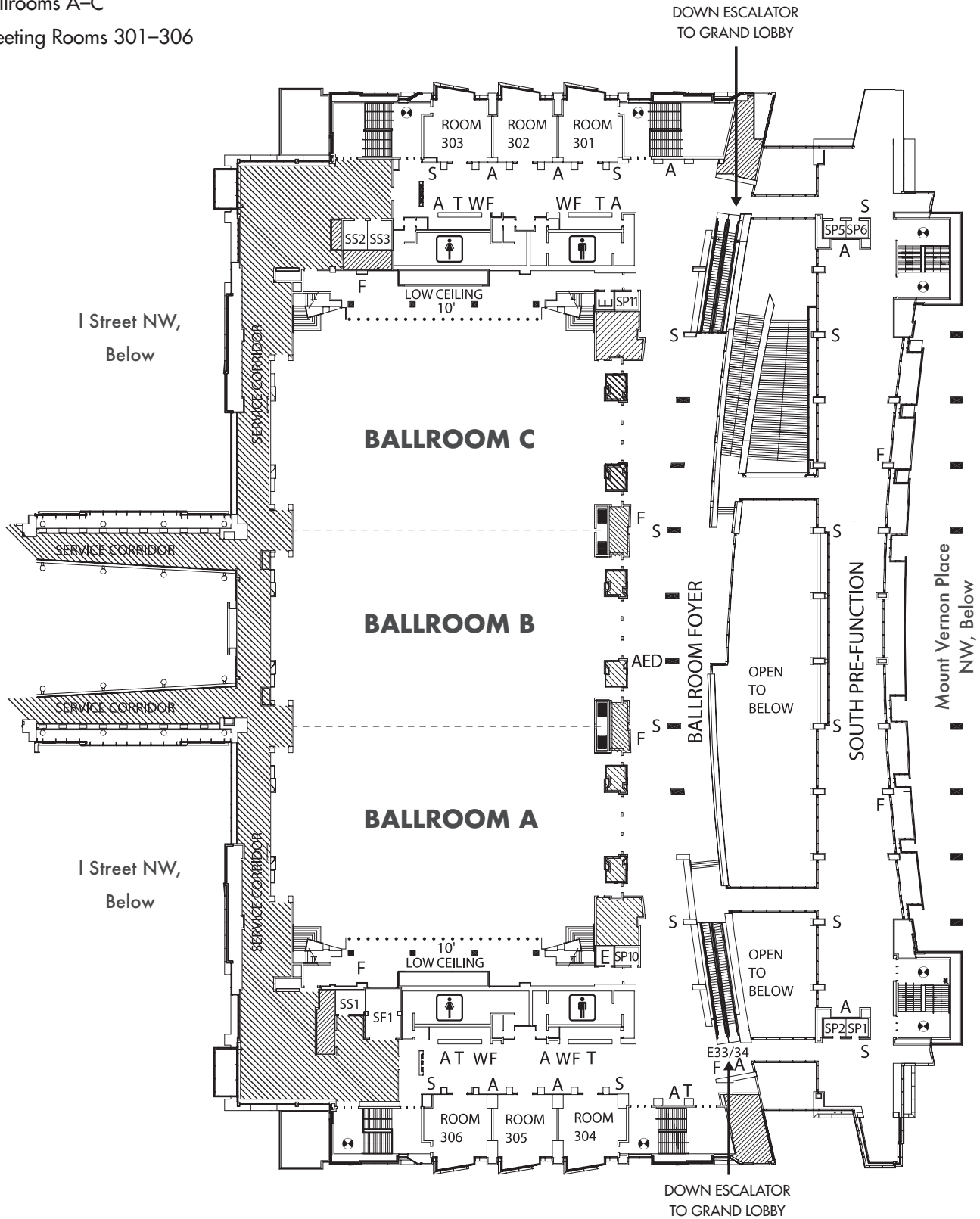
SOUTH BUILDING

CONVENTION CENTER FLOOR PLANS

Level 3

Ballrooms A-C

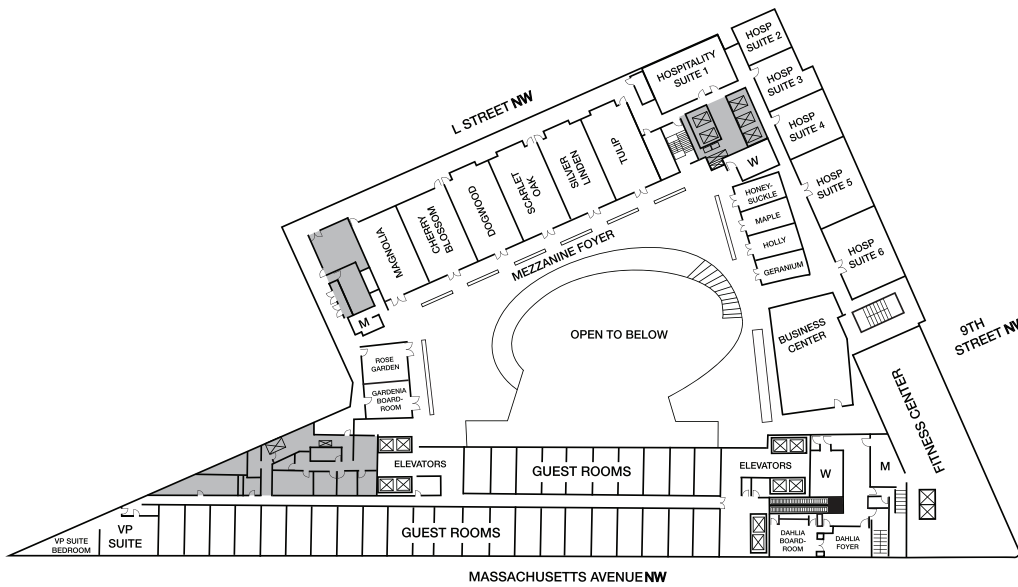
Meeting Rooms 301-306



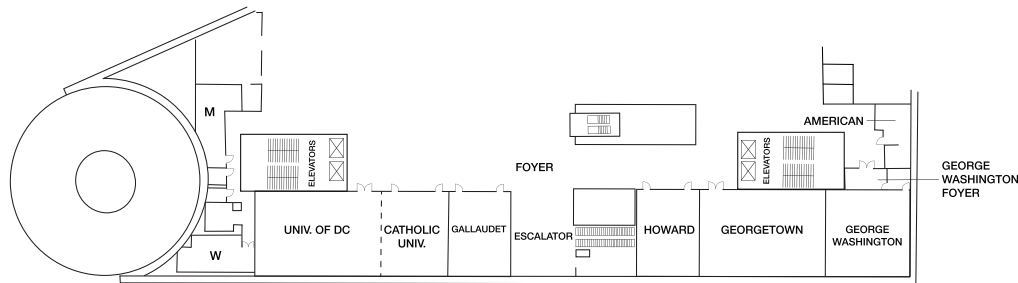
SOUTH BUILDING

HOTEL FLOOR PLANS

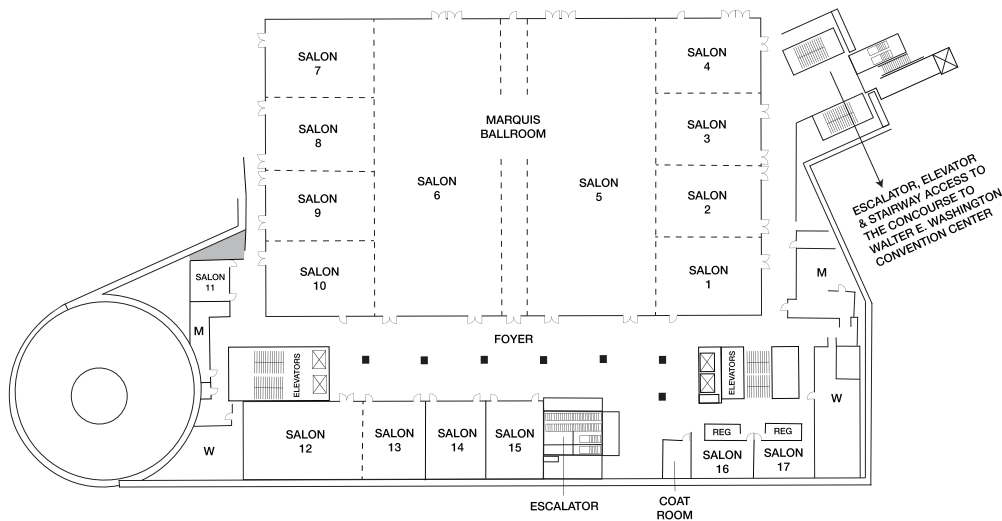
Marriott Marquis Washington, DC



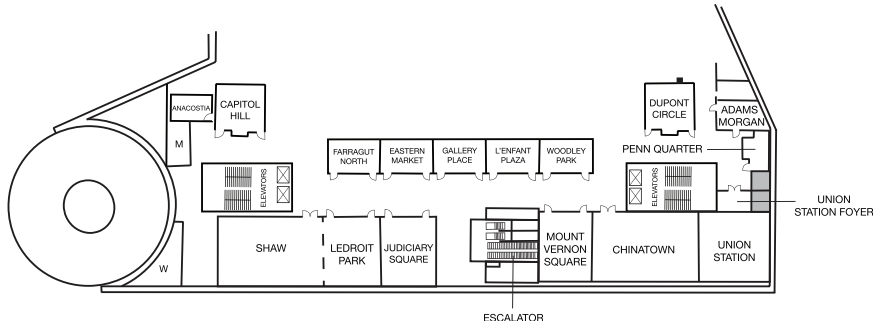
MEZZANINE LEVEL



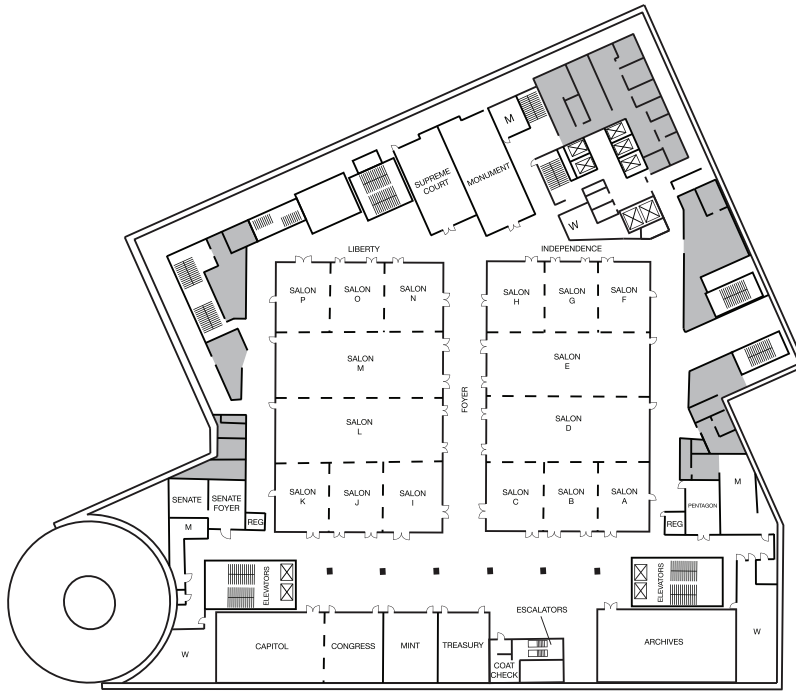
MEETING LEVEL 1



MEETING LEVEL 2

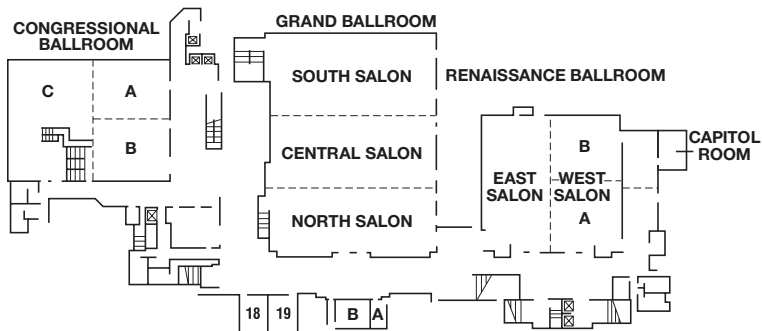


MEETING LEVEL 3

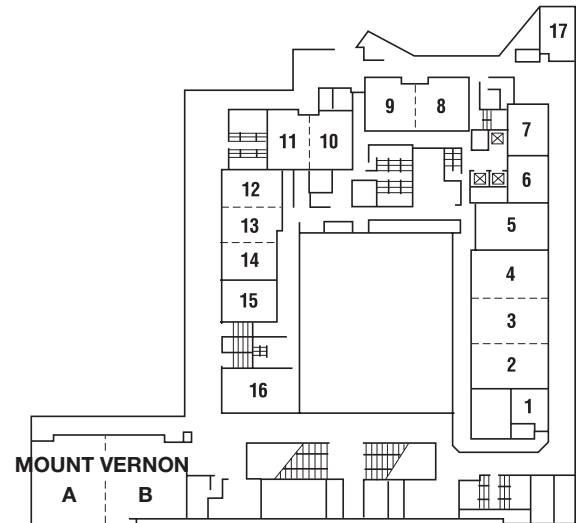


MEETING LEVEL 4

Renaissance Washington, DC Downtown



BALLROOM LEVEL



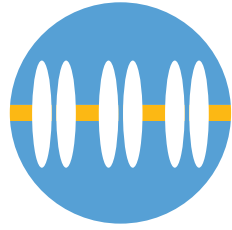
MEETING ROOM LEVEL

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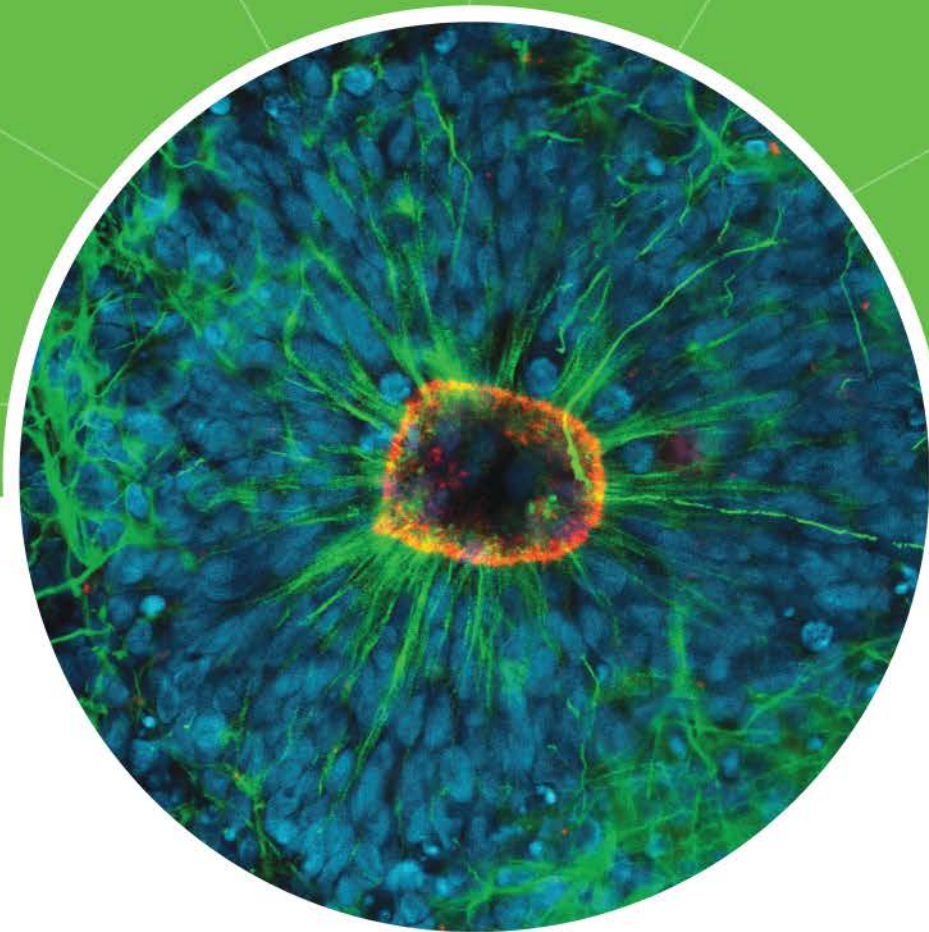
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