SUNDAY

NEUROSCIENCE
2019

SESSION LISTING 093–254

1969–2019

SOCIETY *for* NEUROSCIENCE

CELEBRATING 50 YEARS

Information at a Glance

Neuroscience 2019 is in the North and South Buildings of McCormick Place.
Session information listed here is current as of August 26, 2019. See SfN.org for the most up-to-date annual meeting information.

IMPORTANT PHONE NUMBERS

Annual Meeting Headquarters Office
Logistics & Programming
McCormick Place: Hall A
Logistics: (312) 791-6800
Programming: (312) 791-6805

Donor and Volunteer Leadership Lounge
McCormick Place: Level 2.5 Lounge

Annual Meeting Information Booths
McCormick Place
Gate 3 Lobby
(312) 791-6813
Grand Concourse Lobby
(312) 791-6812

Press Office
McCormick Place: Room S501ABC
(312) 791-6820

Exhibit Management
McCormick Place: Hall A
(312) 791-6824

First Aid and Hospital Numbers
First Aid Station
McCormick Place: Level 2.5S
(312) 791-6060

Mercy Hospital
2525 S. Michigan Ave.
Chicago, IL 60616
(312) 567-2000

South Loop Immediate Care
1430 S. Michigan Ave.
Chicago, IL 60605
(312) 663-3522

KEY TO POSTER FLOOR BY THEMES

The poster floor is in Hall A. Refer to the poster floor map at the end of this booklet.

Theme

A ..... Development

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

C ..... Neurodegenerative Disorders and Injury

D ..... Sensory Systems

E..... Motor Systems

F..... Integrative Physiology and Behavior

G ..... Motivation and Emotion

H ..... Cognition

I..... Techniques

J ..... History, Education, and Society

Note:
Theme J Posters will be on display in Hall A beginning at 1 p.m. on Saturday, Oct. 19, and will remain posted until 5 p.m., Sunday, Oct. 20. 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). Additional local social services resources are listed in one convenient location at www.changingourcampus.org.

Any official report of a violation of the code of conduct should be brought to the designated Human Resources Officer in the SfN headquarters office in the 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, visit: www.sfn.org/codeofconduct.

Cover Image:
This image shows a perineuronal net surrounding a projection neuron in the deep medial nucleus of mouse cerebellum. The tissue is stained with *Wisteria floribunda* agglutinin to label the perineuronal net (pink) and SMI32 (blue) to label neurons. Perineuronal nets are extracellular matrix structures that help stabilize synaptic changes. They may play roles in synaptic plasticity, learning and memory, schizophrenia, Alzheimer's disease, and addiction.
Journal of Neuroscience 9 November 2016, 36 (45) 11459-11468.

Courtesy with permission:
Barbara A. Sorg, Sabina Berretta, Jordan M. Blacktop, James W. Fawcett, Hiroshi Kitagawa, Jessica C.F. Kwok and Marta Miquel.

Complete Session Listing

Sunday AM

LECTURE *McCormick Place*

093. SPECIAL LECTURE- Theoretical Neuroscience: Decision Making and Its Discontents — CME

Sun. 9:00 AM - 10:10 AM — Hall B

Speaker: P. DAYAN, *Max Planck Inst. for Biol. Cybernetics.*

Theoretical neuroscience comes in three intertwined strands: data analysis, which is of ever greater importance in the present age of burgeoning big neural data; mathematical neuroscience, offering quantitative accounts spanning levels of description; and computational neuroscience, predicated on the fact that brains solve complex information processing problems. This lecture will review elements of each of these, focusing on the ever richer understanding of normal and dysfunctional affectively-charged decision-making.

SYMPOSIUM *McCormick Place*

094. Opening the Black Box of the Hippocampus: Visualizing Memories in Distinct Cell Types, Microcircuits, and Cellular Compartments — CME

Sun. 8:30 AM - 11:00 AM — Room: S100BC

Chair: M. KHEIRBEK, *University of California, San Francisco*

The hippocampus is comprised of many cell types and circuits that differentially contribute to aspects of memory encoding. Recent technological advances have led to a reassessment of the hippocampus, its information processing capacity, and how it controls behavior. This symposium will describe how electrophysiology, imaging, and computational tools can be combined to decode the function of hippocampal cell types, microcircuits, and subcellular compartments in the control of behavior.

8:30 **094.01** Introduction.

8:35 **094.02** Experience-dependent changes in subcellular and microcircuit dynamics in the hippocampus. A. LOSONCZY. *Columbia University.*

9:10 **094.03** Hub cells in the hippocampus *in vivo*. R. COSSART. *Institut de Neurobiologie de la Méditerranée.*

9:45 **094.04** Memory codes in the dentate gyrus. M. KHEIRBEK. *University of California, San Francisco.*

10:20 **094.05** Dendritic contributions to hippocampal processing: Insights from computational models. P. POIRAZI. *IMBB-FORTH.*

10:55 **094.06** Closing Remarks.

MINISYMPOSIUM *McCormick Place*

095. Functional Maturation of Cerebello-Cerebral Interactions — CME

Sun. 8:30 AM - 11:00 AM — Room: S406A

Chair: F. E. HOEBEEK, *University Medical Center Utrecht*
Co-Chair: R. V. SILLITOE. *Baylor Col. of Med.*

The developmental processes that connect the cerebellum to the cerebrum constitute critical morphogenetic events that span embryogenesis through postnatal life. It is argued that disrupting these mechanisms results in neurodevelopmental disorders such as autism, movement diseases such as cerebral palsy, and language defects such as dyslexia. This minisymposium brings together recent experimental and clinical advances to better define the cerebellum's role in cerebral maturation.

8:30 **095.01** Introduction.

8:35 **095.02** Fetal origins of developmental cerebellar cognitive affective disorders: Insights from *in vivo* human fetal MRI. C. LIMPEROPOULOS. *Children's Natl. Med. Ctr.*

8:55 **095.03** Neonatal brain injury and cerebellar function. V. GALLO. *Children's Natl. Med. Ct.*

9:15 **095.04** Developmental and acute effects of cerebellar perturbation in mice on autism-like behaviors. A. M. BADURA. *Erasmus MC.*

9:35 **095.05** Sleep-dependent activation of the developing cerebellar system. M. S. BLUMBERG. *Univ. of Iowa.*

9:55 **095.06** Cerebello-cerebral circuits in language processing and development. A. M. D'MELLO. *MIT.*

10:15 **095.07** Multiple facets of the cerebello-cerebral coupling in motor systems. D. POPA. *Inst. de Biologie de l'Ecole Normale Supérieure.*

10:35 **095.08** Closing Remarks.

MINISYMPOSIUM *McCormick Place*

096. Novel Mechanistic Roles for Sodium Channels in Neurodevelopmental Disorders — CME

Sun. 8:30 AM - 11:00 AM — Room: S105

Chair: K. J. BENDER, *University of California, San Francisco*
Co-Chair: E. M. GOLDBERG. *The Children's Hosp. of Philadelphia*

Disease-related alterations in ion channel function, termed channelopathies, contribute to a range of neurodevelopmental disorders. This minisymposium will highlight advances in our understanding of how pathogenic variation in sodium channels contributes to a range of neurodevelopmental disorders, including new insight into well-established sodium channelopathies leading to epilepsy and new associations between sodium channels and other developmental disorders, including autism and schizophrenia.

8:30 **096.01** Introduction.

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:35 **096.02** Mechanisms of cortico-thalamic network synchrony and cognitive impairment by loss of function mutations in SCN8A. C. D. MAKINSON. *Stanford Univ.*

8:55 **096.03** SCN3A encephalopathy: Mechanisms of an emerging syndrome of epilepsy and abnormal cortical development. E. M. GOLDBERG. *The Children's Hosp. of Philadelphia.*

9:15 **096.04** Use of human iPS cells to discover mechanisms of developmental and epileptic encephalopathy. L. L. ISOM. *Univ. of Michigan.*

9:35 **096.05** Dysfunction in SCN2A in autism spectrum disorder. K. J. BENDER. *UCSF.*

9:55 **096.06** Sodium Channelopathies and Genetic Modifiers of Neurodevelopmental Disorders. J. A. KEARNEY. *Northwestern Univ. Feinberg Sch. of Med.*

10:15 **096.07** Dravet Syndrome: tracing the progress of associated comorbidities and inhibitory neuron function. M. RUBINSTEIN. *Goldschleger Eye Res. Inst.*

10:35 **096.08** Closing Remarks.

MINISYMPOSIUM *McCormick Place*

097. Myelin Degeneration and Remyelination in Health and Disease — CME

Sun. 8:30 AM - 11:00 AM — Room: S100A

Chair: C. E. PEDRAZA, *Neuroimmunology Research, Sanofi*
Co-Chair: T. SAMAD. *Sanofi*

Myelin speeds the transmission of the nerve impulse and insulates and protects the neuron. Defects in myelin formation and demyelination result in developmental disabilities and neurological deficits. A better understanding of myelin dynamics is the key to developing effective therapies for demyelinating diseases. Current studies on myelinating cell biology (specifically oligodendrocyte and Schwann cells) during development and pathology will provide the basis for innovative drug discovery.

8:30 **097.01** Introduction.

8:35 **097.02** Pharmacological enhancement of Remyelination in MS. Current drug discovery and development landscape. C. E. PEDRAZA. *Sanofi.*

8:55 **097.03** Unwrapping the cell biological mechanism of CNS myelination. B. ZUCHERO. *Stanford.*

9:15 **097.04** Oligodendrogenesis following cortical demyelination generates a novel myelination pattern. J. L. ORTHMANN-MURPHY. *Perelman Sch. of Medicine, Univ. of Pennsyl.*

9:35 **097.05** Longitudinal *in vivo* imaging of the dynamics of myelin and oligodendrocytes in the adult brain. E. G. HUGHES. *Univ. of Colorado Sch. of Med.*

9:55 **097.06** Is dynamic neuronal signaling necessary for developmental CNS myelination? S. R. MAYORAL. *Univ. of California San Francisco Dept. of Neurol.*

10:15 **097.07** Intraarterial delivery of glial progenitors - the hope for improved remyelination of the brain. A. JABLONSKA. *The Russell H. Morgan Dept. of Radiology and Radiological Science, Div. of MR Res. Inst. for Cell Engineering, Johns Hopkins Univ. Sch. of Med.*

10:35 **097.08** Closing Remarks.

MINISYMPOSIUM *McCormick Place*

098. Parabrachial Complex: A Hub for Pain and Aversion — CME

Sun. 8:30 AM - 11:00 AM — Room: S406B

Chair: M. M. HEINRICHER, *Oregon Health and Science University*

The parabrachial nucleus complex (PBN) has long been recognized as a sensory relay for taste, nociception, and interoception, but how this information is integrated and used to inform different behavioral outputs is only now being elucidated. This minisymposium will provide a context for interrogation of PBN circuits involved in aversion and avoidance and consider how information is integrated within PBN and transmitted to distinct targets to signal alarm and engage appropriate behavioral responses.

8:30 **098.01** Introduction.

8:35 **098.02** Neurobehavioral analysis of bad taste. L. SCHIER. *University of Southern California.*

8:55 **098.03** Role of PBN CGRP-expressing neurons in transmitting a general alarm signal to forebrain neurons. A. BOWEN. *Univ. of Washington.*

9:15 **098.04** Organization of the lateral PBN and implications for distinct functional outputs. M. CHIANG. *Univ. of Pittsburgh.*

9:35 **098.05** The parabrachial complex and the amygdala: Working together to modulate pain and aversion. O. UDDIN. *Univ. of Maryland Sch. of Med.*

9:55 **098.06** Plasticity in the PBN and the link to pain-modulating circuits. M. M. HEINRICHER. *Oregon Health & Science University.*

10:15 **098.07** Parabrachial complex as a safety switch for survival in thermoregulatory challenge. D. TUPONE. *University of Bologna.*

10:35 **098.08** Closing Remarks.

MINISYMPOSIUM *McCormick Place*

099. The Neural Basis of Manual Dexterity — CME

Sun. 8:30 AM - 11:00 AM — Room: S102

Chair: S. J. BENSMAIA, *University of Chicago*

Human hands are remarkably versatile and constitute the principal means by which we physically interact with the environment. This minisymposium will investigate the neural mechanisms that mediate manual dexterity by examining both motor control of the hands and the sensory input necessary for manual precision. Manual dexterity from evolutionary and comparative perspectives and recent efforts to confer anthropomorphic dexterity to brain-controlled bionic hands will also be considered.

8:30 **099.01** Introduction.

8:35 **099.02** Evolution of the neural substrate for dexterity. P. L. STRICK. *Univ. Pittsburgh Sch. Med.*

8:55 **099.03** For dexterous manipulation, the arm is part of the hand. M. H. SCHIEBER. *Univ. of Rochester.*

9:15 **099.04** Sensory representations of the hand in somatosensory cortex. S. J. BENSMAIA. *Univ. of Chicago.*

9:35 **099.05** The neural basis of visuo-motor transformations that mediate grasp. H. SCHERBERGER. *German Primate Ctr.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:55 **099.06** The evolution of the hand and brain areas associated with manual dexterity in mammals. L. A. KRUBITZER. *UC Davis.*

10:15 **099.07** Toward a dexterous brain-controlled bionic hand. J. L. COLLINGER. *Univ. of Pittsburgh.*

10:35 **099.08** Closing Remarks.

LECTURE *McCormick Place*

100. CLINICAL NEUROSCIENCE LECTURE- From Pecking Order to Ketamine: Neural Mechanisms of Social and Emotional Behaviors — CME

Sun. 10:30 AM - 11:40 AM — Hall B

Speaker: H. HU, *Zhejiang Univ. Sch. of Med.*

Emotions and social interactions color our lives and shape our behaviors. Using animal models and engineered manipulations, we aim to understand how social and emotional behaviors are encoded, focusing on the neural circuits underlying dominance hierarchy and depression. This lecture will highlight recent discoveries on the interplay between winning history and prefrontal circuit activities; the impact of social status loss on depression; and how ketamine tames depression by blocking bursts in the brain's anti-reward center, involving a surprising role of glia.

NANOSYMPOSIUM

102. Molecular Mechanisms of Adult Neurogenesis

Theme A – Development

Sun. 8:00 AM – *McCormick Place, S404*

8:00 **102.01** Dysregulation of hippocampal adult-born neurons disrupts brain-wide functional network. H. BAO*; Z. HU; S. LEE; R. KOLAGANI; T. H. CHAO; H. SULLIVAN; I. R. WICKERSHAM; Y. I. SHIH; J. SONG. *Univ. of North Carolina at Chapel Hill, Univ. of California, MIT.*

8:15 **102.02** Functions of different autophagy genes in microglia in postnatal neural stem cells. X. TANG*; M. HAAS; J. GUAN; C. WANG. *Univ. of Cincinnati Col. of Med., Univ. of Cincinnati, COM.*

8:30 **102.03** Enriched environment acts through FGFRs to increase adult hippocampal neurogenesis. M. GRONSKA-PESKI*; J. M. HEBERT. *Albert Einstein Col. of Med.*

8:45 **102.04** Agrin-Lrp4-Ror2 signaling regulates adult hippocampal neurogenesis in mice. H. ZHANG*; A. SATHYAMURTHY; F. LIU; L. LI; L. ZHANG; Z. DONG; W. CUI; X. SUN; K. ZHAO; H. WANG; H. H. HO; W. XIONG; L. MEI. *Case Western Reserve Univ., Augusta Univ., Harvard Med. Sch.*

9:00 **102.05** Neuronal integration in the adult olfactroy bulb is a non selective addition process. J. J. PLATEL*; A. ANGELOVA; S. BUGEON; J. WALLACE; T. GANAY; I. CHUDOTVOROVA; J. DELOULME; C. BÉCLIN; M. TIVERON; N. CORÉ; V. N. MURTHY; H. CREMER. *IBDM – Inst. De Biologie Du Développement De Ma, Developmental Biol. Inst. of Marseille, Harvard Univ., Univ. Grenoble Alpes, Harvard Univ.*

9:15 **102.06** Adult hippocampal neurogenesis during physiological and pathological aging in humans. E. P. MORENO-JIMÉNEZ; M. FLOR-GARCÍA; J. TERREROS-RONCAL; A. RABANO; F. CAFINI; N. PALLAS-BAZARRA; J. AVILA; M. LLORENS-MARTIN*. *Univ. Autonoma De Madrid, Fundacion CIEN, Univ. Europea de Madrid, Ctr. De Biologia Mol. Severo Ochoa (CBMSO), CIBERNED.*

9:30 **102.07** Modulation of hippocampal neurogenesis in awake rats by electrical & chemical thalamic stimulation. F. CHAMAA*; B. DARWISH; E. D. AL-CHAER; Z. NAHAS; N. E. SAADE; W. ABOU-KHEIR. *American Univ. of Beirut, American Univ. Of Beirut, American Univ. of Beirut, Univ. of Minnesota, American Univ. of Beirut, American Univ. of Beirut.*

NANOSYMPOSIUM

103. Behavioral Analysis of Developmental Disorders

Theme A – Development

Sun. 8:00 AM – *McCormick Place, S403*

8:00 **103.01** Brainstem correlates of combined autism spectrum and attention-deficit/hyperactivity symptoms in children. B. TRAVERS*; J. LI; O. J. SURGENT; O. DADALKO; A. L. ALEXANDER; S. KECSKEMETI; D. DEAN, *III Univ. of Wisconsin-Madison, Waisman Ctr.*

8:15 **103.02** Electroencephalographic signal characterization using an emotion recognition test in ASD children. B. SANABRIA*; D. E. GRANADOS. *Univ. Veracruzana, Univ. Veracruzana.*

8:30 **103.03** Determining behavioral phenotypes under genetic influence in autism spectrum disorder. N. T. STOCKHAM*; K. PASKOV; D. P. WALL. *Stanford Univ., Stanford Univ., Stanford Univ.*

8:45 **103.04** Modeling autism using non-human primates. Y. Q. ZHANG*; H. ZHAO; Z. TU; B. LI; Y. JIANG; X. LI. *Inst. of Genet. and Developmental Biology, Chinese Acad. of Sci., Guangzhou Inst. of Biomedicine and Health, Chinese Acad. of Sci., Guangdong-Hongkong-Macau Inst. of CNS Regeneration, Jinan Univ., Guangdong-Hongkong-Macau Inst. of CNS Regeneration, Jinan Univ., Duke Univ. Sch. of Med., Emory Univ.*

9:00 **103.05** Autism associated missense variants impact locomotion and neurodevelopment in *Caenorhabditis elegans.* W. S. WONG*; K. I. BRUGMAN; S. MAHER; J. OH; K. HOWE; P. W. STERNBERG. *Caltech, European Bioinformatics Inst. (EMBL-EBI).*

9:15 **103.06** Traffic related particulate matter affects behavior, inflammation, and neuronal integrity in a developmental rodent model. B. NEPHEW*; A. NEMETH; N. HUDDA; J. PETTITO; G. POIRIER; W. ZAMORE; G. BEAMER; J. A. KING; J. DURANT; D. BRUGGE. *Worcester Polytechnic Inst., Tufts Univ., Tufts Univ., Umass Med. Sch., Tufts Univ. Cummings Sch., Univ. of Connecticut.*

9:30 **103.07** Preterm ASD risk linked to cerebellar white matter changes. C. VACHER*; S. SEBAOUI; H. LACAILLE; J. SALZBANK; J. O'REILLY; D. BAKALAR; P. KRATIMENOS; A. PENN. *Children's Natl. Med. Ctr.*

9:45 **103.08** Maternal immune activation perturbs transcriptional co-expression networks during corticogenesis. K. CICHEWICZ*; C. P. CANALES; M. ESTES; I. ZDILAR; L. SU-FEHER; T. PHAM; J. GOON; K. E. PRENDERGAST; K. M. FARRELLY; L. HAAPANEN; J. VAN DE WATER; A. K. MCALLISTER; A. S. NORD. *UC Davis, UC Davis.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 **103.09** Inefficient thermogenic mitochondrial respiration due to futile proton leak in a mouse model of fragile x syndrome. R. J. LEVY*; K. GRIFFITHS; A. WANG; L. SUN; G. YANG; P. LICZNERSKI; E. A. JONAS. *Columbia Univ., Columbia Univ. Med. Ctr., Columbia Univ. Med. Ctr., Columbia Univ., Yale Univ. Sch. of Med., Yale Univ. Sch. Med.*

10:15 **103.10** The ketogenic diet rescues Fmr1^{KO} phenotypes. P. R. WESTMARK*; A. GUTIERREZ; A. GHOLSTON; T. WILMER; R. K. MAGANTI; C. J. WESTMARK. *Univ. Wisconsin.*

10:30 **103.11** Activation of autophagy rescues cognitive and sensory deficits in fragile X mice. J. YAN*; M. W. PORCH; B. COURT-VAZQUEZ; M. V. BENNETT; R. ZUKIN. *Albert Einstein Col. of Med., Albert Einstein Col. of Med., Albert Einstein Col. Med.*

10:45 **103.12** Altered kurtosis in areas of white matter injury in adolescents with periventricular leukomalacia. C. M. BAUER*; B. KOO; E. S. BAILIN; L. B. MERABET. *Harvard Med. School, Massachusetts Eye and Ear, Boston Univ. Sch. of Med., Harvard Med. School; Massachusetts Eye and Ear.*

NANOSYMPOSIUM

104. Transmitter Co-Expression and Plasticity: From Health to Disease

Theme B – Neural Excitability/ Synapses/ and Glia

Sun. 8:00 AM – *McCormick Place, S104*

8:00 **104.01** Phencyclidine-induced neurotransmitter switching in the mouse prelimbic cortex and its behavioral outcomes. M. PRATELLI*; N. C. SPITZER. *UCSD.*

8:15 **104.02** Different endocytic pathways make synaptic vesicles that store different neurotransmitters and release them with distinct properties. K. SILM*; J. YANG; P. F. MARCOTT; C. S. ASENSIO; J. ERIKSEN; D. A. GUTHRIE; A. H. NEWMAN; C. P. FORD; R. H. EDWARDS. *Univ. of California, San Francisco, Case Western Reserve Univ., Natl. Inst. of Drug Abuse, Univ. of Colorado.*

8:30 **104.03** Large scale analysis of the diversity and complexity of the adult spinal cord neurotransmitter typology. A. PEDRONI*; K. AMPATZIS. *Karolinka Institutet.*

8:45 **104.04** Role of transmitter plasticity in the development of PTSD. H. LI*; N. C. SPITZER. *UC San Diego, Kavli Inst. for Brain and Mind.*

9:00 **104.05** A role for VGLUT2 in the selective vulnerability of dopamine neurons in Parkinson's disease. T. STEINKELLNER*; T. S. HNASKO. *UCSD, Univ. of California San Diego.*

9:15 **104.06** Psychostimulant modulation of dopamine neuron connectivity to striatal cholinergic interneurons. S. ZTAOU*; N. CHUHMA; S. OH; M. MATAMALES; J. BERTRAN-GONZALEZ; S. RAYPORT. *Columbia Univ., Univ. of New South Wales.*

9:30 **104.07** Novel roles for dynamic VGLUT expression in dopamine neurons in health and disease. D. ASLANOGLOU; M. VILLENEUVE; K. FOGLE; E. GEORGE; B. MCCABE; M. PALLADINO; C. E. CHEETHAM; Z. FREYBERG*. *Univ. of Pittsburgh, Univ. of Pittsburgh, EPFL, Univ. Pittsburgh, Univ. of Pittsburgh.*

9:45 **104.08** Leptin receptor-expressing lateral hypothalamus mediates sustaining binge-like eating behaviors induced by early life trauma. S. SHIN*; C. R. LEE; X. WANG; B. LIM. *UCSD, UCSD.*

10:00 **104.09** Neurochemical signaling of reward and aversion in ventral tegmental area glutamate neurons using genetically-encoded GABA and glutamate sensors. D. J. MCGOVERN*; A. PHILLIPS; D. H. ROOT. *Universtiy Of Colorado Boulder, Univ. of Colorado Boulder, Univ. of Colorado Boulder.*

NANOSYMPOSIUM

105. Brain Aging and Role of Systemic Factors

Theme C – Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *McCormick Place, S405*

8:00 **105.01** Human leukocyte antigen DRB1*13:02 protects against dementia. L. JAMES*; A. P. GEORGOPOULOS. *Univ. of Minnesota/Minneapolis VAHCS, Univ. Minnesota.*

8:15 **105.02** Susceptibility to auditory closed-loop stimulation of sleep slow oscillations changes with age. J. SCHNEIDER; P. LEWIS*; D. KOESTER; J. BORN; H. NGO. *Univ. of Manchester, Cardiff Univ., Univ. Tuebingen, Univ. of Birmingham.*

8:30 **105.03** Magnetic resonance spectroscopy reveals age-related elevations in brain glucose. R. J. MULLINS*; D. A. REITER; D. KAPOGIANNIS. *Natl. Inst. on Aging, Emory Univ. Sch. of Med., Natl. Inst. on Aging (NIA/NIH).*

8:45 **105.04** Domain-specific functional network connectivity as a neural substrate of cognitive resilience in the aging brain. S. M. WALTERS*; K. B. CASALETTO; M. YOU; D. COTTER; M. ALTENDAHL; N. DJUKIC; S. WEINER-LIGHT; A. WOLF; Y. COBIGO; J. BROWN; C. A. LINDBERGH; H. ROSEN; A. APPLE; J. KRAMER; A. M. STAFFARONI. *Univ. of California, San Francisco, Univ. of California, San Francisco.*

9:00 **105.05** Brain activity differences between successful and unsuccessful agers. X. CHEN*; D. C. PARK. *Ctr. For Vital Longevity, Univ. of Texas At Dallas.*

9:15 **105.06** BDNF enhances synaptic function in Munc18-1 deficient neurons. Y. I. LEE; A. OROCK; Y. G. KIM; K. M. JOO; S. LOGAN; A. LORINCZ; F. DEAK*. *Dankook Univ., Univ. of Oklahoma Hlth. Sci. Ctr., Sungkyunkwan Univ. Sch. of Med., Univ. of Oklahoma HSC, Florida State Col., Mayo Clin., Univ. of Oklahoma HSC.*

9:30 **105.07** Emotions, neurochemistry and circulating extracellular vesicles: These all come with chronic aerobic physical exercise. F. C. PEREIRA*; M. RODRIGUES; J. REIS; E. SOARES; H. FERREIRA; I. PITA; S. VIANA; C. LEMOS; N. LIMA; T. S. MARTINS; J. CATITA; A. G. HENRIQUES; M. ZUZARTE; T. MARTINS-MARQUES; T. RIBEIRO-RODRIGUES; H. GIRÃO; A. S. AGUIAR, JR; C. A. FONTES-RIBEIRO. *iCBR/Faculty of Medicine, Univ. of Coimbra, ESTESC-Coimbra Hlth. Sch., Innsbruck Med. Univ., iCBR/Faculty of Medicine, Univ. of Coimbra, Univ. of Aveiro, Univ. Fernando Pessoa, Paralab SA, iCBR/Faculty of Medicine, Univ. of Coimbra, Univ. Federal de Santa Catarina.*

9:45 **105.08** On apolipoprotein CIII in the central nervous system. I. V. ACEBES*; P. RECIO-LÓPEZ; P. BERGGREN; L. JUNTTI-BERGGREN. *Karolinska Institutet.*

10:00 **105.09** ● Autophagosome-lysosome fusion is altered in the maternal murine brain across pregnancy. R. A. SMITH*; D. I. RAPOLTI; D. NGUYEN; E. R. BONGARZONE. *Univ. of Illinois at Chicago.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:15 **105.10** Cortical iron deposition predicts reduced working memory performance and decreased functional connectivity of working memory networks in older adults. V. ZACHARIOU*; C. E. BAUER; E. R. SEAGO; B. T. GOLD. *Univ. of Kentucky.*

10:30 **105.11** Poly I:C and LPS induce blood-brain barrier disruption and fatigue behavioural phenotype in rodents *in vivo.* L. M. LANDOWSKI*; C. G. FOSTER; B. A. SUTHERLAND; D. W. HOWELLS. *Univ. of Tasmania.*

10:45 **105.12** ● A transformational plasma-based approach to Alzheimer's disease therapeutics. S. P. BRAITHWAITE*; B. SZOKE; S. LOHR; J. HANNESTAD; S. MINAMI; V. KHEIFETS. *Alkahest.*

NANOSYMPOSIUM

106. Alzheimer's Disease: Neuroinflammation and Immune Actions

Theme C – Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *McCormick Place, S103*

8:00 **106.01** Sex-specific effects of microbiome perturbations on cerebral abeta amyloidosis and microglia phenotypes in an Alzheimer's transgenic mouse model. H. B. DODIYA*; T. KUNTZ; S. M. SHAIK; C. BAUFELD; J. LEIBOWITZ; X. ZHANG; N. GOTTEL; X. ZHANG; O. BUTOVSKY; J. A. GILBERT; S. SISODIA. *Univ. of Chicago, Brigham and Women's Hosp., Univ. of California San Diego.*

8:15 **106.02** Neurons act as inflammatory cells within the pre-plaque brain: The early effects of intracellular aβ. L. WELIKOVITCH*; S. DO CARMO; A. C. CUELLO. *McGill Univ.*

8:30 **106.03** HDAC3 inhibition ameliorates memory function via M2 microglia in a transgenic mouse model of Alzheimer's disease. T. KUBOYAMA*; C. TOHDA. *Instit of Natural Medicine, Univ. of Toyama.*

8:45 **106.04** Gastrointestinal (GI) tract microbiome-derived, lipopolysaccharide (LPS)-mediated up-regulation of microRNA-146a in sporadic Alzheimer's disease (AD). Y. ZHAO; V. R. JABER; N. M. SHARFMAN; W. LI; W. J. LUKIW*. *LSUHSC-NO Neurosci., LSU Neurosci. Ctr., Jiangxi Univ. of TCM, Louisiana State Univ. Neurosci. Ctr. of Excellence.*

9:00 **106.05** ● TREM2 function impedes tau seeding in neuritic plaques. C. E. LEYNS*; M. GRATUZE; S. NARASIMHAN; N. JAIN; L. J. KOSCAL; M. MANIS; H. JIANG; M. COLONNA; V. M. Y. LEE; J. D. ULRICH; D. M. HOLTZMAN. *Washington Univ. Sch. of Med., Washington Univ. Sch. of Med., Washington Univ. Sch. of Med., Univ. of Pennsylvania Sch. of Med., Washington Univ. Sch. of Med.*

9:15 **106.06** Microglia-specific cytokine dysregulation results in Alzheimer's disease-like plaques and tangles in mice. Z. HUANG*; H. KWON; D. SANTHOSH. *UW-Madison.*

9:30 **106.07** Chronic inhibition of phospholipase D1 prevents synaptic dysfunction and memory deficits in a mouse model of Alzheimer's disease. C. NATARAJAN; K. Z. BOURNE; B. TUMURBAATAR; G. TAGLIALATELA; B. KRISHNAN*. *Univ. of Texas Med. Br. at Galveston, Univ. of Texas Med. Br. Dept. of Neurol., Univ. of Texas Med. Br. At Galveston.*

9:45 **106.08** Effects of probiotic supplementation on serum and brain short chain fatty acids in the App $^{NL\text{-}G\text{-}F}$ mouse model of Alzheimer's disease. H. KAUR*; M. Y. GOLOVKO; D. C. DARLAND; C. K. COMBS. *Univ. of North Dakota, Univ. of North Dakota.*

10:00 **106.09** Phospho-tau in synapses and microglial activation are more proximate correlates to cognition than plaques and tangles. A. C. AMARAL*; P. RAMANAN; M. S. T. CHONG; A. D. BALDEON; C. AGUERO; C. ROIG-ARSEQUELL; N. SAEZ-CALVERAS; D. A. DENBOW; P. M. DOOLEY; T. GOMEZ-ISLA. *Massachusetts Gen. Hospital/Harvard Med. Sch.*

10:15 **106.10** ● Alzheimer's disease markers are increased in postmortem human alcoholic brain and models of binge ethanol *in vivo.* L. G. COLEMAN, JR; R. P. VETRENO; L. QIN; J. Y. ZOU; J. SONG; F. T. CREWS*. *Univ. of North Carolina at Chapel Hill, Univ. of North Carolina at Chapel Hill, Univ. North Carolina, Sch. Med., Univ. North Carolina, Chapel Hill, Univ. of North Carolina, Chapel Hill, Skipper Bowles Ctr. Alcohol.*

10:30 **106.11** ● Inhibition of inflammasome activity and ASC speck formation in response to sterile stress signals in Alzheimer's disease. M. SEBASTIAN-VALVERDE; T. FROLINGER; F. HERMAN; G. M. PASINETTI*. *Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai.*

10:45 **106.12** ● Aberrant resident memory CD8 T cells that elicit Alzheimer's (AD)-like neurodegeneration in mice are elevated in AD patient blood and brain. C. J. WHEELER*; A. PANWAR; A. RENTSENDORJ; M. JHUN; R. CORDNER; N. YEAGER; L. JIN; Y. KORONYO; M. KORONYO-HAMAOUI; K. L. BLACK; D. VAN DAM; P. P. DE DEYN; V. YAMAMOTO; K. A. TRUJILLO. *T-Neuro Pharma, Inc. & Brain Mapping Fndn., Cedars-Sinai Med. Ctr., Cedars-Sinai Med. Ctr., Cedars-Sinai Med. Ctr., Univ. of California, Davis, Univ. of Antwerp, Univ. of Southern CA & Brain Mapping Fndn., T-Neuro Pharma, Inc.*

11:00 **106.13** Distinct microglial response against Alzheimer's pathologies characterized by P2Y12 receptor. N. SAHARA*; J. MAEDA; T. MINAMIHISAMATSU; M. SHIMOJO; M. ONO; K. MINATOHARA; H. TAKUWA; Y. TAKADO; B. JI; M. ZHANG; M. HIGUCHI. *Natl. Inst. of Radiological Sci., Natl. Inst. of Radiological Sci., Nat Inst. Radiol Sci.*

NANOSYMPOSIUM

107. Motor Neuron Disease Mechanisms

Theme C – Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *McCormick Place, N426*

8:00 **107.01** Etiology investigation of hereditary spastic paraplegia-SPG4 by transgenic mouse model and isogenic human induced pluripotent stem cell derived neuronal model. L. QIANG*; E. PIERMARINI; A. NICEFORO; H. MURALIDHARAN; S. AKARSU; P. YATES; P. W. BAAS. *Drexel Univ. Col. of Med.*

8:15 **107.02** Membralin deficiency dysregulates astrocytic glutamate homeostasis leading to ALS-like impairment. L. JIANG*; B. ZHU; X. LI; T. HUANG; H. XU. *Sanford Burnham Prebys Med. Discovery Inst.*

8:30 **107.03** Amino acid deprivation promotes C9orf72-linked RAN translation via activation of the integrated stress response. A. T. NELSON*; A. R. HAEUSLER; D. TROTTI. *Thomas Jefferson Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:45 **107.04** Genetic variants and alterations in WWOX lead to tau phosphorylation and mis-localization in post-mortem ALS motor cortex. G. SADRI-VAKILI*; T. PETROZZIELLO; A. N. MILLS; S. M. K. FARHAN; S. DUJARDIN; A. C. AMARAL; T. GOMEZ-ISLA; B. T. HYMAN; K. VAKILI. *Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., Boston Children's Hosp.*

9:00 **107.05** Aberrant mTOR pathway in G93A SOD1 human astrocytes causes motor neuron toxicity. V. GRANATIERO*; N. SAYLES; G. MANFREDI. *Weill Cornell Med.*

9:15 **107.06** Nucleocytoplasmic proteomic analysis uncovers ETF1 and nonsense-mediated decay as modifiers of C9orf72 high repeat expansion toxicity. J. ORTEGA*; E. L. DALEY; S. KOUR; M. SAMANI; L. TELLEZ; Y. TSAI; T. F. GENDRON; C. DONNELLY; T. SIDDIQUE; J. N. SAVAS; U. B. PANDEY; E. KISKINIS. *Northwestern Univ., Univ. of Pittsburg, Mayo Clin.*

9:30 **107.07** Macromolecular connectivity landscape of mammalian brain identifies novel ALS-relevant complex. P. E. A. ASH*; S. PHANSE; R. POURHAGHIGHI; F. GOEBELS; E. MALOLEPSZA; K. TSAFOU; A. NATHAN; S. CHEN; Y. ZHANG; S. D. WIERBOWSKI; S. BOUDEAU; L. Z. M. HU; G. CROMAR; H. GUO; L. A. BECKER; A. D. GITLER; A. YOUSSEF; J. PARKINSON; K. LAGE; H. YU; B. L. WOLOZIN; G. BADER; A. EMILI. *Boston Univ. Sch. of Med., Univ. of Toronto, MIT, Cornell Univ., Univ. of Toronto, Stanford Univ. Sch. of Med., Boston Univ., Harvard Med. Sch., Boston Univ. Sch. of Med., Boston Univ.*

9:45 **107.08** Structure and regulation of TDP-43 liquid droplets in the nucleus. H. YU*; D. W. CLEVELAND. *Ludwig Institute/ UCSD.*

10:00 **107.09** C9orf72-related cellular pathology in skeletal myocytes derived from patient-specific induced pluripotent stem cells with amyotrophic lateral sclerosis. E. LYNCH; T. SEMRAD; V. BELSITO; C. FITZGIBBONS; K. HAYAKAWA; M. SUZUKI*. *Univ. of Wisconsin Madison, The Univ. of Tokyo, Univ. of Wisconsin Madison.*

10:15 **107.10** Extracellular vesicles produced by neurons are associated with toxicity spreading in amyotrophic lateral sclerosis and fronto-temporal dementia. M. CICARDI*; B. K. JENSEN; K. KRISHNAMURTHY; T. R. WESTERGARD; D. TROTTI. *Thomas Jefferson Univ., Thomas Jefferson Univ., Thomas Jefferson Univ., Dept. of Neurosci.*

10:30 **107.11** Examining mutation-specific impact on the long, distal motor axon in ALS using iPSC-derived motor neurons. K. L. MARSHALL*; L. RAJBHANDARI; A. TAGA; A. VENKATESAN; N. J. MARAGAKIS; M. H. FARAH. *Johns Hopkins Sch. of Med.*

NANOSYMPOSIUM

108. Dynamic Signal Integration Across Saccades

Theme D – Sensory Systems

Sun. 8:00 AM – *McCormick Place, S505*

8:00 **108.01** External inputs and intrinsic dynamics of the superior colliculus revealed by local field potentials. C. MASSOT*. *Univ. of Pittsburgh.*

8:15 **108.02** Understanding the dynamic neural code of extrastriate areas underlying visuospatial integration across saccadic eye movements. N. NATEGH*; A. AKBARIAN; K. L. CLARK; K. NIKNAM; B. NOUDOOST; Y. ZAMANI. *Univ. of Utah, Univ. of Utah, Univ. of Utah.*

8:30 **108.03** Predictive influence of static landmarks on visual and memory responses of frontal eye field (FEF) and supplementary eye field (SEF). A. SCHUETZ*; V. BHARMAURIA; X. YAN; H. WANG; F. BREMMER; J. CRAWFORD. *Philipps-Universität Marburg, Ctr. for Mind, Brain and Behaviour - CMBB, York Univ.*

8:45 **108.04** Spatiotemporal evolution of egocentric/allocentric multiplexing in frontal eye field (FEF) and supplementary eye field (SEF) neurons following visual landmark shifts in rhesus macaques. V. BHARMAURIA*; A. SAJAD; H. ARORA; X. YAN; H. WANG; J. D. CRAWFORD. *York Univ., Vanderbilt Univ.*

9:00 **108.05** Cortical networks for transsaccadic updating of grasp orientation: A neuroimaging / functional connectivity study. B. BALTARETU*; S. MONACO; J. VELJI-IBRAHIM; G. N. LUABEYA; J. D. CRAWFORD. *York Univ., Ctr. for Mind/ Brain Sci.*

9:15 **108.06** Working memory enhances the synaptic efficacy of visual inputs to prefrontal cortex. B. NOUDOOST*; T. MOORE. *Univ. of Utah, Howard Hughes Med. Inst. - Stanford Univ.*

9:30 **108.07** Saccade adaptation selectively transfers to spot pursuit. S. N. J. WATAMANIUK*; J. B. BADLER; S. J. HEINEN. *Wright State Univ., Smith-Kettlewell Eye Res. Inst.*

NANOSYMPOSIUM

109. Neural and Molecular Mechanisms of Alcohol and Substance Use Disorders

Theme G – Motivation and Emotion

Sun. 8:00 AM – *McCormick Place, S106*

8:00 **109.01** GDNF overexpression in the VTA prevents relapse of heavy alcohol use and restores mesolimbic dopamine function in rhesus macaques. M. M. FORD*; K. M. HOLLERAN; B. GEORGE; P. HADACZEK; L. E. VANDERHOOFT; J. BRINGAS; J. NAIDOO; J. J. SCHOEN; J. L. MCBRIDE; J. R. FORSAYETH; S. R. JONES; K. A. GRANT; K. S. BANKIEWICZ. *Oregon Hlth. & Sci. Univ., Wake Forest Univ. Sch. Med., Univ. of California San Francisco.*

8:15 **109.02** A potential DNA epigenetic basis for individual differences in susceptibility to alcohol use disorder. G. J. KAPLAN*; J. CHITAMAN; N. WADDELL; H. XU; R. L. HEDINGER; J. FENG. *Florida State Univ.*

8:30 **109.03** Prenatal delta 9 tetrahydrocannabinol exposure elicits divergent age and sex dependent cognitive impairments and dysregulation of prelimbic neural activity via disruption of hippocampal molecular signaling cascades and fatty acid synthesis. R. M. HUDSON*; S. FRIER; T. D. JUNG; W. J. RUSHLOW; S. R. LAVIOLETTE. *Univ. of Western Ontario, Western Univ., UWO.*

8:45 **109.04** Interoceptive enhancement in early onset consumption to smoked cocaine. L. A. DE LA FUENTE DE LA TORRE*; L. SEDEÑO; S. SCHURMANN VIGNAGA; S. SONZOGNI; C. ELLMANN; A. GARCÍA; M. CETKOVICH; E. T. CÁNEPA; T. TORRALVA; E. TAGLIAZUCCHI; A. IBÁÑEZ. *Buenos Aires Physics Inst. (IFIBA), Univ. of Buenos Aires, Inst. of Cognitive Neurol., Lab. de Neuroepigenética, Facultad de Ciencias Exactas y Naturales, Univ. de Buenos Aires.*

9:00 **109.05** Neural mechanisms for opioid-induced respiratory depression. S. LIU*; M. YE; M. SONG; S. HAN. *Salk Inst. for Biol. Studies, UCSD.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:15 **109.06** Heavy cannabis use associated with Wernicke's encephalopathy. A. CHAUDHARI*; Z. YING-LI; A. LONG; A. AFSHINNIK. *Univ. of California San Francisco.*

9:30 **109.07** Gabapentin induced drug seeking like behavior: Possible involvement of dopaminergic mechanism. Y. S. ALTHOBAITI*; A. ALGHORABI; H. ALMALKI; A. ALGHAMDI; A. BASFER. *Taif Univ., Taif Univ.*

9:45 **109.08** Chronic excessive alcohol drinking dysregulates behavior and neuropeptide signaling in rats. S. PANDEY*; J. R. BARSON. *Drexel Univ. Col. of Med.*

10:00 **109.09** The role of LRRK2, a Parkinson's disease-related protein, in regulating striatal function and alcohol drinking in mice. D. DA SILVA E SILVA*; A. MAMAIS; M. R. COOKSON; V. A. ALVAREZ. *NIH, Natl. Inst. On Aging, NIH, Natl. Inst. Aging, NIH, Natl. Inst. on Alcohol Abuse and Alcoholism.*

10:15 **109.10** The α5 nicotinic acetylcholine receptor subunit may mediate alcohol reinforcement through progesterone signaling and alteration of glycinergic and serotonergic receptors in the interpeduncular nucleus. S. CALIGIURI*; V. MATHIS; A. LEPACK; M. V. MICIONI DI BONAVENTURA; M. HEYER; P. BALI; Q. LU; A. RAMAKRISHNAN; I. MAZE; R. M. O'CONNOR; P. J. KENNY. *Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. At Mt Sinai, Icahn Sch. of Med. At Mount Sinai, Univ. of Camerino, Sch. of Pharmacy, Pharmacol. Unit, Icahn Sch. of Med. at Mount Sinai, Scripps Inst., Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Medicine, Mount Sinai, ICAHN Sch. of Med. At Mount Sinai.*

10:30 **109.11** Alcohol metabolism directly fuels histone acetylation in the brain. P. MEWS*; G. EGERVARI; R. NATIVIO; S. SIDOLI; G. DONAHUE; B. A. GARCIA; E. J. NESTLER; S. L. BERGER. *Icahn Sch. of Med. at Mount Sinai, Perelman Sch. of Med. at the Univ. of Pennsylvania.*

10:45 **109.12** Effect of alcohol drinking on myelinating cells in male and female mice. S. AKLI*; S. P. SCOTT; S. NOUDURI; F. L. REAGAN; R. SENTHILKUMAR; H. N. RICHARDSON. *Univ. of Massachusetts.*

11:00 **109.13** The KCNK13 potassium channel is a target for alcohol-induced activation of neurons in the ventral tegmental area. C. YOU; B. J. VANDEGRIFT; D. HE; T. TEPPEN; A. A. PRADHAN; A. F. TIPTON; S. C. PANDEY; A. W. LASEK; M. S. BRODIE*. *Univ. of Illinois at Chicago, Univ. of Illinois at Chicago, Univ. of Illinois at Chicago, Univ. of Illinois at Chicago.*

NANOSYMPOSIUM

110. Representations of Value and Economic Choice Across Different Brain Regions

Theme H – Cognition

Sun. 8:00 AM – *McCormick Place, N427*

8:00 **110.01** Functional interactions between LIP and V4 during rhythmic environmental sampling. M. K. ERADATH*; S. KASTNER. *Princeton Univ., Princeton Univ.*

8:15 **110.02** ● Population dynamics in signaling expected values across multiple reward-related brain regions. H. YAMADA*; Y. IMAIZUMI; M. MATSUMOTO. *Univ. of Tsukuba/Faculty of Med., Univ. of Tsukuba/Medical Sci., Univ. of Tsukuba.*

8:30 **110.03** Is it stable or dynamic? Value representation in the OFC and ACC over an extended delay. P. ENEL*; J. D. WALLIS; E. L. RICH. *Icahn Sch. of Med. At Mount Sinai, Univ. of California Berkeley, Icahn Sch. of Med. At Mount Sinai.*

8:45 **110.04** Causal role of the lateral orbitofrontal cortex in credit assignment. D. FOLLONI*; E. FOURAGNAN; M. WITTMAN; L. ROUMAZEILLES; L. TANKELEVITCH; L. VERHAGEN; J. SALLET; M. F. S. RUSHWORTH. *Univ. of Oxford, Univ. of Plymouth.*

9:00 **110.05** The orbitofrontal cortex is necessary for novel but not established economic choice. M. P. H. GARDNER*; D. SANCHEZ; J. ZHOU; J. C. CONROY; G. SCHOENBAUM. *NIDA IRP, Natl. Inst. on Drug Abuse, Natl. Inst. on Drug Abuse, IRP, Natl. Inst. on Drug Abuse Intramural Res. Program.*

9:15 **110.06** Primate insular cortex represents contextual information that modulates risk-attitude. Y. YANG*; X. LI; V. STUPHORN. *Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ.*

9:30 **110.07** The effects of dopamine and episodic future thinking on intertemporal choice in Parkinson's disease. K. E. FOERDE*; L. LAWSON; D. SHOHAMY. *Columbia Univ. Med. Ctr., NYU, Columbia Univ.*

NANOSYMPOSIUM

111. Language: Physiology, Plasticity, and Cognition

Theme H – Cognition

Sun. 8:00 AM – *McCormick Place, S402*

8:00 **111.01** ● Non-invasive mapping of acoustic-phonetic speech features in human superior temporal gyrus using ultra-high field 7T fMRI. J. D. TOWNSEND*; H. G. YI; A. BECKETT; M. K. LEONARD; A. T. VU; E. F. CHANG; D. FEINBERG. *UC Berkeley/Advanced MRI Technologies, Univ. of California, San Francisco, UC Berkeley/Advanced MRI Technologies, UCSF, VA Med. Ctr., UCSF, UC Berkeley/Advanced MRI Technologies.*

8:15 **111.02** A spatiotemporal map of reading in the ventral pathway. O. WOOLNOUGH*; C. DONOS; P. ROLLO; S. FISCHER-BAUM; S. DEHAENE; N. TANDON. *Univ. of Texas Hlth. Sci. Ctr. At Houston, Rice Univ., INSERM-CEA.*

8:30 **111.03** Effects of musical training on white matter diffusivities and speech in noise perception. Y. DU*; X. LI. *Inst. of Psychology, Chinese Acad. of Sci.*

8:45 **111.04** Narratives: fMRI data for evaluating models of naturalistic language comprehension. S. A. NASTASE*; Y. LIU; H. HILLMAN; A. ZADBOOD; L. HASENFRATZ; N. KESHAVARZIAN; J. CHEN; C. J. HONEY; Y. YESHURUN; M. REGEV; M. NGUYEN; C. H. C. CHANG; C. BALDASSANO; O. LOSITSKY; M. A. CHOW; Y. C. LEONG; P. P. BROOKS; A. GOLDSTEIN; G. CHOE; K. A. NORMAN; U. HASSON. *Princeton Univ., Johns Hopkins Univ., Princeton Univ., Tel Aviv Univ., McGill Univ., Columbia Univ., Brown Univ., DataCamp, Inc., Stanford Univ.*

9:00 **111.05** Neural biomarkers of language proficiency in second language listeners. G. M. DI LIBERTO; J. NIE; J. YEATON; B. KHALIGHINEJAD; S. A. SHAMMA; N. MESGARANI*. *École Normale Supérieure, Columbia Univ., Ecole Normale Supérieure, Dept. Electrical Engineering, Columbia Univ., Univ. of Maryland.*

9:15 **111.06** Stitching cortical dynamics to reveal distributed network interactions for language production. K. FORSETH*; A. GIAHI SARAVANI; X. PITKOW; N. TANDON. *UT Hlth. Sci. Ctr. In Houston, Baylor Col. of Med., Univ. of Texas Med. Sch. at Houston.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:30 **111.07** Convergent cortical state dynamics in language networks for listening and reading. K. FORSETH; N. TANDON*. *UT Hlth. Sci. Ctr.*

9:45 **111.08** Functional mapping of language with high gamma electrocorticography. J. SHUM*; B. MAHMOOD; L. FANDA; P. C. DUGAN; D. FRIEDMAN; W. DOYLE; O. DEVINSKY; A. FLINKER. *NYU Comprehensive Epilepsy Ctr.*

10:00 **111.09** Metaphoric language and brain plasticity. M. ORKODASHVILI*. *Vanderbilt Univ.*

10:15 **111.10** Neural resources shared by language and tool-use: A basis for tool-use benefits over syntactic abilities. S. THIBAULT*; V. BOULENGER; A. ROY; C. BROZZOLI. *ImpAct Team, INSERM U1028, Lyon Neurosci. Res. Centre, CNRS UMR5292, Univ. of Lyon 1, Dynamique du Langage, CNRS UMR5596, Univ. of Lyon 2, Karolinska Institutet.*

10:30 **111.11** Visemic salience modulates mu suppression during silent speech perception: Preliminary evidence for the articuleme. M. MICHON*; G. N. BONCOMPTE; V. LÓPEZ. *Pontificia Univ. Católica De Chile, Univ. Diego Portales, Univ. Catolica De Chile, Pontificia Univ. Católica de Chile.*

NANOSYMPOSIUM

112. Modeling of Schizophrenia Relevant Risk Factors

Theme H – Cognition

Sun. 8:00 AM – *McCormick Place, S401*

8:00 **112.01** Peripubertal treatment with mGluR2/3 agonist prevents dopamine system hyperactivity in adulthood in MAM model of schizophrenia. S. SONNENSCHEIN*; A. A. GRACE. *Univ. of Pittsburgh.*

8:15 **112.02** ● Linking differential resting-state connectivity to spatial gene expression patterns in a mouse model of 22q11 deletion. T. NICKL-JOCKSCHAT*; N. GASS; Z. J. PETERSON; M. DIDRIKSEN; A. J. SCHWARZ; C. HAN; E. SCHWARZ; A. SARTORIUS; A. MEYER-LINDENBERG. *Dept. of Psychiatry, Iowa Neurosci. Instit, Central Inst. of Mental Hlth., Univ. of Iowa, H. Lundbeck A/S, Takeda Pharmaceuticals.*

8:30 **112.03** Altered behavior, neurogenesis, and $GABA_A$ receptor modulation in a Reln and Disc1 double-hit model for genetic susceptibility to schizophrenia. H. L. MAHONEY*; J. FAULKNER; B. CAPRARO; E. PETERSON; H. JUSTIN; D. GONZALEZ; J. J. GAMSBY; E. J. WEEBER; D. GULICK. *Univ. of South Florida, Univ. of South Florida, Univ. of South Florida.*

8:45 **112.04** Development and characterization of a non-human primate model of maternal immune activation. D. SANTANA-COELHO*; J. O'CONNOR; D. LAYNE-COLON; S. TARDIF. *Univ. of Texas Hlth. At San Antonio, Texas Biomed. Res. Inst.*

9:00 **112.05** Reduced myelin content and smaller axons of key white matter tracts in schizophrenia: Evidence for structural dysconnection. B. LU*; S. PATEL; J. LOSIOWSKI; D. KHATIB; M. ARSHAD; N. RAZ; V. DIWADKAR; J. STANLEY. *Oakland Univ. William Beaumount Sch. of Med., Wayne State Univ. Sch. of Med., Wayne State Univ. Sch. of Med.*

9:15 **112.06** ● Mapping combined genetic risk for bipolar disorder & schizophrenia to the human brain in UK Biobank. L. DING*; N. JAHANSHAD; P. THOMPSON. *Imaging Genet. Center, USC Mark and Mary Stevens Neuroimaging and Informatics Inst.*

9:30 **112.07** Chronic paternal THC in rats prior to mating causes long-lasting behavioral disruption in their offspring. E. D. LEVIN*; Z. HOLLOWAY; A. B. HAWKEY; E. PIPPEN; H. WHITE; B. KENOU; J. KIM; E. GREENGROVE; A. H. REZVANI; S. MURPHY. *Duke Univ. Med. Ctr.*

THEME J POSTER *McCormick Place*

021. History of 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)—McCormick Place, Hall A

1:00 CC14 **021.01SA** Building a philosophical framework for the neuroscience of emotions. H. STORL. *Augustana Col.*

2:00 CC15 **021.02SA** ▲ History of Canavan disease: Progress in research over 80 years. A. NAMBOODIRI; M. F. KIRMANI; M. F. KIRMANI; R. VENGILOTE; N. PUTHILLATHU. *USUHS, Uniformed Services Univ. of Hlth. Sci.*

3:00 CC16 **021.03SA** Little, Osler, Freud, and beyond: Cerebral palsy throughout history. K. STANG; N. KING. *Tulane Univ. Sch. of Med., Univ. of Texas McGovern Med. Sch.*

4:00 CC17 **021.04SA** Pioneering studies of spatial behavior in animals: Beritashvili and Tolman. M. G. TSAGARELI. *Ivane Beritashvili Exptl. Biomedicine Ctr.*

1:00 CC18 **021.05SA** ▲ A new comprehensive view of the role of glia after an ischemic stroke: An integrative model of systematic review. J. M. GASPAR-TORO; A. S. PEREZ-RUIZ; S. J. FLOREZ-ROJAS; Z. DUENAS. *Univ. Nacional de Colombia, Univ. Nacional de Colombia.*

2:00 CC19 **021.06SA** Budge, Waller, and Bernard: Sympathetic control of head structures. B. W. BAKKUM. *Illinois Col. of Optometry.*

3:00 CC20 **021.07SA** A historical perspective of urinary bladder dysfunction following spinal cord injury. B. T. DAVID; G. LIU; R. G. FESSLER. *Rush Univ. Med. Ctr.*

4:00 CC21 **021.08SA** This history and significance of the golgi stain and those it impacted. M. S. KASSEM. *Neurosci. Res. Australia.*

1:00 CC22 **021.09SA** Neurons in context: Neuronal regeneration and disciplinary struggles in the first half of the XX Century. F. DE SIO. *Heinrich Heine Univ.*

2:00 CC23 **021.10SA** Tissue regeneration: Cephalopod contribution over more than a century. P. IMPERADORE; G. FIORITO. *Assn. for Cephalopod Res. - CephRes, Stazione Zoologica Anton Dohrn.*

3:00 CC24 **021.11SA** Experimental organisms, neuron regeneration, and the curious case of the lamprey in the history of the neurosciences, 1960-present. K. G. MAXSON JONES; J. R. MORGAN. *Princeton Univ., Marine Biol. Lab.*

4:00 CC25 **021.12SA** The primate's place in our understanding of hippocampal function. R. A. GULLI. *Columbia Univ.*

1:00 CC26 **021.13SA** History of psychedelics in neuroscience - From 19th century to modern medicine. M. A. BOEHM; D. P. EFFINGER. *Natl. Inst. on Drug Abuse, Brown Univ.*

2:00 CC27 **021.14SA** DW Woolley, LSD, and the birth of psychopharmacology. G. C. MCCARTER. *Touro Univ. California.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 CC28 **021.15SA** Social neuroscience: A new approach to the study of the consequences of violence. X. CORTIJO-PALACIOS; O. LOPEZ-SANCHEZ. *Univ. Veracruzana, Univ. Autonoma de Mexico.*

4:00 CC29 **021.16SA** The long historic road to consensus on biomarkers for psych-psych taxonomies: Convergence of multi-disciplinary insights. I. TROFIMOVA. *McMaster Univ.*

1:00 CC30 **021.17SA** Rufus of Ephesus - The precious historical insight into neuroscience. G. SENGUL; E. CANDAR. *Ege Univ. Sch. of Med., Ege Univ. Inst. of Hlth. Sci.*

2:00 CC31 **021.18SA** Mazhar Osman: A distinguished scientist who sheded light on the history and future of neuropsychiatry in Turkey. E. ULUPINAR; B. ERCELEN. *Eskisehir Osmangazi Univ.*

3:00 CC32 **021.19SA** The music of JS Bach: Useful data sets to study perception and movement and using modern neuroscience methods to test historical theories. E. L. ALTSCHULER. *Metropolitan Hosp.*

4:00 CC33 **021.20SA** ▲ Tumor necrosis factor alpha and depression. F. SANCHEZ-LADRON DE GUEVARA; D. HERNANDEZ-BALTAZAR; X. CORTIJO-PALACIOS; M. MELGAREJO-GUTIERREZ; T. CIBRIAN-LLANDERAL. *Facultad de Medicina, Univ. Veracruzana, CONACYT-Inst. de Neuroetologia-Universidad Veracruzana, Inst. de Neuroetologia-Universidad Veracruzana.*

THEME J POSTER *McCormick Place*

022. Exercises and Courses

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)—McCormick Place, Hall A

1:00 CC34 **022.01SA** Development of a novel science curriculum about neural stem cells for high-school students in Hong Kong. K. SUEN; M. LI; M. LIN; W. TANG; H. CHEUNG; W. CHAN; R. C. CHANG. *Po Leung Kuk Laws Fndn. Col., Po Leung Kuk Laws Fndn. Col., Lab. of Neurodegenerative Diseases, LKS Fac. of Medicine, Univ. of Hong Kong.*

2:00 CC35 **022.02SA** ▲ Student communication of science is an effective method for peer based learning. S. GUARIGLIA; A. MARINO; M. PATINELLA. *New York State Inst. for Basic Res., St. Joseph by the Sea HS.*

3:00 CC36 **022.03SA** Training the next generation of jedi scientists. J. A. GEORGE; C. R. BUTSON. *Univ. of Utah, Univ. of Utah, Univ. of Utah.*

4:00 CC37 **022.04SA** A practical demonstration of pharmacological principles: Modulation of skin melanophore properties in xenopus frog tadpoles by serotonin and nitric oxide. K. T. SILLAR; F. SORRELL; L. HACHOUMI. *Univ. St Andrews.*

1:00 CC38 **022.05SA** ▲ Efficient visual neural coding tutorial for grayscale, color, binocular, and video to produce primary visual cortex neural receptive fields. A. G. GEORGARAS; N. URS; P. NOLAN; H. SINGH; M. V. ALBERT. *Loyola Univ. Chicago, Univ. of North Texas.*

2:00 CC39 **022.06SA** Using *C. elegans* based lab activities to connect environment, genes, and behavior. A. J. KALLARACKAL. *Mount St. Mary's Univ.*

3:00 CC40 **022.07SA** NeuroCaseNet - Support for teaching neuroscience with cases. L. A. ROESCH; P. MARSTELLER; K. E. FRENZEL. *Emory Univ., Emory Univ.*

4:00 CC41 **022.08SA** Integrating service learning into a neuropsychopharmacology course. K. M. SEIP-CAMMACK. *The Univ. of the South.*

1:00 CC42 **022.09SA** War and the brain: An exemplar of a liberal arts approach to neuroscience. K. F. PHILLIPS. *Virginia Tech.*

2:00 CC43 **022.10SA** Sherlock Holmes and the neurophysiologists- The case of the four toxins continues. M. M. STAUFFER; M. SALAZAR R.; L. B. FRENCH. *Allegheny Col.*

3:00 CC44 **022.11SA** Kinesthetic illusions of limb position and posture. B. SCHILLER; W. COLGAN, III; B. CALDERON; B. R. JOHNSON. *Cornell Univ., Northern New Mexico Col., ADInstruments. Inc, Cornell Univ.*

4:00 CC45 **022.12SA** Bridging dimensions in neuroanatomy teaching using plasticine modelling. C. KIECKER; R. J. WINGATE. *King's Col., King's Col. London.*

1:00 CC46 **022.13SA** Addition of a central handbook on neuroscience, biology, and psychology to college level neurobiology lab. D. XIAO; A. B. BRADFORD. *Regis Col., Regis Col.*

2:00 CC47 **022.14SA** Three laboratory exercises utilizing *Drosophila melanogaster*: Amphetamine-induced larval locomotion, amphetamine-induced conditioned place preference and optogenetic stimulation of behavioral assays. A. J. BETZ; R. BEER; A. SPRINGER; Z. CULVER; J. FELICIANO; L. RUSH; K. HIBBARD. *Quinnipiac Univ., Quinnipiac Univ., Janelia Res. Campus.*

3:00 CC48 **022.15SA** Use of a practical 3D model for learning sensory-motor tracts in neuroanatomy. V. AKLE; M. C. CHAPARRO; M. A. BLANCO; J. A. GUTIERREZ. *Univ. de los Andes, Univ. de los Andes.*

4:00 CC49 **022.16SA** Accessible, low cost experiential teaching laboratory techniques to reveal the exquisite properties of the muscle spindle. J. L. RICKERT; B. L. TRACY. *Colorado State Univ.*

1:00 CC50 **022.17SA** Reproducible quantitative stimulation allows new analysis of crayfish muscle receptor organ responses. A. E. AMBROSINI; A. GELPERIN. *Princeton Univ.*

2:00 CC51 **022.18SA** The neuromembrane simulator: A format for teaching neuroscience. D. W. ALI; G. D. FUNK; K. E. JONES. *Univ. Alberta, Fac. of Med. and Dentistry, Univ. of Alberta, Univ. Alberta.*

3:00 CC52 **022.19SA** Brothers in arms: Case study to teach PTSD in introductory neuroscience course. K. M. WIENS. *Bay Path Univ.*

4:00 CC53 **022.20SA** Intersex phenotype and genital-normalizing surgery: Case-based instruction of sexual development and differentiation. K. L. BLACK. *Tulane Univ.*

1:00 CC54 **022.21SA** A flexible interpretation of variance, fuzzy p-values and non-parametric statistics using psychophysical data. J. F. GOMEZ-MOLINA; U. M. RICOY; A. L. GOMEZ-MOLINA; E. VELÁSQUEZ; G. PERRY. *Intl. Group of Neurosci. (IGN), Northern New Mexico Col., Univ. of Antioquia (Hosp San Vicente de Paúl), Univ. of Texas at San Antonio.*

2:00 CC55 **022.22SA** Effects of ankle tendon vibration on lean aftereffect. C. S. LAYNE. *Univ. of Houston.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 CC56 **022.23SA** Hands-on, minds-on: A state of the art undergraduate neuroscience laboratory experience. I. F. KIMBROUGH. *Virginia Tech.*

THEME J POSTER *McCormick Place*

023. Outreach and Curricula

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)—McCormick Place, Hall A

8:00 CC57 **023.01SU** Application of bioluminescence and neuroscience concepts for AP biology curriculum development. E. L. CRESPO; J. J. ALLEN; K. R. LITERMAN; N. C. SHANER; D. LIPSCOMBE; U. HOCHGESCHWENDER; C. I. MOORE. *Central Michigan Univ., Brown Univ., UCSD, Brown Univ., Central Michigan Univ.*

9:00 CC58 **023.02SU** Prevention of abuse and addiction to alcohol and other drugs to adolescents: Diffusion of knowledge through interactive methodologies. G. MORAIS-SILVA; C. F. LAVERDE; C. DE OLIVEIRA, Jr; C. S. XAVIER; C. T. DEPENTOR; D. M. OGUIURA; G. C. DE SOUZA; L. L. S. MARTINS; L. O. GIATTI; L. T. DE SANTANA; M. G. SANSÃO; J. A. CAMARGO; M. T. MARIN. *Sao Paulo State Univ.*

10:00 CC59 **023.03SU** BrainWaves: An EEG-based neuroscience program. I. DAVIDESCO; E. LAURENT; S. AZEKA; H. VALK; S. DIKKER; W. SUZUKI. *New York Univ.*

11:00 CC60 **023.04SU** Research experience in autism for college and high school students, a pipeline program for underrepresented students in medicine and neuroscience . R. CESAR; J. ALARCON; M. VALMONT; A. DANIELS-OSAZE; J. LIBIEN. *SUNY Downstate Med. Ctr., SUNY Downstate Med. Ctr., SUNY Downstate Med. Ctr., SUNY Downstate Med. Ctr.*

8:00 CC61 **023.05SU** Behavioral neuroscience: An open access approach to education. S. C. SPANSWICK; J. MONCREIFF; M. C. ANTLE. *Univ. of Calgary.*

9:00 CC62 **023.06SU** ▲ The weight among us: Teaching about obesity from a neuroscience perspective. G. C. HERRON; A. S. CLARK. *Dartmouth Col.*

10:00 CC63 **023.07SU** Get to know your brain days: Agency through neuroscience learning. C. CAMMARATA; K. RATNER; A. BURROW; A. K. ANDERSON; E. D. DE ROSA. *Cornell Univ.*

11:00 CC64 **023.08SU** BrainStation: Elementary school neuroscience. A. I. MORE; J. J. STEIN; N. A. STRADA; B. A. PALLANT; A. C. TSUDA; J. L. BASSELL; S. T. MERNOFF. *Brown Univ., Alpert Med. Sch., Providence VA Med. Ctr.*

8:00 CC65 **023.09SU** K12 students want to learn about neuroscience. A. M. EISEN; C. M. GRANT-HOWARD; J. BENEFIEL; J. SCHMIDT; M. CHAPEK; M. LERNER; R. GARDUNO; J. URIARTE-LOPEZ; H. HAMILTON; A. KIERSARSKY; L. SUMRALL. *Portland State Univ.*

9:00 CC66 **023.10SU** Trainingspace neuroeducation without borders. M. B. ABRAMS; M. SANDSTRÖM; L. JOHANSSON; P. GEORGE. *INCF.*

10:00 CC67 **023.11SU** Brain discovery: Impacts of a school-based neuroscience outreach program. C. T. WEICHSELBAUM; B. V. LANANNA; E. D. HERZOG. *Washington Univ. in St. Louis.*

11:00 CC68 **023.12SU** Brain outreach day as a form of project based learning in an upper level neuroscience elective course. D. M. CURLIK, II. *York Col. of Pennsylvania.*

8:00 CC69 **023.13SU** Perspectives in mental illness: A course to help freshman engage with complexity. L. E. STEPANEK. *American Univ.*

9:00 CC70 **023.14SU** ▲ Neuroscience at Lake Forest College: A model for student organizations' contributions to academic experience. E. MRACKOVA; Y. GANEV; D. SYCHOWSKI; D. BERNINZONI; A. BALARAM; M. KELLEY; S. DEBBURMAN. *Lake Forest Col.*

10:00 CC71 **023.15SU** An undergraduate minor in neuroethics: Innovation in neuroscience education. G. E. HUE; P. R. LENNARD. *Emory Univ.*

11:00 CC72 **023.16SU** A paradigm for integrating neuroscience into small liberal arts colleges. Q. WANG. *John Brown Univ.*

8:00 CC73 **023.17SU** Design of a project-based course that integrates neuroethology with physics of the natural world. A. C. BASU; T. NARITA. *Col. of the Holy Cross.*

9:00 CC74 **023.18SU** On teaching environmental neuroscience and protection from "dual-use" technology: Toward an inclusive and ethical curriculum. P. W. TSANG; A. LAM; E. L. OHAYON. *Univ. of Toronto, Neurolinx Res. Inst.*

THEME J POSTER *McCormick Place*

024. Teaching, Learning, and Assessments

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)—McCormick Place, Hall A

8:00 CC75 **024.01SU** Student led recaps and retrieval practice presented as a simple classroom activity emphasizing effective learning strategies. A. STAVNEZER; B. LOM. *Col. of Wooster, Davidson Col.*

9:00 CC76 **024.02SU** Backward design of a writing-intensive and primary literature-based neurotechniques course at the undergraduate/master's level. G. S. VIDAL. *James Madison Univ.*

10:00 CC77 **024.03SU** Curricular service learning in neuroscience produces positive outcomes for students and community members. H. J. RHODES. *Denison Univ.*

11:00 CC78 **024.04SU** ▲ Impulse allows undergraduates to experience neuroscience publishing from submission through manuscript publication. C. T. FENNELL; E. B. TURNER; C. H. GODFREY; A. N. TOLLEFSRUD; L. S. JONES; M. C. ZRULL. *Appalachian State Univ.*

8:00 DD1 **024.05SU** Benefits of collaborative learning in undergraduate neuroscience education. T. NEWPHER; M. NG. *Duke Univ.*

9:00 DD2 **024.06SU** The Human Biology Program's 'Lab Bootcamp': An experiential learning program for independent undergraduate research at the University of Toronto. J. SINGH; A. H. M. WONG; K. SHAHABI; L. F. ZHAO; M. A. WOODIN; C. DOCKSTADER. *Univ. of Toronto, Univ. of Toronto.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 DD3 **024.07SU** Audience response systems and other modern teaching methods to improve student learning and perception. T. SCHMIDT; K. SCHNABEL; U. MAU-HOLZMANN. *Med. Genetics, Univ. of Tuebingen, Dept. for Educ. and Media (AUM), Univ. of Bern.*

11:00 DD4 **024.08SU** Students' perception about their teaching-learning process in neurophysiology after the use of a game as a ludic practice. L. P. GUTIERREZ; A. F. GUIMARÃES; C. S. MARTINS; A. G. P. NUNES; M. PORAWSKI. *Univ. Federal De Ciências Da Saúde De Porto Alegre, Univ. Federal De Ciências Da Saúde De Porto Alegre, UFCSPA.*

8:00 DD5 **024.09SU** Active learning adoption in a traditional lecture-based motor control course. M. WILSON; Z. A. RILEY. *Indiana Univ. Purdue Univ. Indianapolis, Indiana Univ. Purdue Univ. at Indianapolis.*

9:00 DD6 **024.10SU** N.E.U.R.O. test v. 2.0: Assessing an entire neuroscience curriculum for learning gains. W. E. GRISHAM; H. WHANG; W. E. BABIEC; N. SCHOTTLER; M. LEVIS-FITZGERALD. *UCLA, UCLA, UCLA.*

10:00 DD7 **024.11SU** Effective participatory science education in a diverse Latin American population. M. A. MOSTAJO-RADJI; L. M. R. FERREIRA; G. A. CAROSSO; B. LOPEZ-VIDELA; N. MONTELLANO DURAN; S. BOHORQUEZ-MASSUD; G. VACA DIEZ; L. RIVERA-BETANCOURT; Y. RODRIGUEZ; D. G. ORDONEZ; D. K. ALATRISTE-GONZALEZ; A. VACAFLORES; L. GONZALEZ AUZA; C. SCHUETZ; L. E. ALVARADO-ARNEZ; C. V. ALEXANDER-SAVINO; O. GANDARILLA CUELLAR. *Clubes de Ciencia Bolivia Fndn.*

11:00 DD8 **024.12SU** A cohort-based integrated research community for undergraduate leadership, innovation and trailblazing. M. CERVANTES; M. VILLAFAÑE-DELGADO; E. C. JOHNSON; M. HUGHES; K. GRAY-RONCAL; M. ENCARNACIÓN; W. R. GRAY-RONCAL. *Johns Hopkins Univ.*

8:00 DD9 **024.13SU** Teaching to the outliers in biopsychology: Remediation techniques when a class fails. S. C. PENLEY. *Bridgewater State Univ.*

9:00 DD10 **024.14SU** Neuroscience major development at a primarily undergraduate institution. P. M. SIMONE; C. SABATIER. *Santa Clara Univ.*

10:00 DD11 **024.15SU** Educating about neurodiversity: Incorporating autistic perspectives into the classroom. A. J. LAMPI; L. SHAH; V. K. JASWAL; T. M. EVANS. *Univ. of Virginia.*

11:00 DD12 **024.16SU** An interdisciplinary approach to assessment: Evaluating student learning across the neuroscience major. J. OMELIAN; S. I. SOLLARS. *Univ. of Nebraska at Omaha.*

8:00 DD13 **024.17SU** Development and implementation of a new high-impact mixed-mode professionalism course for biomedical sciences majors at a large university: Biomedical sciences careers. A. L. HAWTHORNE. *Univ. of Central Florida.*

9:00 DD14 **024.18SU** Exploring the effectiveness of removing textbooks from a junior-level neuroscience I course at a primarily undergraduate institution (PUI) with a high percentage of first-generation low-income (FGLI) students in an effort to decrease course-associated costs. N. T. FRIED. *Rutgers Univ. Camden.*

10:00 DD15 **024.19SU** Student lectures improve performance even in unrelated writing assignments. A. K. PACK. *Utica Col.*

11:00 DD16 **024.20SU** ▲ Identification with minority status influences student performance in undergraduate neuroscience courses. A. C. NICHOLAS; Y. YADOLLAHI; N. S. DY. *Univ. of California At Irvine, UCI.*

8:00 DD17 **024.21SU** The effect of social reinforcement on student academic achievement. J. C. NEILL; A. NUZZO; L. TEPPER. *Long Island Univ.*

THEME J POSTER *McCormick Place*

025. Higher Education

Theme J posters will be on display from Sat. 1 p.m.-Sun. 5 p.m., with one-hour presentations occurring either Saturday afternoon (presentation numbers ending in SA) or Sunday morning (presentation numbers ending in SU)—McCormick Place, Hall A

1:00 DD18 **025.01SA** Providing chiropractic college students with National Institutes of Health-funded basic neuroscience research opportunities. M. C. JORDAN; A. G. VANDE HEI; C. J. ARENDS; R. S. SOZIO; R. D. VINING; K. HOYT; C. R. LONG; W. JONES; B. K. TAYLOR; S. M. ONIFER. *Palmer Col. of Chiropractic, Palmer Col. of Chiropractic, Univ. of Pittsburgh.*

2:00 DD19 **025.02SA** Impact of neuroanatomy lab practical exam format on medical students' preference and performance. R. R. KIMPO; B. A. PUDER. *Samuel Merritt Univ.*

3:00 DD20 **025.03SA** Evaluation of medical, basic science, and engineering knowledge following completion of the first engineering-integrated pre-clerkship clinical neuroscience medical course. R. GALVEZ; J. AMOS; E. T. HSIAO-WECKSLER; G. HUESMANN; D. LLANO; A. MIRANPURI; B. SUTTON; Y. VLASOV; J. L. ROWEN. *Univ. of Illinois, Univ. of Illinois, Univ. of Illinois, Carle Fndn. Hosp., Univ. of Illinois.*

4:00 DD21 **025.04SA** ▲ An interactive Python notebook as an educational tool for neuromuscular control. R. G. MOLINARI; L. A. ELIAS. *Univ. of Campinas, Univ. of Campinas.*

1:00 DD22 **025.05SA** Master of science in surgical neurophysiology: An innovative collaboration between academia and industry. R. FILIPOVIC; P. ANDALIB; J. LO TURCO. *Univ. of Connecticut, Univ. of Connecticut, Univ. Connecticut.*

2:00 DD23 **025.06SA** Using CLIL for neuropharmacology teaching in Brazil. H. M. BARROS; F. B. ALMEIDA; R. GOMEZ. *UFCSPA, UFCSPA, UFRGS.*

3:00 DD24 **025.07SA** A preliminary strategy to provide further education to physicians and caregivers on the dietary approaches to the treatment of autism spectrum disorders. D. S. PATEL; R. E. HARTMAN. *Loma Linda Univ.*

4:00 DD25 **025.08SA** Short course in adaptive neurotechnologies. J. S. CARP; J. R. WOLPAW; G. SCHALK. *Wadsworth Center, NY State Dept. of Hlth., Stratton VA Med. Ctr., Albany Med. Ctr.*

1:00 DD26 **025.09SA** A parallel between Gulliver's Travels and the educational journey through the neuroscience course. C. STEFAN. *New York Univ. Col. of Dent.*

2:00 DD27 **025.10SA** Traumatic brain injury: A case report. L. C. BENJAMIN; G. C. BENJAMIN. *Ross Univ. Sch. of Med., Princess Margaret Hosp., Family Med. Clin.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 DD28 **025.11SA** Sociocultural barriers in stem: A graduate course addressing systemic inequity in higher education. S. M. MEADOWS; M. LAMBERT. *Weill Cornell Grad. Sch., Weill Cornell Grad. Sch.*

4:00 DD29 **025.12SA** Establishing a comprehensive typology of retinal ganglion cells using FuncSeq. J. GOETZ; D. GREER; G. W. SCHWARTZ. *Northwestern, Northwestern Univ.*

1:00 DD30 **025.13SA** Faculty for undergraduate neuroscience (FUN): Supporting undergraduate neuroscience education and research since 1992. R. J. BAYLINE; M. E. MORRISON; H. G. MCFARLANE. *Washington and Jefferson Coll, Lycoming Col., Kenyon Col.*

2:00 DD31 **025.14SA** Journal of Undergraduate Neuroscience Education (JUNE): A peer-reviewed, open-access and PubMed-listed forum for innovation in neuroscience education. R. L. RAMOS; B. R. JOHNSON; I. A. HARRINGTON. *NYIT-COM, Cornell Univ., Augustana Col.*

3:00 DD32 **025.15SA** Nu Rho Psi the National Honor Society in Neuroscience. M. J. GILL; S. K. DEBBURMAN; M. T. KERCHNER. *North Central Col., Lake Forest Col., Washington Col.*

THEME J POSTER *McCormick Place*

026. Outreach Activities

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)—McCormick Place, Hall A

8:00 DD33 **026.01SU** Young scholars program-REACH: A neural engineering summer camp for high school students. E. H. CHUDLER; J. M. WIGNALL. *Univ. of Washington, Univ. of Washington.*

9:00 DD34 **026.02SU** Feeding our brains in West Virginia-Coupling neuroscience education with strategic philanthropy as a novel approach to engaging in brain awareness outreach and promoting social embeddedness in the local community. T. J. PETRISKO; R. J. NELSON; B. A. WHITE; M. A. PRUNTY; E. L. STEWART; E. B. ENGLER-CHIURAZZI. *West Virginia Univ. Sch. of Med., West Virginia Univ.*

10:00 DD35 **026.03SU** A bilingual interactive exhibition for Brain Awareness Week & the University of North Carolina Science Expo: Opening doors for the Latinx community. A. GOMEZ-A; J. BESHEER; D. L. ROBINSON. *Univ. of North Carolina at Chapel Hill, Univ. of North Carolina at Chapel Hill.*

11:00 DD36 **026.04SU** The 32nd northeast undergraduate and graduate research organization for neuroscience (NEURON) conference held at Quinnipiac University's Frank H. Netter M.D. School of Medicine in North Haven, CT. R. A. ROTOLO; G. R. TANNER; N. L. TOTTENHAM; V. FRANCONE; C. A. FRYE; A. C. BASU; J. G. TRAPANI; M. L. LINDEN; T. H. AHERN; A. J. BETZ. *Univ. of Connecticut, Univ. of Connecticut, Columbia Univ., Quinnipiac Univ., Univ. Albany, Col. of the Holy Cross, Amherst Col., Brown Univ., Quinnipiac Univ., Quinnipiac Univ.*

8:00 DD37 **026.05SU** Engaging researchers and trainees in science advocacy. A. H. TUTTLE. *UNC Sch. of Med.*

9:00 DD38 **026.06SU** ▲ Grey Matters Journal: Content diversity and engagement. S. RAINA; J. BERGQUIST; C. FISHER; T. GUO; S. FISHER; R. RANDLES; F. MIRALLES; G. WANG; A. AHMED; K. SLOCUM; E. STEFANOU. *Univ. of Washington.*

10:00 DD39 **026.07SU** Reaching young minds in Morgantown, West Virginia. B. A. WHITE; T. J. PETRISKO; E. B. ENGLER-CHIURAZZI; V. GRITSENKO. *West Virginia Univ.*

11:00 DD40 **026.08SU** A very close stranger: Knowing the brain. C. J. JUÁREZ-PORTILLA; T. MOLINA-JIMÉNEZ; M. ALVARADO; T. CIBRIAN-LLANDERAL; J. CUETO-ESCOBEDO; G. GUILLÉN-RUIZ; A. A. CORONA-MORALES; A. CORTÉS-SOL; A. MARTÍNEZ-CHACÓN; M. J. ROVIROSA; F. GARCÍA-ORDUÑA; E. MEZA; B. BERNAL-MORALES; J. E. MORALES-MÁVIL; J. F. RODRÍGUEZ-LANDA; D. HERNANDEZ-BALTAZAR; F. A. GARCÍA-GARCÍA; F. NACHÓN; E. TAMARIZ; D. I. DEL MORAL; G. R. ROLDAN; R. C. ZEPEDA. *Univ. Veracruzana, Facultad de Química Farmacobiología, Neuroetology Inst., Univ. Veracruzana, Inst. de Ciencias de la Salud, Inst. de Neuroetología, Facultad de Biología, Inst. Neurothology UV, Univ. Veracr, CONACYT-Instituto de Neuroetologia., Univ. Veracruzana / Inst. De Ciencias De La Salud, Ctr. De Investigaciones Biomédicas, Natl. Autonomous Univ. of Mexico.*

8:00 DD41 **026.09SU** Your brain is a superhero: Increasing neuroscience knowledge through education outreach by FSU neuroscience. A. C. STIMMELL; K. WALL; K. DAY; S. D. BENTHEM; J. BROWN; C. SIMMONS; J. ZHANG; C. EDWARDS; N. ABRAMS; L. SAILER; C. STRONG; R. AIKEN. *Florida State Univ.*

9:00 DD42 **026.10SU** NW Noggin: Corrections, bias and brains. W. S. GRIESAR; J. J. LEAKE. *Portland State Univ., Oregon Hlth. & Sci. Univ., NW Noggin, Portland State Univ.*

8:00 DP15/DD43 **026.11SU** (Dynamic Poster) Memory games - An interactive exhibit for Brain Awareness Week. D. L. ROBINSON; A. GOMÉZ-A; M. M. MACHADO; M. H. MCFARLAND; J. BESHEER. *Univ. of North Carolina at Chapel Hill.*

11:00 DD44 **026.12SU** The 2019 world brain bee championship. N. R. MYSLINSKI. *Univ. of Maryland Dent. Sch.*

8:00 DD45 **026.13SU** The 10th Annual Kingston Brain Bee: Best practices from a small Canadian city. C. A. LOWRY; K. A. TRESIDDER. *Queen's Univ.*

9:00 DD46 **026.14SU** The 2019 United States Brain Bee Championship. K. VENKITESWARAN; S. RAVI; K. LE; E. BLANKE; M. SUBRAMANIAN; C. WHITE; B. CAMERON; A. KONDROMASHIN; Y. KIM; A. BARBER; T. SUBRAMANIAN; N. R. MYSLINSKI. *Penn State Col. of Med., Univ. of Maryland Dent. Sch.*

10:00 DD47 **026.15SU** Columbia University neuroscience outreach: Publicly available curriculum to share science with our local community. L. J. SIBENER; R. VAADIA; M. STACKMANN; M. TSITSIKLIS; L. LONG; A. KAUFMAN; G. M. PIERCE; L. A. COIE; K. M. MARTYNIUK; J. L. SCRIBNER; S. BITTNER; A. VILLEGAS; Y. JEON; G. H. PETTY; A. A. MORGAN; A. BURGOS. *Columbia Univ.*

11:00 DD48 **026.16SU** The trans-disciplinary convergence course curriculum: Neuroscience, arts, and society. C. A. ZAELZER; B. FORGET. *Convergence Initiative, Concordia Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 DD49 **026.17SU** Showcasing controls systems engineering in neurological disorders. A. DUTTA. *Univ. of Connecticut.*

9:00 DD50 **026.18SU** My so-called lab: Boosting the visibility of women in science. K. L. BRYANT; J. PARGETER; H. DINGWALL; M. YOUNG; E. JAGODA; A. C. KRUGER; L. A. LEMING; E. E. HECHT. *Radboud Univ., Emory Univ., Harvard Univ., Georgia State Univ., WebMD.*

10:00 DD51 **026.19SU** Building a bioluminescent and optogenetic learning community through immersive outreach experiences. K. R. LITERMAN; J. J. ALLEN; D. LIPSCOMBE; U. HOCHGESCHWENDER; N. C. SHANER; C. I. MOORE. *Brown Univ., Brown Univ., Central Michigan Univ., Univ. of California.*

8:00 DP15/DD52 **026.20SU** (Dynamic Poster) The OpenBehavior project. M. LAUBACH; L. M. AMARANTE; M. W. PRESTON, JR; S. R. WHITE; A. V. KRAVITZ. *American Univ., NIH NINDS, Washington Univ.*

8:00 DD53 **026.21SU** Most recent iteration of an open source extruder for bioprinting. D. FOSTER; J. KOO; R. LEE; B. TENG; T. MANZO; S. FISHMAN; D. WAHLQUIST; T. VEGVARI. *TheLab Inc, California State University, Northridge, PVNet.*

9:00 DD54 **026.22SU** From cells to circuits toward cures: Updating NIH contributions to the BRAIN Initiative. A. B. ADAMS; K. B. DUPRE; G. FARBER; J. A. GORDON; N. S. HSU; W. J. KOROSHETZ; K. M. RAMOS; E. M. TALLEY; S. R. WEISS; S. L. WHITE. *NIH.*

10:00 DD55 **026.23SU** University and nonprofit partnership: How science education benefits from pairing a large university and a small nonprofit. P. L. CROXSON; L. WRIGHT; C. PAIGE; L. DINH; F. ANSELMI; R. J. FRAWLEY, III; B. J. DUBIN-THALER; K. E. REMOLE. *Columbia Univ., BioBus, Inc.*

11:00 DD56 **026.24SU** The HEAL (helping to addiction long-term) objectives to advance pain research. M. MATTHEWS; D. HANEY; L. PORTER. *Natl. Inst. of Neurolog. Disorders and S.*

8:00 DD57 **026.25SU** Emotional intelligence and executive functions in children in conflict with law. B. VIJAY; R. P. REDDY. *NIMHANS, NIMHANS.*

9:00 DD58 **026.26SU** Studying blood vessel architecture at capillary level in mouse brain. S. GUM; M. HWANG; J. WON; E. LEE; Y. PARK. *Binaree.*

10:00 DD59 **026.27SU** ▲ Mental landscapes: Accessible virtual reality for neuroscience outreach. D. BAYLY; J. LEVINE; J. FELLOUS. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

THEME J POSTER *McCormick Place*

027. Neuroscience and Society: Ethical and Policy Issues

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)—McCormick Place, Hall A

1:00 DD60 **027.01SA** Health economical research for cell therapy against stroke. H. SHICHINOHE; M. KAWABORI; K. HOUKIN. *Hokkaido Univ. Hosp., Hokkaido Univ. Hosp.*

2:00 DD61 **027.02SA** Sources of the self: Moral determinants in global integration. D. C. LARRIVEE. *Intl. Assn. Catholic Bioethicists.*

3:00 DD62 **027.03SA** NeuroVote: A website to keep our elected officials accountable on neuroscience funding. H. C. MACOMBER. *The Univ. of Chicago.*

4:00 DD63 **027.04SA** Neuroethics: An essential partner to enhance the NIH brain initiative. K. M. RAMOS; J. D. CHURCHILL; S. HENDRIKS; K. B. DUPRE; N. S. HSU; S. L. WHITE; A. ADAMS; J. A. GORDON; W. J. KOROSHETZ. *NIH NINDS, NIH NIMH, NIH.*

1:00 DD64 **027.05SA** Is there an ethical duty to report the socioeconomic status of research participants in human neuroscience research? F. X. SHEN. *Univ. of Minnesota, Massachusetts Gen. Hosp.*

2:00 DD65 **027.06SA** Device removal following brain implant research. D. SIERRA-MERCADO; P. ZUK; A. MCGUIRE; W. K. GOODMAN; G. LÁZARO-MUÑOZ. *Univ. Puerto Rico Sch. of Med., Baylor Col. of Med., Rice Univ., Baylor Col. of Med.*

3:00 DD66 **027.07SA** Research misconduct investigations oversight at two federal science agencies. E. A. RUNKO; R. AMBALAVANAR; A. P. RUNKO. *Natl. Sci. Fndn., U.S. Dept. of Hlth. and Human Services.*

4:00 DD67 **027.08SA** Empirically gauging how sensitive the public views their brain data. W. L. KRENZER; N. A. FARAHANY. *Duke Univ., Duke Univ.*

POSTER

113. Postnatal Neurogenesis

Theme A – Development

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 A1 **113.01** Disruption of cerebellar development by intrauterine growth restriction. I. ISKUSNYKH*; N. FATTAHOV; R. BUDDINGTON; V. CHIZHIKOV. *Univ. of Tennessee Hlth. Sci. Ctr.*

9:00 A2 **113.02** Passive physical forces in gyrification lead to characteristic cortical thickness variations. M. HOLLAND*; A. GORIELY; E. KUHL. *Univ. of Notre Dame, Univ. of Oxford, Stanford Univ.*

10:00 A3 **113.03** Differential effects of neurostimulation therapy on adult hippocampal neurogenesis in animal models. T. ZHANG*; E. M. GUILHERME; A. KESICI; F. VILA-RODRIGUEZ; J. S. SNYDER. *Univ. of British Columbia.*

11:00 A4 **113.04** Investigating the development of neurovascular coupling in postnatal mice using fMRi. X. HAN*; H. UNSAL; N. ZHANG. *The Pennsylvania State Univ.*

8:00 A5 **113.05** Development of GABAergic synapses onto adult born dentate granule neurons. C. L. REMMERS*; C. CASTILLON; A. CONTRACTOR. *Northwestern Univ. Dept. of Physiol.*

9:00 A6 **113.06** Developing a multipotent cell line from the adult mouse suprachiasmatic nucleus for studies of circadian rhythms and myelin formation. D. H. BELIGALA; A. DE; M. E. GEUSZ*. *Bowling Green State Univ.*

10:00 A7 **113.07** Combining electrophysiology and single-cell transcriptomics reveals a gradient of functional states amongst dopaminergic neurons. M. LIPOVSEK*; L. BROWNE; D. BYRNE; A. SINGH; B. AMEIN; I. MACAULAY; J. MILL; M. GRUBB. *Ctr. For Developmental Neurobio., Earlham Inst., Univ. of Exeter.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 A8 **113.08** Input and output connectivity of olfactory bulb dopaminergic neurons. M. CHEAH*; M. S. GRUBB. *King's Col. London.*

8:00 A9 **113.09** Characterization of postnatal radial glia and correlation with vitamin C transporter, SVCT2. N. SALDIVIA*; K. SALAZAR MARTINEZ; F. J. NUALART. *Univ. de Concepción.*

8:00 DP01/A10 **113.10** (Dynamic Poster) Pseudo-4D visualization and analysis of cell division and migration in the whole brain. A. LAZUTKIN*; S. SHUVAEV; R. KIRYANOV; I. DORONIN; K. ANOKHIN; A. KOULAKOV; G. ENIKOLOPOV. *Moscow Inst. of Physics and Technol., P. K. Anokhin Res. Inst. of Normal Physiol., Lomonosov Moscow State Univ., Stony Brook Univ., Cold Spring Harbor Lab.*

10:00 A11 **113.11** ▲ Developmental changes to the neural stem cell niche in fetal-onset hydrocephalus. S. KUMAR*; A. M. COLETTI; D. SINGH; M. R. DEL BIGIO; K. T. KAHLE; J. C. CONOVER. *Univ. of Connecticut, Univ. of Manitoba, Yale Univ. Sch. of Med.*

11:00 A12 **113.12** Axon extension and molecular maturation of olfactory sensory neurons in the young adult. T. LIBERIA*; D. J. RODRIGUEZ-GIL; E. MARTÍN LÓPEZ; S. J. MELLER; C. A. GREER. *Yale Univ. Sch. of Med., East Tennessee State Univ.*

8:00 A13 **113.13** Kainate receptor regulation of the maturation of adult-born dentate granule cells. Y. ZHU*; A. CONTRACTOR. *Northwestern Univ. - Chicago, Northwestern Univ. Dept. of Physiol.*

9:00 A14 **113.14** Adult-generated neurons in the dentate gyrus preferentially innervate and affect interneurons surrounded by perineuronal nets. B. A. BRIONES*; T. J. PISANO; A. E. HAYE; E. J. DIETHORN; M. N. PITCHER; E. A. TAWA; M. J. LOTITO; H. A. CAMERON; E. GOULD. *Princeton Neurosci. Inst., NIH.*

10:00 A15 **113.15** Fyn controls detachment of chain-forming neuroblasts by regulating cell cell adhesion in the postnatal brain. K. FUJIKAKE*; M. SAWADA; T. HIKITA; Y. SETO; N. KANEKO; V. HERRANZ-PEREZ; N. DOHI; N. Y. HOMMA; S. OSAGA; Y. YANAGAWA; T. AKAIKE; J. MANUEL GARCIA-VERDUGO; M. HATTORI; K. SOBUE; K. SAWAMOTO. *Nagoya City Univ. Grad. Sch. of Med. Sci., Nagoya City Univ. Grad. Sch. of Med. Sci., Univ. de Valencia, Nagoya City Univ. Hosp., Gunma Univ. Grad. Sch. of Med., Fndn. for Advancement of Intl. Sci., Grad. Sch. Pharmaceuti. Sci., Nagoya City Univ.*

11:00 A16 **113.16** Epigenetic remodeling of postnatal neurogenesis and hippocampal function in a mouse model of intellectual disability. M. ALAM*; A. MYSORERAJASHEKARA; K. LEE; V. SANDERS; K. HALDAR. *Univ. of Notre Dame.*

8:00 A17 **113.17** Precise positioning of neural progenitors is essential for neocortical development. Y. XIE*; T. TANG; Y. ZHANG; Y. WANG. *Fudan Univ.*

9:00 A18 **113.18** Lin28a is involved in Wnt-dependent regulation of neurogenesis in the adult hippocampus. Z. HU*; Y. GU. *Zhejiang Univ. Sch. of Med., Zhejiang Univ. Sch. of Med.*

10:00 A19 **113.19** Cellular retinoic acid binding protein 1 modulates stem cell proliferation to affect learning and memory in male mice. Y. LIN*; S. D. PERSAUD; J. NHIEU; L. WEI. *Univ. of Minnesota, Univ. of Minneapolis.*

11:00 A20 **113.20** Sox17 regulates notch during the development and regeneration of oligodendrocyte cells. L. CHEW*; X. MING; B. MCELLIN; J. L. DUPREE; E. HONG; M. CATRON; M. FAUVEAU; B. NAIT-OUMESMAR; V. GALLO. *Children's Natl. Med. Ctr., Virginia Commonwealth Univ., Sorbonne Univ.*

8:00 A21 **113.21** Control of proliferation and neural competence in hypothalamic tanycytes. S. YOO*; S. BLACKSHAW. *Johns Hopkins Sch. of Med.*

9:00 A22 **113.22** ASCL1 regulates neurodevelopmental transcription factors and cell cycle genes in glioblastoma. T. VUE*; R. K. KOLLIPARA; M. D. BORROMEO; T. SMITH; T. MASHIMO; D. K. BURNS; R. M. BACHOO; J. E. JOHNSON. *Univ. of New Mexico, UT Southwestern, UT Southwestern, UT Southwestern, UT Southwestern.*

10:00 A23 **113.23** Pen-2 is essential for the maintenance of neural stem cells in the developing neocortex. G. CHEN*; S. CHENG; T. LIU. *Nanjing Univ.*

11:00 A24 **113.24** Intracellular auto-activation of Trk receptors modulates actin dynamics via focal adhesion kinase. R. GUPTA*; V. LUZAK; V. WEGAT; G. LANGLHOFER; B. WACHTER; P. LÜNINGSCHRÖR; J. KUPER; C. MONORANU; M. SENDTNER; R. BLUM. *Inst. of Clin. Neurobio., Universitätsklinikum Würzburg, Universitätsklinikum Würzburg.*

8:00 A25 **113.25** The function of diazepam binding inhibitor during development of the telencephalon. I. EVERLIEN*; J. ALFONSO; H. MONYER. *Universitätsklinikum Heidelberg, DKFZ, Med. Fac. of Univ. Heidelberg & DKFZ.*

9:00 A26 **113.26** Altered 3D-Genome Architecture of Neural Progenitor Cells as a Consequence of Down Syndrome. H. MEHARENA*; L. TSAI. *MIT, The Picower Inst. for Learning and Memory, MIT.*

10:00 A27 **113.27** Genetic disruption of cholesterol biosynthesis inhibits astrogenesis and induces neurodevelopmental deficits through perturbation of Wnt signaling. B. FREEL*; N. COUNGERIS; R. ANDERSON; K. FRANCIS. *Sanford Res., Univ. of South Dakota Sanford Sch. of Med.*

POSTER

114. Axon and Dendrite Development

Theme A – Development

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 A28 **114.01** ▲ *In vivo* epigenetic editing of Sema6A promoter reverses impaired transcallosal connectivity caused by C11orf46/ARL14EP neurodevelopmental risk gene. M. NAGPAL*; A. SAITO; Y. HASEGAWA; A. KAMIYA. *Johns Hopkins Univ., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. Med.*

9:00 A29 **114.02** A novel role for Gpc3 in pre-target topographic axon sorting in the developing visual system. O. SPEAD*; F. E. POULAIN. *Univ. of South Carolina.*

10:00 A30 **114.03** The soluble form of lotus suppresses Nogo receptor signaling by inhibiting Nogo receptor-P75NTR interaction. Y. KAWAKAMI*; Y. KURIHARA; K. TAKEI. *Yokohama City Univ. Grad. Sch. of Medica, Yokohama City Univ. Grad Sch. of Med. Life Sci.*

11:00 A31 **114.04** Micrornas and regulation of retinoid acid-induced growth cone turning. S. E. WALKER*; G. E. SPENCER; R. L. CARLONE. *Brock Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 A32 **114.05** Effect of neuregulins 1, 2, and 3 on cortical GABAergic interneuron neurite outgrowth *in vitro.* A. RAHMAN; C. LAI; A. L. PRIETO*. *Indiana Univ.*

9:00 A33 **114.06** ● Development of myelinated inhibitory axons in mouse cortex. K. D. MICHEVA*; M. KIRALY; M. M. PEREZ; D. V. MADISON. *Stanford Univ. Sch. Med.*

10:00 A34 **114.07** Control of axon-guidance of human ipsc derived neurons by microstructured gradients. S. MEFFERT*; A. OFENHÄUSSER. *Forschungszentrum Jülich.*

11:00 A35 **114.08** Crispr/Cas9 interrogation of the murine Pcdhg gene cluster reveals a crucial isoform-specific role for Pcdhgc4 in organismal and neuronal survival. A. M. GARRETT*; P. J. BOSCH; L. C. FULLER; D. M. STEFFEN; A. A. KOCH; J. A. WEINER; R. W. BURGESS. *Wayne State Univ., Univ. of Iowa, Jackson Lab.*

8:00 A36 **114.09** CRISPR/Cas9 interrogation of the murine Pcdhg gene cluster reveals that both stochastically- and constitutively-expressed isoforms contribute to dendritic arborization. D. M. STEFFEN; C. G. MARCUCCI; P. VALIÑO RAMOS; A. M. HERBER; C. HANES; A. M. GARRETT; R. W. BURGESS; J. A. WEINER*. *The Univ. of Iowa, Wayne State Univ., Jackson Lab.*

9:00 A37 **114.10** Ribosomal protein SA (Rpsa) signaling regulates cortical neuronal morphogenesis. S. BLAZEJEWSKI*; S. BENNISON; N. HA; X. LIU; T. SMITH; K. J. DOUGHERTY; K. TOYOOKA. *Drexel Univ. Col. of Med.*

10:00 A38 **114.11** Activity dependent neuroprotective protein (Adnp) regulates neuronal morphogenesis in the developing cortex. S. BENNISON*; S. BLAZEJEWSKI; X. LIU; T. SMITH; K. TOYO-OKA. *Drexel Univ. Col. of Med.*

POSTER

115. Behavioral Study and Animal Models for Autism Spectrum Disorders

Theme A – Development

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 A39 **115.01** Sexually dimorphic effects of propionic acid in adult rats: Implications for an animal model of autism spectrum disorder. K. BENITAH*; P. OSSENKOPP; M. KAVALIERS. *Univ. of Western Ontario.*

9:00 A40 **115.02** Characterizing ultrasonic vocalizations in the NS Pten knockout model: Implications for autism. M. S. BINDER*; S. L. HODGES; S. O. NOLAN; P. D. WOMBLE; D. G. JONES; J. N. LUGO, JR. *Baylor Univ., Baylor Univ., Baylor Univ., Baylor Univ.*

10:00 A41 **115.03** Targeting the PPARα and endocannabinoid systems in the rat valproic acid model of autism spectrum disorder: Focus on gender differences. S. SCHEGGI; M. G. DE MONTIS; F. GUZZI; M. PARENTI; C. GAMBARANA*. *Univ. of Siena, Univ. of Milano-Bicocca.*

11:00 A42 **115.04** Shank3 social deficits and repetitive behavior reflect preventable context-induced anxiety. S. KRÜTTNER*; P. CARONI. *Friedrich Miescher Inst. For Biomed. Res.*

8:00 A43 **115.05** Similarities and distinctions in behavioral phenotypes of three CAMK2A mutant mouse lines. J. R. THOMAS*; K. SPIESS; R. J. COLBRAN. *Vanderbilt Univ. Med. Ctr., Vanderbilt Brain Inst., Vanderbilt-Kennedy Ctr. for Res. on Human Develop.*

9:00 A44 **115.06** ▲ Developmental differences in eye contact for school age children with high functioning autism and children with perinatal stroke. S. EDWARDS*; E. BEAVER; M. MEYER; P. LAI. *Univ. of Nebraska, Kearney.*

10:00 A45 **115.07** Examining the impact of a two-hit model of neuroinflammation on social behavior in male and female juvenile rats. A. TURANO*; E. M. MCAULEY; M. C. MUENCH; N. A. HAAS; J. M. SCHWARZ. *Univ. of Delaware.*

11:00 A46 **115.08** Objective measures of articulatory complexity in autism spectrum disorder. T. F. QUATIERI*; L. NOWINSKI; J. WILLIAMSON; D. HANNON; A. LAMMERT; H. RAO; S. YUDITSKAYA; D. STURIM; K. CLAYPOOL; H. SARO; C. STAMM; M. MODY; J. PALMER; C. MCDOUGLE. *MIT Lincoln Lab., Massachusetts Gen. Hosp. Lurie Ctr. for Autism.*

8:00 A47 **115.09** ▲ Evaluating nicotinamide riboside supplementation in a mouse model of autism. O. LARNER; M. REESE; S. M. LAMBERT; J. SAXENA; T. RAY; L. R. FREEMAN*. *Furman Univ., Claflin Univ., Furman Univ.*

9:00 A48 **115.10** Pivotal response treatment increases neural efficiency of social perception in autism spectrum disorder. S. KALA*; M. ROLISON; A. NAPLES; P. VENTOLA; J. MCPARTLAND. *Yale Univ., Yale Child Study Ctr.*

10:00 A49 **115.11** ▲ Investigating the effects of nicotinic acetylcholine receptor activation on larval motor function in *drosophila* kismet and cell adhesion molecule mutants. E. L. HENDRICKS*; F. L. W. LIEBL. *Southern Illinois Univ. Edwardsville.*

11:00 A50 **115.12** Sex dependent behavioral deficits and neuropathology in environmental mouse models of autism. M. JABER*; O. HAIDA; T. AL SAGHEER; M. FRANCHETEAU; A. BALBOUS; P. FERNAGUT. *Inserm U1084, Univ. de Poitiers.*

8:00 A51 **115.13** Impaired sensorimotor synchronization in autism reveals slow updating of internal priors. G. VISHNE*; N. JACOBY; M. AHISSAR. *Hebrew Univ. of Jerusalem, Max Planck Inst. for Empirical Aesthetics.*

9:00 A52 **115.14** Autistic traits are associated with reading difficulty and reduced neural suppression to print. I. R. FROSCH*; A. M. D'MELLO; J. D. GABRIELI. *MIT.*

10:00 A53 **115.15** Eye blink and pupillometry as peripheral indicators of reward responsivity in autism spectrum disorder. A. S. DICRISCIO*; V. TROIANI. *Geisinger.*

11:00 A54 **115.16** Dissection of prefrontal corticothalamic circuitry in the regulation of social behaviors. F. MENG*; A. ALARIO; A. C. BRUMBACK. *The Univ. of Texas at Austin, Univ. of Texas at Austin.*

8:00 A55 **115.17** Gait development in genetic mouse models of autism and other neurodevelopmental disorders. C. T. WEICHSELBAUM*; K. B. MCCULLOUGH; S. E. MALONEY; J. D. DOUGHERTY. *Washington Univ. Sch. of Med., Washington Univ. Sch. of Med., Washington Univ. Sch. of Med.*

9:00 A56 **115.18** LINE1 regulates animal behavior impacting on schizophrenia associated phenotypes. A. SARKAR*; I. GALLINA; M. WANG; A. C. PAQUOLA; J. ERWIN; F. H. GAGE. *Salk Inst., Salk Inst., Salk Inst., Lieber Inst. For Brain Develop.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 A57 **115.19** Creatine transporter disorder: New insights into epileptic phenotype and diagnostic biomarkers. F. CACCIANTE*; L. BARONCELLI; G. SAGONA; M. GENNARO; L. LUPORI; R. MAZZIOTTI; E. PUTIGNANO; T. PIZZORUSSO. *Scuola Normale Superiore, Neurosci. Institute, CNR, Univ. of Florence.*

11:00 A58 **115.20** Gene replacement ameliorates deficits in mouse and hiPSC models of CDKL5 disorder. Y. GAO; E. E. IRVINE; I. ELEFTHERIADOU; C. JIMÉNEZ NARANJO; F. HEARN-YEATES; L. BOSCH; J. A. GLEGOLA; L. MURDOCH; A. CZERNIAK; I. MELONI; A. RENIERI; M. KINALI; N. D. MAZARAKIS*. *Imperial Col. London, Univ. of Siena, The Portland Hosp.*

8:00 A59 **115.21** Structural and functional connectomes reveal of brain rewiring in callosal dysgenesis. D. SZCZUPAK*; L. GEMAL; R. LENT; A. C. SILVA; F. TOVAR-MOLL. *Natl. Inst. of Hlth., Inst. D'or for Res. and Educ., Inst. de Ciencias Biomedicas UFRJ, Univ. of Pittsburgh, D Or Inst. For Res. and Educ. / UFRJ.*

9:00 A60 **115.22** A *de novo* mutation in the ATP6V1A gene causing developmental encephalopathy with epilepsy is associated with mitochondrial dysfunction. R. PANDEY*; L. LLACI; A. SOGGE; C. BILAGODY; R. GUPTA; K. CHAIN; G. MILLS; V. NARAYANAN; S. RANGASAMY. *Translational Genomics Res. Inst. (tgen), Ctr. For Rare Childhood Disorders.*

10:00 A61 **115.23** Decreased parvalbumin expression is correlated with tactile hypersensitivity in Shank3$^{-/-}$ and Cntnap2$^{-/-}$ mice models of autism. T. DEEMYAD*; S. PUIG; H. QI; A. E. PAPALE; E. LANOCE; N. N. URBAN. *Univ. of Pittsburgh, Univ. of Pittsburgh, Dept of Neurobio., Univ. of Pittsburgh.*

POSTER

116. Autism: Synaptic and Cellular Mechanisms II

Theme A – Development

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 A62 **116.01** ▲ A custom movement tracking software for behavioral analyses of an adult zebrafish shank3-mutant model of autism. C. TUDOR; L. WANER; J. STONEBREAKER; J. NEWELL; J. E. DALLMAN; P. PRAKASH; T. MUELLER*. *Kansas State Univ., Kansas State Univ., Univ. of Miami.*

9:00 A63 **116.02** ▲ Assessment of Shank3 expression at excitatory synapses in the cerebellar cortex. R. J. HYDE*; B. D. RICHARDSON. *Univ. of Idaho, Univ. of Idaho, Univ. of Idaho.*

10:00 A64 **116.03** Investigating the role of autism related presynaptic NRXN1 and postsynaptic SHANK3 in synaptic mechanisms using human stem cell derived cortical neurons. A. PAUL*; A. MASSRALI; L. D. POLIT; N. GATFORD; D. ADHYA; D. P. SRIVASTAVA; M. R. KOTTER; S. BARON-COHEN. *Autism Res. Ctr., Inst. of Psychiatry, Psychology, and Neurosci., Clin. Neurosciences, Univ. of Cambridge.*

11:00 A65 **116.04** Altered expression of cadherin-8 and cadherin-11 suggests their potential roles in excitatory synapse development and autism. J. A. FREI*; R. F. NIESCIER; J. E. NESTOR; M. W. NESTOR; G. J. BLATT; Y. LIN. *Hussman Inst. For Autism.*

8:00 A66 **116.05** Abnormal postnatal development of synaptic structure and function in valproate-induced autism model marmosets. S. WATANABE*; T. KUROTANI; T. OGA; K. NAKAGAKI; J. NOGUCHI; N. ICHINOHE. *Natl. Ctr. of Neurol. and Psychiatry.*

9:00 A67 **116.06** Synaptic disturbances in the retina of a valproic acid mouse model of autism spectrum disorder. S. CHIAVEGATTO*; C. JOSELEVITCH; L. G. BRITTO; E. M. GUIMARÃES-SOUZA. *Biomed. Sci. Inst. - Univ. of Sao Paulo, Psychiatry Inst. - Univ. Sao Paulo Med. Sch., Psychology Inst. - Univ. of Sao Paulo.*

10:00 A68 **116.07** Exclusive antagonists of extrasynaptic NMDA receptors for autism. A. SAVTCHENKO*; S. MOORE; E. MOLOKANOVA; A. R. MUOTRI. *Nanotools Biosci., Univ. of California, NeurANO Biosci.*

11:00 A69 **116.08** Chloride co-transporters: Major contributors in pathophysiology of SYNGAP1$^{-/+}$ mutation. V. VERMA*; T. BEHNISCH; V. VAIDYA; R. S. MUDDASHETTY; J. P. CLEMENT. *Jawaharlal Nehru Ctr. For Advanced Scientific Res., Fudan Univ., Tata Inst. of Fundamental Res., InStem.*

8:00 A70 **116.09** Abnormal behaviors and neuronal functions in mice lacking Shank3 in parvalbumin-expressing interneurons. J. PAGANO*; L. PONZONI; M. SALA; F. TEMPIA; T. M. BÖCKERS; C. SALA; C. VERPELLI. *CNR Neurosci. Inst., Univ. of Milan, N.I.C.O. - Neurosci. Inst. Cavalieri Ottolenghi, Univ. of Ulm.*

9:00 A71 **116.10** A novel positive allosteric modulator of mGlu5 receptor rescues behavioral and synaptic defects in Shank3 knock-out mice. F. GIONA*; L. PONZONI; S. LANDI; A. TOZZI; M. SALA; G. RATTO; C. W. LINDSLEY; C. K. JONES; T. M. BÖCKERS; C. SALA; C. VERPELLI. *CNR Neurosci. Inst., Univ. of Milan, Nest, Inst. Nanoscience-Cnr, Univ. of Perugia, Vanderbilt Univ., Ulm Univ.*

10:00 A72 **116.11** Role of the autism spectrum disorder associated gene VPS50 in synaptic function. F. J. BUSTOS*; H. HAENSGEN; H. HORVITZ; M. CONSTANTINE-PATON. *Univ. Andrés Bello, MIT.*

11:00 A73 **116.12** Depletion of parvalbumin-positive cortical interneurons and persistence of immature mge-derived oligodendrocytes following conditional biallelic deletion of Nf1 from the medial ganglionic eminence. K. P. ANGARA*; L. PAI; A. M. STAFFORD; J. NGUYEN; J. L. RUBENSTEIN; D. VOGT. *Michigan State Univ., Univ. of California, San Francisco, Michigan State Univ., Univ. of California San Francisco.*

8:00 A74 **116.13** Elucidation of molecular mechanism that induce abnormal excitatory synapse formation in valproic acid-induced rodent model of autism spectrum disorders. F. YOSHIDA*; R. NAGATOMO; M. KIMURA; G. ITO; S. TAKATORI; T. TOMITA. *Univ. of Tokyo, Univ. of Tokyo, The Univ. of Tokyo.*

9:00 A75 **116.14** Autism-linked dopamine transporter mutation alters stratal dopamine neurotransmission and dopamine-dependent behaviors. G. E. DICARLO*; J. AGUILAR; H. MATTHIES; F. E. HARRISON; K. E. BUNDSCHUH; A. WEST; P. HASHEMI; F. HERBORG; M. RICKHAG; H. CHEN; U. GETHER; M. T. WALLACE; A. GALLI. *Vanderbilt Univ., Vandebilt Univ., Univ. of Alabama at Birmingham, Vanderbilt Univ. Med. Ctr., Vanderbilt Univ., Univ. of South Carolina, Univ. of Copenhagen, DRI Biosci. Corp., Vanderbilt Univ., Univ. of Alabama at Birmingham.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 A76 **116.15** Alterations in dendritic spines and intrinsic excitability of pyramidal neurons of somatosensory cortex in the valproic acid model of autism. B. A. GREGORY*; C. L. COX. *Michigan State Univ.*

11:00 A77 **116.16** ● Impaired prefrontal cortex-ventral hippocampal synchrony is linked to abnormal anxiety behavior in PogZ mutant mice. M. CUNNIFF*; E. MARKENSCOFF-PAPADIMITRIOU; J. L. RUBENSTEIN; V. S. SOHAL. *Univ. of California, San Francisco.*

8:00 A78 **116.17** Neuronal and neuroimmune dysfunction underlies behavioral and synaptic phenotypes in a mouse model of MEF2C haploinsufficiency syndrome. C. M. BRIDGES*; A. J. HARRINGTON; K. BLANKENSHIP; A. ASSALI; H. WARREN; Y. J. CHO; E. TSVETKOV; S. A. SKINNER; C. W. COWAN. *Med. Univ. of South Carolina, Greenwood Genet. Ctr.*

9:00 A79 **116.18** Human neural progenitor cells harbor DNA double-strand breaks in long neural genes linked to autism. M. WANG*; C. LIM; P. WEI; I. GALLINA; S. MARSHALL; C. MARCHETTO; F. ALT; F. H. GAGE. *Salk Inst., Boston Children's Hospital, Harvard Med. Sch., Salk Inst.*

POSTER

117. Comparative Brain Anatomy

Theme A – Development

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 A80 **117.01** Inter-individual and inter-hemispheric variations of the cortical sulcal patterns in human brain: Each of us contains a unique cortical sulcal signature. A. KUMAR*; R. K. NARAYAN; V. PAREEK; C. KUMARI; V. R. DESHMUKH; S. K. SANJIB; M. A. FAIQ. *All India Inst. of Med. Sci., Natl. Brain Res. Ctr., Postgraduate Inst. of Med. Educ. and Res., All India Inst. of Med. Sci., Langone Med. Centre, New York Univ. Sch. of Med.*

9:00 A81 **117.02** Assessing variability in macaque brain morphology using a fully automated cortical surface extraction pipeline. B. JUNG*; P. L. PERKINS; J. SEIDLITZ; K. WAGSTYL; C. LEPAGE; L. G. UNGERLEIDER; A. MESSINGER. *Natl. Inst. of Mental Hlth., Univ. of Cambridge, Natl. Inst. of Mental Hlth., Montreal Neurolog. Inst.*

10:00 A82 **117.03** Cortical folding with a mechanical perspective. A. YUCESOY*; R. MEJIA-ALVAREZ; T. J. PENCE; A. M. WILLIS. *Michigan State Univ., San Antonio Military Med. Ctr.*

11:00 A83 **117.04** MacBrainResource: On-site and web-based access to non-human primate brain slides and EM blocks. L. D. SELEMON*; A. DUQUE. *Yale Univ. Sch. Med.*

8:00 A84 **117.05** Comparative analysis of cortical-subcortical resting-state functional connectivity of human and macaque brains. G. ZUR*; E. BERGMANN; I. KAHN. *Technion.*

9:00 A85 **117.06** Cortical connections of the marmoset claustrum complex. D. H. RESER*; M. A. HAGAN; E. ZAVITZ; Y. WONG; D. K. WRIGHT. *Monash Univ., Monash Univ., Monash Univ., Monash Univ., Monash Univ.*

10:00 A86 **117.07** ▲ Characteristics of myelin development in the anterior corpus callosum of capuchin monkeys (Cebus apella). C. M. WATSON*; K. A. PHILLIPS. *Trinity Univ., Trinity Univ., Texas Biomed. Res. Inst.*

11:00 B1 **117.08** ● Quantitative spatial models of neural distribution in human lumbar dorsal root ganglia. Z. J. SPERRY*; R. D. GRAHAM; N. PECK-DIMIT; S. F. LEMPKA; T. M. BRUNS. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

8:00 B2 **117.09** Histological analysis of the cerebellum of Polypterus senegalus. T. IKENAGA*; R. SHIMOMAI; K. MATSUMOTO; S. KIMURA. *Kagoshima Univ.*

9:00 B3 **117.10** Ectodermal interactions in the development of the pineal organ. N. STAUDT; T. FIELDING; J. HUTT; I. FOUCHER; V. SNOWDEN; C. KIECKER*; C. HOUART. *Wellcome Trust Sanger Inst., King's Col., Inst. Pasteur.*

10:00 B4 **117.11** Bairds beaked whale brain in numbers. I. M. FERNANDEZ ARTILES*; A. WATANABE; K. K. THA; M. KOBAYASHI; K. WADA; T. MATSUSHIMA; B. MOTA; N. PATZKE. *Hokkaido Univ., Tokyo Agr. Univ., Univ. Federal do Rio de Janeiro.*

11:00 B5 **117.12** Reconstruction of the African naked mole rat vascular map. R. OSMANI*; V. CASTAGNA; D. M. THEVALINGAM; E. C. JENKINS. *CUNY Col. of Staten Island.*

8:00 B6 **117.13** ▲ Correcting for phylogeny: Why to do it, how to do it, and what happens when you do it. S. THOMAS; S. GRETA; N. SCHOTTLER; W. TOMITA; A. L. BURRE; D. ROSTAMIAN; O. PISHCHALENKO; W. E. BABIEC*; W. E. GRISHAM. *UCLA, Univ. of Chicago, UCLA, UCLA, Claremont McKenna Col.*

POSTER

118. Ionotropic Glutamate Receptors: Pharmacology

Theme B – Neural Excitability/ Synapses/ and Glia

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 B7 **118.01** ● Unique pharmacological properties of GluN1/GluN2A/GluN2D triheteromeric receptors. S. BHATTACHARYA*; K. B. HANSEN; S. F. TRAYNELIS. *Dept. of Pharmacology, Emory Univ. Sch. of Med., Univ. of Montana, Emory Univ. Sch. of Med.*

9:00 B8 **118.02** ● Functional effects of *de novo* GRIN variants in NMDA receptor M2 channel pore-forming loop associated with neurological diseases. D. LIU*; J. LI; J. ZHANG; W. TANG; R. K. MIZU; H. KUSUMOTO; W. XIANGWEI; Y. XU; S. J. MYERS; S. A. SWANGER; J. R. LEMKE; L. P. WOLLMUTH; S. PETROVSKI; H. YUAN; S. F. TRAYNELIS. *Emory Univ. Sch. of Med., Xiangya Third Hospital, Central South Univ., Emory Univ. Sch. of Med., Univ. of Leipzig Hosp. and Clinics, Stony Brook Univ., Univ. of Melbourne.*

10:00 B9 **118.03** ● Functional changes for GRIA variants associated with epilepsy and intellectual disability. N. LIU*; W. XIANGWEI; Y. XU; S. KIM; S. J. MYERS; Y. JIANG; H. YUAN; S. F. TRAYNELIS. *Emory Univ. Sch. of Med., Peking Univ. First Hosp., Xiangya Hospital, Central South Univ., Emory Univ. Sch. of Med.*

11:00 B10 **118.04** ● ▲ Functional features of GRIN2D variants-related developmental and epileptic encephalopathy. Y. XU*; W. XIANGWEI; V. KANNAN; S. BHATTACHARYA; A. PODURI; J. R. LEMKE; S. J. MYERS; Y. JIANG; S. F. TRAYNELIS; H. YUAN. *Emory Univ. Sch. of Med., Xiangya Hospital, Central South Univ., Peking Univ. First Hosp., Boston Children's Hosp., Univ. of Leipzig Hosp. and Clinics, Emory Univ. Sch. of Med.*

● Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 B11 **118.05** ● Negative allosteric modulation of GluN1/GluN3A N-methyl-D-aspartate receptors. H. YUAN*; Z. ZHU; M. P. EPPLIN; F. YI; S. L. SUMMER; R. MIZU; K. B. HANSEN; D. C. LIOTTA; S. F. TRAYNELIS. *Emory Univ. Sch. of Med., Emory Univ. Sch. of Med., Emory Univ. Sch. of Med., Univ. of Montana.*

9:00 B12 **118.06** ● Molecular mechanism of a GRIN2A variant associated with early-onset epileptic encephalopathy. W. HAN*; C. R. CAMP; C. BOSTICK; A. AMADOR; D. KRIZAY; S. J. MYERS; A. PODURI; D. B. GOLDSTEIN; M. BOLAND; W. N. FRANKEL; S. F. TRAYNELIS; H. YUAN. *Emory Univ. Sch. of Med., Emory Univ. Sch. of Med., Children's Hosp. of Chongqing Med. Univ., Columbia Univ. Med. Ctr., Columbia Univ. Med. Ctr., Boston Children's Hosp., Columbia Univ.*

10:00 B13 **118.07** An agonist concentration-dependent allosteric modulator separates triheteromeric (GluN1/2A/2B) from diheteromeric (GluN1/2A) NMDA receptors. B. N. VACCA; T. V. JOHNSTON; D. N. BLEDSOE; A. K. WAGNER; B. M. COSTA*. *Edward Via Virginia Col. of Osteo. Med., Ctr. for One Hlth. Research, Virginia Tech.*

11:00 B14 **118.08** ● Development and validation of NMDA ligand-gated ion channel assays using the Qube 384 automated electrophysiology platform. A. MARKLEW; J. KAMMONEN; E. RICHARDSON; V. LAZARI*; J. MANN. *Charles River.*

8:00 B15 **118.09** NMDAR phosphorylation and function is regulated by PP1 targeting protein, spinophilin. A. B. SALEK*; M. C. EDLER, JR; J. MCBRIDE; A. J. BAUCUM II. *Indiana University-Purdue Univ. Indianapolis, Indiana Univ. Sch. of Med., Indiana University-Purdue Univ. Indianapolis.*

9:00 B16 **118.10** Pregnane based steroids: A new class of positive allosteric modulators of NMDA receptors. T. SMEJKALOVA*; B. KYSILOV; B. KRAUSOVA; V. VYKLICKY; A. BALIK; M. KORINEK; M. LADISLAV; P. HUBALKOVA; M. HORAK; M. NEKARDOVA; H. CHODOUNSKA; E. KUDOVA; J. CERNY; L. VYKLICKY, Jr. *Inst. of Physiology, CAS, Third Fac. of Medicine, Charles Univ. in Prague, Inst. of Organic Chem. and Biochemistry, CAS, Fac. of Mathematics and Physics, Charles Univ. in Prague.*

10:00 B17 **118.11** *In vitro* activity of structurally diverse steroids on modulation of N-methyl-D-asparate receptors. S. ADLA*; E. SZÁNTI-PINTÉR; B. KRAUSOVA; B. KYSILOV; P. HUBALKOVA; L. VYKLICKY JR; E. KUDOVA. *Inst. of Organic Chem. & Biochemistry, Czech Acad. of Sci., Inst. of Physiology, Czech Acad. of Sci.*

11:00 B18 **118.12** Membrane to channel inhibition of NMDARs by (+)-MK-801. A. NIGAM*; M. R. WILCOX; J. W. JOHNSON. *Univ. of Pittsburgh.*

8:00 B19 **118.13** Subtype specificity of calcium-dependent NMDA receptor block by memantine. M. B. PHILLIPS*; J. W. JOHNSON. *Univ. of Pittsburgh.*

9:00 B20 **118.14** Voltage dependence of synaptic NMDA receptor potentiation by exogenous co-agonist. J. M. WONG*; E. V. BARRAGAN; J. A. GRAY. *Univ. of California Davis, Univ. of California, Davis.*

10:00 B21 **118.15** ● NYX-783, a novel NMDAR modulator, rescues the detrimental effects of encephalitis-causing anti-NMDAR antibodies on GluN2B-NMDAR expression *in vitro*. M. E. SCHMIDT*; S. U. SAHU; R. A. KROES; M. BLAAGJERG; E. COLECHIO; T. BHATTACHARYA; J. R. MOSKAL. *Aptinyx Inc., Northwestern Univ., Odense Univ. Hosp., Univ. of Southern Denmark.*

11:00 B22 **118.16** Ketamine selectively enhances AMPA neurotransmission onto a subgroup of identified serotoninergic neurons of the rat dorsal raphe. C. HMAIED*; S. KOULCHITSKY; D. ENGEL; V. SEUTIN. *Univ. of Liège, Lab. of Neurophysiol.*

8:00 B23 **118.17** Sex difference in AMPAR modulation that underlies 17β-estradiol-induced potentiation in the hippocampus. A. JAIN*; C. S. WOOLLEY. *Northwestern Univ.*

9:00 B24 **118.18** AMPA receptor dynamics contribute to tune synaptic plasticity and brain function. D. CHOQUET*. *UMR 5297 CNRS Univ. Bordeaux.*

POSTER

119. Calcium Channels

Theme B – Neural Excitability/ Synapses/ and Glia

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 B25 **119.01** The development and characterization of the new, conditional mouse model over-expressing Cav1.2. R. PARENT*; L. J. OUILLETTE; E. GLASS; H. BURNS; A. SMARSH; G. G. MURPHY. *Univ. of Michigan, Univ. of Michigan.*

9:00 B26 **119.02** Endoplasmic reticular junctophilin proteins maintain a Cav1.3-RyR2-KCa3.1 tri-protein complex at ER-PM junctions in hippocampal pyramidal neurons. G. SAHU*; R. WAZEN; P. COLARUSSO; G. W. ZAMPONI; S. R. W. CHEN; R. W. TURNER. *Univ. of Calgary, Univ. of Calgary, Univ. of Calgary.*

10:00 B27 **119.03** The ubiquitin E3 ligase parkin regulates $Ca_v1.3$ channel functional expression. L. GRIMALDO*; A. SANDOVAL; P. DURAN; R. FELIX. *CINVESTAV-IPN, FES Iztacala UNAM, Cinvestav-IPN.*

11:00 B28 **119.04** Disease-causing *de novo* CACNA1D l-type calcium channel missense mutation in a patient with a severe neurodevelopmental disorder of unknown cause. N. T. HOFER; A. PINGGERA; P. TULUC; Y. NIKONISHYNA; E. M. FRITZ; M. FERNANDES-QUINTERO; K. R. LIEDL; B. E. FLUCHER; G. J. OBERMAIR; J. STRIESSNIG*. *Univ. of Innsbruck, MRC Lab. of Mol. Biol., Med. Univ. of Innsbruck, Univ. of Innsbruck, Univ. of Innsbruck, Karl Landsteiner Univ. of Hlth. Sci.*

8:00 B29 **119.05** Somatodendritic release of dopamine and role of L-type Ca^{2+} channels in regulating the spontaneous firing of midbrain dopaminergic neurons. G. TOMAGRA; M. BONARDI; F. PICOLLO; B. PICCONI; A. PASQUARELLI; P. OLIVERO; P. CALABRESI; E. CARBONE; A. MARCANTONI; V. CARABELLI*. *Univ. of Torino, Univ. of Torino, "NIS" Inter-Departmental Ctr., Inst. Nazionale di Fisica Nucleare, IRCCS San Raffaele Pisana, Univ. San Raffaele, Univ. of Ulm, Univ. of Perugia.*

9:00 B30 **119.06** L-type calcium channels cooperate with NMDA receptors to signal to the nucleus from dendrites. N. MANDELBERG*; S. D. SUN; B. LI; R. W. TSIEN. *New York Univ. Sch. of Med., New York Univ., Sun Yat-Sen Univ., New York Univ.*

10:00 B31 **119.07** Effects of cyclopiazonic acid (CPA) on total calcium accumulation observed in apical dendrites of CA1 pyramidal neurons from young adult and aged rats. T. S. JEFFERSON; J. F. DISTERHOFT; M. M. OH*. *Feinberg Sch. of Medicine/Northwestern Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 B32 **119.08** Expression and localization of P/Q type calcium channel Cav2.1 in iron-induced experimental epilepsy. C. PRAKASH*; D. SHARMA. *Jawaharlal Nehru Univ.*

8:00 B33 **119.09** Ghrelin receptor (GHSR) and dopamine receptor type 2 (D2R) co-expression modifies each receptor's effects on voltage gated calcium channel $Ca_V2.2$. E. R. MUSTAFA*; S. CORDISCO GONZALEZ; S. S. RODRIGUEZ; J. RAINGO. *Multidisciplinary Inst. of Cell Biol., Multidisciplinary Inst. of Cell Biol. (IMBICE).*

9:00 B34 **119.10** Detection of a Cacna1b ($Ca_V2.2$) splice variant in brain tissue. A. S. ANDRADE*; A. BUNDA; B. LACARUBBA; M. AKIKI. *Univ. of New Hampshire, Univ. of New Hampshire.*

10:00 B35 **119.11** Agonist independent activity of dopamine receptor type 1 (D1R) increases $Ca_V2.2$ current in prefrontal cortex neurons. C. I. MCCARTHY; S. S. RODRIGUEZ; C. CHOU-FREED; V. MARTINEZ DAMONTE; J. RAINGO*. *Multidisciplinary Inst. of Cell Biol. (IMBICE).*

11:00 B36 **119.12** Serotonin-mediated modulation of CaV2.2 currents by 5HT-1 receptor stimulation in rat sensory neurons. L. ANSELMI; H. L. PUHL*, III; V. RUIZ-VELASCO. *Penn State Col. of Med., NIH.*

8:00 B37 **119.13** ● *In vivo* efficacy of an orally available N-type calcium channel blocker for the potential treatment of neuropathic pain. A. WILLUWEIT*; G. GUZMAN; P. HIDALGO; D. WILLBOLD; J. KUTZSCHE. *Forschungszentrum Juelich, Priavoid GmbH, Forschungszentrum Juelich, Forschungszentrum Juelich, Heinrich-Heine-University Duesseldorf.*

9:00 B38 **119.14** ● Exploration of Cav2 channel mutations predicted to affect GV-58-mediated slowed deactivation. S. ALDRICH*; R. LAGHAEI; H. CHENG; I. BAHAR; S. D. MERINEY. *Univ. of Pittsburgh, Carnegie Mellon Univ., Univ. of Pittsburgh.*

10:00 B39 **119.15** $Ca_V3.1$ isoform of t-type calcium channels is an important molecular target for hypnotic effect of neurosteroid analogue. T. TIMIC STAMENIC*; S. FESEHA; F. MANZELLA; K. KRISHNAN; D. F. COVEY; V. JEVTOVIC-TODOROVIC; S. TODOROVIC. *CU Denver, Anschutz Med. Campus, Washington Univ. Sch. Med.*

11:00 B40 **119.16** Functional importance of the CACHD1 MIDAS site in the modulation of $Ca_V3.1$ voltage-gated calcium channels. G. S. COTTRELL; S. INCE; G. J. STEPHENS*. *Univ. of Reading.*

8:00 B41 **119.17** Cav3.1 and 3.2 T-type Ca^{2+} channels collectively contribute to oscillatory excitation of nucleus ambiguus neurons. I. AIBA*; J. L. NOEBELS. *Baylor Col. of Med.*

9:00 B42 **119.18** Alternative splicing at the C-terminus of CACNA1G, the spinocerebellar ataxia-42 gene, modulates the activity of the low-voltage activated Cav3.1 calcium channel. R. WANG; Z. WANG; M. HOSSAIN; J. MIRKOVIC; S. SABZANOV; Y. YU; M. RUGGIU*. *St. John's Univ.*

10:00 B43 **119.19** Voltage-dependent and intracellular store-dependent contributors to calcium dynamics at the axon initial segment of neocortical pyramidal cells. A. M. LIPKIN*; M. CUNNIFF; P. W. SPRATT; S. M. LEMKE; K. J. BENDER. *Univ. of California San Francisco, Univ. Of California San Francisco, Univ. of California, San Francisco, UCSF.*

11:00 B44 **119.20** Effect of isoflurane on axonal endoplasmic reticulum calcium dynamics in hippocampal neurons. V. OSMAN*; H. C. HEMMINGS JR. *Weill Cornell Med., Joan and Sanford I Weill Med. Col. of Cornell Univ.*

8:00 B45 **119.21** Calcium channel-embedded transcription factors facilitate direct calcium signaling. E. RAO*; D. HEJAZI PASTOR; X. DU; C. GOMEZ. *Univ. of Chicago, The Univ. of Chicago.*

9:00 B46 **119.22** Initial characterization of the CACNG2 gene antisense promoter-driven transcript. D. MUÑOZ-HERRERA*; A. CALDERÓN-RIVERA; N. ZARCO; R. GONZÁLEZ-RAMÍREZ; R. FELIX. *CINVESTAV-IPN, Mayo Clin., "Dr. Manuel Gea Gonzalez" Gen. Hosp.*

10:00 B47 **119.23** Epidermal growth factor regulates the expression of the calcium channel alpha2delta-1 auxiliary subunit via the ERK/ELK-1 signaling pathway. P. DURAN*; A. SANDOVAL; R. GONZALEZ-RAMIREZ; N. ZARCO; R. FELIX. *Cinvestav-IPN, FES Iztacala UNAM, Dept. of Mol. Biol. and Histocompatibility, "Dr. Manuel Gea Gonzalez" Gen. Hosp., Mayo Clin.*

11:00 B48 **119.24** Store-operated Orai1 channels regulate Ca^{2+} signaling in dendritic spines, synaptic plasticity, and cognition. M. MANESHI*; A. B. TOTH; T. ISHII; J. M. RADULOVIC; G. T. SWANSON; M. PRAKRIYA. *Northwestern Univ., Northwestern Univ., Nippon Med. Sch., Northwestern Univ., Northwestern Univ. - Chicago.*

8:00 B49 **119.25** Li^+ differentially affects mitochondrial Ca^{2+} efflux in central and peripheral neurons. J. RYSTED*; G. WALTERS; Z. LIN; M. NOTERMAN; G. LIU; E. B. TAYLOR; S. STRACK; Y. M. USACHEV. *Univ. of Iowa, Univ. of Iowa, Univ. of Iowa.*

POSTER

120. Potassium Channels I

Theme B – Neural Excitability/ Synapses/ and Glia

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 B50 **120.01** Regulation of Eag1 potassium channel biosynthesis by a RING E3 ubiquitin ligase. Y. FANG*; C. TANG; C. JENG. *Natl. Taiwan Univ., Natl. Yang-Ming Univ.*

9:00 B51 **120.02** The contribution of BK channels to regulation of interneuron firing rates changes across the first postnatal week in the superior region of the hippocampus. M. HUNSBERGER*; M. MYNLIEFF. *Marquette Univ.*

10:00 B52 **120.03** Interplay between β3 integrins and Ca^{2+}-activated K^+ channels in cortical pyramidal neurons. C. VITALE*; F. JAUDON; A. THALHAMMER; L. A. CINGOLANI. *Italian Inst. of Technology-IIT, Univ. of Genoa.*

11:00 B53 **120.04** The Ca^{2+}-activated potassium channel KCa3.1 as a therapeutic target in microglia-mediated neuroinflammation. J. DI LUCENTE*; H. M. NGUYEN; H. WULFF; L. JIN; I. MAEZAWA. *UC Davis, Univ. of California Davis.*

8:00 B54 **120.05** Small conductance Ca^{2+} activated K^+channels modulate the expression of ketamine-induced cognitive impairments in C57BL/6J mice. C. A. RICE*; R. W. STACKMAN, Jr. *Florida Atlantic Univ. Dept. of Psychology, Florida Atlantic Univ.*

9:00 B55 **120.06** Simulations of SK2 and SK3 currents in spinal motoneurons. M. H. MOUSA*; A. A. MAHROUS; S. M. ELBASIOUNY. *Wright State Univ., Wright State Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 B56 **120.07** Axonal A- and D-type potassium currents regulate action potential waveform and dopamine release of midbrain dopamine neurons. Y. XIAO*; W. JI; Q. HE; L. MAO; Y. SHU. *Beijing Normal Univ., Beijing Natl. Lab. for Mol. Sciences, CAS Key Lab. of Analytical Chem. for Living Biosystems, Inst. of Chemistry, Chinese Acad. of Sci.*

11:00 B57 **120.08** Activation of Slack potassium channels (KCNT1) triggers an increase in mRNA translation. T. J. MALONE*; P. LICZNERSKI; E. A. JONAS; L. K. KACZMAREK. *Yale Univ. Sch. of Med.*

8:00 B58 **120.09** Kcnt1 mutants related morbidity of epilepsy and cardiac arrhythmia is attributed to same channelpathy. Z. ZHANG*; Y. LIU; Z. SHEN; Y. XU; Q. TANG. *Xuzhou Med. Univ.*

9:00 B59 **120.10** Suppression of macro- and micro-scopic Kv1.1 channel activity by amyloid peptide fragments. K. DEBOEUF*; M. ISLAM; N. THELEN; J. FARLEY. *Indiana Univ.*

10:00 B60 **120.11** Generation of a human disease model for KCNA2-related developmental epileptic encephalopathy using iPSC-derived neurons. B. UYSAL*; N. SCHWARZ; H. LÖFFLER; H. KOCH; U. HEDRICH; H. LERCHE. *Hertie Inst. for Clin. Brain Res.*

11:00 B61 **120.12** Functional interaction between the voltage-gated potassium channel Kv1.3 and purinergic P2X receptors in pro-inflammatory microglia. H. M. NGUYEN*; Y. CHEN; J. DI LUCENTE; L. JIN; I. MAEZAWA; H. WULFF. *Univ. of California, Univ. of California.*

8:00 B62 **120.13** Control of neuronal excitability by palmitoylation-dependent ion channel clustering at the axon initial segment. S. S. SANDERS; L. M. HERNANDEZ; H. SOH; S. S. KARNAM; A. TZINGOUNIS; G. THOMAS*. *Temple Univ., Temple Univ. Sch. of Med., Univ. of Connecticut, Univ. of Connecticut.*

9:00 B63 **120.14** Trafficking and localization of Kv2.1-HCN2 channel complexes in neurons. S. PARK*; J. HWANG; K. PARK. *Kyung Hee Univ. Sch. of Med.*

10:00 B64 **120.15** Nav channel beta3 regulates the expression and localization of Kv3.1b channels in neurons. J. SHIM*; D. KIM; Y. CHOI; J. CHOI; K. PARK. *Kyung Hee Univ. Sch. of Med., Catholic Univ. of Korea.*

11:00 B65 **120.16** Tank binding kinase-1 interacts with the cytoplasmic C-terminus of the Kv3.3 potassium channel. Y. ZHANG*; L. VARELA; K. SZIGETI-BUCK; M. CHATTERJEE; T. HORVATH; L. K. KACZMAREK. *Yale Univ. Sch. Med., Yale.*

8:00 B66 **120.17** Pin1 isomerization of Kv4.2 regulates neuronal excitability in the mouse hippocampus. C. MALLOY*; J. HU; D. A. HOFFMAN. *NIH, NIH.*

8:00 DP02/B67 **120.18** (Dynamic Poster) Intermittent channel trafficking in dendrites. A. BELLOTTI*; J. MURPHY; F. FORNI; D. HOFFMAN; T. O'LEARY. *Univ. of Cambridge, NIH.*

10:00 B68 **120.19** ● Interrogating voltage-gated ion channel currents and gene expression from the same cell via a modified Patch-seq experimental protocol. B. LEE*; R. MANN; L. NG; A. BUDZILLO; B. KALMBACH; K. BAKER; R. MORSE; A. OLDRE; H. ZENG; G. MURPHY; J. BERG. *Allen Inst. for Brain Sci.*

POSTER

121. Neurotransmitter Release and Vesicle Recycling

Theme B – Neural Excitability/ Synapses/ and Glia

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 B69 **121.01** Activity-evoked and spontaneous opening of synaptic fusion pores. D. BULGARI*; D. L. DEITCHER; B. F. SCHMIDT; M. A. CARPENTER; C. SZENT-GYORGYI; M. P. BRUCHEZ; E. S. LEVITAN. *Univ. of Pittsburgh, Cornell Univ., Carnegie Mellon Univ., Carnegie Mellon Univ., Carnegie Mellon Univ.*

9:00 B70 **121.02** Vesicular calcium sensor synaptotagmin-1 mediates neurotransmission from mammalian rods and cones. W. B. THORESON*; J. J. GRASSMEYER; C. L. HAYS; A. CAHILL; M. J. VAN HOOK; N. BABAI. *Univ. of Nebraska Med. Ctr., Friedrich Alexander Univ.*

10:00 B71 **121.03** Syt1-associated developmental disorder: Molecular pathogenesis and new insights into the Ca^{2+}-sensing mechanism of Syt1. M. M. BRADBERRY*; N. A. COURTNEY; E. R. CHAPMAN. *Univ. of Wisconsin-Madison, Howard Hughes Med. Inst.*

11:00 B72 **121.04** Ca^{2+}-triggered neurotransmitter release requires two Ca^{2+}sensors in *C. elegans.* L. LI*; H. LIU; Y. YU; J. TANG; Z. HU. *Queensland Brain Inst.*

8:00 B73 **121.05** SV2A is essential for distinct synaptic vesicle recycling in excitatory and inhibitory nerve terminals. W. LEE*; S. HWANG; S. KOH; S. KIM. *Kyung Hee Univ., Kyung Hee University, Sch. of Med.*

9:00 B74 **121.06** Multiquantal release from rod ribbons is facilitated by syntaxin3B. C. L. HAYS*; J. GRASSMEYER; R. JANZ; R. HEIDELBERGER; W. B. THORESON. *Univ. of Nebraska Med. Ctr., Univ. of Nebraska Med. Ctr., UT-Houston Med. Schl, McGovern Med. School, UT-HSC Houston, Univ. of Nebraska Med. Ctr.*

10:00 B75 **121.07** Nano-resolved study of acetylcholine neurotransmission on single B1/B2 *Aplysia* cells. S. N. PHAM*; R. CHEN; S. E. MURPHY; C. H. OH; J. V. SWEEDLER; M. SHEN. *Univ. of Illinois At Urbana-Champaign.*

11:00 B76 **121.08** A dual role for the UNC-13 M domain in Ca^{2+}-triggered neurotransmitter release. H. LIU; L. LI; Y. YU; J. TANG; S. SHEORAN; J. E. RICHMOND; Z. HU*. *Queensland Brain Inst., Univ. Illinois Chicago.*

8:00 B77 **121.09** Munc13 critically affects the architecture of the presynaptic terminal. C. PAPANTONIOU; C. IMIG; N. BROSE; W. BAUMEISTER; B. H. COOPER; V. LUCIC*. *Max Planck Inst. of Biochem., Max Planck Inst. of Exptl. Med., Max Planck Inst. of Exptl. Med., Max Planck Inst. of Biochem.*

9:00 B78 **121.10** SphK1/S1P pathway is important for synaptic vesicle endocytosis. Z. JIANG*; T. L. DELANEY; L. GONG. *Univ. of Illinois at Chicago.*

10:00 B79 **121.11** ● Functional analysis of calcium dependent activator protein for secretion 1 and 2 differential subcellular localization. A. STAUDT*; A. H. SHAIB; O. RATAI; A. SHAABAN; H. BZEIH; R. MOHRMANN; J. RETTIG; U. BECHERER. *Saarland Univ., Max Planck Inst. for Exptl. Med., Otto-von-Guericke Univ. Magdeburg.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 B80 **121.12** Analysis of essential and modulatory domains of Syntaxin-1 in murine hippocampal synapses. G. VARDAR*; M. BROCKMANN; A. SALAZAR LÁZARO; M. WEBER-BOYVAT; T. TRIMBUCH; C. ROSENMUND. *Charité-Universitätsmedizin.*

8:00 B81 **121.13** Exocytosis of GABAergic synaptic vesicles tracked by real-time three-dimensional microscopy. C. PARK*; C. FAN; K. PARK; C. LEE; H. PARK. *Hong Kong Univ. of Sci. and Technol., Univ. of Sussex, Hong Kong Univ. of Sci. and Technol.*

9:00 B82 **121.14** The organization and occupancy of synaptic vesicle fusion sites. G. KUSICK; M. CHIN; S. WATANABE*. *Johns Hopkins Univ.*

10:00 B83 **121.15** The serotonin transporter modulates the number and quantal size of vesicular release events in sympathoadrenal chromaffin cells. R. L. BRINDLEY; K. P. CURRIE*. *Cooper Med. Sch. of Rowan Univ.*

11:00 B84 **121.16** Synaptotagmin-7 endows a population of dense core vesicles with distinct calcium sensing and fusion properties. A. CHAPMAN-MORALES*; M. BENDAHMANE; A. J. B. KREUTZBERGER; N. SCHENK; V. KIESSLING; D. CASTLE; L. TAMM; D. R. GIOVANNUCCI; P. M. JENKINS; A. ANANTHARAM. *Univ. of Michigan, Univ. of Virginia, Univ. of Toledo.*

8:00 B85 **121.17** Activity dependent modulation of synaptic transmission and of presynaptic calcium dynamics by α-synuclein. A. STAVSKY; M. ATIAS; J. KAHN; D. GITLER*. *Ben-Gurion Univ. of the Negev, Ben-Gurion Univ. of the Negev.*

9:00 B86 **121.18** VIP immunohistochemical reactivity in rat dorsal horn is increased by prolonged vaginocervical stimulation (VCS) that "exhausts" VCS-produced analgesia. J. A. RIVERA*; E. VENTURA-AQUINO; B. R. KOMISARUK. *Rutgers University-Newark.*

10:00 B87 **121.19** Presynaptic Na^+ regulates synaptic vesicle recycling at the calyx of Held synapse. Y. ZHU; D. LI; H. HUANG*. *Tulane Univ.*

11:00 B88 **121.20** Presynaptic loss of DRP1 affects cytosolic calcium load and inhibits endocytosis at the calyx of Held. K. D. REIHL*; M. SINGH; R. B. RENDEN. *Univ. of Nevada, Reno, Univ. of Nevada, Univ. of Nevada, Reno Sch. of Med.*

8:00 B89 **121.21** Synaptic vesicle endocytosis, spontaneous release and evoked exocytosis at mature glutamatergic and glycinergic synapses. A. A. DAGOSTIN*; H. P. VON GERSDORFF. *Oregon Hlth. and Sci. Univ., Oregon Hlth. & Sci. Univ.*

9:00 B90 **121.22** TRPC5 positively regulates synaptic vesicle endocytosis. T. L. DELANEY*; Z. JIANG; L. GONG. *Univ. of Illinois at Chicago.*

10:00 B91 **121.23** The structural dynamics of actin and presynaptic vesicles in a mammalian synapse. S. SUBRAMANIAN*; J. BURTON; J. XIA; L. K. KACZMAREK; E. A. JONAS. *Yale Univ. Sch. Med., Univ. of Chicago, Yale Univ. Sch. Med., Marine Biol. Lab.*

11:00 B92 **121.24** Regulation of vesicle acidification by Rabconnectin3a at the neuronal synapse. S. GOWRISANKARAN*; A. RAIMONDI; Z. FARSI; N. DE ROUX; I. MILOSEVIC. *European Neurosci. Inst. (ENI), Advanced Light and Electron Microscopy BioImaging Ctr. (ALEMBIC), Max-Delbrück Ctr. for Mol. Med. in Helmholtz Association, Berlin Inst. for Med. Systems Biol., Inserm U1141, Hosp. Robert Debré.*

8:00 B93 **121.25** Kinetic dissection of vesicle recycling in the calyx of held synapse at physiological temperature. Z. LIU; Y. ZHU; Y. HU; S. ZHANG; J. SUN*. *Inst. of Biophysics, Chinese Acad. of Sci., Univ. of Chinese Acad. of Sci., High Sch. Affiliated to Renmin Univ.*

9:00 B94 **121.26** Calcium- and phospholipid-dependent regulation of synaptic plasticity by Munc13-1. N. LIPSTEIN*; S. CHANG; K. LIN; B. H. COOPER; A. GHUMAN; J. J. JANS; H. TASCHENBERGER; N. BROSE. *Max-Planck Inst. of Exptl. Med., Univ. of Toronto, Max Planck Inst. for Biophysical Chem., Utrecht Univ. Med. Ctr., Max-Planck Inst. of Exptl. Med.*

10:00 B95 **121.27** Calcium-independent exo-endocytosis coupling at small central synapses. M. ORLANDO; C. ROSENMUND; M. A. HERMAN*. *Charité-Universitätsmedizin Berlin.*

11:00 B96 **121.28** Effects of acute ATP shortage on the synaptic vesicle cycle at the ultrastructural level. Q. GAN*; S. WATANABE. *Johns Hopkins Sch. of Med., Johns Hopkins Univ.*

8:00 B97 **121.29** The Kv3.3 potassium channel controls endocytosis by organizing the actin cytoskeleton at nerve terminals. L. K. KACZMAREK*; X. WU; S. SUBRAMANIAN; J. XIA; Y. ZHANG; L. EL-HASSAR; K. SZIGETI-BUCK; T. L. HORVATH; E. A. JONAS; L. WU. *Yale Univ. Sch. Med., Natl. Inst. of Neurolog. Disorders and Stroke, Univ. of Chicago.*

9:00 B98 **121.30** Understanding the neuronal trafficking of tissue type plasminogen activator and its neuronal functions. A. VARANGOT*; S. LENOIR; L. LEBOUVIER; Y. HOMMET; D. VIVIEN. *INSERM U1237, INSERM U1216, Caen Univ. Hosp.*

POSTER

122. Structural Plasticity and Circuit Remodeling II

Theme B – Neural Excitability/ Synapses/ and Glia

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 B99 **122.01** Characterization of PSD lattice-like structure purified from rat forebrain. T. SUZUKI*; S. HIGASHIYAMA; K. TABUCHI; Y. SHIRAI; W. LI. *Shinshu Univ. Inst. of Med., Proteo-Science Center, Ehime Univ., Shanghai Jiao Tong Univ.*

9:00 B100 **122.02** New structural evidences on the storage capacity of synapses in hippocampal area CA1 and DG in rat. M. SAMAVAT*; T. M. BARTOL, Jr.; C. BROMER; D. D. HUBBARD; D. C. HANKA; K. M. HARRIS; T. J. SEJNOWSKI. *Salk Inst., The Univ. of Texas at Austin, The Univ. of Texas at Austin.*

10:00 B101 **122.03** Are synapses in the aging brain too large to learn? L. M. KIRK*; P. H. PARKER; K. HARRIS. *Univ. of Texas, Austin.*

11:00 B102 **122.04** Saturation of structural plasticity at individual CA1 dendritic spines. J. C. FLORES*; K. M. ZITO. *Univ. of California, Davis.*

8:00 C1 **122.05** SK2 modulates synaptic plasticity by tuning CaMKII activity. A. SHRETHA; R. SULTANA; C. C. LEE; O. M. OGUNDELE*. *Louisiana State Univ., Louisiana State Univ. Sch. of Vet. Med.*

9:00 C2 **122.06** Non ionotropic NMDA receptor signaling mechanisms driving dendritic spine plasticity. I. S. STEIN*; D. K. PARK; J. N. JAHNCKE; K. M. ZITO. *UC Davis, Oregon Hlth. & Sci. Univ., Univ. of California Davis.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 C3 **122.07** Non-ionotropic NMDA receptor signaling in structural plasticity of dendritic spines and schizophrenia. D. K. PARK*; I. S. STEIN; L. J. TOM; K. M. STACHOWICZ; K. ZITO. *Univ. of California, Davis.*

11:00 C4 **122.08** Synaptic crosstalk conferred by a zone of differentially-regulated calcium signaling in the dendritic shaft adjoining a potentiated spine. P. J. DITTMER; M. L. DELL'ACQUA; W. A. SATHER*. *Univ. of Colorado Sch. of Med.*

8:00 C5 **122.09** Cs6 clusters: evidence for a role of novel proteoglycan structures in experience-dependent clustered plasticity. G. CHELINI*; C. BERCIU; P. DURNING; L. BALASCO; A. BOYER-BOITEAU; J. VALERI; K. HUANG; Y. BOZZI; K. J. RESSLER; S. BERRETTA. *McLean Hosp. - Harvard Med. Sch., Univ. of Trento, McLean Hosp. - Harvard Med. Sch.*

9:00 C6 **122.10** Visualization of micro RNA distribution at the functional states of dendritic spines. H. KIM*; H. LEE; J. KIM. *POSTECH.*

10:00 C7 **122.11** Modulation of synaptic structure and function in primary rodent hippocampal neurons by autism risk genes- A high content imaging analysis. L. MICHOLT; K. W. YOUNG; C. E. BAZENET*; J. RUDOLPH; K. KOTTIG; H. VON DER KAMMER. *Evotec SE.*

11:00 C8 **122.12** Dendritic spine abnormalities and behavioral deficits in forebrain-specific MARK1 knockout mice. E. C. KELLY-CASTRO*; M. SUN; H. ZHANG. *Rutgers Univ., Robert Wood Johnson Med. School, Rutgers Univ.*

8:00 C9 **122.13** The K63-specific deubiquitinase CYLD regulates dendritic spine remodeling, synaptic plasticity, and behavior. A. S. ZAJICEK*; Q. MA; H. RUAN; H. DAI; S. SUN; S. AKBARIAN; W. YAO. *SUNY Upstate Med. Univ., Univ. of Texas MD Anderson Cancer Ctr., Icahn Sch. of Med. At Mount Sinai.*

9:00 C10 **122.14** Input-side dependent left-right asymmetry is critical for the formation of experience-dependent laterality in the hippocampus. M. J. CASE; D. KLEINDIENST; K. KOBAYASHI; R. SHIGEMOTO*. *IST Austria, Natl. Inst. For Physiological Sci.*

10:00 C11 **122.15** A brief period of sleep deprivation leads to dendritic spine loss in the dentate gyrus of the hippocampus. F. RAVEN*; P. MEERLO; E. A. VAN DER ZEE; T. ABEL; R. HAVEKES. *Univ. of Groningen, Univ. of Iowa.*

11:00 C12 **122.16** Plastic changes in dendritic spines of hippocampal pyramidal neurons after Pentylenetetrazole treatment. C. E. ROMERO-GUERRERO*; N. VÁZQUEZ-HERNÁNDEZ; M. FLORES-SOTO; F. L. MARTÍN-AMAYA-BARAJAS; A. TEJEDA-MARTÍNEZ; S. OROZCO-SUAREZ; I. GONZÁLEZ-BURGOS. *Ctr. De Investigación Biomédica De Occidente, Inst. Mexicano del Seguro Social, Speciality Hosp, Mexican Inst. Social Sec.*

8:00 C13 **122.17** Functional and anatomical specificity of spinogenesis in the motor cortex during motor learning. N. G. HEDRICK*; Z. LU; E. A. BUSHONG; P. YAO; Y. XUAN; B. LIM; M. H. ELLISMAN; T. KOMIYAMA. *Univ. of California San Diego, Univ. of California San Diego, Univ. of California San Diego, Univ. of California San Diego, Univ. of California San Diego, Univ. of California San Diego.*

9:00 C14 **122.18** Toric spines on space-specific neurons: Location, expression and intracellular organization. D. SANCULI; P. HARRAST; K. PANNONI; T. SHAMLOO; E. A. BUSHONG; M. H. ELLISMAN; W. M. DEBELLO*. *UC Davis, Va Tech., Univ. California - San Diego, UCSD BSB 1000.*

10:00 C15 **122.19** Diazepam-induced breakdown of inhibitory synapses mediated by phospholipase C delta/ calcium/calcineurin signalling pathway. M. W. NICHOLSON; A. B. ALI; M. R. DUCHEN; J. N. JOVANOVIC*. *UCL Sch. of Pharmacy, Univ. Col. London, Univ. Col. London.*

11:00 C16 **122.20** ▲ Memories at the neuromuscular junction are resistant to extinction. M. M. TARBET*; K. HUDSON; E. LOUT; J. GRAU. *Texas A&M Univ., Texas A&M Hlth. Sci. Ctr., Texas A&M Univ.*

8:00 C17 **122.21** Patterned activation of the temperature-gated TRPA1 channel promotes rapid morphological changes at the *Drosophila* neuromuscular junction. C. MALDONADO-DIAZ*; B. MARIE. *Inst. of Neurobio. - UPR Med. Sci. Campus.*

9:00 C18 **122.22** The role of the planar cell polarity pathway in regulating activity-dependent synaptic plasticity. C. M. DOMINICCI-COTTO*; B. MARIE. *Inst. of Neurobiology/ Univ. of Puerto Rico, Univ. of Puerto Rico - Med. Sch.*

10:00 C19 **122.23** ▲ Visual deprivation-induced plasticity of electrical coupling. D. E. KOSER; M. WEINREICH*; H. MONYER. *Med. Fac. of Univ. Heidelberg & German Cancer Res. Ctr.*

POSTER

123. Epilepsy: Human Studies

Theme B – Neural Excitability/ Synapses/ and Glia

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 C20 **123.01** Brain morphometric alterations accompanying generalized tonic clonic seizures with hypoxemia. L. A. ALLEN*; R. M. HARPER; S. VOS; C. A. SCOTT; L. VIELLA; N. LACUEY; J. S. WINSTON; B. WHATLEY; R. KUMAR; J. A. OGREN; G. WINSTON; S. LHATOO; L. LEMIEUX; B. DIEHL. *UCL, UCLA, UTH, Univ. of California at Los Angeles, UCLA.*

9:00 C21 **123.02** Expression of astrocyte related receptors and channels in epilepsy lesions. M. ITOH*. *Natl. Ctr. of Neurol. and Psychiatry.*

10:00 C22 **123.03** Epileptogenesis of the subiculum associated with hippocampal sclerosisin patients with MTLE: *Ex vivo* optical imaging study. H. KITAURA*; H. SHIROZU; H. MASUDA; M. FUKUDA; Y. FUJII; A. KAKITA. *Brain Res. Inst, Niigata Univ., Nishi-Niigata Chuo Natl. Hosp., Brain Res. Inst, Niigata Univ., BRI, Univ. of Niigata.*

11:00 C23 **123.04** Evaluation of REST/NRSF expression and its transcriptional repression effect on the GRIA2 and GABRD genes in the hippocampus of patients with temporal lobe epilepsy. V. NAVARRETE-MODESTO*, Sr; S. OROZCO-SUAREZ; M. ALONSO-VANEGAS; I. FERIA-ROMERO; L. ROCHA. *Inst. Mexicano Del Seguro Social, Natl. Inst. of Neurol. and Neurosurg. "Manuel Velasco Suarez", Ctr. for Res. and Advanced Studies (CINVESTAV).*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 C24 **123.05** ● Brain cholesterol metabolism as new pathway biomarkers of status epilepticus. A. HANIN*; P. BAUDIN; S. LECAS; D. ROUSSEL; E. TEYSSOU; M. DAMIANO; D. LUIS; V. LAMBRECQ; I. PLU; B. MATHON; D. BONNEFONT-ROUSSELOT; S. DEMERET; R. BITTAR; F. LAMARI; V. NAVARRO. *Brain and Spine Inst., Inserm U1127, Sorbonne Univ., Pitie Salpetriere Hospital, Fondation APHP, Pitie Salpetriere Hospital, APHP, Pitie Salpetriere Hospital, APHP, Pitie Salpetriere Hospital, APHP, Paris Univ., Pitie Salpetriere Hospital, APHP, Pitie Salpetriere Hospital, APHP.*

9:00 C25 **123.06** Kininogen as a biomarker and a possible therapeutic target during epileptogenesis. A. GHOSH*; J. ZOU; Q. WANG; Q. LU; S. LI. *Shanghai Jiao Tong Univ., Shanghai Jiao Tong Univ.*

10:00 C26 **123.07** Altered intracelular signaling pathways in the PBMC of patients with temporal lobe epilepsy. M. SILVA*; F. AMARAL; A. GONÇALVES; A. TEIXEIRA; É. VIEIRA; A. DE OLIVEIRA. *Univ. Federal De Minas Gerais.*

11:00 C27 **123.08** Cannabinoid receptors in microvessels of the blood-brain barrier of the temporal cortex and hippocampus of patients with drug-resistant temporal lobe epilepsy. M. NUÑEZ-LUMBRERAS; F. CARMONA-CRUZ; V. SANCHEZ-VALLE; M. A. ALONSO VANEGAS; R. GUEVARA-GUZMAN; L. L. ROCHA*. *Cinvestav, Inst. Natl. Neurol & Neurosurg., Univ. Nacional Autónoma De México (UNAM), CINVESTAV.*

8:00 C28 **123.09** CRISPR mediated manipulation of epilesy associated genes and its application in mouse and human organotypic hippocampal slice cultures. D. TSORTOUKTZIDIS*; K. M. VAN LOO; S. SCHOCH; H. KOCH; A. J. BECKER. *Dept. of Neuropathology, Bonn Univ. Med. Sch., Univ. Tübingen.*

9:00 C29 **123.10** Neuronal and synaptic pathology in human CDKL5 deficiency disorder. J. C. WACKER*; K. A. SANSALONE; M. YENNAWAR; F. E. JENSEN; D. M. TALOS. *Univ. of Pennsylvania Perelman Sch. of Med., Univ. of Pennsylvania Perelman Sch. of Med.*

10:00 C30 **123.11** Role of autoinflammation in acute seizure generation and epilepsy. S. KUNDA*; R. G. LAFRANCE-COREY; G. A. WORRELL; C. L. HOWE. *Mayo Clin., Mayo Clin.*

11:00 C31 **123.12** Respiratory related brain pulsations are disturbed in epilepsy. J. KANANEN*; T. TUOVINEN; V. KORHONEN; N. HUOTARI; H. HELAKARI; H. ANSAKORPI; P. LEVAN; V. KIVINIEMI. *Univ. of Oulu, Univ. of Freiburg.*

8:00 C32 **123.13** The use of auditory steady-state responses to actively probe abnormal coupling associated with epilepsy. V. R. CARVALHO; S. S. CASH; E. M. A. M. MENDES; M. F. D. MORAES*. *Univ. Federal de Minas Gerais, Mass Genl Hosp, Univ. Federal de Minas Gerais.*

9:00 C33 **123.14** Temporal analysis of preictal high-frequency oscillation rates in refractory epilepsy. J. SCOTT*; S. REN; S. GLISKE; W. STACEY. *Univ. of Michigan.*

10:00 C34 **123.15** Mechanisms of dynamic inhibitory neuronal control of human seizures. O. J. AHMED*; T. JOHN; S. SUDHAKAR; E. K. BRENNAN; S. S. CASH. *Univ. of Michigan, Univ. of Michigan, Mass Genl Hosp.*

8:00 DP03/C35 **123.16** (Dynamic Poster) Action potential alterations and cell-type specific activity through ictal recruitment in humans. E. M. MERRICKS*; E. H. SMITH; G. M. MCKHANN, II; R. R. GOODMAN; S. A. SHETH; B. GREGER; P. A. HOUSE; A. J. TREVELYAN; C. A. SCHEVON. *Columbia Univ., Univ. of Utah, Columbia Univ., Icahn Sch. of Med., Baylor Col. of Med., Arizona State Univ., Newcastle Univ.*

8:00 C36 **123.17** ● Measuring DC dynamics at multiple spatial scales in human intracranial electrophysiology. V. SLADKY*; V. KREMEN; P. NEJEDLY; P. KLIMES; J. CIMBALNIK; J. VAN GOMPEL; M. STEAD; G. A. WORRELL. *Mayo Clin., St. Anne's Univ. Hosp. Brno, Mayo Clin., Czech Tech. Univ. in Prague, Mayo Clin.*

9:00 C37 **123.18** Correlates of hippocampal interictal epileptiform discharges on scalp EEG recordings. S. LEE*; N. ISSA; W. VAN DRONGELEN. *Univ. of Chicago.*

10:00 C38 **123.19** Decreases in cellular firing accompany saccade onsets in human mesial temporal lobe structures and neocortex. A. SCHJETNAN*; C. KATZ; K. PATEL; V. A. BARKLEY; A. NADERIAN; H. BABU; S. KALIA; T. VALIANTE. *Krembil Res. Inst., IBBME, Univ. of Toronto, Toronto Western Hosp., Univ. of Toronto.*

11:00 C39 **123.20** Investigating intrinsic electrophysiological diversity of human pyramidal cells across cortical layers and between individuals. H. MORADI CHAMEH; L. WANG; L. ZHANG; P. CARLEN; S. TRIPATHY; T. A. VALIANTE*. *Krembil Res. Inst., Krembil Ctr. for Neuroinformatics, Ctr. for Addiction and Mental Health, Dept. of Psychiatry.*

8:00 C40 **123.21** Discrimination of high frequency oscillations from sharp transients in the electrocorticogram of patients with refractory epilepsy. A. F. AL-BAKRI*; C. HADDIX; M. BENSALEM-OWEN; P. MODUR; S. SUNDERAM. *Univ. of Kentucky, Univ. of Kentucky, Univ. of Texas, Univ. of Kentucky.*

9:00 C41 **123.22** Characterizing the relationship between functional connectivity and neurocognitive deficits in benign epilepsy with centrotemporal spikes. E. SPENCER*; D. CHINAPPEN; L. OSTROWSKI; D. SONG; S. STOYELL; C. CHU; M. A. KRAMER. *Boston Univ., Massachusetts Gen. Hosp., Boston Univ.*

10:00 C42 **123.23** Impaired thalamocortical functional connectivity of different thalamic nuclei in temporal lobe epilepsy. L. ZHANG; D. LIU; L. WANG; B. XIAO; H. CHEN; L. FENG; R. LI*. *The Clin. Hosp. of Chengdu Brain Sci. Institute, MOE Key Lab. for Neuroinformation, Sch. of Life Sci. and Technology, Univ. of Electronic Sci. and Technol. of China, Dept. of Neurosurgery, Xiangya Hospital, Central South Univ., Dept. of Neurology, Xiangya Hospital, Central South Univ.*

11:00 C43 **123.24** Selective network dynamic abnormalities in juvenile myoclonic epilepsy revealed by MEG energy landscape. D. KRZEMINSKI*; K. SINGH; K. HAMANDI; N. MASUDA; J. ZHANG. *Cardiff Univ., Univ. of Bristol.*

8:00 C44 **123.25** Development of a multi-compartment model of a human L5 pyramidal neuron suggests inter-species h-channel kinetic differences. S. RICH*; H. CHAMEH; V. SEKULIC; F. SKINNER; T. VALIANTE. *Krembil Res. Inst.*

9:00 C45 **123.26** ● Patient-specific computational models of cortical activation for seizure improvement. C. M. CHARLEBOIS*; B. J. PHILIP; D. N. ANDERSON; A. D. DORVAL; C. R. BUTSON. *Univ. of Utah, Univ. of Utah, Univ. of Utah.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 C46 **123.27** Utilizing convolutional neural networks and bayesian modeling to predict patient outcomes. J. NADALIN*; L. MARTINET; U. EDEN; C. CHU; M. A. KRAMER. *Boston Univ., Massachusetts Gen. Hosp., Boston Univ., Massachusetts Gen. Hosp., Boston Univ.*

11:00 C47 **123.28** ● Targeted non-invasive neurostimulation reduces seizures in epilepsy patients with prior surgical interventions. G. RUFFINI*; N. A. SMITH. *Neuroelectrics.*

POSTER

124. Synaptic Dysfunction in Alzheimer's Disease: *In Vivo* Models I

Theme C – Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 C48 **124.01** Alzheimer's disease model mouse analysis focusing on Drebrin. N. KOGANEZAWA*; Y. KAJITA; H. YAMAZAKI; T. SAITO; Y. SEKINO; T. C. SAIDO; T. SHIRAO. *Gunma Univ. Grad. Sch. of Med., Tohoku Univ. Sch. of Med., RIKEN Ctr. for Brain Sci., Grad. Sch. of Pharmaceut. Sciences, The Univ. of Tokyo.*

9:00 C49 **124.02** ● The dendritic improvement by histone deacetylase 2 specific inhibition in amyloid beta precursor protein overexpression mice. K. OGAWA*; D. NAKATSUKA; T. IZUMI; T. TSUKAMOTO; M. OYAMA; K. NIIDOME; H. YAMAKAWA; H. ITO. *Shionogi & Co., LTD.*

10:00 C50 **124.03** Alteration of area CA2 is linked to social memory deficit in the Tg2576 model of Alzheimer's disease. C. C. REY*; V. ROBERT; M. LOISY; V. CATTAUD; C. LEJARDS; R. A. PISKOROWSKI; C. RAMPON; V. CHEVALEYRE; L. VERRET. *CNRS Toulouse Univ., INSERM U894, Inserm U894.*

11:00 C51 **124.04** Chronic administration of GABAA receptor agonist tunes hippocampal network in a mouse model of Alzheimer's disease. Y. LI*; K. ZHU; L. LI; N. LI; X. XIAO; L. LI; X. WANG; Y. ZHENG. *Capital Med. Univ., Capital Med. Univ.*

8:00 C52 **124.05** State-dependent regulation of CA1 ensembles *in vivo* in Alzheimer models. D. ZARHIN*; N. GEVA; Y. ZIV; I. SLUTSKY. *Tel Aviv Univ., Weizmann Inst. of Sci., Tel Aviv Univ.*

9:00 C53 **124.06** Electrophysiological and morphological study of the synaptic processes in hippocampus, amygdala and basal meynert nucleus neurons in dynamics of development of Alzheimer's disease. V. SARGSYAN*; N. BEHNAM; J. SARKISSIAN. *Orbeli Inst. Physiol.*

10:00 C54 **124.07** Laminin and aβ oligomers compete for PrP^C binding and their availability are altered by sleep deprivation. M. H. M. DA LUZ*; J. M. V. PINO; T. G. DOS SANTOS; H. K. M. ANTUNES; B. D. ANTONIO; M. C. LANDEMBERGER; K. S. LEE. *Univ. Federal De São Paulo - UNIFESP, Intl. Res. Center. A C Camargo Cancer Ctr., Univ. Federal De São Paulo - UNIFESP.*

11:00 C55 **124.08** Depletion of voltage-gated potassium channel Kv1.1 contributes to behavioral deficits in transgenic mouse model of Alzheimer's disease. J. M. CHOQUETTE*; S. T. PETERS; V. FOMENKO; J. C. XU; R. J. CRAFT; K. GIMLIN; K. A. VOSSEL*. *Univ. of Minnesota, Kaiser Permanente, Univ. of California, Irvine, Univ. of Colorado, The Jackson Lab.*

8:00 C56 **124.09** Dysregulation of synaptic neurotransmitter systems in human Alzheimer's disease brain cortex revealed by integration of proteomics and neuropeptidomics analyses. V. Y. HOOK*; S. PODVIN; C. LIETZ; R. RISSMAN. *Univ. of Calif., San Diego.*

9:00 C57 **124.10** Disruptions of learning, memory and experience-induced auditory cortical plasticity in a next-generation rat model of Alzheimer's disease. A. SHANG*; S. TSAUR; S. BYLIPUDI; M. D. TAMBINI; L. D'ADAMIO; K. M. BIESZCZAD. *Rutgers Univ., Rutgers Univ.*

10:00 C58 **124.11** mTORC1 signaling in abeta-oligomer-based and transgenic murine models of Alzheimer's disease. D. COZACHENCO*; F. C. RIBEIRO; A. AGUILAR-VALLES; F. G. DE FELICE; N. SONENBERG; S. T. FERREIRA. *Federal Univ. of Rio De Janeiro, Carleton Univ., Queen's Univ., McGill Univ.*

11:00 C59 **124.12** Targeting defective protein synthesis to correct memory impairment in Alzheimer's disease models. M. M. OLIVEIRA*; M. V. LOURENCO; F. LONGO; N. KASICA; W. YANG; T. MA; F. G. DE FELICE; E. KLANN; S. T. FERREIRA. *New York Univ., Fed. Univ. Rio De Janeiro, Howard Hughes Med. Inst. - Wake Forest Univ., Wake Forest Baptist Med. Ctr., Wake Forest Sch. of Med., New York Univ., Fed. Univ. Rio de Janeiro.*

8:00 C60 **124.13** Mobilizing hippocampal noradrenergic fibers to produce dopamine improves contextual fear memory in Tg2576 (Alzheimer's model) mice. N. A. OTMAKHOVA; S. J. BIRREN*; J. LISMAN. *Brandeis Univ.*

9:00 C61 **124.14** An animal model of vascular dementia shows synaptic dysfunction and memory impairment. L. DIWAKAR*; K. CHITHANATHAN; D. TOMAR; R. D. GOWAIKAR; V. RAVINDRANATH. *Indian Inst. of Sci., Indian Inst. of Sci.*

10:00 C62 **124.15** Hippocampal and cerebellar abnormalities in a mouse model of Alzheimer's disease. L. RIS; M. FASSIN; A. LEROY; J. MARQUEZ-RUIZ; G. CHERON*. *Univ. of Mons, Fsm-Université Libre De Bruxelles, División de Neurociencias. Univ. Pablo de Olavide, Fsm-Université Libre De Bruxelles.*

11:00 C63 **124.16** Impact of D-serine depletion in the ß-amyloid cascade related to Alzheimer's disease. T. FRERET*; E. PLOUX; L. GORISSE; I. RADZISHEVSKY; H. WOLOSKER; J. BILLARD. *UNIVERSITE DE CAEN / INSERM U1075, INSERM, Dept. of Biochemistry, Technion-Israel Inst. of Technol., Dept of Biochem.*

8:00 C64 **124.17** Silencing interferon gamma receptor expression at the choroid plexus abrogates the therapeutic capacity of PD-L1 blockade in a mouse model of Alzheimer's disease. M. ARAD*; H. BEN-YEHUDA; J. M. P. RAMOS; G. CASTELLANI; M. SCHWARTZ. *Weizmann Inst. of Sci.*

9:00 C65 **124.18** Monocytes as disease-modifying players driving the therapeutic effect of PD-L1 blockade in murine models of dementia. H. BEN-YEHUDA*; M. ARAD; J. M. PERALTA RAMOS; T. CROESE; G. CASTELLANI; J. C. L. SIPOS; S. FERRERA; T. M. SALAME; M. SCHWARTZ. *Weizmann Inst. of Sci., San Raffaele Scientific Inst., Weizmann Inst. of Sci.*

10:00 C66 **124.19** Immune-dependent regulation of cholesterol metabolism at the choroid plexus in Alzheimer's disease. A. TSITSOU-KAMPELI*; S. SUZZI; S. MEDINA; M. SCHWARTZ. *Weizmann Inst. of Sci.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

125. Alzheimer's Disease and Other Dementias: Imaging Studies II

Theme C – Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 C67 **125.01** ▲ Rates of cerebral protein synthesis measured *in vivo* in a rat model of Alzheimer's disease. C. J. MCARDLE*; N. LOOMBA; I. LOUTAEV; L. KRYCH; C. SMITH. *NIH.*

9:00 C68 **125.02** Reduced fiber density in ArcAbeta but not in PSAPP or E22dABeta transgenic mice. M. AL-AMIN; J. GRANJEAN; J. KIM*. *Indiana Univ. Sch. of Med., The Univ. of Queensland, Radbound Univ. Med. Ctr.*

10:00 C69 **125.03** Optogenetic fMRI of the basal forebrain in Alzheimer's disease and aging. M. ASAAD*; H. LEE; J. LEE. *Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ.*

11:00 C70 **125.04** ● Tau protein impairs functional networks independently of aggregation propensity, but impairment can be reversed by suppressing Tau expression. C. GREEN; A. SYDOW; S. VOGEL; M. ANGLADA-HUGUET; D. WIEDERMANN; M. HOEHN; E. MANDELKOW; E. MANDELKOW*. *MPI for Metabolism Research, in vivo NMR Lab., German Ctr. For Neurodegenerative Dis. (DZNE), Ctr. of Advanced European Studies and Res. (CAESAR).*

8:00 C71 **125.05** Genetic diversity differentially impacts diffusion MRI measures in cortex and hippocampus of wildtype and 5xFAD mice. M. M. GRUDNY*; S. NEUNER; M. POMPILUS; A. DUNN; M. FEBO; C. C. KACZOROWSKI. *Univ. of Florida, The Jackson Lab.*

9:00 C72 **125.06** Non-invasive detection of soluble amyloid-beta oligomers using magnetic resonance imaging in a non-transgenic mammalian species. N. B. ROZEMA*; K. L. VIOLA; J. F. DISTERHOFT; W. L. KLEIN; C. WEISS. *Northwestern Univ., Northwestern Univ.*

10:00 C73 **125.07** Brain volumetrics in aged rhesus monkeys: A progress report. S. C. DASH*; Z. LIU; C. D. KROENKE; H. F. URBANSKI; M. L. VOYTKO; S. G. KOHAMA. *Oregon Natl. Primate Res. Ctr., Oregon Natl. Primate Res. Ctr., Wake Forest Univ. Sch. Med.*

11:00 C74 **125.08** Regional distribution of longitudinal amyloid accumulation in cognitively normal older adults. L. A. FERGUSON; S. L. LEAL*; W. J. JAGUST. *Univ. of California, Berkeley, Rice Univ.*

8:00 C75 **125.09** Hippocampal and medial temporal lobe regions are differentially associated with BOLD signal variability in older adults with and without risk for cognitive decline. J. W. VILLAFUERTE*; T. J. GOOD; M. D. BARENSE; J. D. RYAN; C. L. GRADY. *Univ. of Toronto, Baycrest.*

9:00 C76 **125.10** ● Detection of aging effect on white matter microstructure: A comparison of diffusion MRI preprocessing pipelines. S. I. THOMOPOULOS*; T. M. NIR; J. VILLALON REINA; E. HADDAD; N. JAHANSHAD; R. I. REID; M. A. BERNSTEIN; B. BOROWSKI; C. R. JACK, Jr.; M. W. WEINER; P. M. THOMPSON. *USC, USC Imaging Genet. Ctr., USC, Mayo Clin. and Fndn., Univ. of California San Francisco Sch. of Med., Univ. of Southern California (USC).*

10:00 C77 **125.11** Women show higher cerebral blood flow than men in older age. E. R. SEAGO*; V. ZACHARIOU; C. BAUER; B. T. GOLD. *Univ. of Kentucky.*

11:00 C78 **125.12** Cerebral type 1 metabotropic glutamate receptor availability in early Alzheimer's disease. K. ISHII*; K. ISHIBASHI; T. TAGO; M. SAKATA; K. WAGATSUMA; J. TOYOHARA. *Tokyo Metropolitan Inst. of Gerontology.*

8:00 C79 **125.13** Manual correction of grey/white matter voxel misclassifications does not alter brain-behavioral correlations in subjects with very early Alzheimer's disease. F. HARTMANN; J. REINHARDT; R. W. KRESSIG; S. KRUMM*. *Memory Clin. Felix Platter, Univ. Hosp. Basel, Univ. Hosp. Zurich, Univ. of Basel.*

9:00 C80 **125.14** Longitudinal MRI study on the progression of transentorhinal cortical thinning during early stages of Alzheimer's disease: BIOCARD and ADNI cohorts. S. KULASON*; D. J. TWARD; T. BROWN; M. S. ALBERT; M. MILLER. *Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ.*

10:00 C81 **125.15** Cerebrospinal fluid evidence for accelerated brain age in Alzheimer's disease. N. G. KINNEY*; J. S. PHILLIPS; D. G. WAKEMAN; L. M. SHAW; M. GROSSMAN; D. A. WOLK; C. T. MCMILLAN. *Perelman Sch. of Medicine, Univ. of Pennsylvania, Perelman Sch. of Medicine, Univ. of Pennsylvania.*

11:00 C82 **125.16** Structural connectivity network of Alzheimer's disease and Lewy body disease including mixed disease. K. BAIK*; J. YANG; B. YE. *Yonsei Univ. Col. of Med., Hanyang Univ.*

8:00 C83 **125.17** Cardiovascular risk modifies the relationship of VEGF to cognition and regional glucose metabolism in Alzheimer's disease. M. TUBI*; M. HAPENNEY; K. KING; B. C. RIEDEL; W. MACK; P. M. THOMPSON; M. N. BRASKIE. *Imaging Genet. Center, Mark and Mary Stevens Neuroimaging and Informatics Institute, Keck Sch. of Medicine, Univ. of Southern California, Huntington Med. Res. Institutes, Imaging Div., Indiana Univ. Ctr. for Neuroimaging, Indiana Alzheimer's Dis. Center, Indiana Univ. Sch. of Med., Dept. of Preventive Medicine, Univ. of Southern California.*

9:00 C84 **125.18** ▲ Altered cardiovascular brain pulsations in Alzheimer's disease. T. TUOVINEN; J. KANANEN; Z. RAJNA; V. J. KIVINIEMI*. *OFNI, MIPT/MRC of Oulu Univ. Hosp.*

10:00 C85 **125.19** Mechanical property alterations across the cerebral cortex due to Alzheimer's disease. L. V. HISCOX*; C. L. JOHNSON; M. D. J. MCGARRY; H. MARSHALL; E. J. R. VAN BEEK; N. ROBERTS; J. M. STARR. *Univ. of Delaware, Univ. of Edinburgh, Dartmouth Col., Univ. of Edinburgh.*

11:00 C86 **125.20** Changes in hippocampal-lateral prefrontal cortex resting-state anticorrelations following exercise interventions. K. M. MCDONALD*; S. ANTERAPER; M. VOSS; S. WHITFIELD-GABRIELI; K. I. ERICKSON; C. HILLMAN; E. MCAULEY; A. KRAMER. *Northeastern Univ., MIT, Univ. of Iowa, Univ. of Pittsburgh, Univ. of Illinois.*

8:00 C87 **125.21** Locus coeruleus glucose metabolism in Alzheimer's disease. K. Y. LIU*; J. ACOSTA-CABRONERO; D. HÄMMERER; R. HOWARD. *Univ. Col. London, UCL Inst. of Neurol., Inst. of Cognitive Neurosci. UCL.*

9:00 C88 **125.22** Functional significance of cortical cholinergic circuits in cognitive decline. M. R. ANANTH*; C. DELORENZO; N. PALEKAR; R. PARSEY; D. A. TALMAGE; L. W. ROLE. *Stony Brook Univ., Stony Brook Univ. Sch. of Med., Natl. Inst. of Mental Hlth., Natl. Inst. of Neurolog. Disorder and Stroke.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 C89 **125.23** Sphingosine 1-phosphate receptor ($S1P_1$) activity in postmortem human brain. J. MARTÍNEZ-GARDEAZABAL; G. CUADRA-FERNÁNDEZ; I. BENGOETXEA DE TENA; I. FERNÁNDEZ-VEGA; M. MORENO-RODRÍGUEZ; A. LLORENTE-OVEJERO; L. LOMBARDERO; I. MANUEL; R. RODRÍGUEZ-PUERTAS*. *Univ. of the Basque Country (UPV/EHU), Service of Pathology, Hosp. Universitario Central de Asturias.*

POSTER

126. APP Metabolites in Alzheimer's Disease

Theme C – Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 C90 **126.01** Characterization of exosomes-derived from cholesterol accumulated astrocytes and its significance in Alzheimer's disease pathology. Q. WU*; L. CORTEZ; R. KAMALI-JAMIL; V. SIM; H. WILLE; S. KAR. *Univ. of Alberta, Univ. of Alberta.*

9:00 C91 **126.02** The analysis for APP-βCTF mediated traffic impairment in AD. N. KANESHIRO*; T. HASHIMOTO; T. SAKURAI; T. UEHARA; N. TAKASUGI. *Okayama Univ., Univ. of Tokyo, Juntendo Univ.*

10:00 C92 **126.03** Identification of a novel BACE1 dependent cleavage on amyloid precursor protein. X. NIU*; M. LUO; X. HOU; Y. GENG; Y. CHEN. *Shanghai Inst. of Organic Chem.*

11:00 D1 **126.04** Structural dynamics of presenilin 1, a protein regulating Alzheimer's disease associated aβ42 peptide production. T. CAI*; T. TOMITA. *The Univ. of Tokyo.*

8:00 D2 **126.05** Thermal response of amyloidogenic elements in cultured N2a cells: Potential relevance to Alzheimer's disease pathology. A. SCHMAUS*; S. KAR. *Univ. of Alberta, Univ. of Alberta.*

9:00 D3 **126.06** New evidence that amyloid precursor protein can signal via the heterotrimeric G protein Go to regulate different aspects of neuronal motility. P. F. COPENHAVER*; J. M. RAMAKER; H. LEE; G. WALKER-STEVENSON; C. BATES. *Oregon Hlth. and Sci. Univ., Oregon Hlth. & Sci. Univ.*

10:00 D4 **126.07** Repeated hypoxia exposure decreases *O-GlcNAcylation to indeed amyloid-beta and p-tau accumulation in the brain of adult zebrafish.* J. PARK*; Y. LEE; S. KIM; J. LEE; I. HAN. *Inha Univ.*

11:00 D5 **126.08** Novel microRNA-455-3p and its protective effects against abnormal APP processing and amyloid beta toxicity in Alzheimer's disease. S. KUMAR*; A. REDDY; X. YIN; P. REDDY. *TTUHSC, TTUHSC, TTUHSC.*

8:00 D6 **126.09** Loss of caveolin-1 promotes Alzheimer's disease in type-2- diabetes. A. SHETTI*; J. BONDS; A. BHERI; Z. CHEN; A. DISOUKY; L. TAI; M. MAO; B. P. HEAD; M. BONINI; J. HAUS; R. MINSHALL; O. LAZAROV. *Univ. of Illinois at Chicago, Northwestern Univ., Med. Col. of Wisconsin, Univ. of California San Diego, Med. Col. of Wisconsin, Univ. of Michigan.*

9:00 D7 **126.10** Effects of temperature on APP processing in cultured astrocytes and its potential implication in Alzheimer's disease pathology. M. M. ALAM*; G. KARTHIVASHAN; Q. WU; D. VERGOTE; G. BAKER; S. KAR. *Univ. of Alberta, Univ. of Alberta.*

10:00 D8 **126.11** Investigation of cerebrovascular proteins involved in amyloid-beta disposition in a mouse model of sporadic Alzheimer's disease. K. A. TRESIDDER*; B. M. BENNETT. *Queen's Univ., Queen's Univ.*

11:00 D9 **126.12** APP-mediated signaling rescues memory impairment in presenilin knock-in mice carrying familial Alzheimer's disease variant. C. DEYTS; M. CLUTTER; N. PIERCE; G. BESANT; V. SPRUILL; P. CRUZ; G. THINAKARAN; T. GOLDE; A. PARENT*. *Univ. of Chicago, Univ. of Florida.*

8:00 D10 **126.13** Insulin reduces APP endocytosis by decreasing its localization in lipid rafts. O. KWON*; Y. CHO; S. CHUNG. *Sungkyunkwan Univ. Sch. of Med.*

9:00 D11 **126.14** Cholesterol enriched lipid raft is a platform for APP endocytosis. Y. CHO*; O. KWON; S. CHUNG. *Sungkyunkwan Univ.*

10:00 D12 **126.15** Dysregulation of the aβ degrading enzyme neprilysin (MME) could contribute to Alzheimer's disease. R. WANG*; N. CHOPRA; B. MALONEY; D. K. LAHIRI. *Indiana Univ. Sch. of Med.*

11:00 D13 **126.16** Extracellular vesicles: Where the amyloid precursor protein carboxyl-terminal fragments accumulate and amyloid-beta is not generated. Y. KIM*; R. PÉREZ-GONZÁLEZ; C. MILLER; M. PAWLIK; E. LEVY. *Nathan S. Kline Inst., New York Univ. Langone Hlth., Ctr. for Networked Biomed. Res. on Neurodegenerative Dis. (Ciberned), Hosp. de la Santa Creu i Sant Pau, New York Univ. Langone Hlth., New York Univ. Langone Hlth.*

8:00 D14 **126.17** Gut microbiota manipulation by dietary restriction to treat sensory and cognitive changes in an Alzheimer animal model. K. SAMBAMURTI*; V. PADMARAJU; E. AMELLA; M. A. PAPPOLLA; C. VASU; N. BHAT; D. K. LAHIRI; N. H. GREIG. *Med. Univ. of South Carolina, Med. Univ. of South Carolina, Univ. of Texas, Med. Univ. of South Carolina, Indiana Univ. Sch. of Med., Intramural Res. Program, Natl. Inst. On Aging, NIH.*

9:00 D15 **126.18** Associations between amyloid and tau burden in Down syndrome using positron emission tomography. M. ZAMMIT*; C. LAYMON; D. TUDORASCU; K. CODY; S. JOHNSON; S. ZAMAN; M. SABBAGH; D. MINHAS; A. COHEN; W. KLUNK; B. HANDEN; B. CHRISTIAN. *Univ. of Wisconsin-Madison, Univ. of Pittsburgh, Univ. of Cambridge, Barrow Neurolog. Inst.*

10:00 D16 **126.19** ● J20 Alzheimer's disease mice exhibit an altered circadian actigraphy profile. P. R. WESTMARK; M. J. FILON; E. WALLACE; S. WRIGHT; R. K. MAGANTI; C. J. WESTMARK*. *Univ. of Wisconsin.*

11:00 D17 **126.20** Specific microRNAs (miRNAs) play major roles in human diseases. D. K. LAHIRI*; R. WANG; B. MALONEY; J. BECK; N. CHOPRA; D. K. SOKOL; N. H. GREIG; K. SAMBAMURTI; S. E. COUNTS. *Indiana Univ. Sch. of Med., Michigan State Univ., Indiana Univ. Sch. of Med., Intramural Res. Program, Natl. Inst. On Aging, NIH, MUSC.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

127. Alzheimer's Disease: APP/Abeta Cellular and Animal Models

Theme C – Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 D18 **127.01** The effects of traumatic brain on behavior in double transgenic APP/tau mice. J. M. FLINN*; N. COSCHIGANO; F. BARRIENTOS; C. M. HERNANDEZ; T. DIMOPOULOS; T. GERVASE; R. BARKEY; A. BOOTH; D. CERRI; K. M. CRAVEN. *George Mason Univ., George Mason.*

9:00 D19 **127.02** ● ▲ Instinctual behaviors in double transgenic young adult mice are impaired following repetitive mild TBI. T. N. GERVASE*; K. M. CRAVEN; N. T. COSCHIGANO; F. J. BARRIE; J. M. FLINN. *George Mason Univ.*

10:00 D20 **127.03** Traumatic brain injury increases tau hyperphosphorylation in the prefrontal cortex and hippocampus of double transgenic APP/tau mice. R. E. BARKEY*; K. M. CRAVEN; N. T. COSCHIGANO; C. M. HERNANDEZ; D. D. CERRI; F. J. BARRIENTOS; T. N. GERVASE; J. M. FLINN. *George Mason Univ., George Mason Univ., George Mason Univ.*

11:00 D21 **127.04** Accumulation of lysosomal vesicles and ferritin in dystrophic neurites and their selective degradation in Alzheimer's disease mice brain. M. SHAROAR*; X. HU; R. YAN. *Univ. of Connecticut Hlth. Ctr.*

8:00 D22 **127.05** Metabolic syndrome exacerbates amyloid pathology in a novel comorbid mouse model by decreasing the expression of insulin degrading enzyme. S. PUGAZHENTHI*; A. TYAGI. *Rocky Mountain Regional VA Med. Ctr., Univ. of Colorado-Anschutz Med. Campus.*

9:00 D23 **127.06** Soluble high-molecular weight oligomers of amyloid-beta peptide derived from the brains of APP transgenic mice induce cerebral amyloid-beta deposits. T. HASHIMOTO*; Y. NAKA; M. HAKOZAKI-KASHIWAGI; T. TAJIRI; T. IWATSUBO. *The Univ. of Tokyo, The Univ. of Tokyo.*

10:00 D24 **127.07** Intravesicular retention of amyloid beta aggregates precedes plaque formation and changes in extracellular amyloid beta levels. E. A. ECKMAN; D. CLAUSEN; J. PACHECO-QUINTO*. *Biomed. Res. Inst. of New Jersey.*

8:00 DP04/D25 **127.08** (Dynamic Poster) Blockparty the effects of connected cages on nesting behavior in APP Alzheimer's mice. K. A. PEDEMONTE*; R. BARKEY; J. M. FLINN. *George Mason Univ.*

8:00 D26 **127.09** Early emergence of impaired spatial learning and memory function in male TgF344-AD rats. Z. DING*; Y. ZHANG; A. M. SENTIR; C. M. INGRAHAM; B. T. LAMB; A. L. OBLAK. *Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med.*

9:00 D27 **127.10** Evidence of differential expression of AD related proteins in post natal stages of rat brain regions provide clue on SAD progression. A. JAYACHANDRAN*; M. PONNUSAMY; J. K. SWAMINATHAN. *Bharathidasan Univ., Bharathidasan Univ.*

10:00 D28 **127.11** Episodic memory in a transgenic rat model of Alzheimer's disease. D. PANOZ-BROWN*; L. M. CAREY, IV; A. G. HOHMANN; J. D. CRYSTAL. *Indiana Univ., Indiana Univ., Indiana Univ.*

11:00 D29 **127.12** Tricyclic pyrone CP2 improves long term memory in the TgF344 AD rat of an Alzheimer's disease model. B. ZOU*; W. CAO; C. PASCUAL; K. ERICKSON; H. FAN; Z. TONG; A. V. D. VLIES; I. MAEZAWA; L. JIN; D. H. HUA; X. XIE. *AfaSci Res. Labs., Univ. of California Davis, Kansas State Univ.*

8:00 D30 **127.13** Application of amyloid-beta oligomer to *Aplysia* buccal ganglia suppressed the feeding behavior. T. NAGAHAMA*; T. MINAGAWA; H. NAKAJIMA; M. TOKORO; M. WAKUTA; S. NAGAHAMA. *Teikyo Heisei Univ/ Fac Hlth. Med. Sci., Fac Phar Sci, Toho Univ., Teikyo Heisei Univ.*

9:00 D31 **127.14** APP-induced patterned neurodegeneration is exacerbated by APOE4 in *C. elegans.* L. BROSE*; W. SAE-LEE; L. L. SCOTT; T. SHI; J. T. PIERCE. *Univ. of Texas at Austin, Univ. of Texas at Austin.*

10:00 D32 **127.15** ▲ Investigating a potential interaction between the chromatin remodeling protein kismet and APP in a *Drosophila* model of Alzheimer's disease. N. L. LINSKEY*; E. L. HENDRICKS; F. L. W. LIEBL. *Southern Illinois Univ. Edwardsville.*

11:00 D33 **127.16** Progress towards creating a sheep (*Ovis aries) model of Alzheimer's disease.* N. E. MCKEAN*; R. G. SNELL; R. HANDLEY; H. WALDVOGEL; R. L. M. FAULL; S. BAWDEN; C. MCLAUGHLAN; H. ZETTERBERG; J. HARDY; J. GUSELLA; J. LIU. *Univ. of Auckland - City Campus, Univ. of Auckland, Univ. of Auckland, South Australian Res. and Develop. Inst., Univ. of Gothenburg, UCL, Harvard Univ., Monash Univ.*

8:00 D34 **127.17** Progress in Alzheimer's disease modeling: Intrathecal administration of amyloid-beta oligomers in the African green monkey. J. D. ELSWORTH*; M. R. WEED; A. M. KURIAN; M. S. LAWRENCE; S. E. PEREZ; E. J. MUFSON; E. N. CLINE; K. L. VIOLA; W. L. KLEIN; D. R. WAKEMAN. *RxGen Inc, Barrow Neurolog. Inst., Northwestern Univ.*

9:00 D35 **127.18** Effect of a fiber-enriched diet in the gut microbiota of app/ps1 transgenic and wild type mice: Gender differences. D. CUERVO*. *Cinvestav.*

10:00 D36 **127.19** ● Reversible effects of metabolic improvement on high-fat diet-induced amyloid accumulation in a mouse model of Alzheimer's disease. T. OCHIAI; T. WAKABAYASHI; K. YAMAGUCHI; K. MATSUI; T. SANO; T. IWATSUBO*. *Grad. Sch. of Medicine, The Univ. of Tokyo, Drug Res. Center, Kaken Pharmaceut. Co., LTD., Grad. Sch. of Medicine, The Univ. of Tokyo.*

11:00 D37 **127.20** Effect of a ketogenic diet on spatial learning performance in PS1+APP, APP, and wild type rats. P. N. MICHENER*; R. A. RICHARDSON; C. L. GANN; O. M. FAHR; I. M. NORTH; B. TUMMALA; C. AGCA; Y. AGCA; T. R. SCHACHTMAN. *Univ. of Missouri, Univ. of Missouri.*

8:00 D38 **127.21** The effects of insulin and insulin-like growth factor-I on amyloid precursor protein phosphorylation in *in vitro* and *in vivo* models of Alzheimer's disease. B. KIM*; S. E. ELZINGA; R. E. HENN; L. M. MCGINLEY; E. L. FELDMAN. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

9:00 D39 **127.22** Cognitive deficits in late stage Alzheimer's mice ameliorated by specific tau phosphorylation by p38gamma. A. ITTNER*; K. STEFANOSKA; J. BERTZ; P. ASIH; Y. LIN; A. VOLKERLING; F. DELERUE; L. ITTNER. *Macquarie Univ.*

10:00 D40 **127.23** Tau hyper-phosphorylation in two Alzheimer's disease mouse models. S. KEMAL*; C. HALDAR; R. J. VASSAR. *Northwestern Univ., Illinois Inst. of Technol.*

● Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 D41 **127.24** Axonal transport during injury. V. LACOVICH*; V. M. POZO DEVOTO; K. TEXLOVÁ; M. NOVAKOVÁ; M. FEOLE; G. B. STOKIN. *FNUSA-ICRC.*

8:00 D42 **127.25** A hierarchy of preferred protein-protein adhesions, inferred by cross-linking of Alzheimer-like aggregates, predicts novel drug targets. M. BALASUBRAMANIAM*; S. AYYADEVARA; A. GANNE; S. KAKRABA; N. R. PENTHALA; X. DU; P. A. CROOKS; S. T. GRIFFIN; R. J. SHMOOKLER REIS. *Univ. of Arkansas For Med. Sci., Univ. of Arkansas For Med. Sci., Univ. of North Carolina at Charlotte, Univ. of Arkansas for Med. Sci., Univ. of Arkansas For Med. Sci.*

9:00 D43 **127.26** Allosteric regulation of a7 nAChRs by high and low AB(1-42) concentrations. J. B. ANDERSON*; K. DEBOEUF; J. PANCHAL; M. ISLAM; I. MCFATRIDGE; J. FARLEY. *Indiana Univ. Bloomington, Indiana Univ. Bloomington, Indiana Univ. Bloomington.*

10:00 D44 **127.27** Ammonia-mediated induction of Alzheimer's disease pathology in astrocytes. A. KOMATSU; S. KISHIKAWA; G. ITO; I. IIDA; M. TERUNUMA*. *Niigata Univ.*

11:00 D45 **127.28** Phosphorylation of cellular adaptor GULP1 regulates Alzheimer's disease amyloid precursor protein processing. K. LAU*; J. C. NGO; D. D. CHAU. *The Chinese Univ. of Hong Kong.*

8:00 D46 **127.29** Direct and indirectly-transformed human neurons from AD patients display pathogenic calcium signaling patterns and protein aggregations. S. SCHRANK*; J. MCDAID; C. A. BRIGGS; V. BOTTERO; A. HOUCEK; K. MAIGLER; A. D. EBERT; R. A. MARR; G. E. STUTZMANN. *Rosalind Franklin Univ., Rosalind Franklin Univ., Lake Forest Col., Brandeis Univ., Med. Col. of Wisconsin, Rosalind Franklin Univ. of Med. and Sci., Rosalind Franklin Univ. / Chicago Med. Sch.*

9:00 E1 **127.30** Upregulation of autophagy interrupts exosome secretion to augment endocytic disturbance and enhance intracellular accumulation of abeta. N. KIMURA*; S. KOINUMA; N. SHIMOZAWA; Y. YASUTOMI. *Natl. Ctr. For Geriatrics and Gerontology, Natl. Ctr. for Geriatrics and Gerontology, Natl. Inst. of Biomed. Innovation, Hlth. and Nutr.*

POSTER

128. Neurodegenerative Disorders and Injury I

Theme C – Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 E2 **128.01** DNA methylation signatures in early Alzheimer's disease blood. J. A. Y. ROUBROEKS*; R. SMITH; E. PISHVA; Z. IBRAHIM; P. PROITSI; S. LOVESTONE; I. KŁOSZEWSKA; P. MECOCCI; H. SOININEN; B. VELLAS; S. NEWHOUSE; R. DOBSON; J. MILL; D. L. A. VAN DEN HOVE; K. LUNNON. *Univ. of Exeter, Maastricht Univ., King's Col. London, Univ. Col. London, Univ. of Łódź, Univ. of Perugia, Univ. of Eastern Finland, Univ. of Toulouse, Univ. of Würzburg.*

9:00 E3 **128.02** ● Comprehensive analysis of PM20D1 QTL locus in Alzheimer's disease. J. SANCHEZ-MUT*; J. GRAFF. *Brain and Mind Institute, EPFL.*

10:00 E4 **128.03** Deleting adult neural stem cells ameliorates synaptic and cognitive deficits in animal models of Alzheimer's disease. Y. MEI*; X. ZHANG; Y. HE; D. WANG; E. YANG; X. WEI; D. ZHOU; J. WANG; H. SHEN; Q. SHU; Y. ZHOU; B. SUN. *Inst. of Neurosci., Med. Sch., Children's Hosp.*

11:00 E5 **128.04** Calcification of the basal ganglia in centenarians. T. IWASE*; M. YOSHIDA; Y. HASHIZUME; I. YAZAWA. *Nagoya City Koseiin Med. Welfare Ctr., Aichi Med. Univ., Fukushimura Hosp., Natl. Ctr. for Geriatrics and Gerontology.*

8:00 E6 **128.05** Semantic and episodic memory in neurodegenerative disease. S. I. DEV*; B. C. DICKERSON; R. ECKBO; D. PUTCHA; B. WONG; J. A. COLLINS. *Massachusetts Gen. Hosp., Harvard Med. Sch.*

9:00 E7 **128.06** Genetic and non-genetic factors for sleep and inhibitory control. E. B. SALDES*; P. R. SABANDAL; A. ARZOLA; K. A. HAN. *Univ. of Texas at El Paso.*

10:00 E8 **128.07** Detection of mitogen-activated protein kinase kinase 3 (MAP2K3) immunoreactivity in human cerebral cortex. Y. PAN*; A. BAHRAMI; I. AYALA; R. SHAHIDEHPOUR; C. WU*; E. BIGIO; E. ROGALSKI; M. MESULAM; C. GEULA. *Northwestern University, Feinberg Sch. of Medicine, Chicago, IL, Univ. of California - Irvine Sch. of Medici, Northwestern University, Feinberg Sch. of Medicine, Chicago, IL.*

11:00 E9 **128.08** Transgenerational and immediate effects of E2F1 loss on development of neurocognitive impairment. C. MEURICE*; D. P. JACKSON; S. K. RYAN; M. A. ERICKSON; E. D. HARNESS; K. L. JORDAN-SCIUTTO. *Univ. of Pennsylvania, Seattle VA Puget Sound Hlth. Care Syst., Univ. of Washington.*

8:00 E10 **128.09** GABA-B receptor induced BDNF hypermethylation in dorsal hippocampus impairs postoperative cognition of middle-aged mice. C. GAO*; T. WU; X. SUN; J. HAO. *Xuzhou Med. Univ.*

9:00 E11 **128.10** Dysregulation of the endosomal/lysosomal pathway in Dp16 mice, a mouse model of Down syndrome. X. CHEN*; W. C. MOBLEY. *UCSD.*

10:00 E12 **128.11** Dysregulation of the retromer complex during the progression of Alzheimer's disease in Down syndrome. M. E. CURTIS*; D. PRATICÒ. *Temple Univ. Lewis Katz Sch. of Med.*

11:00 E13 **128.12** ATP-binding cassette subfamily a gene expression is altered in frontotemporal lobar degeneration with TDP-43 inclusions. J. S. KATZEFF*; S. BHATIA; G. M. HALLIDAY; W. S. KIM. *The Univ. of Sydney, The Univ. of Sydney.*

8:00 E14 **128.13** Mean diffusivity in semantic primary progressive aphasia (svPPA): An alternative biomarker. M. MARTIN; D. G. WAKEMAN; J. BOVE; J. S. PHILLIPS; P. COOK; C. MCMILLAN; D. IRWIN; M. GROSSMAN*; J. GEE; M. D. TISDALL. *Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 DP05/E15 **128.14** (Dynamic Poster) Tracking endothelial dysfunction and microglial dynamics *in vivo* to uncover pathological mechanisms in a model of vascular cognitive impairment. J. R. BEVERLEY*; J. KOUDELKA; K. ASKEW; L. HAMILTON; D. SIEGER; U. K. WIEGAND; J. J. R. RODRIGUEZ; M. GARCIA-ALLOZA; B. MCCOLL; A. TAVARES; R. KALARIA; K. HORSBURGH. *Univ. of Edinburgh, Univ. of Edinburgh, Univ. de Granada, Univ. de Cadiz, Univ. of Edinburgh, Univ. of Edinburgh, Newcastle Univ.*

10:00 E16 **128.15** Pilot study of distinguish between dementia with Lewy bodies and healthy subjects using voice. Y. OMIYA*; T. URAGUCHI; T. TAKANO; M. NAKAMURA; S. SHINOHARA; M. HIGUCHI; K. SUZUKI; N. MANOME; M. ISHIDA; Y. KUMAMOTO; S. MITSUYOSHI; S. TOKUNO. *PST Inc., The Univ. of Tokyo, LSII.*

11:00 E17 **128.16** Differential vulnerability of cholinergic involvement of primary sensory thalamic nuclei in dementia with Lewy bodies. P. KANEL*; M. L. T. M. MÜLLER; R. A. KOEPPE; K. A. FREY; N. I. BOHNEN. *Univ. of Michigan, Univ. of Michigan.*

8:00 E18 **128.17** The C9orf72 repeat expansion associated with fronto-temporal dementia leads to early synaptic dysfunction in hippocampal CA1 pyramidal neurons. A. ZAMORA-MORATALLA*; R. FRANCAVILLA; L. TOPOLNIK. *CRCHUQ-CHUL, Laval Univ., CRCHUQ-CHUL, Laval Univ.*

9:00 E19 **128.18** Altered intrinsic and synaptic properties in C9ORF72-associated FTD mouse models. H. L. PHILLIPS*; Q. MA; S. CHOI; L. PETRUCELLI; F. GAO; W. YAO. *SUNY Upstate Med. Univ., Univ. of Massachussetts Med. Sch., Mayo Clin.*

10:00 E20 **128.19** Strain-specific accumulation of human transgenic TDP-43, inclusion formation and microglia activation in a mouse model for frontotemporal lobar degeneration. R. SHAHIDEHPOUR*; L. KUKREJA; G. KIM; K. SADLEIR; C. SPENCER; H. DONG; M. MESULAM; R. VASSAR; C. GEULA. *Northwestern Univ., Northwestern Univ., Northwestern Univ.*

11:00 E21 **128.20** Aaaadk. M. I. YOUSSEF*; Y. ZHOU; J. ZHANG; L. JIANG; W. HU; J. QI; Z. CHEN. *Inst. of Pharmacol. & Toxicology, NHC and CAMS Key Lab. of Med. Neurobiology, Col. of Pharmaceut. Sciences, Sch. of Basic Med. Sciences, Zhejiang Univ., Dept. of Pharmacy, Sir Run Run Shaw Hospital, Sch. of Medicine, Zhejiang University, 3 East Qingchun Road.*

8:00 E22 **128.21** Sex differences in the effects of high fat diet on VCID. A. SALINERO*; L. S. ROBISON; O. J. GANNON; D. RICCIO; A. GALLOWAY; K. L. ZULOAGA. *Albany Med. Col., Albany Med. Col.*

9:00 E23 **128.22** Sex differences in the effects of high fat diet on hippocampal neurogenesis in mouse models of healthy aging and dementia. L. S. ROBISON*; N. M. ALBERT; L. CAMARGO; O. J. GANNON; A. E. SALINERO; M. A. THOMAS; K. L. ZULOAGA. *Albany Med. Col.*

10:00 E24 **128.23** ▲ Studies on the role of DNA dynamics in neurodegeneration. J. RAO*; M. L. HEGDE; J. KOSAGISHARAF. *Univ. of Missouri Kansas City-Umkc, Houston Methodist, INDICASAT AIP.*

11:00 E25 **128.24** Scully in aging-associated loss of memory and inhibitory control. P. R. SABANDAL*; A. ARZOLA; C. M. SIERRA; N. M. DELGADO; E. B. SALDES; K. HAN. *Univ. of Texas At El Paso.*

8:00 E26 **128.25** Mice with progressive communicating hydrocephalus develop urinary incontinence and gait impairment. M. M. TISH*; J. C. GEERLING. *Univ. of Iowa.*

POSTER

129. Cellular Mechanisms of Parkinson's Disease II

Theme C – Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 E27 **129.01** Ziram, a pesticide linked to Parkinson's disease, increases synaptic release and excitability at the *Drosophila* NMJ. D. F. BRAMBILA*; J. HARRIGAN; D. E. KRANTZ; F. E. SCHWEIZER. *UCLA, David Geffen Sch. of Med., UCLA, UCLA, David Geffen Sch. of Med., UCLA.*

9:00 E28 **129.02** ● Evaluation of saposin C and acid sphingomyelinase overexpression in a model of GBA-related Parkinson's disease. C. KAYATEKIN*; K. JACKSON; J. CLARKE; C. VIEL; A. M. RICHARDS; L. S. SHIHABUDDIN; S. P. SARDI. *Sanofi.*

10:00 E29 **129.03** ● Seven murine models of metabolic disease exhibit differences in brain protein aggregation and neuroinflammation. J. CLARKE*; C. KAYATEKIN; C. VIEL; L. SHIHABUDDIN; P. SARDI. *Sanofi.*

11:00 E30 **129.04** Parkinson's disease alters genome-wide DNA methylation and DNA hydroxymethylation in human brain. J. KOCHMANSKI*; S. E. VANOEVEREN; C. SAVONEN; M. GEARING; A. I. BERNSTEIN. *Michigan State Univ., Emory Univ. Sch. of Med.*

8:00 E31 **129.05** Developmental dieldrin exposure induces neuroinflammation and male-specific increased susceptibility to α-synuclein pre-formed fibrils. A. O. GEZER*; J. KOCHMANSKI; S. O. VANOEVEREN; C. J. KEMP; J. PATTERSON; A. C. STRAUSS; S. M. FLEMING; K. C. LUK; C. E. SORTWELL; A. I. BERNSTEIN. *Michigan State Univ., Northeast Ohio Med. Univ., Univ. Pennsylvania, Michigan State Univ.*

9:00 E32 **129.06** Acquired dysregulation of dopamine homeostasis reproduces features of Parkinson's disease. M. L. BUCHER*; C. J. MOON; A. D. MORTIMER; C. W. BARRETT; J. T. GREENAMYRE; T. G. HASTINGS. *Univ. of Pittsburgh.*

10:00 E33 **129.07** Oxicam-derived non-steroidal anti-inflammatory drugs protect against 1-methyl-4-phenyl pyridinium-induced cell death by suppressing of endoplasmic reticulum stress and mitochondrial dysfunction. T. OMURA*; M. SASAOKA; G. HASHIMOTO; S. IMAI; J. YAMAMOTO; Y. SATO; S. NAKAGAWA; A. YONEZAWA; T. NAKAGAWA; Y. TASAKI; I. YANO; K. MATSUBARA. *Kyoto Univ. Hosp., Kobe Univ. Hosp., Kyoto Univ., Asahikawa Med. Univ.*

11:00 E34 **129.08** ISG15 conjugation of STUB1 positively modulates its ubiquitin E3 ligase activity and inhibits cell growth during IFN1 inflammatory signaling. L. YOO; C. PARK; K. C. CHUNG*. *Yonsei Univ., Yonsei Univ., Yonsei Univ.*

8:00 E35 **129.09** Leucine-rich repeat kinase 2 phosphorylates histone deacetylate 3 and facilitates neuronal cell death through epigenetic histone modification. K. A. HAN; J. H. PARK*; K. C. CHUNG*. *Yonsei Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 E36 **129.10** Understanding the role of store operated calcium entry in Parkinson's disease using stem cell derived dopaminergic neurons. R. GOPURAPPILLY*; B. DEB; P. CHAKRABORTY; R. KANNAN; G. HASAN. *Natl. Ctr. for Biol. Sci., Natl. Inst. of Mental Hlth. & Neuro Sci.*

10:00 E37 **129.11** Proteomic analysis of Parkinson's disease-linked D620N VPS35. E. T. WILLIAMS*; S. ISLAM; D. MOORE. *Van Andel Inst., North South Univ.*

11:00 E38 **129.12** A patient iPSC-based platform for investigating idiopathic Parkinson's disease. M. J. CORENBLUM*; A. ANNADURAI; K. SHRESTHA; L. MADHAVAN. *Univ. of Arizona.*

POSTER

130. Alpha-Synuclein: Mechanisms and Transmission

Theme C – Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 E39 **130.01** Truncation of α-synuclein potentiates pathological inclusion formation and is abundant in human disease. Z. A. SORRENTINO; N. VIJAYARAGHAVAN; J. CALDWELL; K. GORION; B. I. GIASSON. *Univ. of Florida.*

9:00 E40 **130.02** Systematic comparison of the molecular mechanisms underlying the spreading of pathology in different neurodegenerative diseases. I. C. BRÁS*; T. F. OUTEIRO. *Univ. Med. Ctr. Göttingen.*

10:00 E41 **130.03** Homogenous generation of dopaminergic neurons from multiple hiPSCs lines by transient expression of transcription factors. S. MAHAJANI; A. RAINA; C. FOKKEN; S. KUEGLER; M. BAEHR*. *Univ. Goettingen.*

11:00 E42 **130.04** Incyclinide, a non-antibiotic tetracycline, prevents alpha-synuclein aggregation and disrupts fibrillary forms of the protein. R. RAISMAN-VOZARI*; F. GONZÁLEZ-LIZÁRRAGA; D. PLOPER; S. B. SOCIAS; C. L. AVILA; P. P. MICHEL; R. CHEHIN. *INSERM U1127/CNRS UMR 7225, ICM, Inst. de Medicina Mol. y Celular Aplicada (IMMCA), CONICET-UNT-SIPROSA.*

8:00 E43 **130.05** Comparison of recombinant alpha-synuclein fibrils created through continuous shaking or periodic sonication. R. W. L. SO*; A. LAU; H. H. C. LAU; E. STUART; J. C. WATTS. *Tanz Ctr. for Res. in Neurodegenerative Diseases, Univ. of Toronto.*

9:00 E44 **130.06** Systematic analysis on the seeding activity of familial mutant forms of α-synuclein. T. TOMITA*; N. XU; A. TARUTANI; G. ITO. *The Univ. of Tokyo.*

10:00 F1 **130.07** Dichotomy of carbamylation: A comparison of aggregation propensity of carbamylated alpha synuclein and fibril core peptides. J. D. GADHAVI*; S. GUPTA. *Indian Inst. of Technol. Gandhinagar.*

11:00 F2 **130.08** Effects of aging on inflammatory responses and propagation of alpha-synuclein preformed fibrils in wild type mouse. M. IBA*; R. A. MCDEVITT; M. SALLIN; C. KIM; B. SIEGARS; R. ROY; S. KWON; R. SEN; J. M. SEN; E. MASLIAH. *NIA/NIH, NIA/NIH, NIA/NIH, NIA/NIH, NIA/NIH.*

8:00 F3 **130.09** Induction of adaptive immunity increases the pathogenicity of alpha synuclein and leads to the loss of dopaminergic neurons in the nigra of A53T transgenic mice. A. R. ROY*. *Rush Univ. Med. Ctr.*

9:00 F4 **130.10** Effects of a-synuclein isolated from human brain tissue on synaptic vesicle trafficking *in vivo.* C. ROMAN-VENDRELL*; A. T. MEDEIROS; J. B. SANDERSON; H. JIANG; D. J. SELKOE; T. BARTELS; J. R. MORGAN. *Marine Biol. Lab., Brown Univ., Brigham & Women's Hosp, Univ. Col. London.*

10:00 F5 **130.11** Oral administration of cinnamon mitigates Lewy body pathology in A53T mouse model of Parkinson's disease. S. RAHA*; D. DUTTA; K. PAHAN. *Rush Univ.*

11:00 F6 **130.12** Regional distribution of fibrillar alpha-synuclein, amyloid beta and tau in Lewy body dementia. D. DHAVALE*; R. MILLER; K. GEHRKING; J. O'SHEA; J. LIU; C. BUDDHALA; N. CAIRNS; J. CIRRITO; M. CAMPBELL; J. PERLMUTTER; P. KOTZBAUER. *Washington Univ. Sch. of Med., Washington Univ. Sch. of Med.*

8:00 F7 **130.13** ▲ Evaluation of dendritic spine density and turnover using 2-photon *in vivo* imaging before and after viral-mediated overexpression of alpha-synuclein. S. M. NATHWANI; L. M. WAGNER; J. E. FLAHERTY; Y. M. USACHEV; N. S. NARAYANAN; G. M. ALDRIDGE*. *Univ. of Iowa, Univ. of Iowa Dept. of Pharmacol., Univ. of Iowa Roy J and Lucille A Carver Col. of Med.*

9:00 F8 **130.14** Impairment of lysosomal activity contributes to synucleinopathy and neurodegeneration in *in vitro* models of Parkinson's disease. A. HENRIQUES*; M. COMBES; P. POINDRON; N. CALLIZOT. *Neuro-Sys.*

10:00 F9 **130.15** The role of Poly(ADP-ribose) (PAR) in seeding intracellular alpha-synuclein aggregation. L. N. PUENTES*; Z. LENGYEL; R. H. MACH. *Univ. of Pennsylvania, Univ. of Pennsylvania.*

11:00 F10 **130.16** Human alpha-synuclein regulates the export of exosomes. P. CHEN*; C. WANG. *Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ. and Academia Sinica.*

8:00 F11 **130.17** ● Investigating alpha-synuclein pathology in primary mouse neurons. H. BORLAND*; M. AMBJØRN; N. DAMSGAARD; F. VILHARDT; J. PEDERSEN; K. FOG. *H. Lundbeck A/S, Univ. of Copenhagen.*

9:00 F12 **130.18** The neuroprotective effects of SUMOylation in Parkinson's disease *in vitro* and mouse models. D. K. VERMA*; D. WILLIAMS; E. CARTIER; S. NAM; M. MOORE; Y. H. KIM. *Delaware State Univ., Delaware State Univ.*

10:00 F13 **130.19** Acute and chronic dopaminergic neurotoxicity of alpha-synuclein oligomers: Two distinct mechanisms. N. CALLIZOT*; A. HENRIQUES; M. COMBES; C. FARRUGIA; P. POINDRON. *Neuro-Sys, Neuro-Sys.*

11:00 F14 **130.20** Role for syndecan-3 in alpha-synuclein aggregate internalization to neurons. A. PANHELAINEN*; A. SINGH; H. RAUVALA; M. SAARMA. *Inst. of Biotechnology, Univ. of Helsinki, Neurosci. Center, Univ. of Helsinki.*

8:00 F15 **130.21** Inhibition of alpha-synuclein aggregation and prion-like propagation as intervention strategies to slow the progression of Parkinson's disease. S. DUTTA*; D. YSSELSTEIN; R. V. STAHELIN; R. SENGUPTA; J. ROCHET. *Purdue Univ., Northwestern Univ.*

9:00 F16 **130.22** ▲ Amyloid-beta (aβ) plaques promote seeding and spreading of alpha-synuclein and tau in a mouse model of lewy body disorders with aβ pathology. S. P. PATTABHIRAMAN*; F. BASSIL; H. J. BROWN; J. IWASYK; E. MEYMAND; T. COX; C. MAGHAMES; D. M. RIDDLE; B. ZHANG; J. Q. TROJANOWSKI; V. M. Y. LEE. *Univ. of Pennsylvania.*

● Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 F17 **130.23** Evolution of alpha-synuclein pathology following a unifocal site of origin. A. CAPUTO; A. LO; Y. LIANG; E. LUNA; B. ZHANG; K. C. LUK*. *Perelman Sch. of Med. at UPenn, Univ. of Pennsylvania, Perelman Sch. of Med. at the Univ. of P, Univ. of Pennsylvania.*

11:00 F18 **130.24** Effects of the alpha-synuclein-interacting protein endosulfine-alpha on PD-related neuropathology. C. CHANDRASEKARAN; J. HENSEL; S. DUTTA; P. MONTENEGRO; E. FAGGIANI; B. DEHAY; E. BEZARD; J. R. CANNON; J. ROCHET*. *Purdue Univ., Purdue Inst. for Integrative Neurosci., Inst. of Neurodegenerative Dis., Purdue Univ.*

8:00 F19 **130.25** The role of sirtuin 3 in the pre-formed fibril α-synuclein rat model of Parkinson's disease. J. E. NASH*. *Univ. of Toronto.*

9:00 F20 **130.26** Alpha synuclein interacts with calcium modulated proteins in dopaminergic cells. D. ERDENGIZ*; K. MAGUIRE-ZEISS. *Georgetown Univ.*

10:00 F21 **130.27** Defining alpha-synuclein species responsible for Parkinson's disease phenotypes in mice. D. THRASHER*; L. A. VOLPICELLI-DALEY; J. M. FROULA. *Univ. of Alabama At Birmingham, Univ. of Alabama at Birmingham.*

11:00 F22 **130.28** ● Persistence of a-synuclein aggregates occurs by disrupting stress-induced cellular clearance in patient-derived iPSC midbrain neurons. L. K. CUDDY; W. W. WANI; M. L. MORELLA; K. TSUTSUMI; C. PITCAIRN; N. R. BELUR; F. ZUNKE; K. FREDRIKSEN; J. R. MAZZULLI*. *Northwestern Univ.*

8:00 F23 **130.29** Phenotypic characterization of synuclein pathology in an intracranial seeding A30P synuclein mouse model of Parkinson's disease. D. TOOLAN*; R. C. GENTZEL; S. JINN; K. TANIS; J. SCHACHTER; S. M. SMITH; J. N. MARCUS. *Merck & Co.*

9:00 F24 **130.30** A new model to study cell-to-cell transfer of αSynuclein *in vivo.* A. MARTINEZ*; G. MERCADO; N. LOPEZ; C. HETZ. *Univ. of Chile.*

POSTER

131. Parkinson's Disease Progression

Theme C – Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 F25 **131.01** Dramatic effects of combining gonadectomy and the neostriatal 6-OHDA lesion model of Parkinson's disease on episodic-like-memory in adult male rats. M. R. CONNER*; S. GUPTA; A. GURBA; B. ANDERSON; M. F. KRITZER. *Stony Brook Univ., Stony Brook Univ., Stony Brook Univ., Stony Brook Univ.*

9:00 F26 **131.02** Early screening of 6-OHDA striatal lesion in rat model of Parkinson's disease using MRI and PET imaging. J. RYTKÖNEN*; K. LEHTIMÄKI; R. O. PUSSINEN; P. POUTIAINEN; T. HUHTALA; A. J. NURMI; D. MISZCZUK. *Charles River Discovery, Kuopio Univ. Hosp.*

10:00 F27 **131.03** Differential changes in the forelimb selectivity of IT and PT projection neurons of motor cortex in hemiparkinsonian rats. A. RÍOS*; S. SOMA; S. NONOMURA; J. YOSHIDA; M. KAWABATA; Y. SAKAI; Y. ISOMURA. *Tamagawa Univ., Univ. of California, Irvine, Tamagawa Univ., Albert Einstein Col. of Med., Tamagawa Univ., Tamagawa Univ.*

11:00 F28 **131.04** Characterization of a humanized A53T alpha-synuclein (aSyn A53T KI) and alpha-synuclein KO (aSyn KO) rat models. T. PARKKARI*; J. T. PUOLIVÄLI; L. RAUHALA; T. STENIUS; L. KOISTINEN; T. BRAGGE; A. OKSMAN; K. M. A. PALDANIUS; Y. CHEN; O. S. MABROUK; K. E. GLAJCH; W. D. HIRST; M. PERKINTON; N. K. POLINSKI. *Charles River Discovery, Biogen, AstraZeneca, The Michael J. Fox Fndn. for Parkinson's Res.*

8:00 F29 **131.05** Structural and electrophysiological changes occurring in the olfactory pathway of a rat model of pre-motor Parkinson's disease are partially prevented by exendin-4 treatment. M. SANCANDI*; A. CONSTANTI; A. MERCER. *UCL Sch. of Pharm.*

9:00 F30 **131.06** Intrapallidal injection effect of cannabidiol and lysophosphatidylinositol on motor behavior in hemiparkinsonian rats. F. PATRICIO-MARTÍNEZ*; N. ARANA-DEL CARMEN; D. LIMÓN. *Meritorious Autonomous Univ. of Puebla.*

10:00 F31 **131.07** The role of dopamine D_3 receptor on the development of L-dopa-induced dyskinesia in 6-OHDA-lesioned mice. Y. CHEN; P. CHANG*; J. CHEN. *Chang-Gung Univ., Chang-Gung University/ Grad. Insititute of Biomed. Sci., Chang-Gung Univ.*

11:00 F32 **131.08** Stereological and histopathological characterization of the neuronal and inflammatory changes in the MPTP mouse model of Parkinson's disease. M. STAUP; J. BAILY; T. STENIUS*; R. O. PUSSINEN; T. HUHTALA. *Charles River Safety Services, Charles River Safety Services, Charles River Discovery.*

8:00 F33 **131.09** Comparison of the effects of clozapine-nitric-oxide (CNO) and clozapine to activate hM4Di containing striatal dopaminergic grafts in hemiparkinsonian rats. K. JARDINE*; K. M. LE; K. VENKITESWARAN; T. SUBRAMANIAN. *Penn State Col. of Med., Penn State Col. of Med., Penn State Col. of Med.*

9:00 F34 **131.10** Levodopa-induced dyskinesia triggers bidirectional changes in striatal connectivity and excitability. S. ZHAI*; J. R. CRITTENDEN; D. WOKOSIN; M. A. CENCI; A. M. GRAYBIEL; D. SURMEIER. *Northwestern Univ., MIT, Lund Univ.*

10:00 F35 **131.11** The intranasal MPTP administration in rats: An animal model to study nociceptive alterations in the early stages of Parkinson's disease. K. ROVERSI*; R. TONELLO; S. TALBOT; J. FERREIRA; A. LATINI; R. PREDIGER. *Univ. Federal de Santa Catarina, Univ. of Cincinnati, Univ. De Montreal.*

11:00 F36 **131.12** Oscillatory signatures of L-DOPA-induced dyskinesia are dependent on the LID induction protocol and L-DOPA dose. T. YE*; M. J. BARTLETT; M. SEXAUER; S. J. SHERMAN; T. FALK; S. L. COWEN. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

8:00 F37 **131.13** Efficacy and specificity of Cre-Lox system in the TH-Cre, Dat-Cre and wildtype Sprague Dawley rat models with the expression of inhibitory chemogenetic or optogenetic viral vectors in the substantia nigra to cause Parkinsonism. K. M. LE*; S. CHINNIAH; V. IYER; C. LIEU; P. MICHAEL; E. HANDLEY; A. ZENOROWITZ; S. SAVALIYA; M. SUBRAMANIAN; K. VENKITESWARAN; T. SUBRAMANIAN. *Penn State Col. of Med., Indiana Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 F38 **131.14** Urocortin 1 neurons of the centrally projecting Edinger-Westphal nucleus contribute to non-motor symptoms of Parkinson's disease in the rat. B. GASZNER*; N. FUREDI; T. GASZNER; L. A. KOVACS; J. FARKAS; A. KECSKES; V. KORMOS; A. HUNYADY; B. UJVARI. *Univ. of Pecs, Univ. of Pecs.*

10:00 F39 **131.15** ● Robust chemically induced animal model of Gaucher disease for preclinical study. S. RAMBOZ*; A. PENNINGTON; K. COX; M. HALL; W. ARIAS; K. KAYSER; J. GUTERL; M. BANSAL; D. HAVAS; K. CIRILLO. *Psychogenics Inc.*

11:00 F40 **131.16** Chronic amphetamine exposure during adolescence in a rat model of ADHD leads to Parkinson's disease-like behavioral pathology as adults. A. L. PERSONS*; I. D. CALMA; B. D. BRADARIC; T. C. NAPIER. *Rush Univ. Med. Ctr.*

8:00 F41 **131.17** SLC39A14 knockout mice-A genetic model of manganese-induced Parkinsonism: Preliminary studies on behavioral and neurochemical phenotype. A. N. RODICHKIN; J. L. MCGLOTHAN DZIEDZIC*; D. R. BROOKS; A. G. SANCHEZ; T. R. GUILARTE. *Florida Intl. Univ.*

9:00 F42 **131.18** Region-dependent cross-frequency interactions in a preclinical model of L-DOPA-induced dyskinesia after low-dose ketamine. T. FALK*; T. YE; M. J. BARTLETT; S. J. SHERMAN; S. L. COWEN. *Univ. of Arizona Col. of Med., Univ. of Arizona Col. of Med., Univ. of Arizona.*

10:00 F43 **131.19** Glia maturation factor dependent activation of mast cells and microglial calpain 1 synergize dopaminergic neuronal loss and behavioral deficits in MPTP induced mouse model of Parkinson's disease. S. GOVINDHASAMY PUSHPAVATHI*; A. MOHAMMAD EJAZ; K. DURAISAMY; R. THANGAVEL; I. DUBOVA; S. MENTOR; A. DHALIWAL; H. ZAHOOR; S. ZAHEER; S. RAIKWAR; S. S IYER; A. ZAHEER. *Univ. of Missouri Columbia, Harry S. Truman Mem. Veterans Hosp., Univ. of the Western Cape.*

11:00 F44 **131.20** Forward genetic assessment of paraquat toxicity in ventral midbrain and cerebellum in mice. B. C. JONES*; C. TORRES-ROJAS; P. JIMENEZ-CARRION; W. ZHAO; L. LU; M. K. MULLIGAN; J. P. O'CALLAGHAN. *Univ. of Tennessee Hlth. Sci. Ctr., Univ. of Memphis, Univ. Tennessee Memphis, Centers For Dis. Control and Prevention.*

8:00 F45 **131.21** Allosteric modulation of nicotinic receptors reduces L-DOPA induced dyskinesias in Parkinsonian mice. A. GOMEZ*; M. PALOMERO-RIVERO; D. A. MILLÁN; R. DRUCKER-COLIN; J. BARGAS. *Univ. Nacional Autonoma De Mexico, Univ. Nacional Autónoma de México, Inst. De Fisiología Celular, Insituto de Fisiologia Celular, UNAM, Inst. De Fisiologia Celular - Univ. Nacional Autonoma De Mexico (UNAM).*

9:00 F46 **131.22** Effects of monoamines reduction in depressive-like behavior and short-term memory in the rotenone model of Parkinson's disease. D. C. RAMOS*; J. C. F. VIEIRA; R. ANDREATINI; M. A. B. F. VITAL. *Univ. Federal Do Paraná, Univ. de São Paulo.*

10:00 G1 **131.23** Time course underlying changes in inspiratory motor output variability in the 6-OHDA SN-lesioned Parkinson's disease rat model. R. WADOLOWSKI*; I. C. SOLOMON. *Stony Brook Univ.*

11:00 G2 **131.24** Behavioral defects associated with amygdala and cortical dysfunction in mice with seeded alpha-synuclein inclusions. M. VISWANATHAN*; L. STOYKA; L. VOLPICELLI-DALEY. *Univ. of Alabama, Univ. of Alabama.*

8:00 G3 **131.25** Motor onset of Parkinson's disease: Is there a somatotopic pattern? M. H. G. MONJE; Á. SÁNCHEZ-FERRO; J. A. PINEDA-PARDO; J. A. OBESO*. *Hosp. HM Puerta del Sur, Univ. Autónoma Madrid.*

9:00 G4 **131.26** Somatotopic related topography of dopaminergic denervation in early *de-novo* Parkinson's disease patients. M. H. G. MONJE; J. A. PINEDA-PARDO; Á. SÁNCHEZ-FERRO; J. BLESA*; J. A. OBESO. *Hosp. HM Puerta del Sur, Univ. Autónoma Madrid.*

10:00 G5 **131.27** Reorganization of cortical motor fMRI activations in early *de-novo* Parkinson's disease. J. A. PINEDA-PARDO*; I. OBESO; M. H. G. MONJE; A. SANCHEZ-FERRO; J. A. OBESO. *HM-CINAC, Hosp. Universitario HM Puerta del Sur, Univ. CEU-San Pablo, HM-CINAC, Hosp. Universitario HM Puerta del Sur, Univ. CEU-San Pablo, Anatomy, Histology and Neurosci. Department. Sch. of Med. Univ. Autónoma de Madrid, HM-CINAC, Hosp. Universitario HM Puerta del Sur, Univ. CEU-San Pablo.*

11:00 G6 **131.28** Gait analysis in male PINK1 knock-out and hemiparkinsonian 6-OHDA rats. V. M. DEANGELO*; G. C. MCCONNELL. *Stevens Inst. of Technol.*

8:00 G7 **131.29** Mild gait deficits in aged female PINK1 knock-out rats without concomitant loss of dopamine neurons. B. O'NEILL*; G. MCCONNELL. *Stevens Inst. of Technol.*

POSTER

132. Parkinson's Disease Therapeutic Strategies: Cellular and Animal Models

Theme C – Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 G8 **132.01** Butyrate protects against salsolinol-induced toxicity in SH-SY5Y cells: Implication for Parkinson's disease. B. GETACHEW; A. B. CSOKA; R. L. COPELAND; Y. TIZABI*. *Howard Univ. Col. of Med., Howard Univ. Col. of Med.*

9:00 G9 **132.02** Transient elevated dopamine pretreatment alleviates motor impairments in a 6-OHDA model of Parkinson's disease. J. C. BRAGUE*; R. P. SEAL. *Univ. of Pittsburgh.*

10:00 G10 **132.03** Characterization of the physiological effect induced by SiO2 nano-matrices in differentiated SH-SY5Y cells. A. J. ESPADAS-ALVAREZ*, Jr; P. VERGARA-ARAGON; R. GARCIA-VILLEGAS; L. TEXCO-MARTINEZ; H. G. ESPADAS-ALVAREZ; D. MEDINA-BUENO. *Univ. Nacional Autónoma De México (UNAM), Facultad De Medicina, CINVESTAV-IPN, CINVESTAV-IPN, CINVESTAV-IPN, CICATA-LEGARIA-IPN.*

11:00 G11 **132.04** Effect of docosahexaenoic acid (DHA) at the enteric level in a synucleinopathy mouse model. J. LAMONTAGNE-PROULX*; K. COULOMBE; C. GUYAZ; M. CÔTÉ; C. TREMBLAY; F. CALON; D. SOULET. *Crchuq-Université Laval, Fac. of Pharmacy, Univ. Laval, Assn. des Laboratoires OptiNutriBrain Intl.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 G12 **132.05** Generation of pluripotent stem cells using SCNT and iPS cell technologies in African green monkeys. Y. G. CHUNG; M. SEAY; J. D. ELSWORTH; T. J. COLLIER; D. E. REDMOND*, Jr. *Axion Res. Fndn., Yale Univ., Enolc, Inc., Michigan State Univ.*

9:00 G13 **132.06** Chemical activation of nigrally grafted human dopaminergic neurons accelerates their axonal growth and re-innervation into the host striatum. Y. TAO*; Y. CHEN; M. XIONG; S. ZHANG. *Duke-Nus Med. Sch., Univ. of Wisconsin-Madison, Univ. Of Wisconsin - Madison.*

10:00 G14 **132.07** New family of multitarget compounds for the treatment of Parkinson's disease: Design, synthesis, biological and computational evaluation. P. DUARTE*; P. MICHALSKA; I. BUENDIA; J. FRANCO-GONZÁLEZ; E. CRISMAN; A. CUADRADO; R. LEÓN. *Univ. Autónoma de Madrid, Inst. Teófilo Hernando, Univ. Autónoma de Madrid, Inst. de Investigación Sanitaria Hosp. Universitario La Princesa, Inst. de Investigaciones Biomédicas "Alberto Sols" (CSIC-UAM).*

11:00 G15 **132.08** ● Potent inhibitors of toxic alpha-synuclein oligomers identified via novel cellular time-resolved FRET biosensor. A. R. BRAUN*; C. LO; H. ZAHID; J. JOHNSON; M. HORVATH; M. C. YOUNG; K. C. LUK; W. POMERANTZ; D. D. THOMAS; J. N. SACHS. *Univ. of Minnesota TC, Univ. of Minnesota TC, Univ. Pennsylvania, Univ. of Minnesota TC.*

8:00 G16 **132.09** Effect of high frequency stimulation on neurological non-motor symptoms in a rat model of premotor-stage Parkinson's disease. S. G. HILLAN*; A. J. ASP; S. BOSCHEN DE SOUZA; J. L. LUJAN. *Mayo Clin. Grad. Sch. of Biomed. Sci., Mayo Clin., Mayo Clin.*

9:00 G17 **132.10** Changes in motor cortex activity evoked by subthalamic nucleus deep brain stimulation in GCaMP6f-expressing Parkinsonian rats. S. L. BOSCHEN DE SOUZA*; S. GORMAN; S. PAEK; S. WANG; L. J. LUJAN. *Mayo Clin., Mayo Clin.*

10:00 G18 **132.11** Biophysical model of astrocyte excitation in high frequency stimulation. K. A. MONTEJO*; L. BALACHANDAR; A. MOSHKFOROUSH; S. B. DE SOUZA; A. J. ASP; S. WANG; S. G. HILLAN; J. J. RIERA; J. LUJAN. *Mayo Clin. Grad. Sch. of Biomed. Sci., Florida Intl. Univ., Mayo Clin., Mayo Grad. Sch., Program In Neuroscience, SUNY At Stony Brook, Mayo Clin. Grad. Sch. of Biomed. Sci., Mayo Clin.*

11:00 G19 **132.12** ● Assessing the impact of a-synuclein pathology on transplanted hESC-derived dopaminergic neutrons in an accelerated a-synuclein rat model of Parkinson's disease. D. B. HOBAN*; S. SHRIGLEY; T. CARDOSO; B. MATTSSON; K. C. LUK; A. BJORKLUND; M. P. PARMAR. *Lund Univ., Lund Univ., Univ. Pennsylvania, Wallenberg Neurosci Ctr., Wallenberg Neurosci Ctr.*

8:00 G20 **132.13** ● Development of a novel, accelerated a-synuclein rat model of Parkinson's disease for longterm assessment therapeutic interventions. B. MATTSSON*; S. SHRIGLEY; L. S. BREGER; K. C. LUK; A. BJORKLUND; M. PARMAR; D. B. HOBAN. *Lund Univ., Inst. Des Maladies Neurodégénératives, Univ. Pennsylvania, Wallenberg Neurosci Ctr., Wallenberg Neurosci Ctr.*

9:00 G21 **132.14** Binding of [^{11}C]-JNJ-42491239 in the marmoset brain: A positron emission tomography study. P. HUOT*; M. S. KANG; H. BDAIR; D. BÉDARD; S. G. NUARA; J. C. GOURDON; K. ROSS; R. HOPEWELL; A. P. MATHIEU; C. L. TARDIF; J. SOUCY; G. MASSARWEH; P. ROSA-NETO; A. HAMADJIDA. *Montreal Neurolog. Inst., Douglas Res. Ctr., Montreal Neurolog. Inst., McGill Univ., McGill Univ., Douglas Mental Hlth. Inst., Dr., McGill Univ.*

10:00 G22 **132.15** Effects of the prototypical mGlu$_2$ positive allosteric modulator BINA on dyskinesia and psychosis in the MPTP-lesioned marmoset model of Parkinson's disease. I. FROUNI*; A. HAMADJIDA; S. NUARA; J. GOURDON; P. HUOT. *Montreal Neurolog. Inst., Comparative Med. & Animal Resource Ctr., McGill Univ. Hlth. Ctr., McGill Univ.*

11:00 G23 **132.16** Effects of combined mGlu$_2$ positive allosteric modulation and orthosteric stimulation on psychosis like behaviours and dyskinesia in the Parkinsonian marmoset. A. HAMADJIDA*; S. G. NUARA; J. C. GOURDON; P. HUOT. *Montreal Neurolog. Inst., McGill Univ.*

POSTER

133. ALS and FTD Mechanisms

Theme C – Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 G24 **133.01** Characterization of pathological consequences of the F115C Matrin 3 mutation in motor neurons derived from patient iPSCs. D. X. MEDINA*; M. N. DOMINICK; R. G. SATTLER; R. BOWSER. *Barrow Neurolog. Inst., Barrow Neurolog. Insitute, Barrow Neurolog. Inst., Barrow Neurolog. Insitute.*

9:00 G25 **133.02** Coordinated disassembly and reassembly of the nuclear pore complex in C9orf72 ALS/FTD. A. N. COYNE*; B. L. ZAEPFEL; L. R. HAYES; B. FITCHMAN; Y. ZALTHBERG; K. BOWEN; H. TROST; A. HAREL; C. SVENDSEN; D. SAREEN; J. D. ROTHSTEIN. *Johns Hopkins Univ. Sch. of Med., Bar-Ilan Univ., Cedars-Sinai Med. Ctr.*

10:00 G26 **133.03** Longitudinal analysis of CSF biomarkers for amyotrophic lateral sclerosis. L. VU*; J. AN; K. GARCIA-MANSFIELD; V. DAVID-DIRGO; R. SHARMA; P. PIRROTTE; R. P. BOWSER. *Barrow Neurolog. Inst., Tgen.*

11:00 G27 **133.04** Dynactin-1 and TRAPPC9 implicate autophagosome-lysosome fusion in the pathogenesis of neurodegenerative diseases. H. ADACHI*; Z. HUANG; K. OKADA; K. OHNARI; T. HASHIMOTO; T. TOYOTA; Y. IWANAKA. *Univ. of Occup. and Envrn. Hlth., Univ. of Occup. and Envrn. Healt.*

8:00 G28 **133.05** Isogenic iPSC lines as a tool for identify common neurodegenerative pathways across fALS mutations. A. H. HELD*; B. J. WAINGER. *Massachusetts Gen. Hosp., Harvard Med. Sch.*

9:00 G29 **133.06** Human *in vitro* culture systems of C9orf72-ALS/FTD patient-derived iPSC cortical neurons and microglial cells to study mechanisms of synaptopathy. I. LORENZINI*; J. LEVY; C. BURCIU; D. BHATIA; B. RABICHOW; M. ROBERTS; R. G. SATTLER. *Barrow Neurolog. Inst., Barrow Neurolog. Inst. at St. Joseph's Hosp, Barrow Neurolog. Inst., Barrow Neurolog. Inst., Barrow Neurolog. Inst.*

● Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 G30 **133.07** C9ORF72 repeat expansions cause axonal transport defects in iPSC-derived motor neurons. L. FUMAGALLI; F. YOUNG; S. BOEYNAEMS; M. DE DECKER; R. FAZAL; W. GUO; A. SWIJSEN; W. ROBBERECHT; P. KOCH; P. VANDEN BERGHE; C. VERFAILLIE; L. M. VAN DEN BOSCH*; S. BULLOCK; P. VAN DAMME. *VIB, Ctr. For Brain & Dis. Research, Lab. of Neurobio., MRC- Lab. of Mol. Biology, Francis Crick Avenue, CB2 0QH, Dept. of Genetics, Stanford Univ. Sch. of Med., Inst. of Reconstructive Neurobiology. Life&Brain Center, Univ. of Bonn, KU Leuven - Translational Res. Ctr. for Gastrointestinal Disorders, KU Leuven - Stem Cell Inst. (SCIL).*

11:00 G31 **133.08** The AR N/C interaction in SBMA-molecular mechanisms and therapeutic potential. A. LISBERG*; R. CADILLA; P. EIDAM; D. E. MERRY. *Thomas Jefferson Univ., GlaxoSmithKline.*

8:00 G32 **133.09** C9orf72 ALS patient iPSC-derived cortical neurons and astrocytes display disease-specific phenotypes. V. J. GARCIA*; H. HEMMATI; R. HO; G. M. THOMSEN; C. N. SVENDSEN. *Cedars-Sinai Med. Ctr., Avexis, Inc.*

9:00 G33 **133.10** ● Using a novel chaperone protein, SRCP1, to reduce toxic proteins in ALS model systems. S. SANTARRIAGA; E. R. SEMINARY*; E. WELBY; M. SCAGLIONE; A. D. EBERT. *Med. Col. of Wisconsin, Duke Univ.*

10:00 G34 **133.11** Poly(ADP-ribose) modulate the phase separation of C9orf72 dipeptide repeat proteins and enhances their toxicity. K. ZHANG*; B. G. KANG; T. KAM; L. GUO; T. E. LLOYD; T. M. DAWSON; V. L. DAWSON; J. D. ROTHSTEIN. *Johns Hopkins University, Sch. of Med., Johns Hopkins Univ. Sch. of Med., Thomas Jefferson Univ., Johns Hopkins Schl Med., Johns Hopkins Univ. Inst. for Cell Engin., Johns Hopkins Univ. Sch. Med., Johns Hopkins Univ.*

11:00 G35 **133.12** Modulators of promyelocytic leukemianuclear body phenotype in models of amyotrophic lateral sclerosis. S. CAO*; H. KO; S. PARELKAR; H. ZHOU; P. THOMPSON; L. HAYWARD. *Univ. of Massachusetts Med. Sch., Univ. of Massachusetts Med. Sch.*

8:00 G36 **133.13** Targeted *Drosophila* screen reinforces nucleocytoplasmic transport to DPR pathology in C9orf72-associated ALS/FTLD. M. DE DECKER; J. VANNESTE; S. BOEYNAEMS; E. BOGAERT; J. A. STEYAERT; T. VERCRUYSSE; D. DAELEMANS; L. M. VAN DEN BOSCH; P. VAN DAMME*. *VIB, Ctr. For Brain & Dis. Research, Laborato, Stanford Univ. Sch. of Med., KU Leuven, KU Leuven, Lab. of Virology and Chemotherapy, Rega Inst. for Med. Res., Neurol. Department, UZ Leuven.*

9:00 G37 **133.14** Inhibition of micro RNA 23a in stressed muscle induce key genes that promote regeneration of neuromuscular synapses. R. ISLAM*; V. FOLETTA; P. DELLA GATTA; A. P. RUSSELL. *Deakin Univ.*

10:00 G38 **133.15** Investigating a role for the sigma-1 receptor in the protein quality control (PQC) network. K. L. FLEMING*; R. BERGERON. *Ottawa Hosp. Res. Inst., Univ. of Ottawa.*

11:00 G39 **133.16** Cellular toxicity model of TDP-43 triple mutation. M. DOPLER*; M. GITCHO. *Delaware State Univ.*

8:00 G40 **133.17** High content assays for the quantification of axonal degeneration and molecular phenotypes associated with amyotrophic lateral sclerosis in motor neurons derived from human iPSCs. S. JAIN*; M. BSIBSI; M. JANUS; J. ESSENLINK; J. DEGROOT; D. F. FISCHER; R. KRAUSS. *Charles River, Charles River, Disarm Therapeut.*

9:00 G41 **133.18** Molecular talk between Alsin/ALS2 and NADPH oxidase complex. A. C. AZIM*; D. O. BONSU; C. NORPHLET. *Chicago State Univ.*

10:00 G42 **133.19** Experimental evidence that disease pathogenesis in sporadic ALS is unique and distinct from that seen in familial ALS. A. K. ROSELLE; S. J. E. SHIMSHAK; J. K. WONG; S. A. SADIQ*. *Tisch MS Res. Ctr. of New York, Tisch MS Res. Ctr.*

11:00 G43 **133.20** Oligodendrocytes are these cells lone hero against toxic insults of cerebrospinal fluid from amyotrophic lateral sclerosis patients. R. KURMOIL; S. BHAGAT; S. RAJKUMAR; A. VARGHESE; A. NALINI; T. SATHYAPRABHA; K. VIJAYALAKSHMI; T. R. RAJU*. *Natl. Inst. Mentl Hlth. Neurosci.*

8:00 G44 **133.21** FUS localization is changed from the post-synapse to the pre-synapse during motorneuron development and accumulates in ALS-synapses. M. DEMESTRE*; D. DESHPANDE; T. M. BOECKERS; J. MICHAELIS. *Ulm Univ., Ulm Univ., Ulm Univ., Ulm Univ.*

9:00 H1 **133.22** Bait RNA oligonucleotides to antagonize pathological protein aggregation in ALS/FTD. J. R. MANN*; L. GUO; A. GLEIXNER; J. C. MAUNA; K. E. COPLEY; E. GOMES; B. PORTZ; J. SHORTER; C. J. DONNELLY. *Univ. of Pittsburgh, Thomas Jefferson Univ., Univ. of Pittsburgh, Univ. of Pittsburgh Dept. of Neurobio., Univ. of Pittsburgh, Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania Dept. of Biochem. and Biophysics, Univ. of Pittsburgh.*

10:00 H2 **133.23** Better understand the amyotrophic lateral sclerosis with a 3D spinal cord model generated by tissue-engineering. A. LOUIT*; M. BEAUDET; F. BERTHOD. *Univ. Laval, Lab. d'Organogenese Experimentale LOEX - Univ. Laval.*

POSTER

134. Neuroprotective Mechanisms: Preclinical Models

Theme C – Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 H3 **134.01** Decavanadate-metformin (MetfDeca) improves recognition memory and decreases neurodegeneration in the hippocampus of rats with metabolic syndrome. A. D. DIAZ*; A. GRANADOS; E. SANCHEZ-LARA; E. GONZALEZ-VERGARA; G. FLORES; B. VENEGAS MENESES; J. GUEVARA; S. TREVIÑO. *Facultad De Ciencias Quimicas, BUAP, BUAP, BUAP, Univ. Autonoma de Puebla / Inst. de Fisiologia, BUAP, UNAM.*

9:00 H4 **134.02** Experimental oximes as organophosphate pre-exposure prophylaxis. D. E. LORKE*; S. M. NURULAIN; M. Y. HASAN; K. KUCA; G. A. PETROIANU. *Florida Intl. Univ., Khalifa Univ., COMSATS Inst. of Information Technology, Islam, UAE Univ., Univ. of Hradec Kralove.*

10:00 H5 **134.03** Marked neuroprotection by the marijuana derivative cannabidiol against piriform cortical brain damage resulting from prolonged seizures and status epilepticus in rats. D. Y. BALLOUGH; T. J. MICKUS; E. M. PARRISH; I. MARTINEZ-IGLESIAS; A. J. HILLER; S. P. GAINES; G. P. H. BALLOUGH*. *La Salle Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 H6 **134.04** Oligodendrocyte precursor maturation is associated with accumulation of endogenous intermediate sterols. G. SHENG*; D. WANG; Q. PAN; K. RADZWILL; J. FARLEY; C. GARRON; A. BYRNE; L. CHAI; B. ZHANG; T. A. SAMAD; C. PEDRAZA. *Sanofi, Sanofi, Sanofi.*

8:00 H7 **134.05** Neuroprotective roles of apolipoprotein e containing lipoproteins in neurons and glia of retina. H. HAYASHI*; M. MORI; M. YAMADA; B. YUAN; N. TAKAGI. *Tokyo Univ. of Pharm. and Life Sci., Josai Univ.*

9:00 H8 **134.06** Expression of GPNMB after peipheral nerve injury and the effect of recombinant human GPNMB on Schwann cells. Y. ZHENG; C. HUANG; F. LIU; X. YANG; Z. ZHANG*. *The Second Military Med. Univ.*

10:00 H9 **134.07** Protective effect of Brazilian green propolis against oxidative stress-induced cell death in mouse hippocampal HT22 cells. M. TAKASHIMA*; K. ICHIHARA; Y. HIRATA. *Gifu Univ., API Co., Ltd.*

11:00 H10 **134.08** Effect of prolactin on the CREB transcription factor expression in primary cultures of rat hippocampal neurons under excitotoxicity. V. RODRIGUEZ CHAVEZ*; N. A. RIVERO-SEGURA; G. MOLINA-SALINAS; M. A. CERBÓN-CERVANTES. *Univ. Nacional Autónoma de México, Univ. Nacional Autónoma de México.*

8:00 H11 **134.09** ▲ Vitamin E promotes neurite outgrowth via Bcl-xL upregulation. J. MAY; A. DAVIS; A. STUMPF; K. BROMAN; H. PARK*. *Univ. of Alabama.*

9:00 H12 **134.10** Acidic nanoparticles formulated from biodegradable poly lactic-co-glyolic acid can restore lysosomal function in Parkinson's disease models. A. MARTIN*; J. ZHENG; O. SHIRIHAI; X. HAN; M. GRINSTAFF. *Boston Univ., UCLA.*

10:00 H13 **134.11** Carboxypeptidase E - Neurotrophic factor- α 1: Obliteration of the enzymatic activity uncovers novel receptor-mediated neuroprotection and cognitive functions in hippocampal CA3 neurons in mice. L. XIAO*; V. K. SHARMA; L. TOULABI; X. YANG; A. PELTEKIAN; I. ARNAOUTOVA; D. ABEBE; Y. LOH. *Section On Cell. Neurobiology, NICHD, NIH, NICHD, Natl. Inst. of Hlth., Natl. Inst. of Hlth., NICHD,NIH, NICHD, NIH.*

11:00 H14 **134.12** NF-α1/CPE neuroprotects against oxidative stress by activating ERK/CREB/BCL2 signaling via HTR1E receptor. V. K. SHARMA*; Y. XUYU; D. S. SANCHEZ; Y. LOH. *Natl. Inst. of Hlth., Ciudad Real Med. School, Univ. of Castilla-La Mancha, Camino de Moledores s/n.*

8:00 H15 **134.13** Exercise is neuroprotective following partial motoneuron depletion via androgen action at the target muscle. C. CHEW*; D. R. SENGELAUB. *Indiana Univ. Bloomington.*

9:00 H16 **134.14** Catfish (Arius bilineatus, Val.) skin protein preparation improves histopathological and ultrastructural alterations in the sciatic nerve myelinated fibers in STZ-diabetic rats. W. M. RENNO*; H. L. SADEK; J. K. KUMAR; P. GEORGE; J. M. AL-HASSN. *Kuwait Univ. Fac. of Med., Kuwait Univ. - Fac. of Sci.*

10:00 H17 **134.15** Epigallocatechin-3-gallate protects from the effect of 3-nitropropionic acid, Huntington's disease mice model, modulating the synapsis. M. ETTCHETO*; A. CANO; O. BUSQUETS; C. AULADELL; M. GARCÍA; J. FOLDH; A. CAMINS. *Univ. of Barcelona, Biomed. Res. Networking Ctr. in Neurodegenerative Dis. (CIBERNED), Inst. de Salud Carlos III, Inst. of Neuroscience, Univ. of Barcelona, Univ. of Rovira i Virgili, Univ. of Barcelona, 6Institute of Nanoscience and Nanotechnology (IN2UB),University of Barcelona, Biomed. Res. Networking Ctr. in Neurodegenerative Dis. (CIBERNED), Inst. de Salud Carlos III, Univ. of Barcelona, 6Institute of Nanoscience and Nanotechnology (IN2UB), Univ. of Barcelona.*

11:00 H18 **134.16** Vagus nerve stimulation modulates inflammatory responses in the poly-I:C-induced animal model of chronic fatigue syndrome. K. LEE*; H. AHN; B. JO; C. SON; U. NAMGUNG. *Daejeon Univ., Inst. of Traditional Med. and Biosci.*

8:00 H19 **134.17** ● Impact of environmental enrichment in cognition, behavioral parameters and BDNF levels of rats subjected to the lithium pilocarpine model of epilepsy. L. F. ARAÚJO*, Sr; J. E. DA SILVA; M. J. FERNANDES. *Sao Paulo Federal Univ.*

9:00 H20 **134.18** CNS biodistribution of nasally administered IFNγ stimulated exosomes. A. D. PUSIC*; K. M. PUSIC; R. P. KRAIG. *Univ. of Chicago.*

10:00 H21 **134.19** Exercise-induced hemoglobin expression in rat CNS. A. E. WEAVER; S. FREEMAN; K. ALKHAYER; N. K. SINGHAL; J. MCDONOUGH; E. J. FREEMAN*. *Kent State Univ., Kent State Univ., Kent State Univ.*

11:00 H22 **134.20** Constitutively active proteasome expression in *C. elegans* improves lifespan and resistance to oxidative stress. R. T. ANDERSON*; D. M. SMITH. *West Virginia Univ. Sch. of Med.*

8:00 H23 **134.21** ● Cell-type specific cytoprotection by xanthohumol. H. N. HARIANI*; A. K. GHOSH; S. ANKIREDDY; K. A. ORLOFF; J. J. HAKKARAINEN; S. KAJA. *Loyola Univ. Chicago, Loyola Univ. Chicago, Loyola Univ. Chicago, Edward Hines Jr. VA Hosp., Experimentica Ltd.*

9:00 H24 **134.22** Cellular characterization of the potential food-addiction biomarker clusterin. C. RODRIGUEZ-RIVERA; C. GONZALEZ-MARTIN*; M. D. PÉREZ-CARRIÓN; C. ANSEEUW; L. F. ALGUACIL; M. J. POLANCO. *Univ. CEU San Pablo.*

10:00 H25 **134.23** Effect of caffeine administration timing, sex, and prenatal condition on cognitive outcomes in premature infants. R. M. MCLEOD*; T. S. ROSENKRANTZ; R. FITCH. *Univ. of Conneticut, Univ. of Connecticut Sch. of Med.*

11:00 H26 **134.24** Retinal ganglion cell axon regeneration is regulated by presynaptic circuits. P. R. WILLIAMS*. *Washington Univ.*

8:00 H27 **134.25** ▲ Extracellular vesicles as novel targeted therapy for retinal damage and repair in MS. S. TRAN; L. G. ACHA; M. NAYYAR; L. A. TORRES; S. KALININ; C. HUANG; D. FEINSTEIN; S. RAVINDRAN; S. ROTH; B. MATHEW. *Univ. of Illinois at Chicago, IL, Univ. of Illinois at Chicago, IL.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 H28 **134.26** ● SM07883, a novel, oral DYRK1A inhibitor, improves cognition and protects against amyloid and tau pathologies in the 3xTg-AD mouse model of Alzheimer's disease. K. X. DUONG-POLK*; B. GUNER; S. HABROUN; S. ANDERSON; C. LAI; B. MELCHIOR. *SAMUMED, LLC, Samumed, Samumed, LLC.*

POSTER

135. Stroke I

Theme C – Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 H29 **135.01** Alpha1-chimaerin limits dendritic spines, synapses and functional recovery after stroke. S. LI*; H. LIANG; M. T. JOY; S. P. BRIDGES; J. LUO; M. MACHNICKI; H. YAO; A. JIMENEZ; R. GHANIAN; A. BRUMM; H. ZHANG; J. XIAO; G. LIANG; L. LIN; S. CARMICHAEL; X. LI. *Wenzhou Univ., Univ. of California Los Angeles, Univ. of California Los Angeles Dept. of Neurol., UCLA, UCLA, Wenzhou Med. Univ., Wenzhou University-Wenzhou Med. Univ.*

9:00 H30 **135.02** The study of VBM-based gray matter remodeling of tele-rehabilitation therapy on promoting motor function recovery in stroke patients. C. REN*; J. CHEN; S. ZHANG. *Shanghai East Hospital,Tongji Univ., Shanghai No. 5 Hosp.*

10:00 H31 **135.03** Changes in the coupling of slow-waves with spindles tracks motor recovery after stroke. J. K. KIM*; A. HISHINUMA; L. GUO; S. WON; K. GANGULY. *Univ. of California San Francisco, San Francisco Veterans Affairs Med. Ctr.*

11:00 H32 **135.04** Sex differences in cerebral autoregulation dynamics following ischemic stroke. A. P. BLABER*; R. RUEDL; K. TAVAKOLIAN; F. FAZEKAS; N. GOSWAMI. *Simon Fraser Univ., Univ. of North Dakota, Med. Univ. of Graz, Med. Univ. of Graz.*

8:00 H33 **135.05** Mouse headfixed reaching for water after stroke provides a high throughput system for assessing motor circuit level plasticity. M. BALBI*; D. XIAO; J. BOYD; T. MURPHY. *Univ. of British Columbia.*

9:00 H34 **135.06** Mesencephalic astrocyte-derived neurotrophic factor and triggering receptor expressed on myeloid cells-2 are modulated by docosahexaenoic acid after ischemic stroke. N. G. BAZAN*; S. HONG; R. S. FERITAS; H. MENGHANI; S. MARCELL; P. MUKHERJEE; L. KHOUTOROVA; L. BELAYEV. *Louisiana State Univ. Hlth. Sci. Ctr., Univ. of Texas Hlth. Sci. Ctr. at Houston.*

10:00 H35 **135.07** Exacerbated outcomes in type I diabetic mice after experimental stroke are associated with CHOP and Erk while neurological deficits can be attenuated by lutein treatment. A. C. LO*; D. T. C. NG; K. TAM; A. K. W. LAI. *The Univ. of Hong Kong.*

11:00 H36 **135.08** Cross-cultural differences and parietal lesioning: Computational modelling work. E. MAVRITSAKI*; P. RENTZELAS. *Birmingham City Univ.*

8:00 H37 **135.09** Ischemic stroke patients with pre-stroke depression and thrombolysis therapy. T. I. NATHANIEL*; L. WORMACK. *Univ. of So Carolina Sch. of Med. Greenville, Univ. of South Carolina.*

9:00 H38 **135.10** Increasing shoulder abduction load negatively affects accuracy in judging elbow flexion torque. N. M. CAI*; J. P. DEWALD; N. GURARI. *Northwestern Univ., Northwestern Univ.*

10:00 H39 **135.11** Stroke induced impairment in spatial working memory on the trial unique nonmatched to location task. J. M. HOULTON*; C. CLARKE; D. K. BARWICK; A. N. CLARKSON. *Univ. of Otago.*

11:00 H40 **135.12** Elucidating the intercellular interactome in white matter stroke. M. TIAN*; Y. KOMURO; J. D. HINMAN; T. S. CARMICHAEL. *Dept. of Neurology, The David Geffen Sch. of Med. at UCLA.*

8:00 H41 **135.13** Catechin alleviates decrease of hippocalcin in middle cerebral artery occlusion animal model. P. KOH*; D. PARK; J. KANG; M. KIM. *Gyeongsang Natl. Univ., Gyeongsang Natl. Univ.*

9:00 H42 **135.14** Inhibition of proteasome over-activation alleviates neuroinflammation and neurological deficit in intracerebral hemorrhage rats. H. LIEW*; W. HU; B. P. LIN; P. WANG; P. A. TSAI; C. PANG; T. CHEN. *Buddhist Tzu Chi Gen. Hosp., Indiana Univ. Sch. of Med., Buddhist Tzu Chi Gen. Hosp., Indiana Univ. Sch. of Med.*

10:00 H43 **135.15** Long term assessment of cardiac abnormalities in mouse subarachnoid hemorrhage. Z. CAO; Z. YANG; X. LI; P. WANG; D. WARNER; W. YANG; H. SHENG*. *Duke Univ. Med. Ctr.*

11:00 H44 **135.16** Novel microRNA PC-5P-12969 and ischemic stroke. M. VIJAYAN*; P. H. REDDY. *Texas Tech. Univ. Hlth. Sci. Ctr.*

8:00 H45 **135.17** Prostaglandin E2 EP3 receptor contributes to acute intracerebral hemorrhage-induced brain Injury. H. REN*; T. WU; X. YANG; J. WANG. *Johns Hopkins Sch. of Med., The Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ.*

9:00 H46 **135.18** Perilesional motor and somatosensory cortex dynamics with recovery of dexterous function after cortical strokes in non-human primates. P. KHANNA*; D. TOTTEN; R. J. MORECRAFT; K. GANGULY. *UCSF, Univ. of California, San Francisco, Univ. South Dakota Schl Med.*

10:00 I1 **135.19** Performance on bilateral object hitting task in children with perinatal stroke. R. L. HAWE*; A. M. KUCZYNSKI; A. KIRTON; S. P. DUKELOW. *Univ. of Calgary, Univ. of Calgary, Univ. of Calgary.*

11:00 I2 **135.20** Ischemic conditioning causes an acute pressor response in chronic stroke survivors. S. Z. ALQAHTANI; M. DURAND; S. C. RAAB; J. NGUYEN; B. D. SCHMIT; A. S. HYNGSTROM*. *Marquette Univ., Med. Col. of Wisconsin, Marquette Univ. Dept. of Biomed. Engin.*

8:00 I3 **135.21** Focal ischemia causes heterokaryotic fusion of neuron and hematopoietic cell. H. WANG; T. W. LAI*. *China Med. Univ., China Med. Univ., China Med. Univ., China Med. Univ. Hosp.*

9:00 I4 **135.22** Real time fMRI neurofeedback for stroke rehabilitation. M. K. FLEMING*; Z. SANDERS; T. SMEJKA; M. MARZOLLA; C. ZICH; S. W. RIEGER; C. SAMPAIO-BAPTISTA; H. JOHANSEN-BERG. *Univ. of Oxford.*

10:00 I5 **135.23** ● A new generation of plasminogen activator for safer clearance of brain hematoma following intracerebral hemorrhage in rats. R. GOULAY; T. GABEREL; M. NAVEAU; D. VIVIEN; J. PARCQ*. *INSERM U1237, Univ. of Caen, Op2lysis.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 I6 **135.24** ● Upper limb proprioceptive acuity is not dependent on motor function post-stroke. J. A. SEMRAU*; J. MARNET; S. H. SCOTT; S. P. DUKELOW. *Univ. of Delaware, Queen's Univ., Queen's Univ., Univ. of Calgary.*

8:00 I7 **135.25** TrkB activation attenuates white matter injury and motor deficit induced by hypoxia-ischemia in neonatal rats. S. HSU; C. HUNG; P. HSU; Y. HUANG; Y. LAN; Y. LEE*. *Natl. Yang-Ming Univ.*

9:00 I8 **135.26** Effects of unilateral and bilateral tDCS over M1 on the kinematics of sensorimotor function in chronic stroke patients. T. MUFFEL*; P. SHIH; B. KALLOCH; V. NIKULIN; A. VILLRINGER; B. SEHM. *Max Planck Inst. For Human Cognitive and Brain Sci., Humboldt-Universität zu Berlin, Charité - Universitätsmedizin Berlin, Univ. Hosp. Leipzig, Leipzig Univ. of Applied Sci., Higher Sch. of Econ.*

10:00 I9 **135.27** ● Separating transient ischaemic attack and migraine from healthy individuals using one-class classification. L. E. R. SIMMATIS*; S. H. SCOTT; A. Y. JIN. *Queen's Univ.*

11:00 I10 **135.28** ● Red blood cell-derived microparticles treatment improves post-intracerebral hemorrhage long-term outcomes in rats. S. CHO*; A. K. REHNI; H. NAVARRO QUERO; C. J. KEATLEY; S. GAJAVELLI; S. KOCH; Y. S. AHN; M. A. PEREZ-PINZON; W. JY; K. R. DAVE. *Univ. of Miami Miller Sch. of Med., Univ. of Miami Miller Sch. of Med., Univ. of Miami Miller Sch. of Med.*

8:00 I11 **135.29** Development of a novel system for motor and sensory rehabilitative therapy after neurological injury. D. PRUITT*; E. MEYERS; Y. DUONG; J. WRIGHT; J. EPPERSON; R. AFFENIT; S. HAYS; M. KILGARD. *Univ. of Texas at Dallas.*

9:00 I12 **135.30** An at-home and clinical system for arm and hand rehabilitative therapy after stroke and spinal cord injury. E. C. MEYERS*; D. T. PRUITT; R. AFFENIT; Y. DUONG; J. WRIGHT; J. EPPERSON; R. L. RENNAKER; S. A. HAYS; M. P. KILGARD. *The Univ. of Texas at Dallas, The Univ. of Texas at Dallas, Univ. of Texas at Dallas, Univ. of Texas at Dallas.*

POSTER

136. Spinal Cord Injury: Responses and Repair

Theme C – Neurodegenerative Disorders and Injury

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 I13 **136.01** Role of blood pressure in pain-induced hemorrhage after spinal cord injury: Does blocking the nociception-induced rise in blood pressure have a protective effect? D. T. JOHNSTON*; M. M. STRAIN; K. E. HUDSON; M. K. HENWOOD; G. N. FAUSS; C. R. WEST; J. W. GRAU. *Texas A&M Univ., Army Inst. of Surgical Res., Univ. of British Columbia.*

9:00 I14 **136.02** Pain-induced hemorrhage after spinal cord injury: Pentobarbital anesthesia and local application of lidocaine prevent hemorrhage when given before, but not after, noxious stimulation. J. DAVIS*; M. K. HENWOOD; C. C. COX; R. E. BAINE; J. W. GRAU. *Texas A&M Univ.*

10:00 I15 **136.03** Role of blood pressure in pain-induced hemorrhage after spinal cord injury: Brain systems may drive an increase in blood pressure, but this effect was not sufficient to induce hemorrhage. G. N. K. FAUSS*; M. M. STRAIN; Y. HUANG; J. A. REYNOLDS; J. A. DAVIS; M. K. HENWOOD; C. R. WEST; J. W. GRAU. *Texas A&M Univ., US Army Inst. of Surgical Res., Texas A&M Univ., Univ. of British Columbia.*

11:00 I16 **136.04** Role of blood pressure in pain-induced hemorrhage after spinal cord injury: Effect of shock and capsaicin treatment on blood pressure, behavioral performance, and hemorrhage over time. R. BAINE*; M. M. STRAIN; J. A. REYNOLDS; M. K. HENWOOD; E. LOUT; P. HARIBHAKTI; C. R. WEST; J. W. GRAU. *Texas A&M Univ., US Army Inst. of Surgical Res., Texas A&M Univ., ICORD.*

8:00 I17 **136.05** Defining the origin of fibrotic scar tissue at single cell resolution. D. HOLL*; W. HAU; D. OLIVEIRA DIAS; S. SAVANT; M. AMIRY-MOGHADDAM; C. GORITZ. *Karolinska Institutet, Univ. Oslo, Inst. Basic Med. Sci.*

9:00 I18 **136.06** Vascular dynamics during scar formation after spinal cord injury in 3D. W. HAU*; C. GORITZ. *Karolinska Institutet, Karolinska Institutet.*

10:00 I19 **136.07** Myelin damage induces pericyte-derived fibrotic scarring. J. KALKITSAS*; D. OLIVEIRA DIAS; C. GORITZ. *Karolinska Institutet.*

11:00 I20 **136.08** A perivascular origin of fibrotic scar tissue across diverse central nervous system lesions. D. O. DIAS*; J. KALKITSAS; Y. KELAHMETOGLU; C. P. ESTRADA; J. TATARISHVILI; A. ERNST; Z. KOKAIA; O. LINDVALL; L. BRUNDIN; J. FRISÉN; C. GÖRITZ. *Karolinska Inst., Karolinska Inst., Lund Univ.*

8:00 I21 **136.09** The biomarker of motor recovery after spinal cord injury in macaque monkey assessed by resting-state electrocorticography. T. KAWASAKI*; R. YAMAGUCHI; Z. C. CHAO; M. MITSUHASHI; S. UENO; Y. YAMAO; T. KIKUCHI; K. YOSHIDA; S. MIYAMOTO; T. ISA. *Kyoto Univ., Kyoto Univ., Kyoto Univ., Kyoto Univ.*

9:00 I22 **136.10** Functional brain network for recovery of hand functions after spinal cord injury. R. YAMAGUCHI*; T. KAWASAKI; Z. C. CHAO; M. MITSUHASHI; S. UENO; T. ISA. *Kyoto Univ., Kyoto Univ., Kyoto Univ., Kyoto Univ.*

10:00 I23 **136.11** Spatiotemporal histopathological pattern of the porcine spinal cord after SCI. E. B. OKON*; X. ZHAO; S. DALKILIC; A. ALLARD BROWN; S. BASNAYAKE; F. STREIJGER; B. K. KWON. *Univ. of British Columbia, Univ. of British Colombia.*

11:00 I24 **136.12** Characterization of gut microbiome changes in a porcine model of traumatic SCI. M. WEBSTER*; S. TIGCHELAAR; M. S. KEUNG; B. MCCONEGHY; F. STREIJGER; S. SINHA; S. FISK; C. MORRISON; C. NISLOW; B. K. KWON. *Univ. of British Colombia, Univ. of British Colombia, Univ. of British Colombia.*

8:00 I25 **136.13** Continuous optical monitoring of spinal cord hemodynamics during the first 7 days post-injury in a porcine model of acute spinal cord injury. A. CHEUNG*; L. TU; N. MANOUCHEHRI; K. SO; M. WEBSTER; S. FISK; S. S. TIGCHELAAR; F. STREIJGER; A. MACNAB; B. KWON; B. SHADGAN. *Univ. of British Columbia, ICORD, UBC, Univ. of British Colombia, Univ. of British Colombia, Univ. of British Colombia.*

● Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 I26 **136.14** Bridging biobanking and SCI research: From biological specimen to biomarkers. N. MANOUCHEHRI*; K. DONG; F. STREIJGER; L. A. M. MATZKE; T. E. TARMIN; S. DEE; A. ALUDINO; A. TSANG; L. REICHL; L. PARKER; F. SAMADI; C. FOURNIER; A. YUNG; P. KOZLOWSKI; C. LAULE; W. MOORE; P. WATSON; B. K. KWON. *Univ. of British Columbia, Univ. of British Colombia, Univ. of British Colombia, Vancouver Gen. Hosp., Vancouver Gen. Hosp., Univ. of British Colombia, Univ. of British Colombia, Univ. of British Colombia.*

10:00 I27 **136.15** Urodynamics and telemetric monitoring of bladder function in minipigs. M. S. KEUNG*; M. WEBSTER; F. STREIJGER; S. FISK; K. N. CHEN; N. MANOUCHEHRI; S. TIGCHELAAR; K. SO; L. STOTHERS; A. KAVANAGH; B. K. KWON. *Univ. of British Columbia, Univ. of British Columbia, Univ. of British Columbia, Vancouver Spine Surgery Inst.*

11:00 I28 **136.16** ▲ Evaluating the congruency between intraparenchymal and subdural intraspinal pressure in a porcine model of acute spinal cord injury. A. ALLARD BROWN*; M. RIZZUTO; K. T. KIM; K. SO; N. MANOUCHEHRI; M. WEBSTER; S. FISK; D. E. GRIESDALE; M. S. SEKHON; F. STREIJGER; B. K. KWON. *Univ. of British Colombia, Univ. of British Colombia, Univ. of British Colombia, Univ. of British Colombia.*

8:00 I29 **136.17** Segment specific orientation of the dorsal and ventral spinal roots in human. A. MENDEZ*; R. ISLAM; T. LATYPOV; P. BASA; O. J. JOSEPH; B. E. KNUDSEN; L. J. STAEHNKE; P. J. GRAHN; N. LACHMAN; A. J. WINDEBANK; I. A. LAVROV. *Mayo Clin., Kazan Federal Univ., Mayo Clin., Mayo Clin., Mayo Clin., Mayo Clin.*

9:00 I30 **136.18** Sparse re-connection across complete spinal cord injury influences sub-lesional spinal network excitability during epidural electrical stimulation enabled locomotor activity in rats. R. ISLAM*; A. SIDDIQUI; C. CUELLAR; J. SILVERNAIL; B. KNUDSEN; D. CURLEY; B. CHEN; T. LATYPOV; N. AKHMETOV; S. ZHANG; P. SUMMER; J. NESBITT; P. GRAHN; N. MADIGAN; M. YASZEMSKI; A. WINDEBANK; I. LAVROV. *Mayo Clin., Kazan Federal Univ.*

10:00 I31 **136.19** Comparison of lumbar spinal cord anatomy between small and large animal models vs. human: Clinical and electrophysiological implication. P. BASA*; A. MENDEZ; R. ISLAM; N. LACHMAN; P. J. GRAHN; A. J. WINDEBANK; I. A. LAVROV. *Mayo Clin., Mayo Clin., Mayo Clin., Mayo Clin., Mayo Clin.*

11:00 I32 **136.20** Iron chelator therapy reduces secondary spinal cord injury. F. J. THOMPSON*; J. HOU; S. TSUDA; R. NELSON; D. PLANT; K. BUCKLEY; I. ANWAR; J. GODIN; A. SADEESHKUMAR; V. BAEZ; R. J. BERGERON; P. BOSE. *North Florida/South Georgia Veterans Hlth. Syst., Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida.*

POSTER

137. Auditory Processing: Adaptation, Learning, and Memory

Theme D – Sensory Systems

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 I33 **137.01** A cortical spiking model with differential short-term plasticity onto parvalbumin and somatostatin interneurons reproduces *in vivo* results of sensory adaptation in auditory cortex. M. J. SEAY*; R. G. NATAN; M. N. GEFFEN; D. V. BUONOMANO. *UCLA, UC Berkeley, Univ. of Pennsylvania.*

9:00 I34 **137.02** Auditory response plasticity in thalamic circuits. J. A. TAYLOR*; M. HASEGAWA; J. AMORIM FREIRE; M. THEODORE; T. LU; J. GRÜNDEMANN. *Univ. of Basel, Friedrich Miescher Inst.*

10:00 I35 **137.03** Olfactory cue congruency modulates neuronal responses in primary auditory cortex. O. D. GILDAY*; A. MIZRAHI. *Hebrew Univ. of Jerusalem.*

11:00 I36 **137.04** Identity recognition across different emotional expressions - An fMRI study in visual and auditory modalities. H. XU*; J. L. ARMONY. *McGill Univ., Douglas Mental Hlth. Univ. Inst., Ctr. for Res. on Brain, Language & Music, Intl. Lab. for Brain, Music and Sound Res., McGill Univ.*

8:00 I37 **137.05** Auditory representation in cortex during perceptual learning. K. A. MARTIN*; R. C. FROEMKE. *New York Univ., New York Univ., New York Univ. Sch. of Med., NYU Med., Howard Hughes Med. Inst. Fac. Scholar.*

9:00 I38 **137.06** Auricular vagus nerve stimulation as a method for driving brain plasticity in learning a novel orthography. V. J. THAKKAR*; A. S. ENGELHART; N. MATTOX; G. PECORARO; Z. RICHARDSON; T. M. CENTANNI. *Texas Christian Univ.*

10:00 I39 **137.07** Neural activity in the auditory cortex during memory formation of auditory patterns. H. KANG*; R. AUKSZTULEWICZ; H. AN; M. L. SUTTER; J. W. SCHNUPP. *City Univ. of Hong Kong, Univ. of California Davis.*

11:00 I40 **137.08** Neuronal correlates of perceptual learning in the auditory cortex. I. MAOR*; A. MIZRAHI. *The Hebrew Univ.*

8:00 I41 **137.09** Optogenetic up- and downregulation of basal forebrain activation impacts distinct aspects of auditory learning. A. KLAASSEN*; K. THOMAS; M. HARVEY; B. RASCH; G. RAINER. *Dept. of Medicine, Univ. of Fribourg, Dept. of Psychology, Univ. of Fribourg.*

9:00 I42 **137.10** Effect of novel acoustic environment exposure on lateralized processing patterns. B. FUREST CATALDO*; B. CABEZAS; J. OVETSKY; L. YANG; D. VICARIO. *Rutgers Univ., CUNY Sch. of Med.*

10:00 I43 **137.11** Behavioral and neural correlates of changes in arousal state evoked by vagal nerve stimulation in mice. L. J. BODDINGTON*; L. N. COLLINS; R. C. FROEMKE; M. J. MCGINLEY; D. A. MCCORMICK. *Univ. of Oregon, New York Univ. Sch. of Med., Baylor Col. of Med.*

11:00 I44 **137.12** Synaptic zinc contributes to contrast adaptation in auditory cortex. P. CODY*; T. TZOUNOPOULOS. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

8:00 J1 **137.13** Neuromodulation enhances plasticity in a rodent model of cochlear implant use. E. G. GLENNON*; J. MULTANI; M. A. SVIRSKY; R. C. FROEMKE. *NYU Sch. of Med., NYU Sch. of Med., NYU Sch. of Med., NYU Sch. of Med., NYU Sch. of Med., Howard Hughes Med. Inst.*

9:00 J2 **137.14** Short-term effects of vagus nerve stimulation on auditory learning and stimulus-specific activity in auditory cortex. J. LAI*; S. V. DAVID. *Oregon Hlth. and Sci. Univ.*

10:00 J3 **137.15** Auditory predictions in cortical and subcortical temporal regions. A. TZOVARA*; T. FEDELE; J. SARNTHEIN; J. LIN; R. T. KNIGHT. *Univ. of California, Berkeley, Higher Sch. of Econ., Universitatsspital Zurich, Univ. of California, Irvine, Univ. of California Berkeley.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 J4 **137.16** Opposite valences learning shapes neuronal selectivities in auditory cortex through inhibitory networks. J. LEGER*; X. LIU; A. LOURDIANE; C. VENTALON; L. BOURDIEU; Y. BOUBENEC; S. A. SHAMMA; S. WOLF; S. COCCO; R. MONASSON. *CNRS - Ecole Normale Superieure, PSL, Univ. of Maryland, CNRS - Ecole Normale Superieure, PSL.*

8:00 J5 **137.17** Deficits in central auditory processing in mouse models of Alzheimer's disease. K. A. FOGELSON*; J. LAWLOR; Z. ZHU; K. V. KUCHIBHOTLA. *Johns Hopkins Univ.*

8:00 DP06/J6 **137.18** (Dynamic Poster) Cellular mechanisms of auditory surprise in faithful computer replica of cortical microcircuit. O. AMSALEM*; J. KING; M. REIMANN; E. MULLER; H. MARKRAM; I. SEGEV. *The Hebrew Univ., EPFL, Blue Brain Project.*

10:00 J7 **137.19** Mapping experience-dependent changes in sensorimotor representations across mouse auditory cortex. S. A. M. PICARD*; Y. WEISSENBERGER; A. J. KING; J. C. DAHMEN. *Univ. of Oxford.*

11:00 J8 **137.20** Vagus nerve stimulation-enhanced auditory perceptual training in the common marmoset (Callithrix jacchus). M. S. OSMANSKI*; X. SHEN*; S. D. KOEHLER; X. WANG. *Johns Hopkins Univ.*

8:00 J9 **137.21** Implicit memory for regularities in rapid sound sequences. R. BIANCO; C. BOLGER; M. HU; P. HARRISON; M. PEARCE; M. CHAIT*. *UCL, Queen Mary Univ.*

9:00 J10 **137.22** Neural activity in mouse auditory cortex is influenced by context, behavior, and expectation. N. J. AUDETTE*; D. M. SCHNEIDER. *New York Univ., New York Univ.*

10:00 J11 **137.23** Longitudinal stability and dynamics of neuronal ensemble representations in the auditory cortex. H. SURI*; G. ROTHSCHILD. *Univ. of Michigan.*

11:00 J12 **137.24** Heterogeneity of locomotion-induced modulation of neuronal activity in the auditory cortex. C. A. P. VIVALDO*; G. ROTHSCHILD. *Univ. of Michigan, Ann Arbor.*

8:00 J13 **137.25** Maladaptive plasticity along the central auditory pathway leads to aberrant loudness perception following acoustic trauma. B. D. AUERBACH*; K. RADZIWON; R. SALVI. *Univ. at Buffalo.*

POSTER

138. Human Auditory Processing I

Theme D – Sensory Systems

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 J14 **138.01** Anterior temporal lobe disconnection disrupts auditory cortical oscillatory neural responses to speech in the human brain. Z. KOCSIS*; R. L. JENISON; B. MCMURRAY; A. E. RHONE; M. E. SARRETT; P. E. GANDER; K. V. NOURSKI; M. STEINSCHNEIDER; R. M. CALMUS; H. KAWASAKI; J. D. GREENLEE; C. K. KOVACH; T. D. GRIFFITHS; M. A. HOWARD, III; C. I. PETKOV. *Univ. of Iowa, Newcastle Univ., Univ. of Wisconsin, Univ. of Iowa, Albert Einstein Col. of Med.*

9:00 J15 **138.02** The role of auditory scene analysis in auditory object perception: Neuroimaging evidence. G. GURARIY*; R. RANDALL; A. S. GREENBERG. *Univ. of Wisconsin, Milwaukee, Carnegie Mellon Univ., Univ. of Wisconsin-Milwaukee.*

10:00 J16 **138.03** Lexical tone processing in human superior temporal gyrus. Y. LI*; C. TANG; J. LU; J. WU; E. F. CHANG. *Univ. of California, San Francisco, Huashan Hospital, Fudan Univ.*

11:00 J17 **138.04** Human speech cortex encodes amplitude envelope as transient, phase-locked responses to discrete temporal landmarks. K. KOJIMA*; Y. OGANIAN; C. CAI; A. FINDLAY; E. F. CHANG; S. S. NAGARAJAN. *Univ. of California San Francisco, Univ. of California San Francisco, Univ. of California San Francisco.*

8:00 J18 **138.05** Cortical tracking of speech-in-noise in patients suffering from auditory obscure dysfunction. M. VANDER GHINST*; M. BOURGUIGNON; M. NIESEN; V. WENS; S. GOLDMAN; X. DE TIÈGE. *Ulb-Hôpital Erasme, Erasme Hosp., ULB Neurosci. Inst., Clin. Univ. de Bruxelles, Unité De Magnetoencephalographie, ULB-Hôpital Erasme.*

9:00 J19 **138.06** Spatiotemporal dynamics of sound representations in the human brain. M. X. LOWE*; Y. MOHSENZADEH; B. LAHNER; S. TENG; I. CHAREST; A. OLIVA. *MIT, Univ. of Birmingham.*

10:00 J20 **138.07** Hyper-sensitivity to pitch is related to poorer prosody processing in adults with autism. S. M. HAIGH*; P. BROSSEAU; C. LELE; S. M. EACK; D. I. LEITMAN; D. F. SALISBURY; M. BEHRMANN. *Univ. of Nevada, Carnegie Mellon Univ., Univ. of Pittsburgh, Natl. Inst. of Mental Hlth., Univ. of Pittsburgh Sch. of Med.*

11:00 J21 **138.08** Oscillatory correlates of auditory working memory in human intracranial EEG. J. I. BERGER*; P. E. GANDER; S. KUMAR; K. V. NOURSKI; M. I. BANKS; H. OYA; H. KAWASAKI; M. A. HOWARD, III; T. D. GRIFFITHS. *Univ. of Iowa, Newcastle Univ., Univ. of Wisconsin, Univ. Col. London.*

8:00 J22 **138.09** Mapping of the cortical tinnitus network: Direct cortical recordings and electrical stimulation induced suppression. P. E. GANDER*; W. SEDLEY; S. KUMAR; C. K. KOVACH; K. V. NOURSKI; H. OYA; H. KAWASAKI; M. A. HOWARD, III; T. D. GRIFFITHS. *Univ. of Iowa, Newcastle Univ., Newcastle Univ., Univ. of Iowa Hosp. and Clinics, The Univ. of Iowa, Univ. of Iowa Hosp. and Clinics, Univ. Iowa Hosp Clin., Univ. of Iowa Hosp. and Clinics, Inst. of Neurosci.*

9:00 J23 **138.10** Cortical responses to auditory novelty across task conditions as revealed by intracranial recordings. K. V. NOURSKI*; M. STEINSCHNEIDER; A. E. RHONE; H. KAWASAKI; M. A. HOWARD, III; M. I. BANKS. *The Univ. of Iowa, Albert Einstein Col. of Med., Univ. of Wisconsin - Madison.*

10:00 J24 **138.11** Effects of task and arousal level on the processing of peri-threshold tones investigated with MEG, EEG, and pupillometry. L. DOLL; A. R. DYKSTRA*; A. GUTSCHALK. *Ruprecht-Karls-Universität Heidelberg, Univ. of Miami.*

11:00 J25 **138.12** Minor critical notes evoke attention-related erp components in musicians over non-musicians. T. M. CENTANNI*; A. R. SEISLER; A. R. HALPERN; M. J. WENGER. *Texas Christian Univ., Pennsylvania State Univ., Bucknell Univ., The Univ. of Oklahoma.*

8:00 J26 **138.13** ● Cochlear implant users experience repetition induced musicality for speech and environmental sounds. A. KASDAN*; I. M. BUTERA; A. J. DEFREESE; J. ROWLAND; M. BURCHESKY; M. T. WALLACE; R. H. GIFFORD. *Vanderbilt Univ., Vanderbilt Univ. Med. Ctr., Princeton Univ., Vanderbilt Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 J27 **138.14** Musical training enhances cortical phaselocking while listening to continuous natural speech. S. PUSCHMANN*; M. REGEV; S. BAILLET; R. J. ZATORRE. *Montreal Neurolog. Inst.*

10:00 J28 **138.15** Attentional modulation of articulatory and semantic representations during multi-speaker natural speech perception. I. KIREMITCI; O. YILMAZ; A. G. HUTH; U. KELES; T. CUKUR*. *Bilkent Univ., UT Austin.*

11:00 J29 **138.16** Neural correlates of tone-sequence awareness probed with pre- and post-stimulus cues in human listeners. K. GAERTNER; A. GUTSCHALK*. *Univ. of Heidelberg.*

8:00 J30 **138.17** Rhythmic facilitation of temporal prediction: Testing the neural entrainment hypothesis. L. IEMI*; I. TAL; A. BRESKA; J. SAMAHA; E. M. MERRICKS; C. A. SCHEVON; G. M. MCKHANN; C. E. SCHROEDER; S. HAEGENS. *Columbia Univ. in the City of New York, Nathan Kline Inst. For Psychiatric Res., Univ. of California, Berkeley, Univ. of California, Santa Cruz, Columbia Univ. Med. Ctr., Columbia Univ., Columbia Univ., Columbia Univ. Col. of Physicians and Surgeons, Donders Inst. For Brain, Cognition & Behaviour.*

POSTER

139. Vestibular System and Balance

Theme D – Sensory Systems

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 J31 **139.01** ● Morphological misalignment of vestibular organs predicts motion sickness susceptibility. T. HARADA*; T. SUGAWARA; M. FUKUNAGA; N. SADATO; S. LAUREYS; H. SAKAI. *Toyota Central R&D LABS., INC., Toyota Central R&D LABS., INC., Natl. Inst. for Physiological Sci., Univ. of Liège.*

9:00 J32 **139.02** ▲ Impact of haltere removal on gravitational perception. A. RAZMI; J. L. FOX*. *Hathaway Brown Sch., Case Western Reserve Univ.*

10:00 J33 **139.03** ▲ Questioning the lasting effect of galvanic vestibular stimulation on postural control. M. NOORISTANI*; M. MAHEU; L. BEHTANI; M. HOUDE; F. CHAMPOUX. *Univ. De Montréal.*

11:00 J34 **139.04** Using vestibular prosthesis to restore yaw rotation perception in primates with bilateral vestibular hypofunction. K. WIBOONSAKSAKUL*; C. C. DELLA SANTINA; K. E. CULLEN. *Johns Hopkins Univ., Johns Hopkins Univ.*

8:00 J35 **139.05** The effect of ageing on multisensory weighting for postural control. L. BEHTANI*; M. MAHEU; M. NOORISTANI; M. HOUDE; F. CHAMPOUX. *Univ. of Montreal.*

9:00 J36 **139.06** Data analysis methods for measurement of postural instability during virtual reality immersion. E. SON*; J. KIM; I. KIM; M. HONG. *Yonsei Univ. Col. of Med.*

10:00 J37 **139.07** Limited habituation to prolonged electrical vestibular stimulation during treadmill walking. K. B. HANNAN*; M. K. TODD; N. J. PEARSON; P. A. FORBES; C. J. DAKIN. *Utah State Univ., Utah State Univ., Erasmus Med. Ctr.*

11:00 J38 **139.08** Electric vestibular stimulation induces gravity dependent inferences of linear acceleration. P. A. FORBES*; N. KOSHRAVI-HASHEMI; C. DAKIN; J. BLOUIN. *Erasmus Univ. Med. Ctr., Univ. of British Columbia, Utah State Univ.*

8:00 J39 **139.09** Auditory vection induces postural sway in sighted and blind humans. L. F. CUTURI*; P. R. MACNEILAGE; M. GORI. *Inst. Italiano Di Tecnologia, Univ. of Nevada, Reno, Inst. Italiano di Tecnologia.*

9:00 J40 **139.10** Differentiation and functioning of crystal cells - gravity sensors in one of the simplest metazoans, Trichoplax adhaerens. T. D. MAYOROVA*; C. L. SMITH; K. HAMMAR; T. S. REESE. *NINDS, MBL.*

10:00 J41 **139.11** Linking anti-saccades and postural control mechanisms in acute traumatic brain injury. E. CALZOLARI*; M. K. CHEPISHEVA; R. SMITH; H. M. RUST; B. M. SEEMUNGAL. *Imperial Col. London.*

11:00 J42 **139.12** Impaired vestibular perception of self-motion in acute traumatic brain injury. B. M. SEEMUNGAL*; E. CALZOLARI; M. K. CHEPISHEVA; H. M. RUST; D. J. SHARP; A. E. J. JOLLY; R. SMITH. *Imperial Col. London, Imperial Col. London.*

8:00 J43 **139.13** Vestibular-guided spatial orientation in healthy young and aged controls and patients with neurodegeneration. M. K. CHEPISHEVA*; E. CALZOLARI; J. B. ROWE; B. M. SEEMUNGAL. *Imperial Col. London, Cambridge Univ. Dept. Clin. Neurosciences.*

9:00 J44 **139.14** ● Test-retest reliability of vestibular perceptual thresholds in yaw. T. L. LEE*; C. S. SHAYMAN; Y. OH; R. J. PETERKA; T. E. HULLAR. *Oregon Hlth. and Sci. Univ., Oregon Hlth. and Sci. Univ.*

10:00 J45 **139.15** Locomotion increases the firing rate of vestibular otolith but not canal afferents in the primate. K. E. CULLEN*; I. MACKROUS; J. CARRIOT. *The Johns Hopkins Univ., McGill Univ., McGill Univ.*

11:00 J46 **139.16** Noise impacts neuronal activity in vestibular pathways. R. D. BRAUN; A. KUHL; M. HALI; S. KALLAKURI; A. HOLT*. *Wayne State Univ. Sch. of Med., John D. Dingell VA.*

8:00 K1 **139.17** Specialized cholinergic sensing cells discovered in semicircular canal cristae. H. A. HOLMAN*; L. A. POPPI; Y. WAN; R. D. RABBITT. *Univ. of Utah, Univ. of Utah, Univ. of Utah.*

9:00 K2 **139.18** Vestibulo-sympathetic reflex in patients with bilateral vestibular loss. O. KULDAVLETOVA*; P. DENISE; G. QUARCK; M. TOUPET; H. NORMAND. *Normandie Univ, UNICAEN, INSERM, COMETE, GIP CYCERON, CHU de Caen, Ctr. d'explorations fonctionnelles oto-neurologiques.*

POSTER

140. Vision: Subcortical Visual Pathways

Theme D – Sensory Systems

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 K3 **140.01** To eat or be eaten: Is there a specific visual bias to snakes over food in humans? S. LI*; J. R. KEENE; B. N. HARRIS; J. A. CARR. *Texas Tech. Univ., Texas Tech. Univ., Texas Tech. Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 K4 **140.02** Enhanced circadian responses to 'yellow' rather than 'blue' light. J. W. MOULAND*; F. MARTIAL; A. WATSON; R. LUCAS; T. BROWN. *Univ. of Manchester.*

10:00 K5 **140.03** Central projections of molecularly distinct M1 intrinsically photosensitive retinal ganglion cells. S. LEE*; E. G. MIN; T. M. SCHMIDT. *Northwestern Univ.*

11:00 K6 **140.04** Model of dynamical asymmetries in early vision parallel pathways. A. R. R. CASTI*. *Fairleigh Dickinson Univ.*

8:00 K7 **140.05** Ocular hypertension alters retinal ganglion cell output to the visual thalamus. M. J. VAN HOOK*; A. BHANDARI; Y. ZHANG; J. SMITH. *Univ. of Nebraska Med. Ctr., Univ. of Nebraska Med. Ctr., Creighton Univ.*

9:00 K8 **140.06** Extraretinal contributions to thalamic filtering of retinal spike trains. P. C. ALEXANDER*; H. J. ALITTO; T. G. FISHER; D. L. RATHBUN; W. M. USREY. *Univ. of California, Davis, Univ. of California, Davis, Univ. of California, Davis, Stanford Univ. Sch. of Med., Univ. of Tuebingen.*

10:00 K9 **140.07** Functional binocular convergence in the retinogeniculate pathway. S. WEILER*; M. H. P. FERNHOLZ; J. BAUER; J. JÄPEL-SCHAEL; V. SCHEUSS; M. HUBENER; T. BONHOEFFER; T. ROSE. *Max Planck Inst. of Neurobio., Max Planck Florida Inst. of Neurosci., Ludwig-Maximilians-Universität München.*

11:00 K10 **140.08** Receptive field structure of local interneurons in the murine dorsal lateral geniculate nucleus. A. S. GORIN*; S. AHN; U. CIFTCIOGLU; F. T. SOMMER; J. A. HIRSCH. *USC, USC, Univ. of California Berkeley.*

8:00 K11 **140.09** Photoreceptor-independent rapid adaptation in macaque LGN neurons. P. TELLERS*; L. C. SINCICH. *Univ. of Alabama at Birmingham.*

9:00 K12 **140.10** Possible parallel visual pathways between the lateral pulvinar and V2 thick/thin stripes in macaques. Y. LIU*; J. HU; S. YAO; T. TAKAHATA. *Zhejiang Univ.*

10:00 K13 **140.11** Comparison of single neuron responses between two rostral subdivisions in the rat pulvinar / lateral posterior thalamic nucleus. A. T. FOIK*; L. R. SCHOLL; G. LEAN; A. HOANG; D. C. LYON. *Univ. of California, Univ. of Caliifornia, Univ. of California Irvine.*

11:00 K14 **140.12** Fine-scale functional organization of the mouse superior colliculus. J. SIBILLE; L. FERRARESE; C. GEHR; H. ASARI; J. KREMKOW*. *Charité-Universitätsmedizin Berlin, Inst. for Theoretical Biology, Humboldt-Universität zu Berlin, Bernstein Ctr. for Computat. Neurosci. Berlin, Einstein Ctr. for Neurosciences Berlin, European Mol. Biol. Lab. (EMBL Rome).*

8:00 K15 **140.13** Locomotion independent encoding of visual motion in the mouse superior colliculus. E. L. SAVIER*; H. CHEN; M. LIU; J. CANG. *Univ. of Virginia.*

9:00 K16 **140.14** Superior colliculus in mice is necessary for detecting behaviorally relevant visual changes. L. WANG*; S. GOLDSTEIN; K. MCALONAN; R. J. KRAUZLIS. *Natl. Eye Inst.*

10:00 K17 **140.15** Functional architecture of motion direction in the mouse superior colliculus. Y. LI*; Z. TURAN; M. MEISTER. *Caltech.*

11:00 K18 **140.16** Visual responses in the superior colliculus of a diurnal, precocial hystricognath rodent: Octodon degus. N. I. MARQUEZ; A. R. DEICHLER; I. PERALES; J. LETELIER; G. J. MARÍN; J. MPODOZIS; S. L. PALLAS*. *Univ. of Chile, Univ. of Chile, Univ. of Massachusetts.*

8:00 K19 **140.17** The tectofugal system of marsupials: A tract tracing and histochemical study in the chilean opossum (Thylamys elegans). A. DEICHLER; G. J. MARÍN*; M. RUIZ; T. VEGA-ZUNIGA; J. MPODOZIS. *Facultad de Ciencias, Univ. de Chile.*

9:00 K20 **140.18** Construction of classical and competitive surrounds in the owl isthmi pars magnocellularis. H. M. SCHRYVER*; J. X. LIM; M. STRAKA; S. P. MYSORE. *Johns Hopkins Univ., Johns Hopkins Univ., Paradromics Inc, Johns Hopkins Univ.*

10:00 K21 **140.19** Deactivating association cortex blocks reversal of hemianopia by multisensory training. H. JIANG*; E. M. WALKER; B. A. ROWLAND; B. E. STEIN. *Wake Forest Sch. of Med.*

11:00 K22 **140.20** The temporal principle of multisensory integration in localization. N. L. BEAN*; B. E. STEIN; B. A. ROWLAND. *Wake Forest Sch. of Med.*

8:00 K23 **140.21** Dark-rearing precludes the auditory enhancement of visual localization. S. A. SMYRE*; Z. WANG; B. E. STEIN; B. A. ROWLAND. *Wake Forest Sch. of Med.*

9:00 K24 **140.22** Can the hemianopic hemisphere compete with its intact counterpart after rehabilitation? A. S. DAKOS*; E. M. WALKER; H. JIANG; B. E. STEIN; B. A. ROWLAND. *Wake Forest Sch. of Med.*

POSTER

141. Visual Cortex: Functional Architecture and Circuits I

Theme D – Sensory Systems

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 K25 **141.01** A theoretical study of differences in the contrast and length tuning of visual cortical neurons between cats and rodents. M. MIYASHITA*; S. TANAKA. *Natl. Inst. of Technol., The Univ. of Electro-Communications.*

9:00 K26 **141.02** Beyond the retinotopic framework of the primary visual cortex: Category-dependent feedback information of non-foveal visual stimuli coded by the foveal cortex. A. I. COSTANTINO*; M. COLTHEART; P. SOWMAN; M. WILLIAMS. *Macquarie Univ.*

10:00 K27 **141.03** Bilateral changes to white matter structure following unilateral resection in pediatric patients. A. M. S. MAALLO*; E. FREUD; C. PATTERSON; M. BEHRMANN. *Carnegie Mellon Univ., Ctr. for the Neural Basis of Cognition, York Univ., Ctr. for Vision Res., Univ. of Pittsburgh.*

11:00 K28 **141.04** Affective processing of face stimuli in human primary visual cortex. T. T. LIU*; J. Z. FU; S. JAPEE; L. G. UNGERLEIDER; E. P. MERRIAM. *NIH.*

8:00 K29 **141.05** Subtraction and division fo visual cortical responses by the serotonergic system. Z. AZIMI*; K. SPOIDA; R. BARZAN; T. SURDIN; M. D. MARK; S. HERLITZE; D. JANCKE. *Ruhr Univ. Bochum, Ruhr Univ. Bochum, Ruhr Univ. Bochum.*

9:00 K30 **141.06** A model for the origin of motion sensitivity in primary visual cortex. A. W. FREEMAN*. *Univ. of Sydney.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 K31 **141.07** A geometric theory for complex cells. Y. CHEN; D. M. PAITON; B. A. OLSHAUSEN*; F. T. SOMMER. *Univ. of California, Berkeley, Univ. of California, Berkeley, Univ. of California, Berkeley, Univ. of California, Berkeley.*

11:00 K32 **141.08** Distinct subnetworks for spatial processing in mouse V1. A. M. MEIER*; E. B. HAN; A. BURKHALTER. *Washington Univ. Sch. of Med.*

8:00 K33 **141.09** Dynamic functional changes of neurons in visual cortex after eye opening. F. KISHINO*; M. UEMURA; S. TRÄGENAP; M. KASCHUBE; K. OHKI. *Univ. of Tokyo, Frankfurt Inst. for Advanced Studies, The Intl. Max Planck Res. Sch. for Neural Circuits, Intl. Res. Ctr. for Neurointelligence, Univ. of Tokyo.*

9:00 K34 **141.10** ▲ Changes in GABAergic and glutamatergic proteins in the young-old and old-old monkey visual cortex. D. AHUJA; E. JEYANESAN; K. ARBABI; K. M. MURPHY*. *McMaster Univ.*

10:00 K35 **141.11** Positive impact of an enriched environment during development of the mouse visual system. O. BIBOLLET-BAHENA*; S. HO-TRAN; A. ROJEWSKI; S. BELANGER; C. F. CASANOVA. *Univ. Montreal, Labeo Technologies.*

11:00 K36 **141.12** Quantitative analysis of ocular dominance columns in foveal and non-foveal eccentricities in macaque monkeys. A. EDATHODATHIL; R. M. FRIEDMAN*; A. W. ROE. *Oregon Hlth. & Sci. Univ. - ONPRC.*

8:00 K37 **141.13** Neural encoding manifolds relate (sparse) responses in mouse visual system to circuit motifs. L. DYBALLA*; M. S. HOSEINI; G. D. FIELD; M. P. STRYKER; S. W. ZUCKER. *Yale Univ., Univ. of California, San Francisco, Duke Univ., Yale Univ.*

9:00 K38 **141.14** ● Development of multimodal wireless brain interfaces in nonhuman primates. M. M. CHERNOV*; D. ZARAZA; R. M. FRIEDMAN; Y. YANG; J. A. ROGERS; A. W. ROE. *Oregon Hlth. and Sci. University- ONPRC, Northwestern Univ., Northwestern Univ., Oregon Hlth. and Sci. University- ONPRC.*

10:00 K39 **141.15** Functional synaptic organization of ocular dominance within the dendritic field of layer 2/3 neurons in ferret visual cortex. C. TEPOHL*; B. SCHOLL; D. FITZPATRICK. *Max Planck Florida Inst.*

11:00 K40 **141.16** Activation of neuromodulatory axon projections in mouse visual cortex during periods of locomotion and pupil dilation. R. S. LARSEN; E. E. TURSCHAK*; T. L. DAIGLE; D. R. OLLERENSHAW; H. ZENG; J. ZHUANG; J. WATERS. *Allen Inst. For Brain Sci.*

8:00 L1 **141.17** Spatiotemporal evolution of V1 laminar activation to dioptic and dichoptic stimulation. B. M. CARLSON*; K. DOUGHERTY; M. A. COX; A. MAIER. *Vanderbilt Univ.*

9:00 L2 **141.18** Cell subtype specific modulation of cortical synchrony by arousal states. L. LI*; L. HUANG. *Sun Yat-sen Univ., Allen Inst. for Brain Sci.*

10:00 L3 **141.19** Central versus peripheral visual location prevalence as diagnostic for feedforward and feedback mechanisms across visual cortical hierarchy for visual recognition. L. ZHAOPING*. *Max Planck Inst. for Biol. Cybernetics, Univ. of Tuebingen.*

11:00 L4 **141.20** Heterogeneous responses in V1 laminar circuits after focal suppression of lateral network. A. R. ANDREI*; S. R. DEBES; I. M. CHELARU; R. JANZ; V. DRAGOI. *McGovern Med. School, Univ. of Texas.*

8:00 L5 **141.21** Connections of functionally distinct regions within and adjacent to visual area V3 in a prosimian primate. M. K. BALDWIN*; R. FAN; A. W. ROE; J. H. KAAS. *Univ. of California At Davis, Stanley Manne Res. Inst., Zhejiang Univ., Vanderbilt Univ.*

POSTER

142. Visual Processing Beyond V1

Theme D – Sensory Systems

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 L6 **142.01** Distributed and retinotopically asymmetric processing of coherent motion in mouse visual cortex. K. SIT*; M. J. GOARD. *Univ. of California: Santa Barbara, Univ. of California: Santa Barbara, Univ. of California: Santa Barbara.*

9:00 L7 **142.02** Characterizing the spatiotemporal tuning properties of mouse visual cortex. N. MESA*; E. E. TURSCHAK; J. ZHUANG; S. E. DEVRIES; J. WATERS. *Univ. of Washington, Allen Inst. For Brain Sci., Allen Inst. for Brain Sci.*

10:00 L8 **142.03** Canonical and non-canonical features of the mouse visual cortical hierarchy. R. D'SOUZA*; Q. WANG; A. MEIER; W. JI; H. KENNEDY; K. KNOBLAUCH; A. H. BURKHALTER. *Washington Univ. Sch. of Med., Allen Inst. for Brain Sci., Univ. Lyon, Univ. Claude Bernard Lyon 1, Inserm.*

11:00 L9 **142.04** Area-specific mapping of binocular disparity across mouse visual cortex. A. LA CHIOMA; T. BONHOEFFER; M. HUBENER*. *Max Planck Inst. of Neurobio.*

8:00 DP07/L10 **142.05** (Dynamic Poster) Neural mechanisms for border-induced brightness perception in early human visual cortex: An intracranial electrophysiology study. L. LUO*; Q. WANG; F. FANG. *Peking Univ., Beijing Key Lab. of Epilepsy, Epilepsy Center, Dept. of Functional Neurosurgery, Sanbo Brain Hosp.*

9:00 L11 **142.06** Responses to figure-ground organization in natural image patches by monkey V4 neurons. K. SAKAI*; K. KIMURA; M. SHISHIKURA; Y. YAMANE; H. TAMURA. *Univ. Tsukuba, Osaka Univ., JSPS, NICT.*

10:00 L12 **142.07** Processing of rotationnal symmetry in the non-human primate brain. P. AUDURIER; Y. HÉJJA-BRICHARD; P. J. KOHLER; A. M. NORCIA; J. DURAND; B. R. COTTEREAU*. *Cerco, CNRS UMR 5549, Stanford Univ.*

11:00 L13 **142.08** Disparity dependent luminance contrast response functions in human dorsal visual areas. P. CHEN; C. CHEN*. *Dept. of Psychology, Natl. Taiwan Universi, Natl. Taiwan Univ.*

8:00 L14 **142.09** Complex feature sets constrained by deep generative image models drive visual evoked potentials in macaque monkeys. H. SCOTT; I. FRUEND; A. C. SNYDER*. *Univ. of Rochester, York Univ., York Univ., York Univ., Univ. of Rochester, Univ. of Rochester.*

9:00 L15 **142.10** Organizing principles in the transformation of representations in ventral visual pathway. R. ROWEKAMP*; T. SHARPEE. *Salk Inst. for Biol. Studies.*

● Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 L16 **142.11** Detailed hierarchical functional architectures of chromatic responses across macaque V1, V2 and V4 cortices. Y. LIU*; X. ZHANG; Y. LU; H. GONG; J. YIN; Z. CHEN; L. QIAN; S. SHIPP; I. M. ANDOLINA; N. MCLOUGHLIN; W. WANG. *Inst. of Neuroscience, Chinese Acad. of Sci., Univ. of Chinese Acad. of Sci., Univ. of Manchester.*

11:00 L17 **142.12** Population-level deficits in contour representation in V4 of amblyopic macaques. J. PAI*; B. N. BUSHNELL; N. MAJAJ; J. A. MOVSHON; L. KIORPES. *New York Univ.*

8:00 L18 **142.13** Population-level deficits in global form representation in V4 of amblyopic macaques. B. N. BUSHNELL*; N. J. MAJAJ; J. A. MOVSHON; L. KIORPES. *New York Univ.*

9:00 L19 **142.14** Long-range apparent motion tuning in ventral visual area V4. A. W. BIGELOW*; T. KIM; W. BAIR; A. PASUPATHY. *Univ. of Washington.*

10:00 L20 **142.15** Clustering of motion signals in ferret PSS. D. C. KHAMISS; A. A. LEMPEL; K. J. NIELSEN*. *Johns Hopkins Univ.*

11:00 L21 **142.16** Image segmentation and neural representation of multiple spatially-separated stimuli in cortical area MT. S. WIESNER*; X. HUANG. *Univ. of Wisconsin Madison.*

8:00 L22 **142.17** Speed tuning in head coordinates as an alternative explanation of depth selectivity from motion parallax in area MT. Z. XU*; G. C. DEANGELIS. *Univ. of Rochester, Univ. of Rochester.*

9:00 L23 **142.18** Macaque area MT is specialized for 2D motion processing. L. THOMPSON*; B. KIM; B. ROKERS; A. ROSENBERG. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

10:00 L24 **142.19** "Changing gears to see fast and slow" - Hierarchical computation of velocity across V1, MT, and MST in non-human primates. J. LUO*; K. HE; X. LI; Y. LU; I. M. ANDOLINA; S. SHIPP; W. WANG. *Inst. of Neuroscience, Chinese Acad. of Sci., Univ. of Chinese Acad. of Sci.*

POSTER

143. Spatial and Chromatic Vision

Theme D – Sensory Systems

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 L25 **143.01** High-resolution artificial vision with shape perception via a chronically implantable 1024-channel neuroprosthesis in monkey visual cortex. X. CHEN*; F. WANG; B. LI; P. ROELFSEMA. *Netherlands Inst. For Neurosci., Vrije Univ., Academic Med. Ctr.*

9:00 L26 **143.02** Cortical visual prosthesis: A detailed large-scale simulation study. J. ANTOLIK*; Q. SABATIER; C. GALLE; Y. FREGNAC; R. BENOSMAN. *Charles Univ., Inst. de la Vision, Gensight Biologics, UNIC-CNRS.*

10:00 L27 **143.03** Figure-ground separation depends on texture differences and texture composition. J. D. VICTOR*; M. M. CONTE. *Weill Cornell Med. Col., Weill Cornell Med. Col.*

11:00 L28 **143.04** ● Temporal straightening capabilities of models for human vision. L. CASSARD; E. P. SIMONCELLI*. *New York Univ. / HHMI.*

8:00 L29 **143.05** Measuring predictability of natural movies. C. M. ZIEMBA*; O. J. HÉNAFF; R. L. T. GORIS. *Univ. of Texas at Austin, UCL.*

9:00 L30 **143.06** A human behavioral task for manipulating visual cortical prediction error. E. S. SEMAYA*; K. B. WELDON; C. A. OLMAN. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota.*

10:00 L31 **143.07** Double-opponent cells in macaque primary visual cortex: Receptive field structure and spatial integration. A. DE; G. D. HORWITZ*. *Univ. of Washington, Washington Natl. Primate Res. Ctr.*

11:00 L32 **143.08** Graded rod saturation and the correspondence with receptive field properties in mouse V1. I. RHIM*; G. COELLO-REYES; I. M. NAUHAUS. *Univ. of Texas at Austin, Univ. of Texas at Austin, Univ. of Texas at Austin.*

8:00 L33 **143.09** Response asymmetry of red and green in macaque primary visual cortex. W. HUANG*; H. WU; Y. PEI; C. YEH. *Natl. Taiwan Univ., Chang Gung Mem. Hosp. at Linkou.*

9:00 L34 **143.10** Chromatic sensitivity affected by depressive symptoms. J. SONG*; S. HONG; C. KIM. *Korea Univ., Florida Atlantic Univ.*

10:00 L35 **143.11** Narrowband gamma oscillations in human visual cortex display color selectivity. E. BARTOLI*; W. H. BOSKING; Y. Y. CHEN; M. BEAUCHAMP; S. A. SHETH; D. YOSHOR; B. L. FOSTER. *Baylor Col. of Med.*

11:00 L36 **143.12** Whole brain map of neuronal responses triggered by colored visual stimuli in zebrafish larvae. C. FORNETTO*; N. TISO; F. S. PAVONE; F. VANZI. *European Lab. For Non-Linear Spectroscopy, Univ. of Padova, Univ. of Florence, Univ. of Florence.*

8:00 L37 **143.13** Eye movements enhance visual acuity. J. INTOY; M. RUCCI*. *Univ. of Rochester.*

9:00 L38 **143.14** Visual response properties and functional organization of the octopus optic lobe. J. PUNGOR*; C. M. NIELL. *Univ. of Oregon, Univ. of Oregon.*

POSTER

144. Eye Movements: Saccades in Nonhuman Primates

Theme E – Motor Systems

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 L39 **144.01** Tracking a moving visual target in the monkey: Influence of the path frequency. N. ORLANDO DESSAINTS*; A. MONTAGNINI; L. GOFFART. *Inst. de Neurosciences de la Timone.*

9:00 L40 **144.02** A statistical framework for characterizing the perisaccadic spatiotemporal sensitivity of visual neurons. Y. ZAMANI*; A. AKBARIAN; B. NOUDOOST; N. NATEGH. *Univ. of Utah, Univ. of Utah.*

10:00 L41 **144.03** How do monkeys perform double-step saccades tasks. M. LI*; B. LI; M. ZHANG. *Beijing Normal Univ., Beijing Inst. of Basic Med. Sci.*

11:00 L42 **144.04** Sources of endpoint position variability of saccades produced in the double-step task. C. BOURRELLY*; N. J. GANDHI. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 L43 **144.05** Ketamine reduces temporal preparation in the Rhesus monkey. S. BRULÉ; B. HERLIN; P. POUGET; M. MISSAL*. *ICM,INSERM UMRS 975, CNRS UMR 7225, UPMC, Univ. Catholique de Louvain.*

9:00 L44 **144.06** Single unit activities in the marmoset parietal cortex during a saccadic task. L. MA*; J. SELVANAYAGAM; L. K. H. SCHAEFFER; K. D. JOHNSTON; S. EVERLING. *Univ. of Western Ontario.*

10:00 L45 **144.07** Encoding of interceptive saccades in parietal cortex of macaque monkeys. J. CHURAN*; D. I. BRAUN; K. R. GEGENFURTNER; A. KAMINIARZ; F. BREMMER. *Philipps-University, Ctr. for Mind, Brain and Behavior, Giessen Univ.*

11:00 L46 **144.08** Cortico-tectal projections in marmoset monkeys studied in a brain-wide neurohistological pipeline. D. MATROV*; M. LIN; C. CHEN; B. HUO; M. HANADA; J. NAGASHIMA; J. A. BOURNE; P. P. MITRA; T. ISA. *Grad. Sch. of Medicine, Kyoto Univ., Cold Spring Harbor Lab., Univ. of Pittsburgh, Aust. Reg. Med. Inst.*

8:00 M1 **144.09** Mapping saccadic representation in the frontal cortex of common marmoset. C. CHEN*; D. MATROV; A. WAJD; K. HO; T. ISA. *Dept. of Neuroscience, Grad. Sch. of Medicine, Kyoto Univ., Inst. for the Advanced Study of Human Biol. (ASHBi).*

9:00 M2 **144.10** Identification of the frontal eye fields in the common marmoset using microstimulation. J. SELVANAYAGAM*; K. D. JOHNSTON; D. J. SCHAEFFER; L. K. HAYRYNEN; S. EVERLING. *Western Univ.*

10:00 M3 **144.11** Analyzing visual instrumental learning in blindsight monkeys with reinforcement learning model. R. KATO*; K. MAJIMA; A. MURAKAMI; A. ZEGHBIB; P. REDGRAVE; Y. KAMITANI; T. ISA. *Grad. Sch. of Med. and Fac. of Medicin, Kyoto Univ., Kyoto Univ.*

11:00 M4 **144.12** Excitatory input to globus pallidus externus facilitates saccadic eye movement. A. YOSHIDA*; H. AMITA; M. TANAKA; O. HIKOSAKA. *Natl. Eye Inst., Kyoto Univ., Hokkaido Univ. Sch. Med.*

8:00 M5 **144.13** Functional characterization of inter hemispheric projections of superior colliculus. A. GOPAL P A*; O. HIKOSAKA. *NIH.*

9:00 M6 **144.14** Pathway-selective optogenetic modulation of amygdala-basal ganglia circuits in macaque monkeys. K. MAEDA*; K. INOUE; M. TAKADA; O. HIKOSAKA. *Lab. Sensorimotor Res., Natl. Eye Inst., Primate Res. Institute, Kyoto Univ.*

10:00 M7 **144.15** Every spike counts: Intra-saccadic superior colliculus visual bursts modify saccade metrics. A. BUONOCORE*; Z. M. HAFED. *Werner Reichardt Ctr. For Integrative Neurosci.*

11:00 M8 **144.16** Dissociation of attentional and saccade-related activity in the frontal eye field. N. SENDHILNATHAN*; D. BASU; M. E. GOLDBERG; A. N. MURTHY. *Columbia Univ., Brown Univ., Columbia Univ., Indian Inst. of Sci.*

8:00 M9 **144.17** Anatomical characterization of virally-mediated transduction to extraocular and periorbital motoneurons in macaques. M. O. BOHLEN*; H. EL-NAHAL; M. HU; V. YUZIUK; E. KREMER; M. A. SOMMER. *Duke Univ. Hlth. Syst., Duke Univ., Duke Univ., Duke Univ., Inst. de Génétique Moléculaire de Montpellier.*

9:00 M10 **144.18** Anatomical characterization of labeling in the claustrum following injection of rAAV2-retro into the FEF of rhesus macaques. H. EL-NAHAL*; M. BOHLEN; M. SOMMER. *Duke Univ.*

10:00 M11 **144.19** Asymmetric binocular control revealed by monocular pursuit on the midline. S. J. HEINEN*; J. B. BADLER; A. CHANDNA; S. N. WATAMANIUK. *Smith-Kettlewell Eye Res. Inst., Wright State Univ.*

11:00 M12 **144.20** Population dynamics underlying sensorimotor transformation in the primate superior colliculus. M. R. HEUSSER*; U. K. JAGADISAN; N. J. GANDHI. *Univ. of Pittsburgh, Ctr. for the Neural Basis of Cognition.*

8:00 M13 **144.21** Independent component analysis of local field potential sources in the primate superior colliculus. A. H. DALLAL; Y. LIU; U. K. JAGADISAN; N. J. GANDHI*. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

POSTER

145. Basal Ganglia: Neuromodulation

Theme E – Motor Systems

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 M14 **145.01** Disynaptic inhibition promotes synchrony between striatal cholinergic interneurons and is regulated by dopamine via D_2 receptors. M. C. DORST*; A. TOKARSKA; M. ZHOU; K. LEE; A. S. STAGKOURAKIS; C. C. BROBERGER; S. C. MASMANIDIS; G. SILBERBERG. *Karolinska Inst., UCLA, Caltech.*

9:00 M15 **145.02** Glycine receptor alpha 2 depletion induces an exaggerated dopaminergic response. J. DEVOGHT*; J. COMHAIR; G. MORELLI; J. RIGO; E. PICCART; B. BRONE. *Hasselt Univ., Inst. Italiano di Technologica.*

10:00 M16 **145.03** ▲ Pallido-nigral terminals express functional CB1 and CB2 cannabinoid receptors. I. O. CONDE ROJAS*, III; R. CABALLERO FLORÁN; R. SÁNCHEZ-ZAVALETA; G. B. FLORAN. *Ctr. De Investigaciòn Y De Estudios Avanzados De, Dept. of Pharmachology, Univ. of Michigan, Ctr. de Investigación y de Estudios Avanzados del IPN, Ctr. for Reseach and Advanced Studies of the Nat.*

11:00 M17 **145.04** Differential calcium channel-mediated dopaminergic modulation in the subthalamo-nigral synapse of the rat. A. A. ROBLES-GÓMEZ*; J. A. BARRAL; G. B. FLORAN. *Univ. Nacional Autónoma DE México, FES Iztacala UNAM, Ctr. for Reseach and Advanced Studies of the Nat.*

8:00 M18 **145.05** Calmodulin modulates signaling efficiency of presynaptic D2 receptors in striatopallidal terminals. R. JIJÓN-LORENZO*; I. CABALLERO-FLORAN; S. RECILLAS-MORALES; A. AVALOS-FUENTES; F. PAZ-BERMUDEZ; B. FLORAN-GARDUÑO. *Ctr. de Investigación y de Estudios Avanzados del Inst. Politécnico Nacional, Univ. Autónoma del Estado de México.*

9:00 M19 **145.06** ▲ Melatonin reduces dopamine release in the mouse caudate putamen. T. BORGELD; K. HUGHES; J. WYN; E. RAMSSON*. *Grand Valley State Univ.*

10:00 M20 **145.07** ▲ Characterizing the effects of Melatonin on striatal dopamine transmission. S. S. PAWELKO; J. FRIED; J. A. NADEL; E. RAMSSON; C. D. HOWARD*. *Oberlin Col., Grand Valley State Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 M21 **145.08** Changes in dopamine signaling and responses to drugs affecting dopaminergic neurotransmission in striatal and ventral midbrain slices from DAT-KO rats. J. T. L. LLOYD*; P. KALLINGAPPA; A. YEE; P. CHEUNG; R. N. KARUNASINGHE; A. JABED; P. S. FREESTONE; J. LIPSKI. *Univ. of Auckland, Univ. of Colorado Denver, Univ. of Auckland.*

8:00 M22 **145.09** Interaction between D2 and D3 receptors and its effect upon cAMP accumulation and GABA release in striato-pallidal terminals. F. S. VILLALOBOS ESCOBEDO*; A. AVALOS FUENTES; F. PAZ BERMÚDEZ; B. FLORÁN GARDUÑO. *Ctr. de Investigación y de Estudios Avanzados del IPN.*

9:00 M23 **145.10** Deciphering the circuit logic underlying dopamine release important to motor learning. J. QI*; M. G. KEARNEY; R. D. MOONEY. *Duke Univ., Duke Univ. Dept. of Neurobio.*

10:00 M24 **145.11** Sustained dopaminergic bursts and noradrenergic pauses favor exploitative behavioral states. A. C. KORALEK*; R. M. COSTA. *Columbia Univ.*

11:00 M25 **145.12** Sub-second dopamine measurement in cortex using a genetically-encoded fluorescent dopamine indicator (dLight). Y. MATEO*; A. G. SALINAS; J. LEE; S. M. AUGUSTIN; T. PATRIARCHI; L. TIAN; D. M. LOVINGER. *NIAAA, Natl. Inst. On Alcohol Abuse and Alcoholism, Natl. Inst. of Hlth. - NIAAA, Univ. of California Davis, Univ. of California, Davis, Natl. Inst. on Alcohol Abuse and Alcoholism Rockville Office.*

8:00 M26 **145.13** ● Real-time measurement of striatal acetylcholine release in brain slices. D. M. LOVINGER*; P. M. BORDEN; L. VOYVODIC-CASABO; J. S. MARVIN; A. G. SALINAS; L. L. LOOGER. *Natl. Inst. on Alcohol Abuse and Alcoholism Rockville Office, Janelia Res. Campus, Natl. Inst. of Alcohol Abuse and Alcoholism, Natl. Inst. On Alcohol Abuse and Alcoholism.*

9:00 M27 **145.14** Direct measurement of striatal cholinergic transmission with a specific genetically encoded fluorescent acetylcholine indicator in mice. T. HERNANDEZ FLORES*; Y. NAKANO; A. CARRASCO; M. GARCIA-MUNOZ; G. W. ARBUTHNOTT. *Okinawa Inst. of Sci. and Technol., Okinawa Inst. of Sci. and Technol.*

10:00 M28 **145.15** Subsecond monitoring of acetylcholine dynamics in awake, freely-moving mice with a novel, genetically-encoded intensity-based acetylcholine sensing fluorescent reporter (iAChSnFR). A. G. SALINAS*; P. M. BORDEN; L. L. LOOGER; D. M. LOVINGER. *Natl. Inst. On Alcohol Abuse and Alcoholism, George Mason Univ., Howard Hughes Med. Institute, Janelia Res. Campus.*

11:00 M29 **145.16** Real-time *in vivo* monitoring of striatal GPCR signaling using FRET-based biosensors. S. M. AUGUSTIN*; J. O. LEE; Y. KIM; H. L. PUHL, III; S. S. VOGEL; J. KOUSSA; D. M. LOVINGER. *Natl. Inst. on Alcohol Abuse and Alcoholism, Natl. Inst. on Alcohol Abuse and Alcoholism.*

8:00 M30 **145.17** Direct measurement of activity dependent endocannabinoid mobilization in brain slice using the novel genetically encoded fluorescent sensor $GRAB_{eCB}$. D. J. LIPUT*; A. DONG; K. HE; S. M. AUGUSTIN; H. L. PUHL, III; Y. LI; D. M. LOVINGER. *NIH/NIAAA, Peking Univ., Natl. Inst. of Hlth. - NIAAA, NIH, Peking Univ., Natl. Inst. on Alcohol Abuse and Alcoholism Rockville Office.*

9:00 M31 **145.18** Dopamine D1 receptor/cAMP/PKA signaling is differently regulated in subregions of the striatum. K. SUGIYAMA*; M. KUROIWA; T. SHUTO; T. FUKUDA; A. NISHI. *Kurume Univ. Sch. of Med., Kumamoto Univ.*

10:00 M32 **145.19** Modulating excitation and inhibition in striatal medium spiny neurons: The role of neuronal glutamate transporters. M. A. PETROCCIONE*; L. D'BRANT; N. AFFINNIH; H. CHESBRO; S. ZAHID; A. SCIMEMI. *Univ. At Albany - SUNY.*

POSTER

146. Basal Ganglia: Behavioral Control

Theme E – Motor Systems

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 M33 **146.01** Altered spontaneous motor behavior in striatal mGluR5 knockout mice. J. J. MARSHALL*; J. XU; A. CONTRACTOR. *Northwestern Univ., Northwestern Univ. Dept. of Physiol.*

9:00 M34 **146.02** ▲ Role of striatal patches in habit formation and the potential contribution of dopamine. J. A. NADEL*; S. P. PAWELKO; D. COPES-FINKE; M. B. NEIDHART; J. R. SCOTT; N. G. HOLLON; C. D. HOWARD. *Oberlin Col., Salk Inst.*

10:00 M35 **146.03** Striosome and matrix coding in a probabilistic decision-making task. B. BLOEM*; R. HUDA; M. SUR; A. M. GRAYBIEL. *MIT, Picower Inst. for Learning and Memory, MIT, MIT.*

11:00 M36 **146.04** Cell class specific segregation of gamma and beta synchronous neuronal ensembles in the striatum. K. BANAIE BOROUJENI*; M. OEMISCH; S. HASSANI; P. H. TIESINGA; T. WOMELSDORF. *Vanderbilt Univ., Yale Univ., Radboud Univ. Nijmegen, Vanderbilt Univ.*

8:00 M37 **146.05** Sensory representations in the dorsolateral striatum provide a temporal reference for learning and executing motor habits. A. E. HIDALGO-BALBUENA; A. Y. LUMA; A. K. PIMENTEL-FARFAN; T. M. PEÑA-RANGEL; P. E. RUEDA-OROZCO*. *Inst. de Neurobiologia, UNAM.*

9:00 M38 **146.06** Striatum encodes task-adaptive expectations and expectation-based choice biases. A. HERMOSO-MENDIZABAL; A. HYAFIL; P. E. RUEDA-OROZCO; D. ROBBE; J. DE LA ROCHA*. *IDIBAPS, Univ. Pompeu Fabra, Inst. de Neurobiologie de la Méditerranée, UNAM.*

8:00 DP08/M39 **146.07** (Dynamic Poster) The role of the basal ganglia in context-dependent changes in vocal performance. J. SINGH ALVARADO*; J. GOFFINET; J. HATFIELD; M. BEN-TOV; R. MOONEY. *Duke Univ.*

11:00 M40 **146.08** The role of the striatal THIN-LTSI circuit in operant behavior. B. STANFIELD*; M. ASSOUS; J. KAMINER; J. M. TEPPER; T. Z. KOOS. *Rutgers Univ.*

8:00 M41 **146.09** A novel task for probing inhibitory control. K. E. SCHULTZ*; D. DENNING; K. PETERSON; A. JOHNSON; V. HUFNAGEL; N. SWANN. *Univ. of Oregon, Univ. of Oregon.*

9:00 M42 **146.10** Computational and behavioral mechanisms of action inhibition. V. CHRISTOPOULOS*; N. HASHOUSH; D. BABAYAN; M. MALEKMOHAMMADI; R. ANDERSEN; N. POURATIAN. *Caltech, Univ. of California Los Angeles.*

● Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 M43 **146.11** Precise coordination of 3D rotational kinematics by ventral tegmental area GABAergic neurons. R. N. HUGHES*; G. D. WATSON; N. KIM; E. PETTER; K. BAKHURIN; H. H. YIN. *Duke Univ., Duke Univ., Duke Univ.*

11:00 M44 **146.12** A striatal interneuron circuit for continuous target pursuit. N. KIM*; R. N. HUGHES; H. H. YIN. *Duke Univ.*

8:00 N1 **146.13** Distinct roles for cortico- and thalamo-striatal projections in motor skill learning and execution. S. B. WOLFF*; A. K. DHAWALE; R. KO; B. P. OLVECZKY. *Harvard Univ.*

9:00 N2 **146.14** Striatal activity and modulation of direct/indirect striatal pathways during go/no-go learning in mice. P. MARTINEZ*; O. BOTONIS; H. SMITH; M. DAWSON; J. WANG; W. F. ASAAD; I. OZDEN. *Univ. of Missouri, Univ. of Missouri, Brown Univ.*

10:00 N3 **146.15** Control of licking behavior by specific cell type in dorsolateral striatum. Z. ZHANG*; Z. CHEN; T. XIE; H. YAO. *Inst. of Neurosci. and State Key Lab. of Neuroscience, CAS.*

11:00 N4 **146.16** Neural correlates of reward-driven switching behavior in striatum. J. WANG; I. OZDEN. *Univ. of Missouri.*

8:00 N5 **146.17** Revealing elements of naturalistic reinforcement learning through closed-loop action identification. W. GILLIS*; J. MARKOWITZ; M. JAY; R. CIESZKOWSKI; J. MURMANN; E. PETERSON; D. ALDARONDO; D. BRANN; S. LINDERMAN; B. SABATINI; S. R. DATTA. *Harvard Med. Sch., Columbia Univ.*

9:00 N6 **146.18** Encoding of force in an isometric 2-action task in dorsal striatum. I. RODRIGUES-VAZ*; V. R. ATHALYE; D. S. PETERKA; R. M. COSTA. *Columbia Univ.*

10:00 N7 **146.19** Dissecting the action learning process with closed loop optogenetics. C. TANG*; V. B. PAIXAO; F. J. CARVALHO; A. SILVA; R. M. COSTA. *Columbia Univ., Champalimaud Fundation, Champalimaud Fndn., Columbia Univ.*

11:00 N8 **146.20** Precisely-timed phasic dopamine signaling creates distinct kinematic representations of skilled movements. A. BOVA*; A. HURST; D. K. LEVENTHAL. *Univ. of Michigan, Univ. of Michigan.*

8:00 N9 **146.21** Associative learning without value: A policy-based neural network model of Pavlovian conditioning. J. T. DUDMAN*; L. T. CODDINGTON. *HHMI, HHMI Janelia Res. Campus.*

9:00 N10 **146.22** Defining the causal structures between behavior, learning, and midbrain dopamine activity. L. T. CODDINGTON*; J. T. DUDMAN. *HHMI Janelia Res. Campus, HHMI.*

10:00 N11 **146.23** A novel behavior for assessing motor sequence learning and execution in rodents. T. RICCELLI*; L. NARAYAN; J. ARNOLD; J. PARK; J. DUDMAN. *Janelia Res. Campus, Mayo Clin.*

11:00 N12 **146.24** Sex- and duration- dependent neural circuit control of voluntary exercise behavior. M. K. TANNER*; K. BONAR; N. A. MOYA; J. K. P. DAVIS; J. JAIME; E. C. LOETZ; B. N. GREENWOOD. *Univ. of Colorado Denver, Univ. of Colorado Denver.*

8:00 N13 **146.25** ▲ Sex differences in voluntary exercise behavior. A. A. HOHORST*; R. R. WOOD; J. K. P. DAVIS. *Univ. of Colorado - Denver.*

9:00 N14 **146.26** ● A portable system to quantify movement stopping in patients with movement disorders. S. CHOUDHURY; A. ROY; B. MONDAL; R. SINGH; S. HALDAR; K. CHATTERJEE; M. R. BAKER; H. KUMAR; S. N. BAKER*. *Inst. of Neurosciences Kolkata, Newcastle Univ.*

10:00 N15 **146.27** Using corticostriatal networks to disentangle reward value and salience. J. B. DENNISON*; T. NG; L. ALLOY; D. V. SMITH. *Temple Univ., Temple Univ., Temple Univ.*

11:00 N16 **146.28** Effects of retina with midbrain coculture system on the neuroprotection of retinal ganglion cells. J. KO*; Y. KIUCHI. *Hiroshima Univ.*

POSTER

147. Maternal and Adolescent Behavior and Physiology

Theme F – Integrative Physiology and Behavior

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 N17 **147.01** Effects of the experience of pregnancy-delivery-nurturing on excitatory synaptic inputs to tuberoinfundibular dopaminergic neurons. M. FURUTA*; C. KAKEHASHI; T. FUNABASHI. *St. Marianna Univ.*

9:00 N18 **147.02** The impact of adolescent oxycodone exposure on future maternal behaviors in the postpartum mouse. A. WATTERS; K. M. SEIP-CAMMACK*. *The Univ. of the South.*

10:00 N19 **147.03** ▲ The effect of postpartum stress on maternal behavior in rats: A possible mechanism for offspring anxiety? L. S. LOWE; A. V. LANDAVERDE; N. L. ANSELMO; J. L. MILLER; K. C. DE LORME*. *Gustavus Adolphus Col.*

11:00 N20 **147.04** The selective dopamine β-hydroxylase inhibitor Nepicastat inhibits pup-directed behavior in virgin male California mice. M. C. ACOSTA*; W. SALTZMAN. *Univ. of California, Riverside.*

8:00 N21 **147.05** The plasticity of corticotropin-releasing factor receptor 1 (CRFR1) within the anteroventral periventricular of the hypothalamus during the postpartum period. R. M. DE GUZMAN*; Z. J. ROSINGER; J. JACOBSKIND; D. G. ZULOAGA. *Univ. at Albany.*

9:00 N22 **147.06** Inappropriate nutrition worsens maternal diabetes by impairing glucose tolerance and altering maternal care and offspring development. M. G. MARTINS*; A. G. CRUZ; G. P. OLIVEIRA; B. C. WOODSIDE; J. A. C. HORTA, Jr.; A. C. I. KISS. *São Paulo State Univ. (UNESP), Inst. of Biosci., Univ. of São Paulo, Concordia Univ., São Paulo State Univ. (UNESP), Inst. of Biosci.*

10:00 N23 **147.07** Oxytocin receptor knockdown in the midbrain dorsal raphe disrupts postpartum maternal sensitivity to pups and increases the number of perineuronal nets in the primary somatosensory cortex. Z. GRIEB*; K. KRISHNAN; F. MANFREDSSON; J. S. LONSTEIN. *Georgia State Univ., Univ. of Tennessee at Knoxville, Michigan State Univ., Michigan State Univ.*

11:00 N24 **147.08** Single parenthood in a biparental species: Maternal versus paternal behavioral and mechanistic responses. A. M. BOOTH*; R. VIERNES; V. S. FARRAR; S. H. AUSTIN; R. M. CALISI. *Univ. of California, Davis, Univ. of California Davis, Univ. of California - Davis.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 N25 **147.09** Interactive effects of maternal lead exposure and restricted home cage bedding on females' caregiving behaviors and central serotonin. S. A. BURT; E. M. VITALE; M. E. DAVIS; E. G. FORD; A. C. MOODY; J. S. LONSTEIN*. *Michigan State Univ., Michigan State Univ.*

9:00 N26 **147.10** Are gonadal hormones responsible for the reorganization of the extracellular matrix of medial preoptic area during motherhood? N. URIARTE*; M. FERREÑO; J. POMI; J. NOGUEIRA BORDE. *Facultad de Ciencias, Univ. de la República, Facultad de Ciencias, Univ. de la República, Facultad de Medicina, Univ. de la República.*

10:00 N27 **147.11** Autoradiographic binding density of central serotonin 1A, 2A, and 2C receptors across female reproductive states and after repeated variable stress during pregnancy in female rats. E. M. VITALE*; J. S. LONSTEIN. *Michigan State Univ., Michigan State Univ.*

11:00 N28 **147.12** The effects of a maternal defense test on the development of a conditioned place preference. A. R. SELKE*; K. L. D'ANNA-HERNANDEZ. *California State Univ. San Marcos.*

8:00 N29 **147.13** ▲ Hypocretin antagonism's influence on postpartum anxiety and pup retrieval in mice. J. K. KUSKE*; K. D'ANNA-HERNANDEZ. *California State Univ. San Marcos.*

9:00 N30 **147.14** Determining the levels of maternal behavior and peer interaction in communal nesting. G. H. LEE*; K. PRESNELL; Y. CABRERA; M. CHAVEZ; K. L. D'ANNA. *California State Univ. San Marcos, California State University, San Marcos.*

10:00 N31 **147.15** ▲ Hypocretin/orexin receptor 1 blockade increases maternal exploration in a T-Maze. A. ALAYOUBI*; K. L. D'ANNA-HERNANDEZ. *California State Univ. San Marcos, California State University, San Marcos.*

11:00 N32 **147.16** ▲ Effects of prenatal exposure to a mixture of endocrine disrupting compounds on parturition and early postnatal neuromuscular development in the Norway rat. M. FLATTERY; E. HILL; M. SMITH; C. SHELTON; M. ZAKY; G. M. LANGE*. *Saginaw Valley State Univ.*

8:00 N33 **147.17** Preventing the accumulation of ΔFosB in the nucleus accumbens of female mice during a hormone-simulated pregnancy alters anxiety-like behavior. A. B. GIBBONS; A. K. SINGH; D. R. GEARINGER; A. A. VALENTINE; E. J. NESTLER; L. E. BEEN*. *Haverford Col., Icahn Sch. Med. At Mount Sinai.*

9:00 N34 **147.18** Prolactin treatment early in life delays puberty onset on female mice and alters olfactory bulb responses. R. CORONA; M. DEL VALLE; L. LUNA; T. MORALES*. *Inst. for Neurobio. - UNAM.*

10:00 N35 **147.19** Sex-specific transcriptional networks in the medial amygdala underlie differences in expression of juvenile social play. A. E. MARQUARDT*; A. C. SHETTY; S. A. AMENT; M. M. MCCARTHY. *Univ. of Maryland Sch. of Med., Univ. of Maryland Sch. of Med., Univ. of Maryland Sch. of Med., Univ. of Maryland Sch. of Med.*

11:00 N36 **147.20** Understanding endogenous and exogenous cannabinoids in the development of sex differences in brain and behavior. J. W. VANRYZIN*; K. R. MONTGOMERY; A. E. MARQUARDT; M. M. MCCARTHY. *Univ. of Maryland Sch. of Med., Univ. of Maryland Sch. of Med.*

8:00 N37 **147.21** Exploring sex differences in the neuroimmune profile of the developing rat. E. L. REINL*; L. A. PICKETT; M. M. MCCARTHY. *Univ. of Maryland Sch. of Med.*

9:00 N38 **147.22** Effect of neonatal hormone exposure on electrophysiological properties of caudate-putamen medium spiny neurons in prepubertal rats. J. CAO; J. MEITZEN*. *North Carolina State Univ.*

10:00 N39 **147.23** Stress and altered pubertal timing: Is the limbic brain the key? D. IVANOVA*; X. LI; C. MCINTYRE; C. GRIFFIN; C. MULETIER; K. O'BYRNE. *King's Col. London.*

11:00 N40 **147.24** An estradiol mediated sensitive period in cerebellar development is disrupted by TLR4 but not TLR3 mediated inflammation. A. HOLLEY*; M. PEREZ-POUCHOULEN; M. M. MCCARTHY. *Univ. of Maryland Baltimore.*

8:00 N41 **147.25** Investigating developmental origins of sex differences in the rewarding properties of juvenile rat social play. S. E. ASHTON*; M. M. MCCARTHY. *Univ. of Maryland Sch. of Med., Univ. of Maryland Sch. of Med.*

9:00 N42 **147.26** ▲ Mu-opioid receptors within the developing amygdala mediate juvenile social play in a sex-dependent manner. H. L. SMYTH*; L. CHANG; S. V. CAPATI; A. M. PANDL; C. ZHAO; L. V. RITERS; A. P. AUGER. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

10:00 N43 **147.27** ▲ Examining the relationship between mu-opioid receptor protein levels and juvenile social play in male and female rats. A. M. PANDL*; L. CHANG; A. NINO DE GUZMAN RAMIREZ; E. K. H. KNEP; H. L. SMYTH; S. V. CAPATI; A. P. AUGER. *Univ. of Wisconsin-Madison.*

11:00 N44 **147.28** Electrophysiological activity of oxytocin receptor expressing neurons in the mouse endopiriform nucleus. L. BIGGS*; E. A. D. HAMMOCK. *Florida State Univ.*

8:00 N45 **147.29** Network analysis of brain transcriptome profiles in new mother rats exhibiting depression-related parenting disturbances. S. B. WINOKUR*; M. PEREIRA. *Univ. of Massachusetts Amherst.*

9:00 N46 **147.30** Positron emission tomography (PET) imaging of phosphodiesterase 4 in brain and peripheral organs of McCune-Albright syndrome. L. A. STOLZ*; L. D. WEIDNER; Y. WAKABAYASHI; M. COLLINS; A. BOYCE; S. ZOGHBI; V. PIKE; R. INNIS. *NIH.*

POSTER

148. Somatic Influences on the Brain and Vice Versa

Theme F – Integrative Physiology and Behavior

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 O1 **148.01** ▲ Tumor necrosis factor alpha and depression. F. SANCHEZ-LADRON DE GUEVARA*; D. HERNANDEZ-BALTAZAR; M. MELGAREJO-GUTIERREZ; X. CORTIJO-PALACIOS; T. CIBRIAN-LLANDERAL. *Facultad de Medicina-Universidad Veracruzana, CONACYT-Inst. de Neuroetologia-Universidad Veracruzana, Inst. de Neuroetologia-Universidad Veracruzana.*

9:00 O2 **148.02** The relationship between the anti-rhinitis and aversive effects of coffee aroma in mice. Y. HAYASHI*; M. TSUJIMOTO; A. SAIKI; J. TANAKA. *Notre Dame Seishin Univ., Naruto Univ. of Educ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 O3 **148.03** Expression of CRH, ACTH and ACTH receptor in mouse lymphoid organs. M. SALEHZADEH*; K. K. SOMA. *Univ. of British Columbia, Univ. of British Columbia.*

11:00 O4 **148.04** Interactions between peripheral monocytes and the neurovasculature in stress disorders. F. CATHOMAS*; Y. SHIMO; H. LIN; A. RAMAKRISHNAN; K. CHAN; L. F. PARISE; L. LI; K. B. LECLAIR; F. DESLAND; M. MERAD; L. SHEN; S. J. RUSSO. *Icahn Sch. of Med. at Mount Sinai.*

8:00 O5 **148.05** Alterations in resting-state amplitude of low-frequency fluctuation in patients with Crohn's disease in remission. J. HOU; V. A. NAIR; S. SAHA; V. PRABHAKARAN*. *Sch. of Med. and Publ. Health, Univ. of Wisconsin-Madison, Sch. of Med. and Publ. Health, Univ. of Wisconsin-Madison.*

9:00 O6 **148.06** Effects of chronic corticosterone exposure on gut microbiome diversity in rats. W. E. KIVLIN; C. FUNG; S. BANSAL; M. RUSLING; Z. REHMAN; B. POPE; L. YUAN*. *Des Moines Univ.*

10:00 O7 **148.07** A role for microglia in the behavioral and cardiovascular response to social stress in female rats. B. S. POPE; E. N. HARRINGTON; C. G. MORGAN; B. M. CALATAYUD; S. K. WOOD*. *Univ. of South Carolina Sch. of Med., WJB Dorn VA Med. Ctr.*

11:00 O8 **148.08** Unraveling the complex roles of vimentin intermediate filament in CNS and during aging. J. Y. HU*; F. GONZALEZ; J. DAVIS; Y. CHENG; M. CIESIELSKI; K. M. RIDGE. *Northwestern Univ.*

8:00 O9 **148.09** The intestinal bacterial metabolite, butyrate, promotes sleep. E. SZENTIRMAI*; N. S. MILLICAN; A. R. MASSIE; L. KAPAS. *Washington State Univ.*

9:00 O10 **148.10** Lipoteichoic acid, a cell wall component of the intestinal bacteria, induces sleep in mice. A. R. MASSIE*; N. S. MILLICAN; L. KAPAS; E. SZENTIRMAI. *Washington State Univ.*

10:00 O11 **148.11** Sleep-promoting effects of nicotinic acid: The role of prostaglandins. L. KAPAS*; E. SZENTIRMAI. *Washington State Univ.*

11:00 O12 **148.12** Lipopolysaccharide-induced sleep in rats: The role of hepatoportal sensory mechanisms. N. S. MILLICAN*; A. R. MASSIE; E. SZENTIRMAI; L. KAPAS. *Washington State Univ.*

8:00 O13 **148.13** Gut dysbiosis attenuates the sympathoadrenal responses to acute hypoglycemia at birth and in young adult animals. B. B. NANKOVA*; F. HU; E. LAGAMMA. *New York Med. College, BCHP, Maria Fareri Children's Hosp. at Westchester Med. Ctr.*

9:00 O14 **148.14** Alteration in the composition of gut microbiota following exposure to stressful or enriched environment. A. HEGDE; R. PURBOJATI; S. PETTERSSON; R. MITRA*. *Nanyang Technological Univ., Lee Kong Chian Sch. of Medicine, Nanyang Technological Univ.*

10:00 O15 **148.15** Deconstructing the infant pain experience. E. P. DUFF*; F. MOULTRIE; S. GOKSAN; L. BAXTER; S. P. FITZGIBBON; A. ABOS; T. D. WAGER; R. SLATER. *Univ. of Oxford, Univ. of Oxford, Univ. Col. London, Univ. of Oxford, Univ. of Barcelona, Univ. of Colorado Boulder Dept. of Psychology and Neurosci.*

11:00 O16 **148.16** Using a humanized mouse model to dissect the mechanistic role of the maternal microbiome on offspring gut-immune-brain development. E. JASAREVIC*; C. HOWARD; P. KANE; T. L. BALE. *Univ. of Maryland Sch. of Med., Univ. of Maryland Baltimore.*

POSTER

149. Neuropeptide Regulation: Feeding and Metabolism

Theme F – Integrative Physiology and Behavior

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 O17 **149.01** Role of spexin in regulation of leptin-mediated feeding behavior in the hypothalamus. B. JEONG*; B. LEE. *Univ. of Ulsan.*

9:00 O18 **149.02** ● NPY2R and GLP-1R agonists activate neuronal circuits involved in energy homeostasis. T. ZIMMERMANN*; J. HECKSHER-SØRENSEN; A. OLDENBURGER; T. BAADER-PAGLER; A. NYGAARD MADSEN; U. ROOSTALU; L. C. BIEHL RUDKJÆR; R. AUGUSTIN. *Boehringer Ingelheim Pharma Gmbh & Co. KG, Gubra.*

10:00 O19 **149.03** CART neuropeptide mediates anorexia in zebrafish by modulating the activity of a specific telencephalic region. A. MADUSKAR*; D. WAKHLOO; D. BODAS; T. KANIGANTI; N. SUBHEDAR; A. GHOSE. *Indian Inst. of Sci. Educ. and Res., Max-Planck-Institute for Exptl. Med.*

11:00 O20 **149.04** Reduced number of hypocretin (orexin) labelled neurons in human obesity. T. THANNICKAL*; M. CORNFORD; J. M. SIEGEL. *Univ. California Los Angeles, VA Greater Los Angeles Healthcare Syst., UCLA.*

8:00 O21 **149.05** Effect of food deprivation and mch ablation on nesfatin-1 distribution and release in the brain. I. MARMOUZI*; P. NGUYEN; L. ALHASSEN; A. ALACHKAR; O. CIVELLI. *Univ. of California, Irvine, Univ. of California, Irvine, Univ. of California Irvine, Univ. of California Irvine.*

9:00 O22 **149.06** Neuropeptidergic profile of hypothalamic neurons involved in the control of brown and white adipose tissue in normal rats and obese rats fed with high energy diet from early age. G. CANO*; S. L. HERNAN; A. G. RICHIE; H. ALLEN; A. STANZANI; D. TUPONE; A. F. SVED. *Univ. of Pittsburgh, Oregon Hlth. & Sci. Univ., Univ. of Bologna.*

10:00 O23 **149.07** Deletion of neuropeptide FF type 2 receptor reduces the food intake in a mouse model. Y. LIN*; S. TSAI; T. LEE; H. LI; J. CHEN. *Chang Gung Univ., Chang Gung Univ., Chang Gung Univ., Oregon Tech., Chang Gung Mem. Hosp.*

11:00 O24 **149.08** Chronically high systemic allopregnanolone improves parasympathetically-mediated glucose metabolism in females. S. FEDORCHAK*; M. LOPEZ; C. R. BOYCHUK. *Univ. of Texas Hlth. Sci. Ctr. at San Antonio.*

8:00 O25 **149.09** Hunger, via the arcuate nucleus neuropeptide biglen, suppresses excitatory transmission in a nucleus accumbens circuit that opposes feeding behavior. N. K. SMITH*; J. PLOTKIN; B. A. GRUETER. *Vanderbilt Univ., Vanderbilt Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 O26 **149.10** Pituitary adenylate cyclase activating polypeptide excites proopiomelanocortin neurons in a sex- and diet-dependent manner: Implications for the regulation of energy homeostasis. R. CHANG*; J. HERNANDEZ; L. PEREZ; E. J. WAGNER. *Western Univ. of Hlth. Sci., Western Univ. of Hlth. Sci.*

10:00 O27 **149.11** Metabolic responses to BDNF antagonist ANA12 administered at different CNS sites in exercised animals. C. WANG*; V. MAVANJI; M. GRACE; C. KOTZ. *Minneapolis VA Hlth. Care Syst., Univ. of Minnesota, Univ. of Minnesota, Minneapolis VA Hlth. Care Syst.*

11:00 O28 **149.12** GHSR signaling in the DMH: Effects on energy balance under normal conditions and during chronic social defeat stress. L. HYLAND*; S. DESANTE; A. WISEMAN; S. PARK; A. EDWARDS; Y. ABDELAZIZ; B. WOODSIDE; A. ABIZAID. *Carleton Univ., Concordia Univ.*

8:00 O29 **149.13** LPS suppresses melanin-concentrating hormone neurons via the COX2-PGE_2 pathway. L. FANG*; M. HIRASAWA. *Mem. Univ., Mem. Univ.*

9:00 O30 **149.14** Selective deletion of the melanocortin-4-receptor in the prefrontal cortex alters feeding and executive function-like behavior. A. T. THOMPSON; A. KIM; Y. LI; S. SUBRAMANIAN; K. RAMOS; R. PATEL; V. BOLSHAKOV; B. B. LOWELL; K. J. RESSLER; R. A. ROSS*. *McLean Hosp., Beth Israel Deaconess Med. Ctr.*

10:00 O31 **149.15** Effect of pharmacosynthetic activation of orexin on spontaneous physical activity and memory in aged mice. P. E. BUNNEY*; V. MAVANJI; P. J. ERICKSON; M. K. GRACE; C. M. KOTZ. *Minneapolis VA Hlth. Care Syst., Minneapolis VA Hlth. Care Syst., Univ. of Minnesota Twin Cities.*

11:00 O32 **149.16** Changes in serum concentrations of orexigenic and anorexigenic peptides related to sweetener consumption in overweight people. I. CONTRERAS; J. DOTOR; M. SANCHEZ; S. LOPEZ; J. A. ESTRADA*. *Univ. Autonoma Del Estado De Mexico.*

8:00 O33 **149.17** Effects of silencing relaxin-3 production in nucleus incertus neurons on food intake, body weight, anxiety-like behaviour and limbic brain activity in female rats. C. DE ÁVILA DAL'BO*; S. CHOMETTON; S. MA; L. TORZ PEDERSEN; E. TIMOFEEVA; C. CIFANI; A. L. GUNDLACH. *Laval Univ., CRIUCPQ, Monash Univ., Univ. of Copenhagen, Laval Univ., Univ. of Camerino, Sch. of Pharm., The Florey Inst. of Neurosci. and Mental Hlth.*

9:00 O34 **149.18** Distributions of immunoreactivities for hypocretin/orexin and neuronal nitric oxide synthase in the male rat hypothalamus: An analysis and representation in an atlas reference space. V. I. NAVARRO*; E. PERU; K. NEGISHI; M. ORTEGA; A. M. KHAN. *Univ. of Texas At El Paso.*

10:00 O35 **149.19** Generation of synthetic rat brain atlas plates at the level of the hypothalamus using multipoint warping. J. G. PEREZ*; O. FUENTES; A. M. KHAN. *The Univ. of Texas at El Paso, The Univ. of Texas at El Paso.*

11:00 O36 **149.20** Using high-spatial resolution atlas-based mapping to examine the spatial relationships of hypocretin/orexin- and tyrosine hydroxylase-immunoreactive axonal fibers in the rat paraventricular thalamic nucleus. M. A. PEVETO*; A. F. SILVEYRA; B. E. PINALES; A. M. KHAN. *Univ. of Texas At El Paso.*

8:00 O37 **149.21** ▲ Viral tracing of axonal projections from tyrosine hydroxylase-expressing neurons of the zona incerta in male mice. E. MEJIA*; M. S. PONCE; K. NEGISHI; A. HEBERT; M. J. CHEE; A. M. KHAN. *Univ. of Texas at El Paso, Carleton Univ.*

9:00 O38 **149.22** Computer vision-based tools to segment gray and white matter regions in experimental tissue sections and to analyze tracer injection sites mapped in digital atlas space: Use cases for the hypothalamus and ventral tegmental area for circuits related to feeding control. A. ARNAL*; O. FUENTES; A. M. KHAN. *Univ. of Texas at El Paso, Univ. of Texas at El Paso, Univ. of Texas at El Paso.*

10:00 O39 **149.23** Distributions of axons immunoreactive for α-melanocyte stimulating hormone and neurons immunoreactive for neuronal nitric oxide synthase in the hypothalamus of the adult male rat: An analysis of interactions and their representation in an atlas reference space. E. PERU*; V. I. NAVARRO; K. NEGISHI; R. GUZMAN; A. M. KHAN. *Univ. of Texas at El Paso.*

11:00 O40 **149.24** The contribution of axonal projections from infralimbic area neuronal populations to the medial forebrain bundle: Analysis of morphology and interactions with hypocretin/orexin neurons in the rat. K. NEGISHI*; A. M. KHAN. *Univ. of Texas at El Paso.*

POSTER

150. Appetitive and Incentive Learning and Memory I

Theme G – Motivation and Emotion

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 O41 **150.01** A role for dopamine in aversive prediction error. V. OPARA; A. MAHMUD; B. P. LAY*; M. COSSETTE; M. D. IORDANOVA. *Concordia Univ., Concordia Univ.*

9:00 O42 **150.02** ▲ Causal evidence supporting the proposal that dopamine transients function as a temporal difference prediction error. E. MAES; M. SHARPE; M. P. GARDNER; C. CHANG; G. SCHOENBAUM; M. D. IORDANOVA*. *Concordia Univ., UCLA, NIDA IRP, NIDA, Natl. Inst. on Drug Abuse Intramural Res. Program.*

10:00 O43 **150.03** Circuits that encode and predict alcohol associated preference. K. M. SCAPLEN*; M. TALAY; S. SALAMON; K. NUNEZ; A. G. WATERMAN; S. GANG; S. L. SONG; G. BARNEA; K. R. KAUN. *Brown Univ., Univ. of Cologne, Brown Univ., Brown Univ.*

11:00 O44 **150.04** Midbrain fMRI ensemble patterns encode the identity of sensory prediction errors in humans. J. D. HOWARD*; T. A. STALNAKER; G. SCHOENBAUM; T. KAHNT. *Northwestern Univ., Natl. Inst. on Drug Abuse, Intramural Res. Program, Natl. Inst. on Drug Abuse Intramural Res. Program.*

8:00 P1 **150.05** Dopamine neuron ensembles encode the identity of sensory prediction errors in rats. T. A. STALNAKER*; Y. K. TAKAHASHI; J. D. HOWARD; S. J. GERSHMAN; T. KAHNT; G. SCHOENBAUM. *Natl. Inst. on Drug Abuse, Intramural Res. Program, NIH, Northwestern Univ., Harvard Univ., Univ. of Maryland Sch. of Med., Johns Hopkins Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 P2 **150.06** ● Dopamine D2 receptor-like stimulation blocks learning from negative feedback in the rat: A behavioral and computational study. B. U. PHILLIPS*; J. ALSIÖ; J. SALA-BAYO; S. R. O. NILSSON; L. LOPEZ-CRUZ; J. W. DALLEY; R. N. CARDINAL; A. C. MAR; T. W. ROBBINS. *Univ. of Cambridge, Univ. of Cambridge, New York Univ. Med. Ctr., Univ. of Cambridge, NHS.*

10:00 P3 **150.07** Optogenetic stimulation of midbrain dopamine promotes decision-making towards actions associated with less effort and lower value reinforcers. B. R. FRY*; A. MCLOCKLIN; N. PENCE; R. SCHAEFER; J. BEATTY; C. L. COX; A. W. JOHNSON. *Michigan State Univ., Michigan State Univ., Michigan State Univ.*

11:00 P4 **150.08** Optogenetic inhibiton of cue-elicted dopamine activity attenuates sign-tracking behavior to a Pavlovian food cue. A. IGLESIAS*; J. WONG; P. CAMPUS; K. DEISSEROTH; H. AKIL; S. B. FLAGEL. *Univ. of Michigan, Univ. of Michigan, Stanford Univ. Dept. of Psychology, Univ. of Michigan.*

8:00 P5 **150.09** Investigating individual differences in cue-induced reinstatement of opioid-seeking behavior. S. E. CHANG*; M. M. CHOJECKI; L. D. KRUEGER; S. B. FLAGEL. *Univ. of Michigan.*

9:00 P6 **150.10** Investigating the role of corticosterone receptor signaling on dopamine-dependent Pavlovian incentive learning. S. A. LOPEZ*; Y. KIM; R. T. KENNEDY; S. B. FLAGEL. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

10:00 P7 **150.11** Optogenetic stimulation of melanin concentrating hormone and orexin differentially influence cue potentiated feeding. N. RUSSELL; L. RAYCRAFT; R. BUGESCU; G. M. LEINNINGER; A. W. JOHNSON*. *Michigan State Univ., Michigan State Univ.*

11:00 P8 **150.12** Estrus cycle interactions with melanin concentrating hormone on peak interval responding in rats. L. M. RAYCRAFT*; E. NOBLE; S. E. KANOSKI; A. W. JOHNSON. *Michigan State Univ., USC, USC.*

8:00 P9 **150.13** Anterior paraventricular thalamus to ventromedial nucleus of the hypothalamus projection modulates compulsive sucrose seeking induced by high-fat diet. Z. YUAN*; X. MA; J. CHENG; Y. ZHOU; Y. SHEN. *Zhejiang Univ., Zhejiang Univ., Zhejiang Univ. Sch. of Med.*

9:00 P10 **150.14** ▲ Assessing the effects of selective inhibition of neuronal projections from the lateral hypothalamus to the paraventricular nucleus of the thalamus on Pavlovian conditioned approach behavior. A. JOHNSON; A. IGLESIAS; P. CAMPUS; S. B. FLAGEL*. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

10:00 P11 **150.15** DREADD silencing of neurons in the paraventricular thalamus interferes with context-mediated renewal of food seeking in a sex-dependent manner. A. M. K. MADDEN*; G. D. PETROVICH. *Boston Col.*

11:00 P12 **150.16** Fos expression in central amygdala following novel food and context exposure. E. G. GREINER*; G. D. PETROVICH. *Boston Col., Boston Col.*

8:00 P13 **150.17** Investigation of the prelimbic cortex neuronal ensembles plasticity during context-mediated renewal of responding to food cues. D. S. LAFFERTY*; G. D. PETROVICH. *Boston Col.*

9:00 P14 **150.18** Contribution of dorsal striatal direct and indirect pathway projections to goal-directed and habit learning. M. MALVAEZ*; A. LIANG; M. D. MURPHY; K. M. WASSUM. *UCLA.*

10:00 P15 **150.19** Transient inactivation of ventral hippocampus promotes learning of the odor-safe association in rats. K. SHINOHARA*; Y. YASOSHIMA. *Osaka Univ.*

11:00 P16 **150.20** Lateral habenula lesions impair absolute but not relative reward comparisons. M. R. PAPINI*; S. E. CONRAD; R. DONAIRE; S. GUARINO; C. TORRES. *Texas Christian Univ., Texas Christian Univ., Univ. of Jaen.*

8:00 P17 **150.21** Rat licking microstructure analysis: Effect of long-term sucrose consumption on taste preferences. H. VILLARREAL-VÁZQUEZ*; E. BOLAÑOS-AQUINO; G. VERA-RIVERA; M. I. MIRANDA. *Univ. Nacional Autónoma De México, Univ. Nacional Autónoma de México, Univ. Nacional Autónoma de México.*

9:00 P18 **150.22** Exercise reduces incubation of craving for food high in fat. G. E. KIRKPATRICK*; P. M. DINGESS; T. E. BROWN. *Univ. of Wyoming, Univ. of Alaska, Univ. of Wyoming.*

10:00 P19 **150.23** ▲ Physical exercise ameliorates increases in sign-tracking behavior in rats exposed to high levels of kynurenic acid during adolescence. S. B. MILLER*; M. C. EDDY; N. E. DEANGELI; D. J. BUCCI. *Dartmouth Col.*

POSTER

151. Fear and Aversive Learning and Memory: Acquisition

Theme G – Motivation and Emotion

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 P20 **151.01** ▲ Carriers of the met allele of the bdnf val66met polymorphism develop weaker fear memories in a fear-potentiated startle paradigm. J. N. WEISER*; M. R. RIGGENBACH; B. E. MOSLEY; J. J. HIPSKIND; L. E. WIREMAN; K. L. HESS; T. J. DUFFY; J. K. HANDEL; M. G. KASCHALK; K. E. RENEAU; S. J. HELWIG; P. R. ZOLADZ. *Ohio Northern Univ.*

9:00 P21 **151.02** Fear conditioning responses and regulatory role of intracerebral NMDA antagonist D-AP5. A. MORA-GALLEGOS*; J. FORNAGUERA; D. QUESADA-YAMASAKI. *Univ. of Costa Rica.*

10:00 P22 **151.03** HU-211-sensitive, cognitive learning and memory processes modulate GluN2B surface expression in the mouse brain. J. J. VIGIL; S. D. KOCH; A. L. UHERNIK; J. P. SMITH*. *Colorado State University-Pueblo.*

11:00 P23 **151.04** Using high resolution near infrared imaging to measure fear-learning induced changes in AMPA/NMDA ratios throughout the fear circuit. B. SHULTZ*; N. MOHAMMADMIRZAEI; A. FARKASK; B. COLLINS; D. KNOX. *Univ. of Delaware.*

8:00 P24 **151.05** The conditions under which consolidation of conditioned fear requires *de novo* protein synthesis in the basolateral amygdala complex. M. J. WILLIAMS-SPOONER*; R. F. WESTBROOK; N. M. HOLMES. *Univ. of New South Wales, Sch. of Psychology.*

9:00 P25 **151.06** The experience of danger changes the way the brain consolidates innocuous information: The roles of the perirhinal cortex and basolateral amygdala. O. QURESHI*; R. F. WESTBROOK; N. M. HOLMES. *Univ. of New South Wales.*

10:00 P26 **151.07** Fear memory extinction is enhanced by cannabidiol when given during acquisition in female mice. A. L. UHERNIK*; Z. T. MONTOYA; C. R. TURNER; J. P. SMITH. *Colorado State University-Pueblo.*

● Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 P27 **151.08** Characterization of conditioned taste aversion without liquid deprivation: Effects on learning and aversive memory extinction. A. ALCALÁ-RAMÍREZ*; A. RANGEL-HERNÁNDEZ; M. I. MIRANDA. *Univ. Nacional Autónoma de México.*

8:00 P28 **151.09** Conditioned taste aversion can be acquired under dexmedetomidine-induced anesthesia in rats. C. CHENG*; H. HSIAO; D. CHEN. *Natl. Cheng Kung Univ.*

9:00 P29 **151.10** The role of basolateral amygdala parvalbumin neurons in the blocking of Pavlovian fear. J. YAU*; G. MCNALLY. *Univ. of New South Wales.*

10:00 P30 **151.11** GABA neurons in the prelimbic cortex regulate locomotion and associative learning. E. MARRON*; M. TIPPS; T. ROSE; B. VO; K. WICKMAN. *Univ. of Minnesota.*

11:00 P31 **151.12** ▲ Enhanced emotional memory formation and alcohol consumption in mice exposed to early life stress during infancy. K. M. SCHUH*; E. A. SNEDDON; J. J. QUINN; A. K. RADKE. *Miami Univ.*

8:00 P32 **151.13** ▲ VTA kappa opioid receptor stimulation paired with CRF elicits conditioned place aversion, but kappa stimulation alone does not. J. M. R. BASTACKY*; D. P. DUNN; H. S. KILLEN; E. B. MARGOLIS; P. J. CURRIE. *Reed Col., Reed Col., UCSF, Dept. Psychology, Reed Col.*

9:00 P33 **151.14** The impact of chronic fluoxetine treatment in adolescence or adulthood on context fear learning and perineuronal nets. D. CHAN; K. D. BAKER*; R. RICHARDSON. *UNSW Sydney.*

10:00 P34 **151.15** Serotonin input to the dorsal BNST contributes to sex differences in fear learning. R. RAVENELLE*; H. YOON; E. LIKHTIK; N. S. BURGHARDT. *The Grad. Center, CUNY, Hunter College, CUNY, Hunter College, CUNY.*

11:00 P35 **151.16** Oxytocin signaling modulates the switch from passive to active defensive responses in fear memory circuits. R. STOOP*; R. TRIANA DEL RIO; D. SCHEGGIA; C. HEGOBURU; C. LEROUX; T. YIN; E. VAN DEN BURG. *Ctr. For Psychiatric Neuroscience, Univ. Lausanne, CNP, CHUV, Lausanne Univ. Hosp., CHUV Psychiatrie Neurosci. Ctr., CIBM.*

8:00 P36 **151.17** ● Testing the theory of epigenetic priming for memory formation. A. BURNS*; P. ARGUELLO-PASCUALLI; M. FARINELLI-SCHARLY; S. HUGUES; J. GRAFF. *Brain and Mind Institute, EPFL, E-PHY-SCIENCE.*

9:00 P37 **151.18** An epigenetic contribution to neuronal competition during memory formation. G. SANTONI*; J. GRAFF. *Brain and Mind Institute, EPFL.*

POSTER

152. Human Motivation and Emotion I

Theme G – Motivation and Emotion

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 P38 **152.01** Multidimensional markers of a novel sync based measure of interoception. S. FITTIPALDI*; S. ABREVAYA; L. DE LA FUENTE; A. BIRBA; P. SALAMONE; M. HILDEBRANDT; S. ALARCO MARTI; M. MARTORELL; A. YORIS; A. GARCIA; L. SEDENO; A. IBANEZ. *Inst. of Cognitive and Translational Neurosci. (INCyT), Natl. Scientific and Tech. Res. Council (CONICET), Chair for Clin. Psychology and Behavioral Neurosci., Fac. of Education, Natl. Univ. of Cuyo (UNCuyo), Ctr. for Social and Cognitive Neurosci. (CSCN), Sch. of Psychology, Univ. Adolfo Ibanez.*

9:00 P39 **152.02** Intersubject correlation analysis of EEG rhythm during listening to music. Y. INAGAKI*; S. SHIMADA. *Grad. Sch. of Sci. and Technology, Meiji U, Meiji Univ.*

10:00 P40 **152.03** Isolating the neural correlates of processing socio-emotional threat and ambiguity across modalities with influence of individual differences: An fMRI-adaptation study. J. C. WHITEHEAD*; I. SPOIUSAS; J. L. ARMONY. *McGill Univ., Douglas Mental Hlth. Univ. Inst., Intl. Lab. for BRAin, Music and Sound Res. (BRAMS), The Ctr. for Res. on Brain, Language and Music (CRBLM), Univ. Nacional de Quilmes, McGill Univ.*

11:00 P41 **152.04** Headache in patients with musculoskeletal pain: A link to vitamin D and calcium. K. K. ABDUL-RAZZAK*; A. ALHUSBAN; M. AL-FARRAS. *Jordan Univ. of Sci. and Technol., Jordan Univ. of Sci. and Technol.*

8:00 P42 **152.05** Personality traits, emotionality, and striatal dopamine D_2 receptors in substance use disorder and obesity. V. RAMIREZ*; C. E. WIERS; G. WANG; N. D. VOLKOW. *NIH, Natl. Inst. on Alcohol Abuse and Alcoholism, Natl. Inst. On Alcohol Abuse and Alcoholism, Natl. Inst. on Alcohol Abuse and Alcoholism, NIH/NIDA.*

9:00 Q1 **152.06** ▲ Relationship between scholarship and self-esteem levels in obese adult patients. N. V. VEGA-CABRERA*; M. BAUTISTA-ÁVILA; L. E. VEGA-CABRERA; O. A. JARAMILLO-MORALES. *Inst. Mexicano del Seguro Social, Área Académica de Farmacia, Inst. de Ciencias de la Salud, Univ. Autónoma del Estado de Hidalgo, Departameto de Estudios Moleculares Avanzados, Inst. de Ecología A.C., Área Académica de Farmacia y Enfermería, Inst. de Ciencias de la Salud, Univ. Autónoma del Estado de Hidalgo.*

10:00 Q2 **152.07** Effective connectivity of reward network in high and low sense of humor. Y. CHAN; W. HSU; Y. CHEN; P. LI. *Natl. Tsing Hua Univ., Natl. Taiwan Univ. of Sci. and Technol., Pennsylvania State Univ.*

11:00 Q3 **152.08** ▲ Reproducibility of the emotion regulation network using fMRI at ultra-high magnetic field. S. BERBOTH*; C. WINDISCHBERGER; C. MORAWETZ. *Charité Universitätsmedizin Berlin, Med. Univ. Vienna, Med. Univ. Vienna.*

8:00 Q4 **152.09** ● Reward-related oscillatory activity associated with gossip information. J. MARCO-PALLARES*; H. ALICART. *Univ. of Barcelona.*

8:00 DP09/Q5 **152.10** (Dynamic Poster) Emotional tactile stimulation device for non-invasive neuroimaging. N. KANAYAMA*; M. HARA; J. WATANABE; R. KITADA; M. SAKAMOTO; S. YAMAWAKI. *Natl. Inst. of Advanced Industrial Sci., Saitama Univ., Nippon Telegraph and Telephone Corp., Nanyang Technological Univ., The Univ. of Electro-Communications, Hiroshima Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 Q6 **152.11** Predicting emotion regulation success from distributed patterns of event-related potentials during anticipation and implementation of different regulation strategies. E. SCHUBERT; J. AGATHOS; M. BRYDEVALL; D. FEUERRIEGEL; P. KOVAL; C. MORAWETZ; S. BODE*. *The Univ. of Melbourne, Med. Univ. Vienna.*

11:00 Q7 **152.12** ▲ Relationship between empathy and conformity based on behavior measurement and brain function measurement. M. ASAKA*; Y. HOSOKAWA; A. OMURA; H. SATO; H. KAWAGUCHI. *Toyo Univ., Toyo Univ., Shibaura Inst. of Technol.*

8:00 Q8 **152.13** Empathy and prosocial motivation for suffering others is improved by implicit empathy training. S. KIM*; S. KIM. *Korea Univ.*

9:00 Q9 **152.14** The voice of primates: Evolutionary perspective to the human affective brain. C. DEBRACQUE*; L. CERAVOLO; K. SLOCOMBE; Z. CLAY; T. GRUBER; D. GRANDJEAN. *Univ. of Geneva - Swiss Ctr. for Affective Sci., Univ. of York, Durham Univ.*

10:00 Q10 **152.15** ▲ Increased amygdala-frontal resting state functional connectivity is associated with greater heart rate variability and reduced anxiety. K. FREDERIKS; S. KARK; J. PAYNE; E. A. KENSINGER*. *Boston Col., Univ. of Notre Dame Dept. of Psychology.*

11:00 Q11 **152.16** Presence of another person can affect neuronal responses and task performance. Y. TSENG*; K. TAMURA; T. OKAMOTO. *Kyushu Univ., Kyushu Univ.*

8:00 Q12 **152.17** Empathic concern trajectories reflect underlying amyloid-β and hippocampal gray matter volume in cognitively normal older adults. T. E. CHOW*; C. R. VEZIRIS; R. LA JOIE; V. BOURAKOVA; K. P. RANKIN; J. H. KRAMER; B. L. MILLER; W. W. SEELEY; G. D. RABINOVICI; V. E. STURM. *Univ. of California, San Francisco.*

9:00 Q13 **152.18** Why TV commercials inside the advertising unit attract less attention. S. TUKAIEV*; I. SELEZNOV; A. POPOV. *Natl. Taras Shevchenko Univ. of Kyiv, Inst. of Journalism, Natl. Tech. Univ. of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute".*

10:00 Q14 **152.19** ▲ The relationship between anxiety and emotionally ambiguous facial expressions. H. M. WILKS*; S. E. WILLIAMS; K. L. MEEKER; J. D. WARING. *St. Louis Univ.*

11:00 Q15 **152.20** ▲ The continued influence of neuroplasticity on attention and emotional expression in school-age children with perinatal stroke. M. R. MEYER*; S. EDWARDS; E. BEAVER; P. LAI. *Univ. of Nebraska at Kearney.*

8:00 Q16 **152.21** Dissociating affective and semantic neural representations of valence. X. LI*; A. K. ANDERSON. *Dept. of Human Development, Cornell Univ.*

9:00 Q17 **152.22** Compensation and its cousins: Parsing moral motives underlying guilt-induced behaviors. B. SHEN*; H. YU; X. ZHOU. *NYU Langone Sch. of Med., Peking Univ.*

10:00 Q18 **152.23** How direct or indirect social interaction affects the brain activities during the drum playing? H. EDA*; T. SHIBUYA; M. UCHIYAMA; T. TANAKA; M. YAMAZAKI; N. OKAMOTO; Y. KURODA; M. SATOH. *Grad. Sch. For GPI, Phonics Innovations Co., Ltd., ATV Corp., Grand Coeur Lab. LLC, Col. of Social Sciences, Ritsumeikan Univ., Kyoto Univ. of Educ., Mie Univ.*

11:00 R1 **152.24** An fMRI study on the encoding and retrieval of political fake news. B. L. GONZALEZ*; Y. CHEN; T. CANLI. *Stony Brook Univ.*

POSTER

153. Human Motivation and Emotion II

Theme G – Motivation and Emotion

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 R2 **153.01** Interoceptive imagination facilitates emotional face perception. Y. CHAE*. *Kyung Hee Univ.*

9:00 R3 **153.02** An EMG study of human affective state dynamics in a social videogame paradigm. D. V. TIKHOMIROVA; A. V. SAMSONOVICH*. *Natl. Res. Nuclear Univ. Mephi.*

10:00 R4 **153.03** Interindividual differences in the neural response to social rejection predict aggressive behavior. P. PETEREIT*; U. M. KRÄMER. *Univ. of Luebeck, Univ. of Luebeck.*

11:00 R5 **153.04** Cross frequency coupling between the human amygdala and hippocampus during successful encoding of negative emotional memory. M. COSTA; A. GIL.NAGEL; R. TOLEDANO; C. OEHRN; M. YEBRA; C. MÉNDEZ-BÉRTOLO; N. AXMACHER; S. MORATTI; B. A. STRANGE*. *Univ. Politecnica de Madrid, Ruber Internacional Hosp., Universitätsklinikum Gießen und Marburg, Dept. of Neuropsychology, Inst. of Cognitive Neuroscience, Fac. of Psychology, Ruhr Univ. Bochum, Dept. of Exptl. Psychology, UCM, Univ. Politecnica De Madrid.*

8:00 R6 **153.05** Neural substrates of negativity bias in the recognition of facial emotion. G. KIM*; S. LEE. *Korea Advanced Inst. of Sci. and Technol. (KAIST), Korea Advanced Inst. of Sci. and Technol. (KAIST).*

9:00 R7 **153.06** Brain decoding of affective meaning through personal stories. H. KIM*; C. WOO. *Ctr. For Neurosci. Imaging Res. (CNIR), Sungkyunkwan Univ.*

10:00 R8 **153.07** Know pain, know gain: Brain representations of sensory pleasure and pain. S. LEE*; J. HAN; M. CHOI; C. WOO. *Ctr. For Neurosci. Imaging Res. (CNIR), Sungkyunkwan Univ.*

11:00 R9 **153.08** Understanding the brain representations of endogenous affective experiences. B. E. KIM*; C. WOO. *Ctr. For Neurosci. Imaging Res., Sungkyunkwan Univ.*

8:00 R10 **153.09** Structural covariance of the amygdala is associated with trait aggression. M. GÖTTLICH; M. BUADES-ROTGER*; F. BEYER; J. WIECHERT; U. M. KRÄMER. *Univ. of Luebeck, Queen Mary Univ.*

9:00 R11 **153.10** Increased savivary alpha amylase following intermittent transdermal VNS. D. SHELTON; B. E. HARRIS; G. COLLIER; M. MENNEMEIER; R. W. ROOSEVELT*. *Arkansas Tech. Univ., Arkansas Tech. Univ., Univ. of Arkansas for Med. Sci.*

10:00 R12 **153.11** Violence exposure contributes to sex differences in the neural response to stress. E. DAVIS*; A. M. GOODMAN; M. N. ELLIOTT; M. A. SCHUSTER; S. TORTOLERO EMERY; S. MRUG; D. C. KNIGHT. *Univ. of Alabama At Birmingham, Univ. of Alabama at Birmingham, RAND, Kaiser Permanente, Univ. of Texas.*

11:00 R13 **153.12** Effect of mortality salience on the neurocognitive processing of guilt and shame. Z. XU*; R. ZHU; C. LIU. *Beijing Normal Univ., State Key Lab. of Cognitive Neurosci. and Learning, IDG/McGovern Inst. for Brain research.*

8:00 R14 **153.13** Neuroticism associates brain functional network efficiency. M. PENG*. *Beijing Normal Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 R15 **153.14** Neural evidence for positive "compassion carry-over". T. SRIRANGARAJAN; A. GENEVSKY; B. MERRITT; T. JINPA; B. D. KNUTSON*. *Stanford Univ., Erasmus Univ. Rotterdam, Univ. of San Francisco, McGill Univ.*

10:00 R16 **153.15** ● Cerebellar tDCS in Parkinson's disease: Modulation of negative emotions recognition. F. RUGGIERO; S. MARCEGLIA*; F. MAMELI; M. VERGARI; S. MRAKIC-SPOSTA; M. NIGRO; S. BARBIERI; A. PRIORI; R. FERRUCCI. *Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Univ. Degli Studi Di Trieste, Inst. of Mol. Bioimaging and Physiol. Natl. Res. Council, Univ. degli Studi di Milano, Univ. of Milan.*

11:00 R17 **153.16** Cultivating affective resilience: Translational benefits of a novel cognitive-emotional intervention in veterans. S. D. DOLCOS*; Y. HU; H. BERENBAUM; F. DOLCOS. *Univ. of Illinois at Urbana-Champaign.*

8:00 R18 **153.17** Immediate and long-term effects of focused attention: A functional MRI investigation. F. DOLCOS*; S. JUN; Y. KATSUMI; S. CHEN; P. BOGDAN; M. O'BRIEN; S. BUETTI; A. LLERAS; K. FREEMAN BOST; S. DOLCOS. *Univ. of Illinois.*

9:00 R19 **153.18** Neurophysiological synchrony as generalizable biomarker of group experience and performance. S. M. RENNIE*; L. GAUDREAU; R. LEONE; D. BHATT; M. L. PLATT. *Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania.*

10:00 R20 **153.19** Postural and autonomic responses during observation of emotional body expressions. A. A. NOGUEIRA-CAMPOS*; M. R. A. CORREIA; L. A. IMBIRIBA. *Federal Univ. of Juiz De Fora, Federal Univ. of Rio de Janeiro.*

11:00 S1 **153.20** EEG source localization of independent components associated with multimodal emotion perception. K. M. BECKER*; D. C. ROJAS. *Colorado State Univ., Colorado State Univ.*

POSTER

154. Drugs of Abuse: Learning and Memory I

Theme G – Motivation and Emotion

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 S2 **154.01** Cerebellar perineuronal nets digestion with chondroitinase ABC in cocaine-induced memory: Creating conditions for change. J. GUARQUE-CHABRERA*; I. MELCHOR-EIXEA; A. SANCHEZ-HERNANDEZ; M. MIQUEL. *Univ. Jaume I.*

9:00 S3 **154.02** Effects of chemogenetic manipulation of the VTA dopamine projection to lateral amygdala on cocaine-cue conditional learning. D. M. SMITH*; M. M. TORREGROSSA. *Univ. of Pittsburgh.*

10:00 S4 **154.03** Hippocampal MeCP2 and histone acetylation mediate cocaine-induced shifts in behavioral learning and control. E. HARVEY; M. M. COBB; Y. LU; D. P. MATHEOS; M. A. WOOD; P. J. KENNY; I. S. MAZE; P. J. KENNEDY*. *Univ. of California Los Angeles, Icahn Sch. of Med. At Mount Sinai, Univ. of California Irvine, ICAHN Sch. of Med. At Mount Sinai.*

11:00 S5 **154.04** Cognitive training and cocaine addiction in rats: Timing is everything! M. SOLINAS*; M. WAHAB; L. VIRGINIE. *INSERM U1084/University of Poitiers.*

8:00 S6 **154.05** Identifying genetic targets within activity-dependent neuronal ensembles in the prefrontal cortex following cocaine place conditioning. L. R. WHITAKER*; C. N. MILLER; C. CANN; R. MADANGOPAL; R. A. M. MARINO; M. VENNIRO; F. J. RUBIO; C. T. RICHIE; B. T. HOPE. *Natl. Inst. on Drug Abuse Intramural Res. Program.*

9:00 S7 **154.06** ● Effects of prolonged cocaine abstinence on neural activity in the prelimbic cortex and nucleus accumbens core. R. M. HAAKE*; M. NIEDRINGHAUS; T. M. MOSCHAK; E. A. WEST; F. FROHLICH; R. M. CARELLI. *Univ. of North Carolina at Chapel Hill, Univ. of North Carolina at Chapel Hill.*

10:00 S8 **154.07** Targeted optogenetic stimulation of the prelimbic cortex to nucleus accumbens core pathway restores behavioral flexibility following a history of cocaine exposure. E. A. WEST*; M. NIEDRINGHAUS; T. J. SLOAND; R. M. CARELLI. *Univ. of North Carolina.*

11:00 S9 **154.08** A small interference peptide disrupts drug induced long term place preference in rats. C. YANG; C. DONG; Y. WANG; W. HAO; X. ZHANG*. *Dept. of Psychiatry, Xiangya 2nd Hospital, Ce, Tianjing Anding Hosp., Univ. of British Columbia.*

8:00 S10 **154.09** Brain region-specific differences in the transcriptome of cocaine- and methamphetamine-associated memories. M. HAFENBREIDEL*; M. E. JONES; S. B. BRIGGS; S. E. SILLIVAN; S. KHAN; M. D. CAMERON; G. RUMBAUGH; C. A. MILLER. *Scripps Res., Scripps Res., Scripps Res.*

9:00 S11 **154.10** Melatonin attenuates learning and memory impairment and accompanying changes in mouse hippocampus after methamphetamine administration. S. MUKDA*; N. VESCHSANIT; T. LWIN; P. CHANCHAROEN; S. NGAMPRAMUAN; P. GOVITRAPONG. *Mahidol Univ., Burapha Univ., Mahidol Univ., Chulabhorn Royal Acad.*

10:00 S12 **154.11** ▲ Experience with methamphetamine induces changes in credit assignment during multi-cue reinforcement learning. S. KOLLI; A. STOLYAROVA; A. B. THOMPSON; A. IZQUIERDO*. *UCLA.*

11:00 S13 **154.12** The neuronal ensembles in the infralimbic prefrontal cortex is involved in the effect of memory retrieval-extinction procedure on methamphetamine seeking. Y. XUE*; Y. CHEN; J. SHI; L. LU. *Natl. Inst. on Drug Dependence, Peking Univ., Peking Univ., Natl. Inst. On Drug Dependence of Peking Un, Inst. Mental Health,Peking Univ. Sixth Hospita.*

8:00 S14 **154.13** Escalated compulsive methamphetamine taking in the presence of punishment: Expression of stress-related genes in the rat hippocampus and prefrontal cortex. S. JAYANTHI*; J. A. HERNANDEZ; M. T. MCCOY; B. LADENHEIM; J. L. CADET. *DHHS/NIH/NIDA-IRP, DHHS/NIH NIDA-IRP, DHHS/NIH/NIDA-IRP.*

9:00 S15 **154.14** Modafinil and methylphenidate activate dopamine transients in the rat striatum. S. AVULA; B. M. SMITH*; A. A. SALZMAN; N. WORBY; P. A. GARRIS. *Illinois State Univ.*

10:00 S16 **154.15** The effect of contextual cocaine and nicotine conditioned stimuli on memory consolidation: Role of the noradrenergic system. M. WOLTER; T. SPEIGEL; B. WINTER; F. LERI*. *Univ. Guelph.*

11:00 S17 **154.16** Memories that linger: Effects of acute and conditioned opiate withdrawal on memory consolidation. N. BAIDOO*; M. WOLTER; B. WINTERS; M. HOLAHAN; F. LERI. *Univ. of Guelph, Carleton Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 S18 **154.17** VTA-DH projections mediate morphine-induced memory retrieval. Y. HAN; Y. ZHANG; H. KIM; M. V. CENTENO; A. L. GUEDEA; V. S. GRAYSON; C. GAO; M. MARTINA; J. A. ROGERS; A. V. APKARIAN; J. M. RADULOVIC. *Northwestern Univ., Xuzhou Med. Univ., Northwestern Univ., Col. of Engineering, Univ. of Missouri, Northwestern Univ., Dept. of Physiology, Northwestern University, Chicago.*

8:00 DP10/T1 **154.18** (Dynamic Poster) Hippocampal activity dynamics during contextual reward association in virtual reality place conditioning. S. B. WILLIAMS*; M. W. ARRIAGA; S. HARLALKA; W. W. POST; A. A. KORGAONKAR; E. B. HAN; J. MORON-CONCEPCION. *Washington Univ. in St. Louis, Washington Univ. In St. Louis Sch. of Med., Washington Univ. In St. Louis.*

10:00 T2 **154.19** Enhancement of object memory consolidation in rats by exposure to heroin or a heroin-paired context is unaffected by naltrexone. A. E. HUFF*; M. WOLTER; N. BAIDOO; B. D. WINTERS; F. LERI. *Univ. of Guelph.*

11:00 T3 **154.20** ● Post trail inhibition of dopamine reverses morphine conditioning and prevents sensitization. M. P. CARRERA*; R. J. CAREY; J. B. LEITE, Jr.; J. M. MELLO BASTOS; R. SAMUELS. *State Univ. of North Fluminense, SUNY Upstate Med. Univ.*

POSTER

155. Mechanisms Underlying Alcohol Consumption II

Theme G – Motivation and Emotion

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 T4 **155.01** Effects of systemic and intra-accumbal administration of 5-HT_{1B} receptor agonist CP94253 on oral self-administration of ethanol in rats. J. C. JIMÉNEZ*; F. CORTÉS-SALAZAR; L. N. CEDILLO ZAVALETA; R. RUÍZ GARCÍA; A. BARRIENTOS-NORIEGA; F. MIRANDA-HERRERA. *Facultad de Estudios Superiores Iztacala, Facultad de Estudios Superiores Iztacala, Facultad de Estudios Superiores Iztacala, FES, Iztacala, UNAM, Univ. Nacional Autonoma De Mexico.*

9:00 T5 **155.02** GABA-B receptor in the central amygdala as a target for treating compulsive-alcohol drinking in rats. E. DOMI*; L. XU; J. WISKERKE; S. TOVAINEN; E. BARBIER; E. AUGIER; M. HEILIG. *Ctr. for Social and Affective Neuroscience, IKE.*

10:00 T6 **155.03** Risky alcohol consumption and its effects on the brain an *in vivo* longitudinal study. A. LANQUETIN*; A. DRIEU; C. FREYSSAINGE; D. VIVIEN; A. PITEL; M. RUBIO. *U1237, Phind, U1077.*

11:00 T7 **155.04** Chronic intermittent voluntary alcohol consumption affects sensitivity to negative feedback but not overall probabilistic discrimination learning during prolonged withdrawal. C. G. AGUIRRE*; K. DAS; M. CERVANTES; I. SPIGELMAN; A. IZQUIERDO. *Univ. of California- Los Angeles, Univ. of California- Los Angeles.*

8:00 T8 **155.05** Behavioral characterization of mice with selective dopamine D3 receptor knockout on striatal D1 projection neurons. C. E. TERESI*; M. E. BOCARSLY; L. K. DOBBS; Z. Z. FREYBERG; V. A. ALVAREZ. *Natl. Inst. On Alcohol Abuse and Alcoholism, Ctr. on Compulsive Behaviors, Univ. of Pittsburgh.*

9:00 T9 **155.06** Operant ethanol self-administration paradigm measuring both appetitive and consummatory behavior in rats. E. M. STARR*; H. YANG; E. J. GLOVER. *Univ. of Illinois at Chicago.*

10:00 T10 **155.07** Salvia divinorum extract increase alcohol consumption and tonic immobility and decrease food intake in Wistar rat. A. MIRANDA-PÁEZ*; P. VÁZQUEZ-LEÓN; U. ARENAS-MARTÍNEZ. *Inst. Politécnico Nacional.*

11:00 T11 **155.08** Systemic and intra-dorsal striatal administration of the AMPA receptor antagonist NBQX disrupts binge-like alcohol consumption in C57BL/6J mice. M. R. WATSON*; D. P. GARCY; S. L. BOEHM, II. *Indiana Univ. Purdue Univ. Indianapolis.*

8:00 T12 **155.09** Evidence for separable anterior insula pathways that control compulsion-like and regular, alcohol-only drinking. T. DE OLIVEIRA SERGIO*; K. LEI; C. KWOK; L. NAKAYAMA; L. LI; S. GHOTRA; J. YU; S. A. WEGNER; D. DAREVSKY; F. W. HOPF. *Univ. of California, San Francisco.*

9:00 T13 **155.10** The role of mu-opioid receptors in individual differences in voluntary alcohol consumption and conditioned fear learning. A. PAJSER*; H. FISHER; C. L. PICKENS. *Kansas State Univ.*

10:00 T14 **155.11** Nucleus accumbens D1- vs D2 receptor-containing medium spiny neurons differentially control binge-like alcohol drinking in male and female rats. C. E. STRONG*; D. P. HAGARTY; K. J. SCHOEPFER; A. BREA GUERRERO; S. M. CAJUSTE; K. L. MANN; J. L. BREEDLOVE; M. KABBAJ. *Florida State Univ.*

11:00 T15 **155.12** Regulation of binge alcohol drinking by anaplastic lymphoma kinase and signal transducer and activator of transcription 3. K. HAMADA*; A. W. LASEK. *Univ. of Illinois At Chicago, Univ. of Illinois At Chicago.*

8:00 T16 **155.13** Encoding and enhancement of the motivation to consume alcohol by the central nucleus of the amygdala. P. H. JANAK*; T. KIM; D. J. OTTENHEIMER; K. M. FRASER. *Johns Hopkins Univ., Johns Hopkins Univ.*

9:00 T17 **155.14** Adolescent stress increases adult ethanol self-administration and alters ventral tegmental area GABA signaling. D. A. CONNOR*; R. WITTENBERG; J. DROGEN; A. MAK; J. A. DANI. *Univ. of Pennsylvania, Univ. of Pennsylvania.*

10:00 T18 **155.15** The 5-HT_{2C} receptor agonist lorcaserin, alone and in combination with naltrexone, reduces binge-like alcohol drinking in C57BL/6J mice. R. I. TABBARA*; P. J. FLETCHER; A. D. LÊ. *Univ. of Toronto, Ctr. for Addiction and Mental Hlth., Univ. of Toronto, Ctr. for Addiction and Mental Hlth., Univ. of Toronto.*

11:00 T19 **155.16** Escalation of ethanol consumption: Effects on the expression of DAT (SLC6A3) and ABCG2. D. MUSKIEWICZ*; N. FROMMANN; B. PATEL; A. SIMON; H. AMAWI; A. TIWARI; F. S. HALL. *The Univ. of Toledo, Univ. of Toledo Col. of Pharm. and Pharmaceut. Sci.*

8:00 T20 **155.17** Binge-like alcohol consumption during a within-session intermittent access paradigm. C. P. KING*; P. J. MEYER. *Univ. at Buffalo.*

9:00 U1 **155.18** A cortical hypothesis for succeeding and failing at compulsion-like alcohol drinking. D. DAREVSKY; F. W. HOPF*. *UCSF.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

156. Neural and Behavioral Mechanisms of Addiction: Amphetamine

Theme G – Motivation and Emotion

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 U2 **156.01** Sex differences in methamphetamine intake and changes in molecular neuroadaptations associated with relapse to drug seeking behaviors. A. DAIWILE*; S. JAYANTHI; B. LADENHEIM; M. MCCOY; J. CADET. *Natl. Inst. On Drug Abuse.*

9:00 U3 **156.02** ● Dopamine D_1 and D_2 receptors mediate the discriminative stimulus effects of 4-methylmethcathinone (4-MMC) in male and female Sprague-Dawley rats. R. L. BURROUGHS; J. D. ZUARTH GONZALEZ; K. J. CARGILE; L. E. BAKER*. *Western Michigan Univ.*

10:00 U4 **156.03** Rewarding and aversive effects of methamphetamine to test the reward comparison hypothesis and the paradoxical effect hypothesis of abused drugs. A. C. HUANG*; C. HUANG; A. KOZŁOWSKA; J. CHEN; C. WU. *Dept. of Psychology, Fo Guang Univ., Dept. of Human Physiology, Sch. Medicine, Collegium Medicum, Univ. of Warmia and Mazury in Olsztyn, Dept. of Substance Abuse and Psychiatry, Tri-Service Gen. Hosp. Beitou Br., Dept. of Pharmacy, Keelung Hospital, Ministry of Hlth. and Welfare.*

11:00 U5 **156.04** The role of reverse transport of dopamine in complex behavioral phenotypes in *Drosophila melanogaster.* S. J. MABRY*; A. SHEKAR; J. AGUILAR; A. GALLI; H. MATTHIES. *Univ. of Alabama Birmingham, Vanderbilt Univ., Vandebilt Univ., Vanderbilt Univ., Univ. of Alabama at Birmingham.*

8:00 U6 **156.05** Repeated intermittent exposure to conditions of uncertainty increases glutamate signaling in the nucleus accumbens. P. MASCIA; Q. WANG; J. BROWN; K. M. NESBITT; R. T. KENNEDY; P. VEZINA*. *The Univ. of Chicago, Towson Univ., Univ. of Michigan.*

9:00 U7 **156.06** Cross reinstatement by 3 4 methylenedioxypyrovalerone MDPV and cocaine of mice conditioned to both drugs. L. DUART-CASTELLS; C. BLANCO-GANDÍA; M. H. BUENROSTRO-JAUREGUI*; D. PUBILL; M. RODRÍGUEZ-ARIAS; E. ESCUBEDO. *Univ. of Barcelona, Univ. of Valencia, Univ. Iberoamericana.*

10:00 U8 **156.07** ▲ The effects of methamphetamine exposure on anxiety-like behavior, corticosterone levels, and tyrosine hydroxylase levels in adolescent and adult mice. M. L. NEWBY; H. A. ORTMAN; J. A. SIEGEL*. *The Univ. of St. Thomas.*

11:00 U9 **156.08** Methamphetamine and habit formation in gonadally-intact female rats. H. SCHOENBERG*; L. BAUSCH; I. MINEARO; A. KIRSHENBAUM; D. J. TOUFEXIS. *Univ. of Vermont, St. Michael's Col.*

8:00 U10 **156.09** The effects of n-acetylcysteine and differential rearing on amphetamine seeking. T. D. FORT*; T. J. MOSER; J. T. GOMENDOZA; J. P. RACK; M. ALLISON. *Kansas State Univ.*

9:00 U11 **156.10** ▲ LSD1 neuronal-specific splicing variant modulates acute and chronic responses to amphetamine in mice. G. B. MERELLO*; M. OLIVARES COSTA; M. P. GONZALEZ; E. BATTAGLIOLI; F. S. RUSCONI; M. E. ANDRES. *Pontificia Univ. Catolica De Chile, Univ. Católica, Pontificia Univ. Catolica De Chile, Univ. of Milan, Univ. of Milan, Pontificia Univ. Catolica de Chile.*

10:00 U12 **156.11** ● Antagonizing serotonin 2A ($5\text{-}HT_{2A}$) receptors with M100907 prevents methamphetamine-induced reward. J. T. MADDEN*; N. C. REYNA; C. M. MAGCALAS; N. S. PENTKOWSKI. *Univ. of New Mexico.*

11:00 U13 **156.12** ▲ Central ghrelin 1a and glucagon-like peptide-1 receptor activation modulates d-amphetamine conditioned place preference and operant responding for palatable food. D. P. DUNN*; L. ENGEL; O. DAO; M. HALPERIN; K. HAYWORTH; M. KANTER; K. KESSLER; H. KILLEN; J. KOHN; E. LEIF; M. O'KELLEY-BANGSBERG; C. WALWORTH; D. WONG; P. J. CURRIE. *Reed Col.*

8:00 U14 **156.13** Effects of pre-weaning on amphetamine conditioned place preference development and dopaminergic system. M. MENDEZ-DIAZ*; O. AMANCIO-BELMONT; Y. A. ALVARADO RAMÍREZ; A. E. RUIZ-CONTRERAS; O. PROSPERO-GARCIA. *Univ. Nacional Autonoma De Mexico, UNAM, Univ. Nacional Autonoma De Mexico, Lab. Neurogenomica Cognitiva, Fac. Psicologia, UNAM, UNAM.*

9:00 U15 **156.14** Characterization of second order methamphetamine self-administration in female rats. G. F. GUERIN*; V. Y. HEBERT; N. E. GOEDERS. *LSUHSC-S.*

10:00 U16 **156.15** Removal of the $5\text{-}HT_{1B}$ receptor leads to enhanced voluntary consumption of methamphetamine in males and protects against the long-lasting effects of methamphetamine in females. N. K. MEMOS*; J. A. AVILA; E. RODRIGUEZ; N. S. BURGHARDT; P. A. SERRANO. *Hunter College, CUNY, The Grad. Center, CUNY.*

11:00 U17 **156.16** Conditioned neural responses to methamphetamine-paired contexts. H. YANG*; J. WEAFER; E. CHILDS. *Univ. of Illinois At Chicago, Univ. of Chicago, Univ. of Illinois At Chicago.*

8:00 U18 **156.17** Fos expression associated with $5\text{-}HT_{1B}$ receptor agonist inhibition of methamphetamine seeking in the conditioned place preference model. T. S. DER-GHAZARIAN; D. CHARMCHI; S. N. NOUDALI; S. N. SCOTT; M. C. HOLTER; J. M. NEWBERN; J. L. NEISEWANDER*. *Arizona State Univ.*

9:00 U19 **156.18** Glutamine and dopamine in the VTA participate differently in the acute and chronic effect of methylphenidate. S. FLOREN*; N. KING; A. CARRASO; P. DASH*; N. DAFNY. *Univ. of Texas Med. Sch. at Houston.*

10:00 U20 **156.19** Does sensitization to the stimulant effects of methamphetamine develop following repeated administration in laboratory rats? C. P. CERVANTES ALDANA*; K. A. TRUJILLO. *CSUSM, California State Univ. San Marcos.*

11:00 U21 **156.20** ▲ Reward-related ultrasonic vocalizations in response to methamphetamine are greater in a comfortable environment. E. P. ROBERTS*; C. P. CERVANTES ALDANA; K. A. TRUJILLO. *California State Univ. San Marcos, California State Univ. San Marcos.*

8:00 U22 **156.21** Inhibition of methamphetamine reward by the NMDA receptor antagonist MK-801. C. A. CHAVEZ*; K. A. TRUJILLO. *California State Univ. San Marcos, California State Univ. San Marcos.*

9:00 U23 **156.22** A supervised deep learning classification approach to quantifying ultrasonic vocalizations in rodents. A. ARANGO; K. A. TRUJILLO*; X. ZHANG. *California State Univ. San Marcos.*

10:00 U24 **156.23** ▲ Sensitization to the rewarding effects of D-amphetamine following repeated administration to laboratory rats. L. INGRAM*; K. TRUJILLO. *California State Univ. San Marcos.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 U25 **156.24** Mesolimbic dynamics underlying estrous cycle-dependent differences in social stress-induced amphetamine cross-sensitization in female rats. M. L. RUDOLPH*; A. F. AZUMA; R. L. NEVE; R. P. HAMMER, Jr.; E. M. NIKULINA. *Univ. of Arizona Col. of Medicine-Phoenix, Arizona State Univ., Massachusetts Gen. Hosp.*

8:00 U26 **156.25** Compulsive methamphetamine intake under punishment and striatal ATF2 p53 signaling. J. L. CADET*; R. SUBU; S. JAYANTHI; M. T. MCCOY; B. LADENHEIM. *Nih/nida/Intramural Res.*

POSTER

157. Cocaine Relapse

Theme G – Motivation and Emotion

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 U27 **157.01** Inhibition of a prelimbic to the posterior paraventricular thalamus pathway reduces anxiety-like behaviors during early withdrawal from cocaine. R. A. R. REICHARD*; D. M. COSSIO; J. F. MCGINTY. *Med. Univ. of South Carolina.*

9:00 U28 **157.02** Distinct roles of basolateral amygdala anandamide and 2-arachidonoylglycerol signaling on cocaine-memory reconsolidation in male and female rats. J. L. WALTERS*; J. R. WANG; J. L. RITCHIE; J. A. HIGGINBOTHAM; T. A. BROWN; C. K. IBARRA; J. N. ROLAND-MCGOWAN; R. A. FUCHS. *Washington State Univ.*

10:00 U29 **157.03** More adult-born dentate gyrus neurons to weaken cocaine-related retrograde memories: An *in vivo* strategy employing exogenous lysophosphatidic acid. D. LADRÓN DE GUEVARA-MIRANDA; R. MORENO-FERNÁNDEZ; S. GIL-RODRÍGUEZ; C. ROSELL-VALLE; G. ESTIVILL-TORRÚS; A. SERRANO; F. PAVÓN; F. RODRÍGUEZ DE FONSECA; L. J. SANTÍN*; E. CASTILLA-ORTEGA. *Univ. of Málaga, Inst. de Investigación Biomédica de Málaga (IBIMA), Hosp. Regional Universitario de Málaga, Inst. de Investigación Biomédica de Málaga (IBIMA).*

11:00 U30 **157.04** The effect of PARP-1 inhibition on cue-primed reinstatement to cocaine seeking. E. A. WILLIAMS*; K. J. REISSNER. *Univ. of North Carolina At Chapel Hill, Univ. of North Carolina at Chapel Hill.*

8:00 U31 **157.05** Pre- and post-reactivation perineuronal net removal differentially alters cue-reinstatement response in cocaine self-administering rats. J. WINGERT*; J. H. HARKNESS; A. E. GONZALEZ; R. P. TODD; B. A. SORG. *Washington State Univ. Vancouver, Washington State University, Vancouver, Washington State Univ., Washington State Univ.*

9:00 U32 **157.06** Effect of adolescent formed context-drug-associations on drug-seeking behavior: Use of abbreviated self-administration paradigm. J. GERENA*; A. BAL; D. I. OLEKANMA; B. R. CHO; A. A. ARGUELLO. *Michigan State Univ.*

10:00 U33 **157.07** ▲ Cfos protein induction following cue-induced reinstatement of cocaine-seeking behavior: Automated analysis with SimpylCellCounter (SCC). A. BAL*; J. GERENA; D. I. OLEKANMA; A. A. ARGUELLO. *Michigan State Univ.*

11:00 U34 **157.08** Hierarchical cue control of cocaine seeking in the face of cost. A. L. COLLINS*; B. T. SAUNDERS. *Univ. of Minnesota.*

8:00 U35 **157.09** How reinforcing is bupropion? Comparison with methylphenidate and cocaine by intravenous self-administration in rats. S. L. SMITH*; Z. TURNBULL; H. DAY; D. HEAL. *Renasci Ltd.*

9:00 U36 **157.10** Differences in the relative contributions of drug re-exposure / salient cues in relapse tococaine and heroin seeking. D. J. HEAL*; S. SMITH. *RenaSci Ltd.*

10:00 U37 **157.11** CB1 receptor antagonism inhibits stress-induced enhancement of extracellular glutamate in nucleus accumbens core after extinction of cocaine-conditioned place preference. A. S. GUZMAN*; M. P. AVALOS; P. V. EULIARTE; M. A. SANCHEZ; D. RIGONI; F. A. BOLLATI; M. B. VIRGOLINI; L. M. CANCELA. *IFEC - CONICET.*

11:00 U38 **157.12** Ceftriaxone attenuates activity in the BLA and VTA during cue-primed seeking of cocaine after abstinence. J. R. MESA*; V. HODGES; C. N. LOGAN; A. R. BECHARD; L. A. KNACKSTEDT. *Univ. of Florida, Univ. of Florida, SUNY Geneseo.*

8:00 U39 **157.13** Identification of brain regions selectively activated during psychosocial stress-induced cocaine seeking in rats. I. D. WOJTAS; D. F. MANVICH*. *Rowan Univ. Sch. of Osteo. Med.*

9:00 U40 **157.14** Cue-induced reinstatement of cocaine seeking elevates glutamate and nitric oxide in the nucleus accumbens core in a pathway-specific manner. B. M. SIEMSEN*; J. MCFADDIN; K. HAIGH; M. D. SCOFIELD. *Med. Univ. of South Carolina.*

10:00 V1 **157.15** Dopamine D3 receptor antagonism blocked the mTORC1 pathway downregulation in the dentate gyrus after the reinstatement of cocaine-induced CPP evoked by social stress. C. NÚÑEZ*; R. GUERRERO-BAUTISTA; J. M. HIDALGO; M. MILANÉS. *Univ. De Murcia.*

11:00 V2 **157.16** ▲ Corticosterone potentiates reinstatement through endocannabinoid-dependent activation of the cortico-accumbens pathway. B. J. CONWAY*; J. R. MCREYNOLDS; P. J. GOTTSHALL; E. VAN NEWENHIZEN; X. LIU; Q. LIU; C. J. HILLARD; J. R. MANTSCH. *Marquette Univ., Marquette Univ., Med. Col. of Wisconsin, Med. Col. of Wisconsin, Med. Col. Wisconsin, Marquette Univ.*

8:00 V3 **157.17** Prelimbic cortical sex and stress hormone-potentiated reinstatement of cocaine seeking. E. M. DONCHECK*; G. T. LIDDIARD; C. D. KONRATH; E. M. ANDERSON; L. A. URBANIK; M. C. DEBAKER; X. LIU; M. R. HERBST; N. J. RADDATZ; E. C. VAN NEWENHIZEN; J. C. MATHY; L. M. BARRON; O. VRANJKOVIC; E. N. GRAF; J. R. MCREYNOLDS; J. J. TUSCHER; K. M. FRICK; M. R. GILMARTIN; M. C. HEARING; Q. LIU; C. J. HILLARD; J. R. MANTSCH. *Marquette Univ., Med. Col. of Wisconsin, Univ. of Wisconsin-Milwaukee.*

9:00 V4 **157.18** The rostromedial tegmental nucleus regulates reinstatement of cocaine seeking via input from the prefrontal cortex. P. J. VENTO*; M. EID; T. C. JHOU. *Med. Univ. of South Carolina.*

10:00 V5 **157.19** Inactivation of prelimbic projections to rostromedial tegmental nucleus enhances cue-induced reinstatement of cocaine seeking. A. M. CRUZ*; H. F. SPENCER; T. C. JHOU; R. J. SMITH. *Texas A & M Univ., Med. Univ. of South Carolina.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

158. Hippocampal Function

Theme H – Cognition

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 V6 **158.01** Advanced age and ketogenic diet have dissociable effects across hippocampal subregions. A. HERNANDEZ*; C. M. HERNANDEZ, III; L. M. TRUCKENBROD; K. CAMPOS; Q. FEDERICO; J. L. BIZON; S. N. BURKE. *Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida McKnight Brain Inst., Univ. of Florida.*

9:00 V7 **158.02** ▲ Acute vagus nerve stimulation increases Arc expression in the dentate gyrus of the hippocampus. M. ASH*; M. MELTON; K. OLCZAK; E. DIRR; K. N. LUBKE; J. NICK; B. MCLAURIN; E. ATKINSON; K. J. OTTO; A. P. MAURER; D. G. LAMB; B. SETLOW; J. L. BIZON; S. N. BURKE. *Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida, North Florida/South Georgia VA Med. Ctr.*

10:00 V8 **158.03** Targeted hippocampal GABA neuron ablation produces hippocampal sclerosis, epilepsy, and dissociable effects on the Morris water maze and object-place paired association tasks. L. M. TRUCKENBROD*; A. V. BUMANGLAG; E. CHUN; A. HERNANDEZ; Q. P. FEDERICO; A. P. MAURER; R. S. SLOVITER; S. N. BURKE. *Univ. of Florida, Morehouse Sch. of Med., Morehouse Sch. of Med., McKnight Brain Institute, Univ. of Florida, Univ. of Florida, Univ. of Florida.*

11:00 V9 **158.04** Mesoscale collective action in the hippocampus: Turbulence and energy cascade. A. SHEREMET*; Y. QIN; A. P. MAURER. *Univ. of Florida, Univ. of Florida, Univ. of Florida.*

8:00 V10 **158.05** ▲ Reductions in hippocampal IGF-I signaling in adulthood negatively regulates neuron structure and cognition. C. A. HAYES*; E. L. HODGES; J. MARSHALL; N. ASHPOLE. *Univ. of Mississippi, Univ. of Mississippi.*

9:00 V11 **158.06** Context-modulation of hippocampal dynamics and deep convolutional networks: Using parallel pathways to limit network size. J. B. AIMONE*; W. SEVERA; F. WANG. *Sandia Natl. Labs.*

10:00 V12 **158.07** Focal optogenetic stimulation reveals heterogeneous place field plasticity rules within and between hippocampal subregions. S. A. MCKENZIE*; R. HUSZAR; D. F. ENGLISH; G. BUZSAKI. *NYUMC, New York Univ., Virginia Tech., New York University, Sch. of Med.*

11:00 V13 **158.08** Cholinergic dynamic in hippocampus. Y. Z. ZHANG*; L. CAO; G. BUZSAKI. *New York Univ., NYU Sch. of Med., New York University, Sch. of Med.*

8:00 DP11/V14 **158.09** (Dynamic Poster) Objects, context, memory and space: Neuronal representations in the hippocampus of virtually navigating primates. R. A. GULLI*; L. R. DUONG; B. W. CORRIGAN; G. DOUCET; S. WILLIAMS; S. FUSI; J. C. MARTINEZ-TRUJILLO. *Columbia Univ., New York Univ., Univ. of Western Ontario, Univ. of Ottawa, McGill Univ., Columbia Univ., Brain and Mind Institute, Univ. of Western On.*

9:00 V15 **158.10** Neuronal discrimination of similar sensory inputs during hippocampal memory encoding. M. ALLEGRA; L. POSANI; C. SCHMIDT-HIEBER. *Inst. Pasteur.*

POSTER

159. Decision Making: Lateral Prefrontal Cortex

Theme H – Cognition

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 V16 **159.01** Causal role for involving expected value in risky choice in macaque ventrolateral prefrontal cortex. R. SASAKI*; N. TAKAKUWA; T. ISA. *Kyoto Univ., Max Planck Inst. For Brain Res., Kyoto Univ.*

9:00 V17 **159.02** The effect of delay to reward on probabilistic learning in non-human primates. J. M. FREDERICKS*; J. E. BOYCE; P. H. RUDEBECK. *Icahn Sch. of Med. At Mount Sinai.*

10:00 V18 **159.03** The role of ventrolateral prefrontal cortex in spatial self-ordered response sequencing in marmosets. S. F. A. AXELSSON*; N. K. HORST; N. HORIGUCHI; T. W. ROBBINS; A. C. ROBERTS. *Univ. of Cambridge, Univ. of Cambridge, Univ. of Cambridge.*

11:00 V19 **159.04** Pac-man for monkeys: A behavior paradigm for the investigation of the neural mechanisms of complex cognitive functions. W. ZHANG*; X. CHEN; J. LI; Y. BAI; R. SU; Z. LIN; T. YANG. *Inst. of Neurosci.*

8:00 V20 **159.05** Action initiation decision signals in the lateral prefrontal cortex. C. LIBEDINSKY*; R. HERIKSTAD; S. YEN. *Natl. Univ. of Singapore.*

9:00 V21 **159.06** Neural signals in the monkey prefrontal-striatal network reflect multiple cognitive strategies in category rule learning with trial and error feedback. M. PARK*; A. L. DENICOLA; D. A. CROWE; M. V. CHAFEE. *Univ. of Minnesota, Augsburg Univ., Univ. Minnesota.*

10:00 V22 **159.07** A cognitive signal controls speed-accuracy trade-off in a neural model of two-stage decision making in the frontal eye fields. D. STANDAGE*; G. BLOHM; D. HEINKE. *Univ. of Birmingham, Queen's Univ.*

11:00 V23 **159.08** Learning the values of reward sequences. Z. CHENG*; D. LEE. *Yale Sch. of Med.*

8:00 V24 **159.09** ● Context dependent computation by randomly connected attractor networks with synaptic depression. S. QIU*; P. MILLER. *Brandeis Univ., Brandeis Univ.*

9:00 V25 **159.10** Top-down and bottom-up expectations in the prefrontal and auditory cortices. L. SURIYA-ARUNROJ*; J. I. GOLD; Y. E. COHEN. *Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania.*

10:00 V26 **159.11** Rhythmicity of prefrontal cortical activity in impulsive and uncertain choices. S. SUBRAMANIAM*; A. B. PERSILY; X. QI; M. L. PHILLIPS; C. CONSTANTINIDIS. *Wake Forest Sch. of Med., Univ. of Pittsburgh.*

11:00 V27 **159.12** FEF signatures of saccade inhibition during perceptual decision-making. M. SHINN*; D. LEE; J. D. MURRAY; H. SEO. *Yale Sch. of Med., Yale Sch. of Med., Yale Sch. of Med., Yale Sch. of Med.*

8:00 V28 **159.13** The maintenance and comparison of numerical information in the primate prefrontal cortex. P. VISWANATHAN*; A. M. STEIN; A. NIEDER. *The Rockefeller Univ., Inst. of Neurobiology, Univ. of Tuebingen.*

9:00 V29 **159.14** Neural substrate underlying the selection of behavioral tactics to transform sensory information into action: A comparative study of primate medial frontal areas. M. H. AWAN*; H. MUSHIAKE; Y. MATSUZAKA. *Tohoku Univ., Tohoku Med. & Pharm Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 V30 **159.15** Multiple memory traces of choice and reward in macaque frontal cortex. M. K. WITTMANN*; E. FOURAGNAN; D. FOLLONI; B. K. CHAU; M. KHAMASSI; M. RUSHWORTH. *Univ. of Oxford, Univ. of Plymouth, The Hong Kong Polytechnic Univ., Sorbonne Univ. / CNRS.*

11:00 V31 **159.16** Orbitofrontal circuits influence multiple reinforcement learning processes. S. M. GROMAN*; A. KEIP; R. J. DILEONE; C. J. PITTENGER; D. LEE; J. TAYLOR. *Yale Univ., Yale Univ., Yale Univ., Yale Sch. of Med., Yale Univ. Sch. Med.*

8:00 V32 **159.17** ▲ Ablation of orbitofrontal projections to the nucleus accumbens disrupts punishment-induced suppression of drug-taking behaviors in rats. A. J. KEIP*; J. R. TAYLOR; S. M. GROMAN. *Yale Univ.*

POSTER

160. Memory Consolidation and Reconsolidation: Behavior

Theme H – Cognition

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 V33 **160.01** Reconsolidation and retrieval deficits following prediction error induced reactivation of remote and recent appetitive odor discrimination memory in Long Evans rats. G. HANSON GOTTHARD*; A. BASHFORD; D. BSALES; H. GURA; J. GOLBITZ; R. SHEAR. *Muhlenberg Col.*

9:00 V34 **160.02** Disruption of reconsolidation of conditioned threat memories in rats by electroconvulsive shock. X. AN; A. G. GIBSON; A. WHITE; J. DEBIEC*. *Univ. of Michigan, Univ. of Michigan, Yangzhou Univ., Univ. of Michigan.*

10:00 V35 **160.03** Hippocampal neuroinflammation cytokine TNFα negatively regulates retrieval and reconsolidation, but not encoding and formation, of contextual fear memory. S. TAKAHASHI*; H. FUKUSHIMA; S. KIDA. *Tokyo Univ. of Agr., The Univ. of Tokyo.*

11:00 V36 **160.04** Resolving the interneuronal drivers of functionally and temporally diverse inhibitory regulation of dentate projection neuron. M. AFRASIABI*; V. SANTHAKUMAR. *Rutgers, New Jersey Med. Sch., New Jersey Med. Sch. Dept. of Pharmacol. and Physiol.*

8:00 V37 **160.05** Role of prelimbic cortex protein kinases C and Mzeta in aversive memory reconsolidation and persistence. T. R. DA SILVA*; A. M. RAYMONDI; L. J. BERTOGLIO; R. ANDREATINI; C. A. J. STERN. *Federal Univ. of Paraná - UFPR, Federal Univ. of Santa Catarina - UFSC.*

9:00 V38 **160.06** Recovery of generalized fear memory after experimentally induced amnesia challenges the reconsolidation blockade account of forgetting. J. M. ALFEI PALLONI*; D. DE BUNDEL; L. LUYTEN; T. BECKERS. *KU Leuven, Vrije Univ. Brussel, KU Leuven & Leuven Brain Inst.*

10:00 V39 **160.07** M_1 muscarinic receptor activity is necessary for retrieval-induced object memory updating: Evidence from a newly developed memory modification task for rats. K. H. JARDINE*; C. E. WIDEMAN; C. C. MACGREGOR; K. A. MITCHNICK; B. D. WINTERS. *Univ. of Guelph.*

11:00 V40 **160.08** Optogenetic stimulation of the pathway from the basolateral amygdala to the medial entorhinal cortex after spatial Barnes training increases activity-regulated cytoskeletal-associated protein (ARC) in the dorsal hippocampus. K. L. WAHLSTROM*; R. T. LALUMIERE. *Univ. of Iowa, Univ. of Iowa.*

8:00 V41 **160.09** Selective deletion of Dnmt1 and Dnmt3a in a subpopulation of excitatory or inhibitory neurons affects different forms of learning and memory. W. SUN*; M. YU; Y. ZHOU. *Qingdao Univ.*

9:00 V42 **160.10** New spatial learning dynamics in mice differ by environmental familiarity. E. G. FRASER*; R. J. MCDONALD. *Univ. Lethbridge.*

10:00 V43 **160.11** Acute stress impairs memory in ETM in female and male rats and modifies serotoninergic and dopaminergic dorsal striatal systems. E. A. RENDON-OCHOA*; M. R. GONZALEZ LOPEZ; N. L. GARCIA SALDIVAR; J. MONROY; R. DOMINGUEZ; S. E. CRUZ-MORALES. *UNAM - Facultad de Estudios Superiores Iztacala, FES Zaragoza UNAM.*

11:00 V44 **160.12** ● Stress hormone effects on memory accuracy in an object-in-context task in mice. C. GUO*; M. TIMPLALEXI; P. COLUCCI; M. HENCKENS; B. ROOZENDAAL. *Donders Inst. For Brain, Cognition and Behavior Radboud Univ. Med. Center, Dept. of Physiol. and Pharmacol. . Sapienza Univ. of Rome.*

8:00 V45 **160.13** Hippocampal $GABA_A$ α5 subunit and BDNF expression in a postnatal day 7 model of fetal alcohol syndrome: Role in memory impairment. V. LOCCI*; E. GATTA; S. C. PANDEY; D. R. GRAYSON. *The Psychiatric Institute, Dept. of Psychiatry, Col. of Medicine, Univ. of Illinois at Chicago, Ctr. for Alcohol Res. in Epigenetics, Dept. of Psychiatry, Col. of Medicine, Univ. of Illinois at Chicago, Jesse Brown VA Med. Ctr.*

9:00 V46 **160.14** ▲ The effects of moderate prenatal alcohol exposure on the organization of exploratory behavior by adult rats. M. GONCALVES GARCIA*; L. E. BERKOWITZ; T. DONALDSON; R. E. HARVEY; J. L. WAGNER; S. DAVIES; D. D. SAVAGE II; B. J. CLARK. *Univ. of New Mexico, 1 Univ. of New Mexico, Univ. of New Mexico Sch. of Med.*

10:00 W1 **160.15** ▲ Distributive home base behavior in the TgF344-AD rat model of Alzheimer's disease. L. E. BERKOWITZ; M. A. GABALDON-PARISH*; R. E. HARVEY; E. A. SNEDDON; B. J. CLARK. *Univ. of New Mexico, Univ. of New Mexico, Miami Univ., Univ. of New Mexico.*

11:00 W2 **160.16** Chronic repetitive mild traumatic brain injury disrupts reference memory in adult male Sprague-Dawley rats. T. E. WHITE*; P. T. JUZANG; M. A. GRAHAM. *Morehouse Sch. of Med., Atlanta VA Hlth. Care Syst.*

8:00 W3 **160.17** Examining cognitive deficits in IL-6 deficient mice in a high fat diet induced neuroinflammatory state. T. SIMON*; S. SHATELA; P. SONI; P. GHOTRA; L. R. BANNER. *California State Univ. Northridge.*

9:00 W4 **160.18** Maternal perinatal fructose intake impairs learning and memory, and insulin receptor expression in hippocampus of adult male offspring. F. A. TOBAR*; D. X. CUEVAS; L. QUEVEDO; R. FÉLIX; S. R. ZAMUDIO. *IPN, Cinvestav.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 W5 **160.19** ▲ Effects of circadian desynchronization by the T22 protocol on the rhythmicity and memory of adolescent Wistar rats: An ontogenetic perspective. P. E. L. MARINHO*; K. C. PUGLIANE; J. C. PEREIRA; K. K. B. C. ARAÚJO; V. S. DIAS; B. H. L. SANTOS; A. L. A. DIAS; R. V. C. B. MOURÃO; C. A. SILVA; F. F. BARBOSA. *Univ. Federal da Paraíba.*

11:00 W6 **160.20** ▲ Effect of different musical classes on the extinction of fear memory in female rats. V. A. P. DE PAULA*; N. C. DE OLIVEIRA; A. H. L. RESENDE; G. P. L. TEIXEIRA; P. H. M. OLIVEIRA; D. H. PIETROBON; J. C. PRETO; G. A. C. CAMANDUCAIA; I. C. MESQUITA; M. S. DE PAULA; R. S. DE FARIA; C. M. F. TRZESNIAK; C. R. SARTORI. *Faculdade de Medicina de Itajuba, Dept. of Structural and Functional Biol., State Univ. of Campinas (UNICAMP).*

8:00 W7 **160.21** ▲ Comparative analysis of the effect of different musical genres on the recognition memory of objects in female rats. J. C. PRETO*; M. S. DE PAULA; C. M. F. TRZESNIAK; C. R. SARTORI; R. S. DE FARIA; T. H. PEREIRA; P. A. J. MACIEL; G. A. C. CAMANDUCAIA; V. A. P. DE PAULA. *Fac. of Med. of Itajubá (FMIt), State Univ. of Campinas (UNICAMP).*

9:00 W8 **160.22** ▲ Comparative analysis of the effect of different musical genres on the acquisition of memory during breastfeeding and adult hood in female rats. G. C. CAMANDUCAIA*; I. C. MESQUITA; M. S. DE PAULA; M. P. P. FONTES; K. A. D. N. BRITO; V. A. P. DE PAULA; J. C. PRETO; R. S. DE FARIA; C. M. F. TRZESNIAK; C. R. SORTORI. *Fac. of Medicina of Itajubá, State Univ. of Campinas (UNICAMP).*

10:00 W9 **160.23** Chronic seizures cause lasting retrograde amnesia for a spatial memory in the Morris Water Task. K. ROBERTS*; L. BRANDT; N. M. FOURNIER; H. LEHMANN. *Trent Univ., Trent Univ., Trent Univ.*

11:00 W10 **160.24** Kindled seizures promote accelerated long-term forgetting of context fear memories in rats. L. E. BRANDT*; H. LEHMANN; N. M. FOURNIER. *Trent Univ., Trent Univ., Trent Univ.*

8:00 W11 **160.25** The effect of sexual behavior and social interaction in the memory of old male rats. A. TAPIA DE JESUS*; L. M. RODRIGUEZ-SERRANO; O. GALICIA-CASTILLO; L. F. S. HERNÁNDEZ-GONZÁLEZ; P. ESPINOSA-VILLAFRANCA; I. LÓPEZ-CORTINA; M. E. G. CHÁVEZ-HERNÁNDEZ; M. I. F. MATA-ESQUIVIAZ; G. LAGO; M. H. BUENROSTRO-JAURÉGUI. *Univ. Iberoamericana.*

POSTER

161. Hippocampus: Intrinsic Hippocampal Circuits

Theme H – Cognition

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 W12 **161.01** An examination of hippocampal interneurons underlying enkephalin release and their potential role in memory. S. CASSIM*; A. FAFOURI; L. THERREAU; V. CHEVALEYRE; R. PISKOROWSKI. *Inst. de Psychiatrie & Neurosciences de Paris, INSERM UMR 1266, Ecole de Neurosci. de Paris, Inovarian.*

9:00 W13 **161.02** Prioritized experience replay for learning in the rat hippocampus. H. IGATA*; Y. IKEGAYA; T. SASAKI. *The Univ. of Tokyo, Japan Sci. and Technol. Agency.*

10:00 W14 **161.03** Impairment of cognitive function under Hyper-Gravity in rats. J. LEE*; D. JANG; H. KANG; H. KIM; G. KIM; S. YANG. *Incheon Natl. Univ., Inha University, Col. of Med.*

11:00 W15 **161.04** Whole brain mapping of the monosynaptic inputs and projections of dorsal hippocampus and ventral hippocmpus. S. TAO*; F. XU. *Huazhong Univ. of Sci. and Technol., Wuhan Inst. of Physics and Mathematics, Ctr. for Excellence in Brain Sci. and Intelligence, Wuhan Inst. of Physics and Mathematics,Center for Excellence in Brain Sci. and Intelligence.*

8:00 W16 **161.05** Correlation of electrophysiological parameters with behavioral performance in an animal model using aluminum exposures. J. G. ROHAN*; T. ETHRIDGE; M. K. MIKLASEVICH; N. M. GARGAS; S. M. MCINTURF. *Naval Med. Res. Unit Dayton, Oak Ridge Inst. for Sci. and Educ., Henry Jackson Fndn. for Military Res.*

9:00 W17 **161.06** Characterizing resonant and synchronizing mechanisms in a hippocampal theta model. T. BANKS*; V. GUNTU; A. M. HUMMOS; S. S. NAIR. *Univ. of Missouri, Informatics Institute, Univ. of Missouri.*

10:00 W18 **161.07** Distinct neuronal populations contribute to trace conditioning and extinction learning in the hippocampus. K. R. HANSEN; H. J. GRITTON; R. MOUNT*; S. SRIDHAR; A. I. MOHAMMED; M. ABDULKERIM; R. KESSEL; B. NAZER; X. HAN. *Boston Univ., Boston Univ.*

11:00 W19 **161.08** The role of the hippocampus in recognition memory in the common marmoset (Callithrix jacchus). W. J. ASSIS*; L. PREMACHANDRAN; B. W. CORRIGAN; D. BUITRAGO-PIZA; Z. W. DAVIS; J. C. MARTINEZ-TRUJILLO. *Western Univ., Salk Inst., Brain and Mind Institute, Univ. of Western On.*

8:00 W20 **161.09** Temporal criteria for hippocampal maps and remapping. J. L. KUBIE*; E. R. LEVY; A. A. FENTON. *SUNY Downstate Med. Ctr., New York Univ.*

9:00 W21 **161.10** Learning alters hippocampal topology to nest new mnemonic representations without compromising previous ones. G. GAVA*; D. DUPRET; S. R. SCHULTZ. *Imperial Col. London, Med. Res. Council Brain Network Dynamics Unit, Univ. of Oxford.*

10:00 W22 **161.11** Standardized extract of Ginkgo biloba mobilizes calcium stores in hippocampal slices. C. ZAMBERLAM; J. CERUTTI; R. P. URESHINO; S. M. CERUTTI*. *Univ. Federal de São Paulo.*

11:00 W23 **161.12** Use of 3D printed capacitive touch objects for object recognition tasks. J. M. S. DEFILIPP; K. POTTS; K. D. STEVANOVIC; G. DRYE; J. D. CUSHMAN*. *Natl. Inst. of Envrn. Hlth. Sci.*

8:00 W24 **161.13** Reduced Npas4 expression is associated with impaired spatial but not contextual memory retrieval in split-brain mice. J. JORDAN*; Y. TONG; C. L. PYTTE. *Grad. Center, The City Univ. of New York, Queens Col.*

9:00 W25 **161.14** Hippocampal TRPC5 channels support hippocampus dependent memory and affect *in vivo* network activity. F. M. THEISSEN*; A. REBOREDA; A. ALBRECHT; O. STORK; L. LEICHERT; L. BIRNBAUMER; M. SAUVAGE; M. YOSHIDA. *DZNE Magdeburg, Leibniz Inst. For Neurobio., Otto Von Guericke Univ., Ruhr Univ. Bochum, Biomed UCA-Conicet, Leibniz Inst. for Neurobio.*

10:00 W26 **161.15** Age-related modulation of functional connectivity along the long-axis of the hippocampus and the hippocampal subfields. S. M. STARK*; B. KIRWAN; C. E. STARK. *Univ. of California, Irvine, Brigham Young Univ., Univ. of California Irvine.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 W27 **161.16** Dose-dependent effects of the ampakine CX614 on the development of spatial navigation in juvenile rats. R. OGOE*; T. C. DUMAS; D. G. MCHAIL. *George Mason Univ., George Mason Univ.*

8:00 W28 **161.17** Persistence of dorsal and ventral hippocampal remapping after exploring a novel environment. S. LEE*; R. TROHA; A. ANAM; M. KATZ; K. CITRIN; T. PIETRUSZEWSKI; I. H. STEVENSON; E. J. MARKUS. *Univ. of Connecticut.*

POSTER

162. Hippocampal Dynamics in Learning and Memory

Theme H – Cognition

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 W29 **162.01** A behavioral report of spatial memory confidence and neural correlates in the rat hippocampus, orbitofrontal cortex, and nucleus accumbens. H. R. JOO*; H. LIANG; J. E. CHUNG; C. GEAGHAN-BREINER; J. FAN; J. A. PEBBLES; A. M. YORITA; R. HAQUE; D. F. LIU; D. ROUMIS; L. M. FRANK. UCSF, *Lawrence Livermore Natl. Lab., Lawrence Livermore Natl. Lab., UC San Francisco.*

9:00 W30 **162.02** Operant conditioning of hippocampal sharp wave ripples. A. K. GILLESPIE*; D. A. ASTUDILLO MAYA; D. F. LIU; M. E. COULTER; E. L. DENOVELLIS; S. DESSE; D. K. ROUMIS; U. EDEN; L. M. FRANK. *UCSF, Boston Univ., Howard Hughes Med. Inst., UCSF.*

10:00 W31 **162.03** Dorsal and ventral hippocampal sharp-wave ripples engage opposing networks in the nucleus accumbens. M. SOSA*; H. JOO; L. M. FRANK. *Univ. of California, San Francisco, Univ. of California, San Francisco.*

11:00 W32 **162.04** A state space model for characterizing replay dynamics. E. L. DENOVELLIS*; A. GILLESPIE; M. E. COULTER; L. M. FRANK; U. EDEN. *Boston Univ., Univ. of California San Fransisco.*

8:00 W33 **162.05** Integrated statistical and machine learning approach to identify spatial receptive field structure in rat hippocampal and prefrontal cortex populations. M. SARMASHGHI*; S. P. JADHAV; L. M. FRANK; U. T. EDEN. *Boston Univ., Brandeis Univ., UC San Francisco, Boston Univ.*

9:00 W34 **162.06** Event-to-event variability in structural organization of population spiking during hippocampal sharp wave-ripples. X. DENG*; S. CHEN; X. WEI; M. SOSA; M. KARLSSON; L. M. FRANK. *Columbia Univ., Univ. of California, Davis, Univ. of California, San Francisco, Univ. of California, San Francisco, UC San Francisco.*

10:00 W35 **162.07** Self-recognition in the mouse hippocampus. J. YOKOSE*; J. I. TERRANOVA; W. D. MARKS; J. YAMAMOTO; S. K. OGAWA; T. KITAMURA. *Univ. of Texas Southwestern Med. Ctr., Univ. of Texas Southwestern Med. Ctr.*

11:00 W36 **162.08** Novel behavioral approaches for analyzing temporal-tracking, context-time integration, and time cell activity in mice. W. D. MARKS*; H. OSANAI; S. K. OGAWA; J. YAMAMOTO; T. KITAMURA. *Univ. of Texas Southwestern Med. Ctr.*

8:00 W37 **162.09** A hippocampal-amygdala circuit for experience-dependent observational fear. J. I. TERRANOVA*; J. YOKOSE; W. D. MARKS; J. YAMAMOTO; S. K. OGAWA; T. KITAMURA. *Univ. of Texas Southwestern Med. Ctr.*

9:00 W38 **162.10** Lateral entorhinal cortex drives strong dendritic excitation of CA1 pyramidal neurons. O. BILASH*; J. BASU. *New York Univ. Sch. of Med.*

10:00 W39 **162.11** Spatial selectivity in apical dendrites of area CA3 during treadmill locomotion. J. J. MOORE*; S. K. RASHID; J. BASU. *NYU Langone Med. Ctr.*

11:00 W40 **162.12** Familiar and novel environments as different network states in CA3. S. K. RASHID*; M. A. DUFOUR; J. J. MOORE; J. BASU. *NYU Neurosci. Inst., NYU Neurosci. Inst., NYU Neurosci. Inst.*

8:00 W41 **162.13** Hippocampus modulates cortical sensory output through parallel processing pathways. T. BUTOLA*; L. PENG; J. BASU. *New York Univ. Langone Hlth.*

9:00 W42 **162.14** Calcium imaging of hippocampal CA1 neurons during contextual fear memory encoding, retrieval, and extinction. K. KOBAYASHI*; R. TAKAKURA; J. TERAMA; N. MATSUO. *Kyushu Univ., Kyoto Univ.*

10:00 W43 **162.15** Plastic neuronal allocation to hippocampal signatures of behavioural contingencies supports flexible learning. M. EL-GABY*; H. REEVE; V. LOPES DOS SANTOS; I. LUKÁCS; P. PERESTENKO; N. CAMPO-URRIZA; O. PAULSEN; D. DUPRET. *Univ. of Oxford, Univ. of Oxford, Univ. of Cambridge.*

11:00 W44 **162.16** Neural coding in the dorsal CA1 hippocampus during behavioral flexibility. M. A. GHANE*; K. M. DALEY; Z. D. ALLEN; I. BELYKH; A. M. MABB. *Georgia State Univ., Georgia State Univ.*

8:00 X1 **162.17** Hippocampal unit spiking becomes selective for ripples of specific duration over extended spatial memory retention periods. S. AHMADI*; C. K. LUONG; S. LEUTGEB; J. K. LEUTGEB. *Univ. of California San Diego, Univ. of California San Diego.*

9:00 X2 **162.18** The ventral hippocampus is necessary for acquisition of innate fear memory. L. RAGAZZI*; M. SABARIEGO; I. ZUTSHI; S. LEUTGEB; J. K. LEUTGEB; V. H. BRUN; K. B. KJELSTRUP. *UiT The Arctic Univ. of Norway, UCSD, UCSD, Univ. Hosp. of North Norway.*

10:00 X3 **162.19** Hippocampal growth hormone modulates relational memory by changing the dendritic spine density in CA1. K. HAUGLAND*; A. OLBERG; F. STETTE; A. LANDE; K. KJELSTRUP; V. BRUN. *UiT The Arctic Univ. of Norway, Univ. Hosp. of North Norway.*

11:00 X4 **162.20** Characterization of a reverberating network in hippocampal field CA3 required for the acquisition of temporal order. B. G. GUNN*; B. M. COX; C. D. COX; C. M. GALL; G. LYNCH. *Univ. of California Irvine.*

8:00 X5 **162.21** Hippocampal field CA3 is necessary for encoding temporal order: A proposed 'when' component of episodic memory. C. M. GALL*; B. M. COX; A. A. LE; B. G. GUNN; J. QUINTANILLA; C. D. COX; G. LYNCH. *Univ. of California, Univ. of California.*

9:00 X6 **162.22** Temporary inactivation of field CA3 of hippocampus in different forms of learning in enriched rats. L. C. PALMER*; B. M. COX; C. D. COX; C. PETREE; B. HENRIQUEZ; C. M. GALL; G. LYNCH. *Univ. of California, Univ. California, Univ. of California, Irvine.*

10:00 X7 **162.23** Distance and position coding in CA1 place cells during septal inactivation. M. NORDLUND*; D. LALAINA; G. MARTI; R. BOURBOULOU; F. MICHON; J. EPSZTEIN; J. KOENIG GAMBINI. *Inst. of Neurobio. of the Mediterranean Sea (INMED), INSERM UMRS1249.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 X8 **162.24** Characterizing the activity of neural assemblies in the hippocampus across the full sleep-wake cycle. R. BOYCE*; R. COSSART. *Inst. De Neurobiologie De La Méditerranée.*

8:00 X9 **162.25** How direct thalamic inputs modulate hippocampal dynamics during development? E. LEPRINCE*; M. BOCCHIO; R. COSSART; A. BAUDE. *INMED UMR 1249.*

9:00 X10 **162.26** A deep-learning-based toolbox for inferring *in vivo* large scale neuronal activity from calcium imaging movie in the region CA1 of the developing hippocampus. J. DENIS*; R. DARD; M. PICARDO; R. COSSART. *INMED Mediterranean Inst. of Neurobio.*

10:00 X11 **162.27** Emergence of cell assemblies in the developing hippocampus. R. F. DARD*; J. DENIS; R. COSSART; M. A. PICARDO. *INMED, INSERM U2149.*

POSTER

163. Learning and Memory: Physiology I

Theme H – Cognition

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 X12 **163.01** Monkey hippocampal neurons respond to structured task events in virtual reality. Y. BROWNING*; J. W. RUECKEMANN; A. L. FAIRHALL; E. A. BUFFALO. *Univ. of Washington, Univ. of Washington, Univ. of Washington, Univ. of Washington.*

9:00 X13 **163.02** Spectral phenotypes of the monkey hippocampus. A. D. GARCIA*; J. W. RUECKEMANN; B. W. BRUNTON; E. A. BUFFALO. *Univ. of Washington, Univ. of Washington, Univ. of Washington.*

10:00 X14 **163.03** Traveling sharp-wave ripples in the monkey hippocampus. J. W. RUECKEMANN*; A. DEDE; Y. BROWNING; E. A. BUFFALO. *Univ. of Washington, Univ. of Washington, Univ. of Washington, Washington Natl. Primate Ctr.*

11:00 X15 **163.04** Elucidating the neural mechanisms of learning-to-learn. V. GOUDAR*; B. PEYSAKHOVICH; E. A. BUFFALO; D. J. FREEDMAN; X. WANG. *New York Univ., Univ. of Chicago, Univ. of Washington, Univ. of Chicago.*

8:00 X16 **163.05** Modeling of cognitive flexibility in Rhesus monkey. A. J. O. DEDE*; V. GOUDAR; S. AHMAD; S. A. SCHLEUFER; C. I. O'LEARY; N. GERMANOS; E. A. BUFFALO. *Univ. of Washington, Washington Natl. Primate Ctr., New York Univ., Univ. of Washington.*

9:00 X17 **163.06** Heterogeneous coding of spatial behavioral variables across the macaque medial temporal lobe. D. MAO*; E. AVILA; G. C. DEANGELIS; J. DICKMAN; D. E. ANGELAKI. *Baylor Col. of Med., New York Univ., Univ. of Rochester.*

10:00 X18 **163.07** Monkeys with temporal-prefrontal disconnections are slow to learn a recognition memory task. J. E. PEARL*; M. A. G. ELDRIDGE; R. C. SAUNDERS; E. A. MURRAY; B. J. RICHMOND. *Natl. Inst. of Mental Hlth.*

11:00 X19 **163.08** Object recognition and categorization in monkeys with aspiration removals of inferior temporal areas TEO and/or TE. M. A. ELDRIDGE*; T. SETOGAWA; J. E. PEARL; G. P. FOMANI; R. C. SAUNDERS; B. J. RICHMOND. *NIMH, Univ. of Tsukuba.*

8:00 X20 **163.09** Silencing the ChATter: Coexpressing an shRNA suppressing choline acetyltransferase activity and a chemogenetic DREADD receptor in monkey striatum. S. MUMUNEY*; W. LERCHNER; A. ADIL; R. FALCONE; J. N. TURCHI; B. J. RICHMOND. *Natl. Inst. of Mental Hlth.*

9:00 X21 **163.10** Retrograde and anterograde lentivirus transduction in old-world monkey amygdala for examining connections to and from frontal cortex, striatum, and temporal lobe. W. LERCHNER*; K. DASH; T. SETOGAWA; J. TURCHI; M. G. A. ELDRIDGE; V. DER MINASSIAN; B. J. RICHMOND. *NIH.*

POSTER

164. Cortical Hippocampal Circuits: Time and Memory

Theme H – Cognition

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 X22 **164.01** Consistent sequences on the scale of tens of minutes in mice hippocampus. Y. LIU*; S. J. LEVY; W. MAU; M. W. HOWARD. *Boston Univ., Boston Univ.*

9:00 X23 **164.02** Identifying the contribution of medial septum cell types in generating the entorhinal grid cell code. J. C. ROBINSON*; M. P. BRANDON; M. E. HASSELMO. *Boston Univ., McGill Univ., Douglas Hosp. Res. Ctr.*

10:00 X24 **164.03** Trisynaptic input mediates remapping of the CA1 rate code by entryway. A. T. KEINATH; A. NIETO-POSADAS; J. C. ROBINSON; M. P. BRANDON. *McGill Univ., Boston Univ., Douglas Hosp. Res. Ctr.*

11:00 X25 **164.04** The role of medial septum and visual inputs for theta rhythmicity and coding of location and running speed in medial entorhinal cortex. H. DANNENBERG*; M. E. HASSELMO. *Boston Univ.*

8:00 X26 **164.05** A cortical-hippocampal network supporting the temporal organization of memory. W. NING*; J. H. BLADON; J. CHEN; S. STEINWENTER; A. HOYLAND; M. E. HASSELMO. *Boston Univ., Univ. of Vermont.*

9:00 X27 **164.06** Impaired path integration correlates with selective disruption of grid cells in an amyloid beta mouse model of preclinical Alzheimer's disease. J. YING*; A. T. KEINATH; R. LAVOIE; S. KIM; M. P. BRANDON. *McGill Univ., McGill Univ., Douglas Mental Hlth. Univ. Inst., Douglas Mental Hlth. Univ. Inst., McGill Univ.*

10:00 X28 **164.07** Neural responses in retrosplenial cortex associated with environmental objects. L. C. CARSTENSEN*; A. S. ALEXANDER; G. W. CHAPMAN, IV; M. E. HASSELMO. *Boston Univ., Boston Univ.*

11:00 X29 **164.08** Egocentric boundary vector tuning of the retrosplenial cortex. A. S. ALEXANDER*; L. C. CARSTENSEN; W. G. CHAPMAN; F. RAUDIES; J. R. HINMAN; M. E. HASSELMO. *Boston Univ.*

8:00 X30 **164.09** Input-output organization of VIP interneurons in the medial entorhinal cortex. S. BADRINARAYANAN*; F. MANSEAU; A. KEINATH; S. WILLIAMS; M. P. BRANDON. *McGill Univ., Douglas Hosp. Res. Ctr., McGill Univ.*

9:00 X31 **164.10** Examination of non-spatially tuned hippocampal neurons in a context fear discrimination task. R. R. ROZESKE*; L. RUNTZ; A. T. KEINATH; A. SOSSIN; M. P. BRANDON. *McGill Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 X32 **164.11** Linking hippocampal remapping to memory retrieval in a context fear teleportation task. L. RUNTZ*; R. R. ROZESKE; A. T. KEINATH; A. SOSSIN; M. P. BRANDON. *McGill Univ.*

11:00 X33 **164.12** Heterogeneous stability in hippocampal spatial memory representations. S. J. LEVY*; N. KINSKY; D. SULLIVAN; M. HASSELMO. *Boston Univ.*

8:00 X34 **164.13** Compressed representations of time and space in the hippocampus. D. W. SULLIVAN*; J. CHEN; M. W. HOWARD. *Boston Univ., Boston Univ.*

9:00 X35 **164.14** Optogenetic inactivation of medial septum GABAergic neurons induces partial remapping of delay encoding neurons. H. YONG*; M. P. BRANDON. *McGill Univ., McGill Univ.*

10:00 X36 **164.15** Network dynamics of the thalamic head direction system during reorientation. Z. AJABI*; A. NIETO-POSADAS; M. P. BRANDON. *McGill Univ., McGill Univ.*

11:00 X37 **164.16** Mixed selectivity across task dimensions. C. MIKKELSEN*; M. W. HOWARD. *Boston Univ., Boston Univ.*

8:00 X38 **164.17** Applying hierarchical Bayesian models to time cells. R. CAO*; S. CHARCZYNSKI; Z. TIGANJ; M. W. HOWARD. *Boston Univ., Boston Univ., Boston Univ.*

9:00 X39 **164.18** A temporal record of the past with a spectrum of time constants in the monkey entorhinal cortex. I. M. BRIGHT*; M. L. MEISTER; N. A. CRUZADO; Z. TIGANJ; M. W. HOWARD; E. A. BUFFALO. *Boston Univ., Univ. of Washington.*

10:00 X40 **164.19** A physical model for pattern completion of temporally correlated patterns for episodic memory. Z. G. ESFAHANI*; M. W. HOWARD. *Boston Univ.*

11:00 X41 **164.20** Imaging and optogenetically manipulating memories over half a life time reveals a time-limited and preferential role of CA3 for the retrieval of precise memories when compared to CA1. E. ATUCHA*; S. KU; M. LIPPERT; F. OHL; M. SAUVAGE. *Leibniz Inst. For Neurobio.*

8:00 X42 **164.21** Imaging object-in-place memories over half a life time. E. ATUCHA; C. FUERST; M. SAUVAGE*. *Leibniz Inst. for Neurobio.*

POSTER

165. Cortical and Cortico-Hippocampal Circuits: Spatial Navigation II

Theme H – Cognition

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 X43 **165.01** Functional and pathological changes in the parietal-hippocampal network underlie impaired spatial reorientation in AD mice. A. C. STIMMELL*; J. DIXON; S. MOSELEY; V. LAPOINTE; R. COOK; L. SANTOS-MOLINA; L. JENNINGS; R. BERLIN; B. L. MCNAUGHTON; A. A. WILBER. *Florida State Univ., The Univ. of Lethbridge, Univ. of California, Irvine.*

9:00 X44 **165.02** Impaired memory reactivation in a mouse model of Alzheimer's disease. S. D. BENTHEM*; I. SKELIN; S. MOSELEY; J. R. DIXON; A. S. MELILLI; A. C. STIMMELL; A. A. WILBER. *Florida State Univ., Univ. of California Irvine.*

10:00 X45 **165.03** Role of the anterior thalamic nuclei-parietal cortex network in an action-orientation task. C. SIMMONS*; M. BAIAMONTE; B. J. CLARK; A. A. WILBER. *Florida State Univ., Univ. of New Mexico.*

11:00 X46 **165.04** Neural mechanisms of social foraging in flying bats. N. M. DOTSON*; K. SOMAN; M. M. YARTSEV. *Univ. of California Berkeley.*

8:00 Y1 **165.05** Planar representation in the hippocampus of freely flying bats. K. SOMAN*; N. M. DOTSON; A. GOLDSHTEIN; Y. YOVEL; M. M. YARTSEV. *Univ. of California Berkeley, Tel-Aviv Univ.*

9:00 Y2 **165.06** A new experimental framework for studying spatial navigation in flying bats: The Automated Flight Room and its utilization to investigate multiplexed coding in the retrosplenial cortex. D. GENZEL; M. M. YARTSEV*. *Univ. of California, Univ. of California Berkeley.*

10:00 Y3 **165.07** Representation of large-scale spaces in the hippocampus of flying bats. T. ELIAV*; S. R. MAIMON; L. LAS; N. ULANOVSKY. *Weizmann Inst. of Sci.*

11:00 Y4 **165.08** Episodic cells for self and other in the bat hippocampus. D. OMER*; L. LAS; N. ULANOVSKY. *The Hebrew Univ. of Jerusalem, Weizmann Inst. of Sci.*

8:00 Y5 **165.09** Representation of 3D space in the entorhinal cortex of flying bats. G. GINOSAR*; J. ALJADEFF; Y. BURAK; H. SOMPOLINSKY; L. LAS; N. ULANOVSKY. *Weizmann Inst. of Sci., Imperial Col. London, The Edmond and Lily Safra Ctr. for Brain Sciences, and Racah Inst. of Physics.*

9:00 Y6 **165.10** Effects of early experience on spatial representation of large-scale environments in the bat hippocampus. S. R. MAIMON*; T. ELIAV; L. LAS; N. ULANOVSKY. *Weizmann Inst. of Sci.*

10:00 Y7 **165.11** Dynamics of hippocampal spatial representation upon brief attentional switches during navigation. A. SAREL*; D. BLUM; L. LAS; N. ULANOVSKY. *Weizmann Inst. of Sci.*

11:00 Y8 **165.12** Mutual-information based method for detecting coordinated neural activity in two-photon calcium imaging data. H. CHANG*; M. TATSUNO; M. H. MOHAJERANI; B. L. MCNAUGHTON. *Univ. of Lethbridge, Univ. of California Irvine.*

8:00 Y9 **165.13** Rapid global remapping in retrosplenial cortex. Z. NAVRATILOVA*; D. BANERJEE; F. MUQOLLI; S. LONDONO-MUNOZ; S. P. GANDHI; B. L. MCNAUGHTON. *Univ. of California Irvine.*

9:00 Y10 **165.14** Probing the contribution of self-motion versus sensory cues in generating responses of hippocampal CA1 place cells in mice. S. INAYAT*; J. SUN; B. L. MCNAUGHTON; M. H. MOHAJERANI. *Univ. of Lethbridge, The Univ. of Lethbridge, Univ. of California, Univ. of Lethbridge.*

10:00 Y11 **165.15** Retrosplenial high frequency oscillations demarcate high activity REM sleep frames. M. GHOSH*; F. C. YANG; A. GONZALEZ; V. HETRICK; O. AHMED. *Univ. of Michigan,Ann Arbor.*

11:00 Y12 **165.16** Computational modeling reveals novel biophysical mechanisms underlying profound theta phase-amplitude coupling in the retrosplenial cortex. S. SUDHAKAR*; E. K. W. BRENNAN; O. J. AHMED. *Univ. of Michigan, Univ. of Michigan.*

8:00 Y13 **165.17** Comparison of retrosplenial oscillatory dynamics during head-fixed vs unrestrained behaviors. S. P. RICE*; M. GHOSH; V. HETRICK; O. J. AHMED. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

9:00 Y14 **165.18** Stability and flexibility in the hippocampal theta sequence coding circuit. T. JOHN*; O. J. AHMED. *Univ. of Michigan, Univ. of Michigan.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 Y15 **165.19** Anatomical and behavioral correlates of retrosplenial oscillations. A. P. LORENZO GONZALEZ*; M. GHOSH; V. HETRICK; O. J. AHMED. *Univ. of Michigan.*

11:00 Y16 **165.20** Connections of hyperexcitable pyramidal neurons in the retrosplenial cortex. E. K. BRENNAN*; S. SUDHAKAR; I. JEDRASIAK-CAPE; S. RICE. *Univ. of Michigan.*

POSTER

166. Human Perception and Imagery I

Theme H – Cognition

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 Y17 **166.01** ▲ Taking (virtual) aim: A study of symptoms related to training in VR. A. TORRES LOPEZ*; C. Y. DELGADO; R. MOSHER; A. X. KRAUSE; D. LEVATON; S. A. DREW; J. HINKEL-LIPSKER; B. GABAY. *California State Univ. Northridge, California State Univ. Northridge.*

9:00 Y18 **166.02** Comparing human and network similarity judgments on adversarial image scenes and captions. R. M. FLEMMING*; J. SCHWARTZ; P. R. SCHRATER. *Univ. of Minnesota, Twin Cities, Univ. of Minnesota.*

10:00 Y19 **166.03** Environmental priors and stimulus history shape early visual processing. T. C. SHEEHAN*; C. CHUNHARAS; J. SERENCES. *UC San Diego, King Chulalongkorn memorial hospital, Chulalongkor, UCSD.*

11:00 Y20 **166.04** Estimating behavioral and neural stimulus-response functions in auditory processing. M. ALIZADEH SHALCHY*; K. C. YAGHOUBI; X. CHEN; J. LANGLEY; I. J. BENNETT; X. P. HU; M. A. K. PETERS; A. R. SEITZ. *UCR, UCR, UCR, UCR, UCR.*

8:00 Y21 **166.05** ▲ Exploring steady-state visual evoked potentials with video stimuli. A. C. LAKMAZAHERI; A. DATAR; S. W. MICHALKA*. *Olin Col. of Engin.*

9:00 Y22 **166.06** Electrocorticography (ECoG) high gamma modulation from the depth inversion illusion. J. JESCHKE*; D. FRIEDMAN. *NYU Langone Med. Ctr.*

10:00 Y23 **166.07** Brain pattern in V1 changes after receiving social information. W. LIN*; Y. YOTSUMOTO. *The Univ. of Tokyo, Japan Society for the Promotion of Sci.*

11:00 Y24 **166.08** Pre-stimulus alpha oscillatory mechanisms affecting objective and subjective perceptual decision making. H. ELSHAFEI*; L. IEMI; A. SHARMA; S. HAEGENS. *Donders Inst. For Brain, Cognition & Behaviour, Columbia Univ.*

8:00 Y25 **166.09** Cortical structures associated with multiple object tracking performance. K. KAMIBAYASHI*; Y. NARAI; A. OSHIMA. *Doshisha Univ.*

9:00 Y26 **166.10** Social information in peripersonal space impact perceptual discrimination and internal state. A. DUREUX*; E. BLINI; L. GRANDI; C. DESOCHE; A. FARNE; F. HADJ-BOUZIANE. *IMPACT - Lyon Neurosciences Res. Ctr. - INSERM U1028, CRNS UMR 5292 - Lyon 1 Univ.*

10:00 Y27 **166.11** Ocular movements are involved in perceptual change in bistable stimuli. E. LORCA-PONCE*; D. ZENTENO; S. MADARIAGA; M. A. CONCHA; C. DEVIA; P. E. MALDONADO. *Univ. of Chile, Biomed. Neurosci. Inst. (BNI).*

11:00 Y28 **166.12** Cross species neural correlates of visual simulation. A. AHUJA*; D. L. SHEINBERG. *Brown Univ.*

8:00 Y29 **166.13** Influence of attention on binocular information-processing in motion aftereffect investigated by frequency tagging technique. M. YAMASHITA; N. KOGO; N. NAKAJIMA; H. HAYAKAWA; T. AIHARA*. *Tamagawa Univ., Radboud Univ.*

9:00 Y30 **166.14** Effect of inhalation of aroma of pelargonium graveolens compound essence on human electroencephalographic activity. K. HYUN*; G. LEE. *Dongeui Univ., Dong-Seo Univ.*

10:00 Y31 **166.15** Electroencephalographic markers of body ownership illusion in virtual reality. N. GOLDWAY*; G. GUREVITCH; Y. ZAMIR; A. AZAMY; T. VAKNIN; I. GEFFEN; G. RAZ. *Tel Aviv Univ., Tel Aviv Sourasky Med. Ctr., Tel Aviv Univ., Radboud Univ., Tel Aviv Univ., Tel Aviv Univ.*

11:00 Y32 **166.16** Correspondence competition in motion brings to implicit time perception. M. GIRELLI*. *Univ. of Verona.*

8:00 Y33 **166.17** Hysteresis in the transition between fusion and rivalry can be reversed as predicted by a tristable zone. G. RIESEN*; A. M. NORCIA; J. L. GARDNER. *Stanford Univ. Dept. of Neurol. and Neurolog. Sci., Stanford Univ., Stanford Univ.*

9:00 Y34 **166.18** Scene-selective brain regions show a posterior-anterior gradient for representing perceptual and conceptual information. N. KHAN*; C. MULLIN; A. MARTIN; W. D. STEVENS. *York Univ., Natl. Inst. of Mental Hlth.*

POSTER

167. Human Long-Term Memory: Medial Temporal Lobe I

Theme H – Cognition

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 Y35 **167.01** A hippocampal subfield model of category learning. J. SUCEVIC; A. C. SCHAPIRO*. *Univ. of Oxford, Univ. of Pennsylvania.*

9:00 Y36 **167.02** Grid-like hexadirectional modulation of theta oscillations in human ventromedial prefrontal cortex. D. CHEN*; L. KUNZ; H. ZHANG; N. AXMACHER; L. WANG. *Inst. of Psychology, Chinese Acad. of Sci., Univ. of Freiburg, Ruhr University, Bochum, Inst. of Cognitive Neuroscience, Ruhr Univ. Bochum.*

10:00 Y37 **167.03** Differential effect of human hippocampal stimulation on memory enhancement with theta rhythm. S. JUN*; S. LEE; J. KIM; C. CHUNG. *Seoul Natl. Univ., Korea Advanced Inst. of Sci. and Technol., Seoul Natl. Univ.*

11:00 Y38 **167.04** Spatiotemporal spiking patterns in human medial temporal lobe support successful episodic encoding and recognition. Y. REN*; T. I. BROWN. *Georgia Inst. of Technol.*

8:00 Y39 **167.05** Developmental differences in sensitivity to naturalistic event boundaries. A. DUTCHER*; A. R. PRESTON. *The Univ. of Texas at Austin, The Univ. of Texas at Austin.*

9:00 Y40 **167.06** Cholinergic modulation enhances hippocampally dependent spatial relational attention. N. RUIZ*; M. ALY. *Columbia Univ.*

10:00 Y41 **167.07** Are grid-like codes used to remember long lists of words? A. O. CONSTANTINESCU*; E. PATEL; J. BISBY; A. CASTEGNARO; N. BURGESS. *UCL Inst. of Cognitive Neurosci.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 Y42 **167.08** Hippocampal theta coordinates memory processing during visual exploration. J. E. KRAGEL*; S. VANHAERENTS; J. W. TEMPLER; S. SCHUELE; J. M. ROSENOW; A. S. NILAKANTAN; D. J. BRIDGE. *Northwestern Univ. Feinberg Sch. of Med., Northwestern Univ. Feinberg Sch. of Med., Northwestern Univ. Feinberg Sch. of Med.*

8:00 Y43 **167.09** Hippocampal spatial memory retrieval effects may be less localized than encoding effects. H. A. FRITCH*; S. D. SLOTNICK. *Boston Col.*

9:00 Y44 **167.10** Connectivity dependent prediction of DBS induced memory improvement. S. TREU*; J. A. BARCIA; A. BIERBRAUER; L. KUNZ; C. NOMBELA-OTERO; N. LI; A. HORN; B. RENESES-PRIETO; N. AXMACHER; B. A. STRANGE. *Univ. Politecnica De Madrid, Univ. Complutense de Madrid, Ruhr Univ. Bochum, Univ. of Freiburg, Charité Univ. Med. Berlin, Univ. Complutense de Madrid.*

10:00 Z1 **167.11** A novel account of recognition memory based on generic memory storage and retrieval. O. HAKOBYAN*; S. CHENG. *Ruhr Univ. Bochum.*

11:00 Z2 **167.12** Task-dependent population-level representations of choice and memory in human medial frontal cortex. J. MINXHA*; A. MAMELAK; R. ADOLPHS; U. RUTISHAUSER. *Caltech, Cedars Sinai Medial Ctr., Caltech, Cedars-Sinai Med. Ctr.*

8:00 DP12/Z3 **167.13** (Dynamic Poster) Building integrated and structured cortical and medial temporal lobe representations during goal-directed navigation. C. FERNANDEZ*; J. JIANG; A. D. WAGNER. *Stanford Univ.*

9:00 Z4 **167.14** Hippocampal BOLD recollection effects predict longitudinal change in memory performance in healthy older adults. M. A. DE CHASTELAINE*; M. HOU; M. D. RUGG. *Univ. of Texas At Dallas.*

10:00 Z5 **167.15** Memento - memory for objects and scenes in the human medial temporal lobe at 7 tesla. H. SCHULTZ*; A. GREVE; C. RUA; D. BERRON; R. HENSON; B. STARESINA. *Univ. of Birmingham, Univ. of Cambridge, Univ. of Cambridge, Lund Univ., Univ. of Cambridge.*

11:00 Z6 **167.16** Stimulus prediction in the hippocampus resulting from rapid statistical learning. E. A. MCDEVITT*; G. KIM; N. B. TURK-BROWNE; K. A. NORMAN. *Princeton Univ., Korea Brain Res. Inst., Yale Univ., Princeton Univ.*

8:00 Z7 **167.17** Goal changes during navigation change hippocampal representations of space and time. N. R. BOUFFARD*; I. K. BRUNEC; J. D. OZUBKO; J. ROBIN; M. MOSCOVITCH; M. D. BARENSE. *Univ. of Toronto, Rotman Res. Institute, Baycrest, SUNY Geneseo.*

9:00 Z8 **167.18** Mapping memory consolidation in humans with propofol. D. MOON; N. ESFAHANI-BAYERL; C. FINKE; D. SALCHOW; S. BAYERL; R. KEMPTER; C. J. PLONER*. *Charité, Humboldt-Universität zu Berlin.*

10:00 Z9 **167.19** Dynamic interactions between statistical learning and episodic memory. B. SHERMAN*; C. ELLIS; C. F. BENJAMIN; J. L. GERRARD; D. D. SPENCER; N. B. TURK-BROWNE. *Yale Univ., Yale Univ. Sch. of Med.*

11:00 Z10 **167.20** Hippocampal pattern separation and associative memory: Distinct intracranial EEG temporal encoding patterns predict subsequent memory. S. HSU*; K. F. LAROCQUE; O. RACCAH; A. GONZALEZ; J. PARVIZI; A. D. WAGNER. *Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ.*

8:00 Z11 **167.21** Hippocampal subfield volumes, cardiorespiratory fitness, and pattern separation task performance in older adults. K. L. KERN*; R. K. NAUER; T. W. STORER; K. SCHON. *Boston Univ. Sch. of Med., Boston Univ., Brigham and Women's Hospital, Harvard Med. Sch.*

9:00 Z12 **167.22** Impact of interictal epileptiform discharges on short timescale cortical activity. S. MEISENHELTER*; B. C. JOBST. *Dartmouth Col. Geisel Sch. of Med., Dartmouth-Hitchcock Med. Ctr.*

POSTER

168. Human Long-Term Memory: Encoding and Retrieval I

Theme H – Cognition

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 Z13 **168.01** Individual-specific and shared representations during episodic memory encoding and retrieval. Y. ZHOU*; X. XIAO; Z. YE; L. YAO; C. CHEN; G. XUE. *Beijing Normal Univ., Beijing Normal Univ., Univ. of California, Irvine.*

9:00 Z14 **168.02** The neural pattern similarity between working memory maintenance and retrieval was associated with successful long-term memory. J. LIU*; G. XUE. *State Key Lab. of Cognitive Neurosci. and Learning and IDG/ McGovern Inst. of Brain Reasearch.*

10:00 Z15 **168.03** Temporal distance modulates functional-anatomic correlates of overt autobiographical memory retrieval. A. QUACH*; A. W. GILMORE; S. KALINOWSKI; S. J. GOTTS; D. L. SCHACTER; A. MARTIN. *Lab. of Brain and Cognition, NIMH/NIH, Harvard Univ.*

11:00 Z16 **168.04** In-scanner spoken recall identifies dynamic, content-specific retrieval of autobiographical memories. A. W. GILMORE*; A. QUACH; S. KALINOWSKI; S. J. GOTTS; D. L. SCHACTER; A. MARTIN. *Lab. of Brain and Cognition, NIMH/NIH, Lab. of Brain and Cognition, NIMH/NIH, Harvard Univ.*

8:00 Z17 **168.05** Prefrontal reinstatement of contextual task demand is mediated by repulsion in hippocampal activity patterns between contexts. J. JIANG*; S. WANG; W. GUO; A. D. WAGNER. *Stanford Univ., Stanford Univ., Univ. of Oregon.*

9:00 Z18 **168.06** Pre-trial fluctuations in alpha and theta oscillatory power affect goal-state orienting and accuracy during episodic remembering. K. P. MADORE*; A. M. KHAZENZON; C. W. BACKES; J. M. QI; A. M. NORCIA; A. D. WAGNER. *Stanford Univ., Stanford Univ.*

10:00 Z19 **168.07** Community detection of the default mode network in resting fMRI reveals anterior temporal, posterior medial, and lateral subnetworks. A. J. BARNETT*; W. REILLY; C. RANGANATH. *UC Davis.*

11:00 Z20 **168.08** Sleep modulates a delay-dependent retrieval benefit for events which form a coherent narrative. A. I. DELARAZAN*; B. I. COHN-SHEEHY; C. RANGANATH. *Univ. of California, Davis.*

8:00 Z21 **168.09** Structured representations of characters, contexts, and event schemas in cortico-hippocampal networks. Z. M. REAGH*; J. MACALUSO; R. BUGSCH; C. RANGANATH. *Univ. of California, Davis.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 Z22 **168.10** Cortical representations that cross events facilitate the integration of events which form coherent narratives in memory. B. I. COHN-SHEEHY*; A. I. DELARAZAN; J. E. CRIVELLI-DECKER; W. B. REILLY; Z. M. REAGH; C. RANGANATH. *Univ. of California, Davis.*

10:00 Z23 **168.11** Semantic knowledge distorts episodic memory: Behavioral and neural investigations. A. TOMPARY*; A. XIA; S. L. THOMPSON-SCHILL. *Univ. of Pennsylvania.*

11:00 Z24 **168.12** Replay of neural sequences underlies human memory retrieval. A. VAZ*; J. WITTIG, Jr; S. INATI; N. BRUNEL; K. ZAGHLOUL. *Duke Univ. Sch. of Med., Natl. Inst. of Neurolog. Disorders and Stroke (NINDS), Duke Univ. Dept. of Neurobio.*

8:00 Z25 **168.13** Representing myself in multiple ways: Dissociable activation between different levels of abstractness for self in autobiographical memories. A. KATSUMI*; S. IWATA; T. TSUKIURA. *Kyoto Univ.*

9:00 Z26 **168.14** Why the expert more concentrating than novice: Attentional superiority and memory trace on scene information. M. HE*; C. QI. *Wuhan Sports Univ.*

10:00 Z27 **168.15** Recognition memory performance can be estimated based on few robust functional brain networks. J. PETROVSKA*; E. LOOS; D. COYNEL; T. EGLI; A. PAPASSOTIROPOULOS; D. J. DE QUERVAIN; A. MILNIK. *Univ. of Basel.*

11:00 Z28 **168.16** ▲Voluntary and involuntary autobiographical memory retrieval across the lifespan. A. STROUD*; R. TWOHY; E. BAI; C. NEILL; M. GUGLIANO; A. BELFI. *Missouri Univ. of Sci. and Technol.*

8:00 Z29 **168.17** Frontal correlates of verbal and visual memory in alcoholism: A double dissociation. R. FAMA; A. LE BERRE; S. A. SASSOON; N. M. ZAHR; K. M. POHL; A. PFEFFERBAUM; E. V. SULLIVAN*. *Stanford Univ. Sch. of Med., SRI Intl.*

POSTER

169. Human Long-Term Memory: Encoding and Retrieval II

Theme H – Cognition

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 Z30 **169.01** Memory-guided attentional states are established by the hippocampus and medial prefrontal cortex. E. GÜNSELI*; M. ALY. *Columbia Univ.*

9:00 Z31 **169.02** Evidence for differential neural reinstatement of associative memories in children and adults. N. L. VARGA*; H. E. ROOME; R. J. MOLITOR; L. MARTINEZ; E. M. HIPSKIND; A. R. PRESTON; M. L. SCHLICHTING. *The Univ. of Texas at Austin, Univ. of Toronto.*

10:00 Z32 **169.03** Memory-based choices: Computational mechanisms and neural signatures. Z. ZHANG*; S. WANG; S. HRISTOVA; M. GOOD; A. S. KAYSER; M. HSU. *Univ. of California, Berkeley, Univ. of California San Francisco.*

11:00 Z33 **169.04** Competition induces adaptive exaggeration of memories. Y. ZHAO*; A. J. CHANALES; B. A. KUHL. *Univ. of Oregon, NYU.*

8:00 Z34 **169.05** Repulsion and sharpening along diagnostic feature dimensions support resolution of memory interference. M. L. DRASCHER*; A. G. TREMBLAY-MCGAW; B. A. KUHL. *Univ. of Oregon, Univ. of Oregon, Univ. of Oregon.*

9:00 Z35 **169.06** Repulsion of competing hippocampal representations parallels learning-related reductions in memory interference. W. GUO*; G. KIM; S. E. FAVILA; B. A. KUHL. *Univ. of Oregon, Korea Brain Res. Inst., New York Univ.*

10:00 Z36 **169.07** Hippocampal and cortical contributions to spatiotemporal context memory for a remote real-world event. N. B. DIAMOND*; B. LEVINE. *Univ. of Toronto, Rotman Res. Institute, Baycrest.*

11:00 Z37 **169.08** Identifying and characterising the supramodal inhibitory control network in the brain - and its role in the regulation of memories, emotion, and actions. S. SANKARASUBRAMANIAN*; D. APSVALKA; Y. GUO; M. ANDERSON. *MRC-CBU, Univ. of Cambridge, Behavioral and Clin. Neurosci. Institute, Univ. of Cambridge.*

8:00 Z38 **169.09** Mechanisms of regulation of intrusive autobiographical memories: A cognitive neuroscience perspective. G. BARSUOLA*; S. SANKARASUBRAMANIAN; D. APSVALKA; H. ENGEN; J. M. FAWCETT; M. C. ANDERSON. *Univ. of Cambridge, Deutsches Resilienz Zentrum, DRZ, Mem. Univ. of Newfoundland.*

9:00 Z39 **169.10** The effects of motivated forgetting on contextual memory. S. KOZAK*; N. HERZ; Y. BAR-HAIM; N. CENSOR. *Tel-Aviv Univ.*

10:00 Z40 **169.11** Memory guided preferential viewing behavior spans context changes. M. R. DULAS*; H. SCHWARB; N. J. COHEN. *Univ. of Illinois.*

11:00 Z41 **169.12** Incidental spatial encoding in human visual memory. S. E. FAVILA*; J. WINAWER. *New York Univ.*

8:00 Z42 **169.13** Probing intra-network dynamics of the posterior medial system during episodic memory retrieval. R. COOPER*; M. RITCHEY. *Boston Col.*

9:00 AA1 **169.14** Unique and overlapping contributions of posterior medial network nodes to predicting recollection outcomes. K. A. KURKELA*; M. RITCHEY. *Boston Col.*

10:00 AA2 **169.15** Different activation patterns during the temporal-order judgment in memory for face-name associations between happy and neutral facial expressions. S. IWATA*; T. TSUKIURA. *Kyoto Univ., JSPS.*

11:00 AA3 **169.16** Holistic recollection and incidental reinstatement of scene context. A. TAMM; K. CAMPION; R. HENSON; A. FORSBERG; S. COX; A. M. MORCOM*. *Univ. of Edinburgh, Med. Res. Council, Univ. of Sussex.*

8:00 AA4 **169.17** A role for schema in establishing rapid relational memory associations in the human brain. J. P. PAULUS*; M. N. COUTANCHE. *Univ. of Pittsburgh.*

9:00 AA5 **169.18** One year after long-term value learning: Remembering the historical values of visual objects both explicitly and implicitly. S. HWANG*; H. Z. KIM; H. F. KIM. *Seoul Natl. Univ., Inst. For Basic Science(Ibs).*

10:00 AA6 **169.19** Accelerated long-term forgetting in patients with seizures. R. L. TOM*; E. D'AGOSTINO; B. C. JOBST. *Geisel Sch. of Med. At Dartmouth, Geisel Sch. of Med. at Dartmouth, Dartmouth-Hitchcock Med. Ctr.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 AA7 **169.20** Interactive effects of endogenous testosterone and cortisol levels on emotional episodic memory performance in college aged men. A. MARTINEZ TLATENCHI*; J. D. PAYNE. *Univ. of Notre Dame, Univ. of Notre Dame.*

8:00 AA8 **169.21** Patterns of spatial memory activity are more similar within than between sex. D. S. SPETS*; S. D. SLOTNICK. *Boston Col. Dept. of Psychology, Boston Col.*

POSTER

170. Encoding and Retrieval in High-Level Content and Naturalistic Protocols

Theme H – Cognition

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 AA9 **170.01** Measuring behavioural and neural responses to fluctuations in real-world predictability. B. BELLANA*; H. LEE; X. ZUO; J. CHEN. *Johns Hopkins Univ.*

9:00 AA10 **170.02** Narratives as networks: Predicting memory from the structure of naturalistic events. H. LEE*; J. CHEN. *Johns Hopkins Univ.*

10:00 AA11 **170.03** Decoding narratives from fMRI responses of the present and causally related past events during movie-watching. H. SONG*; H. KO; J. PARK; J. LEE; W. SHIM. *Ctr. For Neurosci. Imaging Research, IBS, Sungkyunkwan Univ., Sungkyunkwan Univ.*

11:00 AA12 **170.04** Connecting the past and the future: The role of the pre-commissural fornix in episodic autobiographical memory and simulation. A. N. WILLIAMS; S. RIDGEWAY; M. POSTANS; K. S. GRAHAM; A. D. LAWRENCE; C. J. HODGETTS*. *Cardiff Univ.*

8:00 AA13 **170.05** Differences in the neural representations of visual content between encoding and free recall across the brain. W. A. BAINBRIDGE*; E. H. HALL; C. I. BAKER. *Natl. Inst. of Mental Hlth., Univ. of California, Davis.*

9:00 AA14 **170.06** Multivariate encoding-retrieval similarity in visual cortex during high-confidence memory. M. S. COHEN*; L. Y. CHENG; K. A. PALLER; P. J. REBER. *Northwestern Univ.*

10:00 AA15 **170.07** Human hippocampus and medial prefrontal cortex represent hierarchical task schemas. N. W. MORTON*; R. J. MOLITOR; M. L. SCHLICHTING; M. L. MACK; S. A. MCKENZIE; A. R. PRESTON. *The Univ. of Texas at Austin, Univ. of Texas At Austin, Univ. of Toronto, NYUMC, The Univ. of Texas At Austin.*

11:00 AA16 **170.08** Retrieval practice induces dynamic neural reorganization to boost long-term memory retention. L. ZHUANG*; J. WANG; B. XIONG; L. HAO; P. J. BAYLEY; S. QIN. *Beijing Normal Univ., Beijing Normal Univ., VA Palo Alto Hlth. Care Syst., Stanford Univ.*

8:00 AA17 **170.09** Memorability of arbitrary verbal associations and its role during memory retrieval in the anterior temporal lobe. W. XIE*; W. BAINBRIDGE; K. ZAGHLOUL. *NIH.*

9:00 AA18 **170.10** An abstract neural representation of category membership beyond information coding stimulus or response. R. M. MOK*; J. D. CARLIN; B. C. LOVE. *Univ. Col. London, MRC Cognition and Brain Sci. Unit, Univ. of Cambridge.*

10:00 AA19 **170.11** No evidence for visual statistical learning in standard reaction time measures. K. HIMBERGER*; A. S. FINN; C. J. HONEY. *Johns Hopkins Univ., Univ. of Toronto.*

11:00 AA20 **170.12** Estimating Pi with memory recall experiments. M. TSODYKS*; M. KATKOV; M. NAIM. *Weizmann Inst. of Sci.*

8:00 AA21 **170.13** The default-mode network represents aesthetic appeal that generalizes across visual domains. E. A. VESSEL*; A. I. ISIK; A. M. BELFI; J. L. STAHL; G. G. STARR. *Max Planck Inst. For Empirical Aesthetics, Missouri Univ. of Sci. and Technol., Ohio State Univ., Pomona Col.*

POSTER

171. Human Social Cognition: Behavior, Mechanisms, and Disorders I

Theme H – Cognition

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 AA22 **171.01** The influence of anti-social behavior in top-down modulation of motor resonance. Y. SIONAKA*; Y. MIYAWAKI; S. MORIOKA. *Kio Univ.*

9:00 AA23 **171.02** Top-down modulation of motor resonance through affective attitude toward a non-biological object. Y. MIYAWAKI*; Y. SHIONAKA; S. MORIOKA. *Kio Univ.*

10:00 AA24 **171.03** Investigating social motivation in young children with and without autism. K. S. CARLSON*; S. HULBERT GEORGE; B. L. THOMPSON. *Michigan State Univ.*

11:00 AA25 **171.04** Predicting social motivation in children with and without autism using eye-tracking and machine learning. S. HULBERT GEORGE*; K. S. CARLSON; B. L. THOMPSON. *Michigan State Univ.*

8:00 AA26 **171.05** Examining the relationship between individual differences in spontaneous theory of mind and neural correlates of explicit theory of mind. D. SHARIQ*; D. ALKIRE; S. DZIURA; J. MERCHANT; A. RASHID; K. MCNAUGHTON; E. REDCAY. *Univ. of Maryland, Univ. of Maryland.*

9:00 AA27 **171.06** Modulation of joint attention by naturalistic social and emotional stimuli in FMRI and eye tracking. A. RASHID*; D. SHARIQ; S. DZIURA; K. A. MCNAUGHTON; D. ALKIRE; J. MERCHANT; E. REDCAY. *Univ. of Maryland.*

10:00 AA28 **171.07** Co-localization of hemodynamic and theta band activity during interactive joint attention. S. DRAVIDA*; J. A. NOAH; X. ZHANG; J. HIRSCH. *Yale Sch. of Med., Yale Sch. of Med., Yale Sch. of Med., Yale Sch. of Med., Univ. Col. London.*

11:00 AA29 **171.08** Effects of ketamine on the perception of animacy and metacognition. S. WASSERTHAL*; J. SCHULTZ; U. ETTINGER; M. LEHMANN; R. HURLEMANN. *Uniklinikum Bonn, Univ. of Bonn, Univ. of Bonn, Univ. of Bonn, Univ. of Bonn Med. Ctr.*

8:00 AA30 **171.09** Unpacking the temporal self: Evidence that future and past selves are temporally compressed. S. C. BRIETZKE*; M. L. MEYER. *Dartmouth Col., Dartmouth Col.*

9:00 AA31 **171.10** Maternal education moderates infant and early childhood functional networks important for reading performance. M. M. K. BRUCHHAGE*; G. NGO; S. C. L. DEONI; V. D'SA. *Warren Alpert Med. Sch. at Brown Univ., Warren Alpert Med. Sch. at Brown Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 AA32 **171.11** The influence of choice attributes and memory on choice induced preference change. Y. HWANG*; S. CHO. *Chung-Ang Univ.*

11:00 AA33 **171.12** Effects of group membership on neural correlates of mentalizing in the prisoner's dilemma game. G. NEZIROGLU*; M. STEINES; T. KIRCHER; B. STRAUBE. *Philipps Univ. of Marburg.*

8:00 AA34 **171.13** Neural modeling and computational approaches to investigating the brain mechanisms underpinning emotional expression processing of East Asian faces. G. C. SHYI*; S. T. HUANG; J. O. GOH; C. J. LEE; Y. CHEN; C. CHEN; W. HSIEH; F. F. TSAI; C. CHEN. *Natl. Chung Cheng Univ., Natl. Taiwan Univ., Natl. Tsing Hua Univ., Natl. Taiwan Univ.*

9:00 AA35 **171.14** Teaching machines to recognize neurodynamic correlates of team and team member uncertainty. R. STEVENS*; T. GALLOWAY. *IMMEX/UCLA, The Learning Chameleon.*

10:00 AA36 **171.15** ▲ Antisocial personality traits, voice modulation, and appraisal of music impact social discounting behavior. D. TOSSAVAINEN; S. E. MCCLELLAND; S. SPIVACK; L. E. CRANMER; G. IENNER; A. POINCOT; P. WALLISCH*. *New York Univ.*

11:00 AA37 **171.16** ▲ Single-neuron representations in human orbitofrontal cortex and amygdala of internal emotional states evoked by contextual information. J. FELDMAN; D. BEAM; J. YIH; A. N. MAMELAK; J. PARVIZI; U. RUTISHAUSER*. *Cedars-Sinai Med. Ctr., Stanford Univ., Stanford Univ., Stanford Univ., Caltech.*

8:00 AA38 **171.17** Real-time assessment of brain dynamics during embodiment: An IVR-TMS-EEG study. E. P. CASULA*; G. TIERI; M. MAIELLA; R. PEZZETTA; E. F. PAVONE; S. M. AGLIOTI; G. KOCH. *Univ. Col. London, Santa Lucia Fndn., Braintrends Ltd, Sapienza Univ. of Rome, Fondazione S. Lucia I.R.C.C.S.*

9:00 AA39 **171.18** Association of arousal-related neural activation with disposition towards social issues: A pupillometric fMRI study. D. P. CHRISTIANO*; H. WANG; A. TAM; D. G. GHAHREMANI; E. D. LONDON. *UCLA, UCLA, UCLA.*

10:00 AA40 **171.19** Aging alters corticostriatal interactions during shared reward processing. V. KELLY*; K. HACKETT; N. M. HENNINGER; T. GIOVANNETTI; D. V. SMITH; D. S. FARERI. *Temple Univ., Adelphi Univ.*

11:00 AA41 **171.20** Neural substrates of variations in momentary happiness during social decisions. O. SALAH*; M. GÄDEKE; T. WILLEMS; B. WEBER; R. HURLEMANN; J. SCHULTZ. *Rheinische Friedrich-Wilhelms-Universität Bonn, Rheinische Friedrich-Wilhelms-Universität Bonn.*

8:00 AA42 **171.21** Individual differences in social and non-social cognitive control. K. M. DARDA*; E. E. BUTLER; R. RAMSEY. *Bangor Univ.*

9:00 AA43 **171.22** Effects of transcranial direct current stimulation (tDCS) of the anterior prefrontal cortex on Theory of Mind tasks. A. KARIM*; Z. ZHENG; R. KHALIL; B. GODDE. *Univ. of Tübingen, SRH Mobile Univ., Jacobs Univ.*

POSTER

172. Genetic and Genome Engineering Techniques

Theme I – Techniques

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 AA44 **172.01** Cytosine base editor generates substantial off-target single-nucleotide variants in mouse embryos. H. YANG*; E. ZUO; Y. SUN; T. YUAN. *Inst. of Neuroscience, Chinese Acad. of Scie, Inst. of Neurosci., CAS-MPG Partner Inst. for Computat. Biol., Chinese Acad. of Agr. Sci.*

9:00 BB1 **172.02** A single-allele conditional gene inactivation and *in situ* restoration strategy utilizing two recombinases. X. LIU*; H. LIU; L. MA; J. GAN; T. ZHANG; Y. XU; L. GONG; P. MU; M. HE. *Inst. of Brain Science, Fudan Univ.*

10:00 BB2 **172.03** Developing adeno-associated virus reporters for intersectional cell-type targeting. Y. ZHU*; J. XU. *Northwestern Univ., Northwestern Univ.*

11:00 BB3 **172.04** Doxorubicin accelerates and enhances rAAV-mediated gene expression in the cortex of mouse, cat and monkey. H. GONG*; C. TANG; L. QIAN; Y. LU; I. ANDOLINA; S. ZHANG; H. YANG; J. WU; W. WANG. *Inst. of Neuroscience, Chinese Acad. of Sci., Univ. of Chinese Acad. of Sci., Dept. of Ophthalmology, Eye and ENT Hosp. of Fudan Univ.*

8:00 BB4 **172.05** ● Transposon mediated, cell type specific transcription factor recording in the mouse brain. A. J. CAMMACK*; A. MOUDGIL; T. LAGUNAS, JR; M. J. VASEK; M. SHABSOVICH; J. HE; X. CHEN; M. HOODA; M. N. WILKINSON; T. M. MILLER; R. D. MITRA; J. D. DOUGHERTY. *Washington Univ. In St. Louis, Washington Univ. In St. Louis, Washington Univ, Sch. Med., Washington Univ. Sch. of Med.*

9:00 BB5 **172.06** Development of novel IDLV lentiviral vector platform as an efficient vehicle for CRISPR/dCas9-DNMT3A gene therapy: The new generation drug for precised modulation of SNCA gene expression. O. CHIBA-FALEK; L. TAGLIAFIERRO; E. ILICH; J. GU; Z. Y. HUANG; S. MURPHY; B. KANTOR*. *Duke Univ., Duke Univ., Duke Univ.*

10:00 BB6 **172.07** A CRISPR/Cas9 based recombination system to facilitate the design of complex transgenic animals for neuroscience experimentation. J. LUO*; C. HUANG; J. LI; M. J. SCHNITZER. *HHMI, Stanford Univ.*

11:00 BB7 **172.08** Combinatorial optimization of CRISPR/Cas9-mediated knockin yields high-performance editing *in vivo*. R. RICHARDSON*; M. STEYERT; B. ALTAS; A. ROMANOWSKI; A. POULOPOULOS. *Univ. of Maryland Baltimore Sch. of Med.*

8:00 BB8 **172.09** ● Plug and play protein modification using homology-independent universal genome engineering. Y. GAO*; E. HISEY; T. W. BRADSHAW; E. ERATA; W. E. BROWN; J. L. COURTLAND; A. UEZU; Y. XIANG; Y. DIAO; S. H. SODERLING. *Duke Univ.*

9:00 BB9 **172.10** ● Circuit-based genome editing using self-inactivating rabies virus. E. CIABATTI; H. LEE; M. TRIPODI. *MRC Lab. of Mol. Biol., Univ. of Cambridge.*

10:00 BB10 **172.11** Auxin inducible rapid degradation in hippocampal neurons. R. NAKANO*; N. IHARA; A. NAKASHIMA; S. MORIKAWA; M. KANEMAKI; Y. IKEGAYA; H. TAKEUCHI. *The Univ. of Tokyo, Natl. Inst. of Genet.*

● Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 BB11 **172.12** Single cell RNA sequencing reveals regulation of protein folding gene expression by the nuclear receptor Nr4A in hippocampal CA1 neurons after learning. S. CHATTERJEE*; E. BAHL; E. WALSH; J. D. LEDERMAN; J. MICHAELSON; S. SAFE; T. ABEL. *The Univ. of Iowa, The Univ. of Iowa, Texas A&M Univ.*

8:00 BB12 **172.13** Novel AAV mediated genetic sensor of somatic mosaicism in postmitotic neurons- implications in environmental toxicant elicited neurotoxicity and sporadic Parkinson's disease. M. ELSAADI*; X. TIAN; X. LU. *Lsuhsc-Shreveport.*

9:00 BB13 **172.14** Utilizing a CTIP2 promoter-driven trans-synaptic tracing system to interrogate the development of cortical circuitry. J. T. LIM*; D. JGAMADZE; T. DUONG; J. A. WOLF; J. A. MILLS; H. I. CHEN. *Univ. of Pennsylvania, Univ. of Pennsylvania, Corporal Michael J. Crescenz Veterans Affairs Med. Ctr.*

10:00 BB14 **172.15** A viral intersectional approach for cortex-wide projection-specific gene expression. X. R. SUN*; S. MUSALL; A. KHANAL; S. LI; A. KEPECS; V. GRADINARU; A. K. CHURCHLAND. *Cold Spring Harbor Lab., CALTECH.*

11:00 BB15 **172.16** Drug- and calcium-gated transcription factor for mapping functional neuronal circuits. J. SHEN*; W. WANG. *Univ. of Michigan.*

8:00 BB16 **172.17** ● Third-generation, nontoxic, single-deletion-mutant rabies viral vectors. L. JIN; M. MATSUYAMA; T. K. LAVIN; H. A. SULLIVAN; N. E. LEA; I. R. WICKERSHAM*. *MIT.*

9:00 BB17 **172.18** Detailed morphological imaging of sparsely labeled and genetically-defined neuronal populations in Cre-dependent MORF mice. C. S. PARK*; M. B. VELDMAN; C. M. EYERMANN; M. ZHU; K. MARRETT; E. ZUNIGA-SANCHEZ; A. A. HIRANO; N. C. BRECHA; S. L. ZIPURSKY; J. CONG; H. DONG; X. W. YANG. *UCLA, USC.*

10:00 BB18 **172.19** TIGRE3.0 and VIEDL: Transgenic and viral tools for combinatorial labeling and perturbation of cell types in the mouse brain. L. T. GRAYBUCK*; M. WALKER; G. LENZ; L. SIVERTS; E. SZELENYI; A. SEDENO-CORTES; T. NGUYEN; B. KALMBACH; E. GARREN; J. MICH; S. YAO; M. MORTRUD; B. LEVI; J. TING; E. LEIN; A. CETIN; H. ZENG; T. DAIGLE; B. TASIC. *Allen Inst. For Brain Sci.*

11:00 BB19 **172.20** Photoactivable recombinases for targeted single-cell genomic modification. P. BALARAM*; S. YAO; P. YUAN; S. CHATTERJEE; B. OUELLETTE; T. ZHOU; M. MORTRUD; T. DAIGLE; B. TASIC; R. CHRAPKIEWICZ; M. SCHNITZER; H. ZENG; A. CETIN. *Allen Inst. for Brain Sci., Stanford Univ., Stanford Univ.*

8:00 BB20 **172.21** ▲ Repurposing protein degradation for optogenetic modulation of protein activities. N. HAACK*; P. MONDAL; V. V. KRISHNAMURTHY; S. R. SHARUM; K. ZHANG. *Univ. of Illinois, Urbana-Champaign.*

9:00 BB21 **172.22** Optimization of a light-gated transcriptional system for tracking protein-protein interactions in the brain. R. M. MILLER*; W. WANG. *Univ. of Michigan.*

10:00 BB22 **172.23** Development of a novel live-cell reporter for identification of neuronal activity modulators. A. SANTOS*; S. PARK. *Univ. of Utah Sch. of Med.*

11:00 BB23 **172.24** ● Genetically modified rat toolbox: Characterization and application for neuron-type specific activity modulation. Z. LIU*; G. ZHAO; A. BROWN; K. FORBES. *Horizon Discovery.*

8:00 BB24 **172.25** Establishment of CaMKIIα-ChrimsonR-GFP transgenic macaque monkey model. S. HE*; Z. LIU. *Inst. of Neurosci.*

9:00 BB25 **172.26** Transgenic expression directed to the CNS of non-human primates. J. PICKEL*; A. C. CUMMINS; N. FLYTZANIS; N. GOEDEN; V. GRADINARU. *NIH, LN NIMH NIH, Caltech, Caltech, CALTECH.*

10:00 BB26 **172.27** Lineage Tracker Bitbow2: A convenient and versatile spectral barcoding tool for neuronal lineage studies in the *Drosophila* brain. Y. LI*; Y. ZHAO; E. EDWARDS; T. CHEN; M. GHAZZI; D. ROOSSIEN; D. CAI. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

11:00 BB27 **172.28** Identifying efficient chemical-based nucleic acid transfection compound for primary neurons and neuronal cell lines. V. T. TOUSSAINT*; F. PREMARTIN; T. BENCHIMOL; M. DENU; M. DUMONT; G. FREUND; P. FRIEDEL; Y. PHILIPSON; M. HELLAL; P. ERBACHER. *POLYPLUS-TRANSFECTION.*

8:00 BB28 **172.29** Development of OR-expressing stable cell lines using lentiviral genomic integration and those uses for biomimetic noses. J. CHOE*; C. MOON. *DGIST, Dept. of Brain & Cognitive Sci.*

9:00 BB29 **172.30** Non-invasive and longitudinal opsin monitoring for research and potential clinical optogenetics applications. J. BONAVENTURA*; S. LAM; J. GOMEZ; C. RICHIE; M. MICHAELIDES. *NIDA/NIH.*

POSTER

173. Anatomic Methods: Image Acquisition I

Theme I – Techniques

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 BB30 **173.01** Brain region segmentation at single cell scale based on Markov random field. X. XU; Y. GUAN*; H. GONG; Z. FENG; W. SHI; A. LI; M. REN; J. YUAN; Q. LUO. *Huazhong Univ. of Sci. and Technol.*

9:00 BB31 **173.02** ▲ Whole brain mapping of long-range direct input to glutamatergic and GABAergic neurons in motor cortex. P. LUO*; J. TIAN; A. LI; H. GONG; X. LI. *Huazhong Univ. of Sci. and Technol., Huazhong Univ. of Sci. and Technol., Wuhan Natl. Lab. For Optoelectronics.*

10:00 BB32 **173.03** The whole brain afferent to cortical corticotropin-releasing hormone (CRH) neurons in mice. P. ZHAO*; H. WANG; J. TIAN; A. LI; H. GONG; X. LI. *Wuhan Natl. Lab. for Optoelectronics -Huazhong Univ. of Sci. and Technol., HUST–Suzhou Inst. for Brainsmatics, JITRI Inst. for Brainsmatics.*

11:00 BB33 **173.04** A high efficient whole brain optical imaging platform. J. YUAN*; Q. ZHONG; A. LI; R. JIN; X. YANG; G. LIU; Z. DING; J. CHEN; X. LI; H. GONG; Q. LUO. *Huazhong Univ. of Sci. and Tenchnology.*

8:00 BB34 **173.05** Design of a precision tape-driven platform for thin tissue sections cutting, collecting and imaging. L. DENG*; J. CHEN; H. GONG; Q. LUO; J. YUAN. *Huazhong Univ. Of Sci. and Technol.*

9:00 BB35 **173.06** Real-time optical-sectioning method based on deep learning. K. NING*; X. ZHANG; A. LI; H. GONG; Q. LUO; J. YUAN. *Wuhan Natl. Lab. For Optoelectronics.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 BB36 **173.07** Processing and analysis pipeline for mesoscopic brain-wide big data in Brainsmatics studies. A. LI*; Y. GUAN; Z. FENG; T. QUAN; S. ZENG; H. GONG; Q. LUO. *Huazhong Univ. of Sci. and Technol.*

11:00 BB37 **173.08** Projection pattern defines anatomical subtypes of pyramidal neurons in layer 5 of the motor cortex. S. JIANG*; Y. GUAN; A. LI; Q. LUO; H. GONG. *Huazhong Univ. of Sci. and Technol.*

8:00 BB38 **173.09** A registration pipeline for mapping histological brain slices to standard stereotaxic coordinate system. Z. ZHANG*; Z. FENG; H. GONG; A. LI. *Huazhong Univ. of Sci. and Technol.*

9:00 BB39 **173.10** Functional projection at single-neuron level in the visual cortex in mice. S. KE*; J. CHANG; R. MENG; W. LI; A. LI; W. ZHOU; H. GONG. *Britton Chance Ctr. for Biomed. Photonics, Wuhan Natl. Lab. for Optoelectronics-Huazhong Univ. of Sci. and Technol.*

10:00 BB40 **173.11** A new method for ventricle expansion correction to assist the precise location of neuron projection pathway. Z. FENG*; C. TAN; H. NI; H. GONG; Q. LUO. *Huazhong Univ. of Sci. and Technol.*

POSTER

174. Anatomic Methods: Image Acquisition II

Theme I – Techniques

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 BB41 **174.01** ● Scalable and cost-effective processing for Micro-CT imaging of postmortem brain structure. D. B. KASTNER*; V. KHARAZIA; Z. YANG; S. JANA; J. SANCHEZ; D. Y. PARKINSON; L. M. FRANK. *UCSF, UCSF, Lawrence Berkeley Natl. Lab.*

9:00 BB42 **174.02** Confocal reflectance microscopy for metal and lipid nanoparticle visualization in the brain. C. CAKIR AKTAS; S. ERDENER*; B. TEKE; S. PEHLIVAN; Z. KAYA; A. TASKIRAN SAG; T. DALKARA; M. MUT. *Hacettepe Univ.*

8:00 DP13/BB43 **174.03** (Dynamic Poster) Whole-brain connectomic mapping of rhesus monkey at micron-resolution. F. XU; Y. SHEN*; H. TAN; C. YANG; L. DING; H. WANG; Q. ZHU; X. HU; P. LAU; G. BI. *Univ. of Sci. and Technol. of China, Shenzhen Inst. of Advanced Technology, Chinese Acad. of Sci., Kunming Inst. of Zoology.*

11:00 BB44 **174.04** Whole-body imaging of vDISCO-cleared mice with the mesoSPIM light-sheet microscope. F. F. VOIGT*; S. ZHAO; R. CAI; M. I. TODOROV; A. ERTURK; F. HELMCHEN. *Brain Res. Inst., Inst. For Stroke and Dementia Res. (ISD), Klinikum Der Univ. Muenchen, Klinikum der Univ. München, Inst. for Stroke and Dementia, Brain Res. Inst. / Univ. of Zurich.*

8:00 BB45 **174.05** 3D-MANC a computational platform for extracting and reconstructing single neurons in 3D from multi-colour labelled populations. N. MILOSAVLJEVIC*; C. A. PROCYK; E. ZINDY; R. J. LUCAS. *The Univ. of Manchester, UCL.*

9:00 BB46 **174.06** The endorestiform nucleus of the human brainstem. M. S. KASSEM*; G. PAXINOS. *Neurosci. Res. Australia.*

10:00 BB47 **174.07** Quantitative delineation of sub-regions of marmoset auditory cortex using ultra-high field MRI. Y. ZHANG*; X. WANG. *Johns Hopkins Univ., Johns Hopkins Univ. Sch. Med.*

11:00 BB48 **174.08** Light sheet microscopy of human brain tissue and tumors. H. DODT*; S. SAGHAFI; I. SABDYUSHEVA-LITSCHAUER; J. GAUGELER; K. BECKER; M. FOROUGHIPOUR. *Tech. Univ. Vienna, Med. Univ. Vienna.*

8:00 BB49 **174.09** Awake rhesus macaque imaging at ultra high field strength (10.5T). S. JUNGST*; R. LAGORE; P. MEHTA; M. D. GRIER; S. R. HEILBRONNER; G. ADRIANY; B. Y. HAYDEN; J. ZIMMERMANN. *Univ. of Minnesota Twin Cities Campus, Univ. of Minnesota Twin Cities, Univ. of Minnesota, Univ. of Minnesota Twin Cities, Univ. of Minnesota, Univ. of Minnesota.*

9:00 BB50 **174.10** Airysynapse—A simple, robust super-resolution imaging technique to quantify synaptic loci in mammalian neuropil. A. D. SAUERBECK*; M. GANGOLLI; T. KUMMER. *Washington Univ. in St. Louis, The Henry M. Jackson Fndn., Uniformed Services Univ. of the Hlth. Sci.*

10:00 BB51 **174.11** Hippocampal formation in Carollia perspicillata. T. D. MORELLO*; R. KOLLMAR; M. G. STEWART*. *SUNY Downstate Med. Ctr., SUNY Downstate Med. Ctr.*

11:00 BB52 **174.12** Benchmarking diffusion tensor calculation for reliable individual analysis. N. A. SEIDER*; D. J. NEWBOLD; T. O. LAUMANN; J. RUTLIN; R. MILLER; B. ADEYEMO; A. Z. SNYDER; J. SHIMONY; N. DOSENBACH. *Washington Univ. Sch. of Med., Washington Univ. in St Louis, Washington Univ. Sch. of Med., Washginton Univ. Sch. of Med., Washington Univ. Sch. of Med., Washington Univ. Sch. Med., Washington Univ. Sch. of Med., Washington Univ. in St. Louis.*

8:00 BB53 **174.13** Multimodal cell and fiber mapping in full vervet brain sections. R. N. KOOIJMANS*; M. AXER; M. SCHOBER; D. GRÄßEL; P. SCHLÖMER; K. ZILLES; P. R. ROELFSEMA; K. M. AMUNTS. *Netherlands Inst. for Neurosci., Res. Ctr. Jülich.*

9:00 BB54 **174.14** Bessel beam tomography for fast volume imaging. A. FLORES VALLE*; J. SEELIG. *Caesar Fndn.*

10:00 BB55 **174.15** Multiscale imaging of brain tumor using confocal laser endomicroscopy, light-sheet fluorescence microscopy and magnetic resonance imaging in small animal. H. HUI*; X. YANG; J. TIAN. *Inst. of Automation, Chinese Acad. of Scienc, Inst. of Automation, Chinese Acad. of Scienc, Key Lab. of Mol. Imaging, CAS.*

11:00 BB56 **174.16** Validation of experimental pipelines for mouse brain imaging with functional ultrasound (fUS) to quantitatively measure sensory responses and intrinsic functional connectivity patterns. J. MARIANI; R. SANTOS*; L. BEYNAC; L. BOURGEAIS; T. DEFFIEUX; A. JOUTEL; M. TANTER; Z. LENKEI. *Inst. of Psychiatry and Neurosci. of Paris, Inserm U1266- Univ. Paris Descartes, Inst. of Psychiatry and Neurosci. of Paris, Physics for Med. Paris, Inserm, ESPCI Paris, CNRS, PSL Res. Univ.*

8:00 BB57 **174.17** A meso- and nano-scale pipeline for detailing butterfly brain evolution. G. WILDENBERG; K. NORWOOD*; M. KRONFORST; N. B. KASTHURI. *Univ. of Chicago/Argonne Natl. Lab., Univ. of Chicago, Univ. of Chicago, Univ. of Chicago.*

9:00 BB58 **174.18** Crystal episkull: Chronic imaging of neocortical dendritic spines in mice using three-photon microscopy. H. BOELE*; J. L. VERPEUT; D. PACUKU; S. Y. THIBERGE; S. S. H. WANG. *Princeton Neurosciene Inst.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 BB59 **174.19** Two-photon excitation enhances resolution of metal-stained tissue by scanning microscopy. M. S. SONDERS; G. ROSOKLIJA; C. LANGRECK; T. P. SCHNIEDER; C. HIKITA-DWORK; A. J. DWORK*; J. A. JAVITCH. *Columbia Univ., New York State Psychiatric Inst., Columbia Univ., Columbia Univ.*

11:00 BB60 **174.20** A new neuron confocal reflection super-resolution (CRSR) Golgi-staining imaging technique and its application in neuroinflammation studies. Y. KHAW*. *Univ. of Illinois At Urbana-Champaign.*

8:00 BB61 **174.21** Overcoming challenges in neuroscience: Multiplex immunofluorescence and autofluorescence isolation in brain tissue using multispectral imaging. B. REMENIUK*; R. MATHIAS; K. ROMAN; C. COLTHARP; B. R. HUBER. *Akoya Biosci., VA Boston Healthcare Syst., Boston Univ.*

9:00 BB62 **174.22** ● ClearScope - The complete light sheet theta microscope for cleared tissue imaging and analysis. S. J. TAPPAN*; W. D. PACK; D. S. DENU; R. TOMER; B. W. HAYDOCK; C. THOMAS; M. GULENKO; B. S. EASTWOOD; N. D. LIESE; P. J. ANGSTMAN; J. R. GLASER. *MBF Biosci. - MicroBrightField Inc., MBF Biosci., Columbia Univ.*

10:00 BB63 **174.23** Label-free imaging of the photoreceptor mosaic in living mouse eye using confocal adaptive optics scanning light ophthalmoscopy. N. SREDAR*; S. K. CHEONG; L. LI; S. J. STEVEN; T. J. KOWAL; Y. SUN; Y. HU; A. DUBRA. *Stanford Univ., Univ. of Rochester.*

11:00 BB64 **174.24** Investigation of blood-brain barrier development using atomic force microscopy. T. FISCHER*; B. BRANKIN; H. A. MCNALLY. *Purdue Univ., Technological Univ. Dublin.*

8:00 BB65 **174.25** Diffusion imaging of young and aged rat brain slices on a human clinical MRI scanner. N. AW; A. CERJANIC; J. W. MITCHELL*; M. U. GILLETTE; B. SUTTON. *Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign.*

9:00 BB66 **174.26** A pipeline from MRI to X-ray to EM for brain imaging. S. FOXLEY; R. VESCOVI; V. DEANDRADE; A. SOROKINA; K. NORWOOD; N. KASTHURI*. *Univ. of Chicago, Univ. of Chicago/ Argonne Natl. Lab., Argonne Natl. Lab., Univ. of Chicago/ Argonne Natl. Laborator, Univ. of Chicago.*

10:00 BB67 **174.27** Two photon reversible inactivation and optical highlighting of GCaMP expressing neurons in zebrafish larvae for the study of circuits. C. FORNETTO; L. TURRINI; N. TISO; F. VANZI*; F. S. PAVONE. *European Lab. for Non-Linear Spectroscopy, Univ. of Padova, Univ. of Florence, Univ. of Florence.*

11:00 BB68 **174.28** ● Quantitative volumetric microscopy of whole mouse brains with a universal autofocus system. L. SILVESTRI*; M. MUELLENBROICH; I. COSTANTINI; A. DI GIOVANNA; G. MAZZAMUTO; F. ORSINI; A. FRANCESCHINI; P. FRASCONI; L. SACCONI; F. PAVONE. *European Lab. For Non-Linear Spectroscopy, Univ. of Glasgow, Univ. of Florence.*

8:00 BB69 **174.29** A software pipeline for image processing and cell segmentation in biomedical microscopy. G. MAZZAMUTO*; F. ORSINI; I. COSTANTINI; M. ROFFILLI; P. FRASCONI; F. S. PAVONE; L. SILVESTRI. *European Lab. For Non-Linear Spectroscopy (LENS), Univ. of Florence, European Lab. for Non-Linear Spectroscopy (LENS), Natl. Res. Council (CNR), Bioretics srl.*

9:00 BB70 **174.30** Three dimensional cytoarchitectonic analysis of the human brain. I. COSTANTINI*; G. MAZZAMUTO; A. LAURINO; E. LAZZERI; A. SIMONETTO; A. ALLEGRA MASCARO; M. ROFFILLI; L. SACCONI; L. SILVESTRI; F. S. PAVONE. *INO - CNR, LENS, Bioretics Srl.*

POSTER

175. Drug Delivery

Theme I – Techniques

Sun. 8:00 AM – *McCormick Place, Hall A*

8:00 BB71 **175.01** Silicon probes with buried channels for simultaneous neural recording and drug delivery. K. SHARMA*; S. D. N. KUMAR; O. PAUL; P. RUTHER. *IMTEK, Univ. of Freiburg.*

9:00 BB72 **175.02** Development of a high content imaging assay in blood-brain barrier *in vitro* model to monitor protein internalization and transcytosis. Q. CHENG*; M. SINGH; D. WAKEFIELD; C. HALE; D. SIMSEK BUCK; X. LUO; O. HOMANN; S. WANG; S. CHAMBERS. *Amgen, Inc, Amgen Inc, Amgen Inc., Amgen San Francisco.*

10:00 BB73 **175.03** Ultrabright lipid droplets light novel opportunities for targeted drug delivery in brain trauma. I. KHALIN*; A. NAGAPPANPILLAI; F. HELLAL; A. KLYMCHENKO; N. PLESNILA. *Inst. for Stroke and Dementia Research, Univ. of Munich Med. Ctr., Univ. of Strasbourg, Cluster for Systems Neurol.*

11:00 BB74 **175.04** Lipid based nano-formulation of efavirenz: A strategy to eradicate viral sanctuaries from the brain. S. SETHI*; V. RANA. *Punjabi Univ.*

8:00 BB75 **175.05** Bolus volume effect on the distribution and silencing of intrathecally delivered siRNA conjugates in the central nervous system. J. A. GILBERT*; S. LEBLANC; S. AGARWAL; S. MILSTEIN; E. FISHILEVICH; T. NGUYEN; R. DEGAONKAR; A. CASTORENO; S. CHIGAS; J. NAIR; V. JADHAV; M. MAIER; M. JANAS; K. BROWN. *Alnylam.*

9:00 BB76 **175.06** Discovery of a small molecule antagonist scaffold for the relaxin-3/RXFP3 System. C. JIN; E. A. GAY*; K. M. MATHEWS; D. F. LOVELOCK; J. BESHEER. *Res. Triangle Inst., Univ. of North Carolina at Chapel Hill, Univ. of North Carolina at Chapel Hill.*

10:00 BB77 **175.07** ● Anesthetic complications during surgery in a juvenile nonhuman primate model for safety assessment of therapeutics with CNS indications. L. D. KRUEGER; M. P. BRADLEY; J. W. VEENSTRA; S. L. ADRIAN; M. D. JOHNSON; B. W. GUNTER*. *Univ. of Michigan, Charles River Labs. - Mattawan, Charles River Labs. - Mattawan.*

11:00 BB78 **175.08** Design, synthesis and pharmacological characterization of GPR88 agonists with improved metabolic stability. C. JIN; D. A. PERREY; M. T. RAHMAN; A. M. DECKER*; T. L. LANGSTON; W. MA; E. DARCQ; B. L. KIEFFER. *RTI Intl., McGill Univ.*

8:00 BB79 **175.09** Investigation of safety profile and potential diapedesis of G4 PAMAM dendrimers across the blood brain barrier following systemic injection in healthy rats. M. R. RESK*; M. M. ANDREWS; B. SRINAGESHWAR; A. K. TOTH; S. KONERU; J. GALLIEN; D. SWANSON; G. L. DUNBAR; A. SHARMA; J. ROSSIGNOL. *Central Michigan Univ., Central Michigan Univ., Central Michigan Univ., Central Michigan Univ., Central Michigan Univ., Central Michigan Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 BB80 **175.10** Influence of tight junction protein density on focused ultrasound-mediated blood-brain barrier permeability enhancement measured by dynamic contrast-enhanced MRI. D. MCMAHON*; K. HYNYNEN. *Sunnybrook Res. Inst., Univ. of Toronto.*

8:00 DP14/BB81 **175.11** ● (Dynamic Poster) A non-human primate model for closed-loop control of propofol-induced unconsciousness. S. CHAKRAVARTY*; J. A. DONOGHUE; A. WAITE; M. K. MAHNKE; E. K. MILLER; E. N. BROWN. *MIT, MIT, MIT.*

11:00 BB82 **175.12** ● MRI-guided injections in the brain: A method for gene therapy delivery for NHP and humans. E. GAREA RODRÍGUEZ; J. KÖNIG; J. BAUDEWIG; C. SCHLUMBOHM; L. SPRONCK; B. BLITS; M. EVERS; M. DE HAAN; S. BORETIUS; M. M. VAN GAALEN*. *Charles River Labs. Germany GmbH, German Primate Ctr., uniQure biopharma BV.*

8:00 BB83 **175.13** Investigating enhanced gene transfer to the mouse central nervous system using modified viral vectors. S. N. MATHIESEN*; L. SCHODERBOECK; S. M. OHLINE; H. E. WICKY; W. C. ABRAHAM; S. M. HUGHES. *Univ. of Otago, Univ. of Otago.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

LECTURE *McCormick Place*

101. SPECIAL LECTURE- The Brain From Inside Out — CME

Sun. 12:00 PM - 1:10 PM — Hall B

Speaker: G. BUZSAKI, *New York Univ.*

Is there a right way to study the brain? The current outside-in approach examines neural reactions to external stimuli. It has fueled a generation of extraordinary brain research but now it must confront its limits and hidden assumptions. The brain is a foretelling device that interacts with its environment through action and the examination of action's consequence. It is not an information-absorbing coding device but a venture-seeking explorer constantly controlling the body to test its hypotheses. Our brain does not process information: it creates it.

LECTURE *McCormick Place*

176. SPECIAL LECTURE- Comparative Neurobiology of Vocal Communication — CME

Sun. 1:30 PM - 2:40 PM — Hall B

Speaker: M. A. LONG, *New York Univ. Sch. of Med.*

Vocal communication is central to our everyday lives, facilitating social exchange. Despite significant recent discoveries, the neural mechanisms underlying coordinated vocal exchanges remain poorly understood. This lecture will examine the brain processes involved in interactive vocal behaviors, focusing on forebrain circuitry in the songbird and the rodent, and will relate these to emerging human studies that employ a range of methods to manipulate and monitor cortical areas relevant for speech.

SYMPOSIUM *McCormick Place*

177. The Molecular and Spatial Complexity of Tau: What Forms and Loci to Target? — CME

Sun. 1:30 PM - 4:00 PM — Room: S100A

Chair: D. M. WALSH, *Biogen Inc., Brigham and Women's Hospital*

Aggregation of tau is a common feature of a range of neurodegenerative disorders referred to as tauopathies. However, the forms of tau which mediate toxicity remain ill-defined, making it difficult to design optimal anti-tau therapeutics. This symposium will address the molecular and structural heterogeneity of tau, the effects of tau on excitatory neurons, and factors which contribute to the specific spatiotemporal patterns of neurodegeneration which characterize particular tauopathies.

1:30 **177.01** Introduction.

1:35 **177.02** The molecular and spatial complexity of tau – what forms and loci to target. K. HOGLUND. *The Sahlgrenska Academy at University of Gothenburg.*

2:10 **177.03** The mechanisms and forms of tau which modulate brain rhythms. L. MUCKE. *Gladstone Inst. of Neurolog. Dis.*

2:45 **177.04** Tau homeostasis contributes to the selective regional vulnerability of excitatory neurons in Alzheimer's disease. K. DUFF. *Columbia Univ. Med. Ctr.*

3:20 **177.05** Tau strains determine disease-specific cell type vulnerability. V. M. LEE. *Univ. Pennsylvania Sch. Med.*

3:55 **177.06** Closing Remarks.

MINISYMPOSIUM *McCormick Place*

178. The Gut-Brain Axis in Health and Brain Disease — CME

Sun. 1:30 PM - 4:00 PM — Room: S406A

Chair: A. LIESZ, *University Medical Center Munich*
Co-Chair: J. A. FOSTER. *McMaster Univ.*

The gut microbiome is a critical player in neurodevelopment and aging as well as in brain diseases including stroke, Alzheimer's disease, and Parkinson's disease. Intestinal bacteria act along the gut-brain axis in part by modifying the immune response. Bacteria also produce neuroactive mediators and can modulate neuronal function, plasticity and behavior. This minisymposium will highlight recent insights on the bi-directional communication along the brain-gut-microbiome-immune axis.

1:30 **178.01** Introduction.

1:35 **178.02** Maternal bacteria and neurodevelopmental disorders. J. HUH. *Harvard Med. Sch.*

1:55 **178.03** Gut metabolites as immunomodulators of stroke outcome. C. BENAKIS. *Ludwig Maximilian Univ.*

2:15 **178.04** The role of bidirectional communication between gut bacteria and T cells in neurodevelopment. J. A. FOSTER. *McMaster Univ.*

2:35 **178.05** Mechanism underlying gut-brain-interactions in the neurodevelopmental. M. COSTA-MATTIOLI. *Baylor Col. of Med.*

2:55 **178.06** Post-stroke gut microbiota manipulations to improve recovery. V. R. VENNA. *Dept. of Neurology, McGovern Med. School, UTHealth.*

3:15 **178.07** Host response to stroke: a focus on the effect of inflammaging on the gut. C. H. Y. WONG. *Monash Univ.*

3:35 **178.08** Closing Remarks.

MINISYMPOSIUM *McCormick Place*

179. Cannabis and the Developing Brain: Insights Into Its Long-Lasting Effects — CME

Sun. 1:30 PM - 4:00 PM — Room: S100BC

Chair: Y. HURD, *Icahn School of Medicine at Mount Sinai*
Co-Chair: M. MELIS. *Univ. of Cagliari*

Increasing evidence suggests that cannabis exposure during neurodevelopment (perinatal and adolescent stages) results in persistent alterations in brain circuits underlying neuropsychiatric disorders and leads to an increased risk for certain psychiatric conditions later in life. This minisymposium will explore gene x environment interactions that appear to play a significant role in such sensitivity and will provide translational insights about molecular, epigenetic, neurophysiological, and *in vivo* neuroimaging disturbances in the human brain and animal models.

1:30 **179.01** Introduction.

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:35 **179.02** Cell type-specific mechanisms of genetic vulnerability to adverse cognitive effects of adolescent cannabis exposure. M. PLETNIKOV. *Johns Hopkins School of Medicine.*

1:55 **179.03** FAAH genetic variation enhances vulnerability to THC-seeking behavior in female adolescent mice. F. LEE. *Weill Cornell Medical College.*

2:15 **179.04** Prenatal THC exposure biases dopamine neuron function and behavior. M. MELIS. *University of Cagliari.*

2:35 **179.05** Maternal cannabis exposure during gestation or lactation disrupts the developmental trajectory and cognitive and synaptic functions in adulthood. O. MANZONI. *Aix Marseille University, INSERM.*

2:55 **179.06** A translational window into the neurodevelopmental impact of cannabis on the epigenetic landscape and psychiatric vulnerability. Y. L. HURD. *Ichan Sch Med At Mount Sinai.*

3:15 **179.07** Effects of adolescent onset regular cannabis use on brain function and chemistry. S. BHATTACHARYYA. *King's College of London.*

3:35 **179.08** Closing Remarks.

MINISYMPOSIUM *McCormick Place*

180. Cognitive Cerebellum: Role in Motivation, Emotion, Executive, Social, and Sensory Processing — CME

Sun. 1:30 PM - 4:00 PM — Room: S102

Chair: I. A. SAVTCHOUK, *Marquette University*
Co-Chair: J. LIU. *Louisiana State Univ. Hlth. Sci. Ctr.*

The cerebellum has been predominantly studied as a sensory-motor integrator, but anatomic studies reveal its extensive reciprocal connections with non-motor cortical regions. It is now increasingly implicated in higher-order cognition, such as complex planning as well as emotional, social, linguistic, and reward processing. This minisymposium will review how these recent advances in beyond-motor cerebellar research will reshape our view of brain function and dysfunction, including autism and cognitive affective syndrome.

1:30 **180.01** Introduction.

1:35 **180.02** The cerebellar cognitive affective syndrome. Neurobiology, diagnosis, and implications for ataxiology, behavioral neurology, and neuropsychiatry. J. D. SCHMAHMANN. *Massachusetts Gen. Hosp. and Harvard Med. Sch.*

1:55 **180.03** Cerebellar Contribution to Motivated & Social Behaviors. K. KHODAKHAH. *Albert Einstein Col. Med.*

2:15 **180.04** Cerebellar circuitry and the consolidation of associative fear memory. J. LIU. *LSU Hlth. Sci. Ctr.*

2:35 **180.05** Cerebellar learning rules for motor planning. C. I. DE ZEEUW. *Erasmus MC.*

2:55 **180.06** Cerebellum, spatial coding and navigation behavior. L. RONDI-REIG. *CNRS, Sorbonne Univ.*

3:15 **180.07** Brainwide mapping of cerebellar influences over flexible behavior. S. S. WANG. *Princeton Univ.*

3:35 **180.08** Closing Remarks.

MINISYMPOSIUM *McCormick Place*

181. Optical Recording of Neural Transmission: From Tool Development to Applications — CME

Sun. 1:30 PM - 4:00 PM — Room: S105

Chair: H. ZHONG, *Vollum Institute*
Co-Chair: L. L. LOOGER, *Janelia Research Campus, Howard Hughes Medical Institute*

Imaging of genetically encoded calcium indicators have revolutionized systems neuroscience. However, crucial complementary information, such as when and where neurotransmission takes place, are required for revealing the full picture of brain function. This minisymposium aims to highlight the most recent development of the fluorescent indicators for imaging key neurotransmitters and their downstream events, and the exciting applications of these indicators for dissecting neuronal function.

1:30 **181.01** Introduction.

1:35 **181.02** Visualizing the rapid metabolic consequences of neuronal stimulation with fluorescent biosensors. G. YELLEN. *Harvard Medical School.*

1:55 **181.03** Expanding the repertoire of technologies for imaging neurotransmitters & neuromodulators. L. LOOGER. *Janelia Research Campus, Howard Hughes Medical Inst.*

2:15 **181.04** Cellular biochemical activity architecture for signal sensing and processing. J. ZHANG. *UCSD.*

2:35 **181.05** Using optical sensors to examine real-time dopamine dynamics for learning and motivation. A. MOHEBI. *UCSF.*

2:55 **181.06** Deep brain monitoring of striatal cyclic AMP and PKA signaling during striatum dependent behaviors. S. M. AUGUSTIN. *National Institutes of Health - NIAAA.*

3:15 **181.07** Imaging the intracellular signaling events downstream of neuromodulation. H. ZHONG. *Oregon Health & Science Univ.*

3:35 **181.08** Closing Remarks.

STORYTELLING *McCormick Place*

182. The Storytelling Brain: How Neuroscience Stories Help Bridge the Gap Between Research and Society

Sun. 1:30 PM - 4:00 PM — Room: S406B

Chair: S. MARTINEZ-CONDE, *State University of New York Downstate Medical Center*

This storytelling session brings together neuroscientific discovery, science reporting, and personal storytelling in a synergetic and memorable way. Broad-appeal lectures will interweave with personal stories to showcase the effective ways in which neuroscience researchers and journalists can collaborate, how storytelling provides a common ground between science and art, and the power of narrative to hold captive our storytelling brains.

1:30 **182.01** Introduction.

1:40 **182.02** The poisoner's guide to storytelling. D. BLUM. *MIT.*

2:05 **182.03** What my amnesia experience taught me about my memory research. G. J. QUIRK. *Univ. Puerto Rico Sch. of Med.*

2:20 **182.04** Mental simulation of fictional worlds during narrative comprehension. R. WILLEMS. *Radboud Univ.*

2:45 **182.05** A new perspective on autism from a lifelong expert. N. BRITTON. *Bunker Hill Community Col.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
Indicates a high school or undergraduate student presenter.

3:00 **182.06** The neuroscientist who lost her mind: my tale of madness and recovery. B. K. LIPSKA. *NIH/NIMH.*

3:15 **182.07** The magic of storytelling. J. I. SWISS.

3:40 **182.08** Closing Remarks.

LECTURE *McCormick Place*

183. PETER AND PATRICIA GRUBER LECTURE- Molecular Basis of the Circadian Clock in Mammals and Its Fundamental Role in Aging and Longevity

Sun. 3:00 PM - 4:10 PM — Hall B

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

Support contributed by: The Gruber Foundation

The molecular basis of circadian clocks involves a 24-hour autoregulatory transcriptional network that is cell-autonomous and widely expressed. The suprachiasmatic nucleus acts as master pacemaker, but peripheral oscillators can respond to proximal signals. In addition to behavior and physiology, the clock gene network interacts directly with many other pathways in the cell. With respect to metabolism, the timing of nutrient consumption is critical, and restricting the timing of feeding has many health benefits that impact aging, health span, and longevity.

LECTURE *McCormick Place*

184. PRESIDENTIAL SPECIAL LECTURE- Understanding Cortical Development and Disease: From Embryos to Brain Organoids — CME

Sun. 5:15 PM - 6:30 PM — Hall B

Speaker: P. ARLOTTA, *Harvard Univ.*

Support contributed by: The Tianqiao and Chrissy Chen Institute

Much remains unknown regarding the cellular and molecular mechanisms governing mammalian brain development. Focusing on the cerebral cortex, this lecture will present data on the mechanistic principles that control the developmental generation of cellular diversity *in vivo*, and consider to what extent processes of cortical development can be replicated outside the embryo, within brain organoids. This lecture will also discuss the challenges of modeling human corticogenesis in the dish, and the promise that brain organoids hold to investigate complex human neurodevelopmental disease.

NANOSYMPOSIUM

185. Molecular Mechanisms of Synaptogenesis and Connectivity

Theme A – Development

Sun. 1:00 PM – *McCormick Place, S405*

1:00 **185.01** Mechanisms of Robo3 activation in the developing spinal cord. J. PAK*; J. WANG; Z. DELOUGHERY; Y. PARK; A. JAWORSKI; E. OZKAN. *Univ. of Chicago, Brown Univ., Univ. of Chicago, Brown Univ.*

1:15 **185.02** Molecular controls over corticospinal neuron axonal branching at specific spinal segments. Y. ITOH*; V. SAHNI; S. J. SHNIDER; J. D. MACKLIS. *Harvard Univ.*

1:30 **185.03** ● Early emergence of columnar synaptic circuit in human. L. ZHOU*; A. KRIEGSTEIN. *Univ. of California - SF.*

1:45 **185.04** Modular transcriptional programs define neuron subtype-specific connectivity. J. YOO*; Y. Z. KURMANGALIYEV; S. L. LOCASCIO; S. L. ZIPURSKY. *UCLA, UCLA/HHMI.*

2:00 **185.05** Molecular basis of synaptic specificity by a class of immunoglobulin superfamily receptors conserved across bilaterians. S. CHENG; Y. PARK; J. ASHLEY; J. W. THORNTON; R. A. CARRILLO; E. OZKAN*. *The Univ. of Chicago, Univ. of Chicago, Univ. of Chicago, Univ. of Chicago.*

2:15 **185.06** Unsupervised clustering identifies morphometric features distinguishing dentate semilunar granule cells from granule cells through postnatal development. A. GUPTA*; A. PRODDUTUR; Y. CHANG; J. GUEVARRA-FERNÁNDEZ; V. SANTHAKUMAR. *Univ. of California, Univ. of California, The Rutgers Univ., Rutgers NJMS, New Jersey Med. Sch. Dept. of Pharmacol. and Physiol.*

2:30 **185.07** Molecular control of the cholinergic interneuron activity in the developing striatum. Y. RANJBAR-SLAMLOO; N. AHMED; L. GAO; S. AL ABED; Y. SONTANI; A. RCOM-H'CHEO-GAUTHIER; E. ARABZADEH; N. DEHORTER*. *The Australian Natl. Univ.*

NANOSYMPOSIUM

186. Molecular Mechanisms of Synaptogenesis and Activity-Dependent Development

Theme A – Development

Sun. 1:00 PM – *McCormick Place, S401*

1:00 **186.01** Experience-dependent maturation of inhibitory neuron connectivity in the dentate gyrus. T. FENG*; C. ALICEA; S. PIERAUT. *Univ. of Nevada Reno, Univ. of Nevada, Reno, Univ. of Nevada, Reno.*

1:15 **186.02** Neuronal non-classical MHCI Qa-1 is a novel receptor of activity-dependent plasticity via an innate immune receptor. I. A. MARIN*; A. Y. WEI; K. S. CHEW; A. D. BRADFIELD; C. J. SHATZ. *Stanford Univ., Stanford Univ.*

1:30 **186.03** Neuroligin-3 localizes to distinct synapse types via brain-region-specific phosphorylation. L. P. TUFFY; B. ALTAS; A. PATRIZI; K. DIMOVA; T. SOYKAN; M. C. AMBROZKIEWICZ; O. YAGENSKY; D. KRUEGER; M. HAMMER; H. HSIAO; M. SASSOÈ-POGNETTO; J. J. E. CHUA; H. URLAUB; O. JAHN; N. BROSE; A. POULOPOULOS*. *Max Planck Inst. of Exptl. Med., Univ. of Maryland Sch. of Med., Chica und Heinz Schaller-Stiftung Res. Group at German Cancer Res. Ctr. (DKFZ), Smith Col., Leibniz Inst. Für Molekulare Pharmakologie, Max Planck Inst. of Biophysical Chem., Max Planck Inst. For Exptl. Med., Univ. of Turin.*

1:45 **186.04** Neurexins play a central role in organizing presynaptic active zones. F. LUO*; A. SCLIP; M. JIANG; T. C. SUDHOF. *Stanford Univ., Guangzhou Univ.*

2:00 **186.05** Synapse formation activates a transcriptional program for the persistent enhancement in the bidirectional transport of mitochondria in the presynaptic neurons. K. BADAL; K. AKHMEDOV; P. LAMOUREUX; X. LIU; A. REICH; S. SWARNKAR; K. MILLER; S. V. PUTHANVEETTIL*. *Scripps Res., Florida Atlantic Univ., Michigan State Univ., The Scripps Res. Inst.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:15 **186.06** Delayed critical period trajectory in the absence of SRGAP2. G. A. VARGISH*; E. SCHMIDT; F. POLLEUX; T. K. HENSCH. *Boston Children's Hosp., Columbia Univ., Columbia Univ., Harvard Univ.*

2:30 **186.07** Synaptic maturation requires the gamma-secretase dependent cleavage of a synaptic Wnt receptor. L. RESTREPO; A. DEPEW; M. PARISI; M. AIMINO; T. J. MOSCA*. *Thomas Jefferson Univ.*

NANOSYMPOSIUM

187. Rett Syndrome: New Mechanisms and Potential Therapeutics

Theme A – Development

Sun. 1:00 PM – *McCormick Place, S403*

1:00 **187.01** Role of DNA methylation and MeCP2-mTOR signaling in the brain. M. RASTEGAR*; D. KROFT; K. SHEIKHOLESLAMI; M. BUIST; A. ALI SHER; S. PEJHAN; C. OLSON. *Univ. of Manitoba, Univ. of Toronto.*

1:15 **187.02** MECP2 regulates hemisphere-specific, subregion-specific expression of perineuronal nets in the adult primary somatosensory cortex in a learned maternal behavior paradigm. B. Y. B. LAU; D. LAYO; K. KRISHNAN*. *Univ. of Tennessee at Knoxville.*

1:30 **187.03** Enhancement of activity rescues the early establishment of Mecp2 null neuronal features. F. BEDOGNI*; L. SCARAMUZZA; G. DE ROCCO; C. COBOLLI GIGLI; F. CESCA; N. LANDSBERGER. *San Raffaele Hosp., Univ. of Trieste, San Raffaele Hosp., Inst. Italiano di Tecnologia, Univ. Statale di Milano.*

1:45 **187.04** A novel *in vitro* modeling system for the study of MeCP2 pathology and treatment response. S. L. POWERS*; K. KINLEY; C. DENNYS-RIVERS; R. RODRIGO; X. ZHANG; S. B. LIKHITE; M. J. DUNNING; P. R. HEATH; L. FERRAIUOLO; K. C. MEYER. *Nationwide Children's Hosp., The Ohio State Univ., Univ. of Sheffield.*

2:00 **187.05** ● Identifying potential therapeutics against Rett syndrome using a highly homogeneous 3-dimensional high-throughput screening platform. P. NEGRAES; N. SODHI; S. ROMERO; F. ZANELLA; C. CARROMEU*. *StemoniX, Stemonix.*

2:15 **187.06** Vitamin D supplementation rescues aberrant NF-kB pathway activation and partially ameliorates Rett syndrome cortical phenotypes in Mecp2 mutant mice. M. C. RIBEIRO*; S. M. MOORE; J. D. MACKLIS; J. L. MACDONALD. *Syracuse Univ., Harvard Univ.*

2:30 **187.07** MECP2 deletion prematurely restricts a novel window of hippocampal synaptic plasticity. K. E. CARSTENS; D. J. LUSTBERG; E. K. SHAUGHNESSY; K. E. MCCANN; G. M. ALEXANDER; S. M. DUDEK*. *Natl. Inst. of Env. Hlth. Sci., NIH, Emory Univ.*

NANOSYMPOSIUM

188. Neuroinflammation: Mechanisms and Therapeutic Strategies

Theme C – Neurodegenerative Disorders and Injury

Sun. 1:00 PM – *McCormick Place, N427*

1:00 **188.01** Making sense of genetic risk factors in multiple sclerosis. A. I. B. BOULLERNE*; D. L. FEINSTEIN. *Univ. of Illinois at Chicago.*

1:15 **188.02** Histone modifications induce a neuroinflammatory response in X-linked dystonia Parkinsonism. T. PETROZZIELLO*; A. N. MILLS; C. A. VAINE; E. B. PENNEY; C. D. BRAGG; G. SADRI-VAKILI. *NeuroEpigenetics Laboratory, Healey Ctr. for ALS at Mass General, Massachusetts Gen. Hosp., Dept. of Neurology, Massachusetts Gen. Hosp.*

1:30 **188.03** Novel phenotype-specific plasma biomarkers in x-linked adrenoleukodystrophy. J. SINGH*; A. FATEMI; L. M. POISSON; S. GIRI; N. TIWARI. *HENRY FORD HEALTH SYSTEM, Johns Hopkins Univ., Henry Ford Hlth. Syst., Henry Ford Hlth. Syst.*

1:45 **188.04** ● Gene expression analysis reveals significant neuroinflammatory mechanisms in the LBSL mouse. C. L. NEMETH*; S. N. TOMLINSON; M. JAIN; B. M. O'BRIEN; A. S. FINE; L. LEBON; K. MARTIN; C. SIDRAUSKI; A. TRIFUNOVIC; A. FATEMI. *Kennedy Krieger Inst., Kennedy Krieger Inst., Kennedy Krieger Inst., Calico Labs LLC, CECAD Res. Ctr.*

2:00 **188.05** Brassicaceae and Asteraceae plants (kale, arugula, dandelion) moderates changes in sulfate-reducing bacteria, Desulfovibrionaceae, in the gut microbiome and reduces inflammation in diet-induced obese pre-diabetic C57BL/6 mice. B. TENG*; D. FOSTER; A. OYETUNDE; P. SONI; T. SIMON; P. GHOTRA; L. R. BANNER. *California State Univ. Northridge.*

2:15 **188.06** Glial mitochondria released after dysregulated fission propagate inflammatory neurodegeneration. A. U. JOSHI; P. S. MINHAS; S. LIDDELOW; B. HAILESELASSIE; K. I. ANDREASSON; D. MOCHLY-ROSEN*. *Stanford Univ., NYU Langone Med. Ctr.*

2:30 **188.07** Naringenin promotes aβ clearance and ameliorates cognitive deficiency in Alzheimer's disease and underlying mechanisms. Z. YANG*; T. KUBOYAMA; C. TOHDA. *Inst. of Marine Drugs, Guangdong Ocean Univ., Inst. of Natural Medicine, Univ. of Toyama.*

2:45 **188.08** ● Human Brain-Chip: Modeling functions of the human blood-brain barrier and inflammation. K. KODELLA; D. V. MANATAKIS; C. HINOJOSA; G. A. HAMILTON; K. KARALIS; I. PEDIADITAKIS*. *Emulate Inc.*

3:00 **188.09** Effects of CNTF gene therapy on optic nerve regeneration and RGC survival involve neuroinflammation and other growth factors. L. XIE*; Y. YIN; H. GILBERT; L. I. BENOWITZ. *Harvard Med. Sch.*

3:15 **188.10** ● Modeling human Alzheimer's diseases (AD) with human iPSC neurons, astrocytes, and microglia. B. CHIH*; R. A. BASSIL; K. SHIELDS; S. NG PALACE. *Genentech Inc.*

● Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:30 **188.11** ● A phase 1b multiple ascending dose study of elezanumab in multiple sclerosis patients reveals biomarker profiles consistent with CNS target engagement and a neurorestorative mechanism of action. T. P. MISKO*; Y. FANG; M. SALTARELLI; M. SCHULZ; J. SCHMIDT; J. SAVARYN; K. AWWAD; J. MOLLON; M. DROESCHER; J. BERNHARD; H. V. KALLURI; M. ROSEBRAUGH; X. QI; C. LOCKE; I. DREHER; A. ZIEMANN. *Abbvie Neurosci. Develop., Abbvie Inc, Abbvie Inc, Abbvie Inc, Abbvie Inc, Abbvie Inc.*

NANOSYMPOSIUM

189. Neurodegeneration and Injury II

Theme C – Neurodegenerative Disorders and Injury

Sun. 1:00 PM – *McCormick Place, S103*

1:00 **189.01** High-fat diet leads to memory impairment and decreased insulin-Akt-GSK3β signaling in the brain of transgenic mouse model of Alzheimer's disease. T. NATUNEN; S. GABBOUJ*; H. KOIVISTO; S. KEMPPAINEN; P. MÄKINEN; S. KAIPAINEN; M. TAKALO; J. LÄMSÄ; H. SVOBODOVA; H. TANILA; M. HILTUNEN. *Univ. of Eastern Finland, Univ. of Eastern Finland.*

1:15 **189.02** Voluntary ethanol drinking behavior in an Alzheimer's mouse model following repeated mild traumatic brain injury. K. SMITH*; S. D. MOORE; R. KLEIN. *Duke Univ.*

1:30 **189.03** Sedative, anesthetic, and alcohol exposure in neonatal mice produces connectomic neuropathology and reductions in functional connectivity. K. K. NOGUCHI*; X. GE; M. REISMAN; G. KRIKORIAN; F. M. MANZELLA; S. WILLIAMS; J. N. HUFFMAN; K. KAPRAL; A. BICE; B. SWINEY; J. P. CULVER; J. GARBOW. *Washington Univ. St. Louis, Washington Univ. in St Louis, Washington Univ. In St. Louis, Univ. of Colorado Anschutz Med. Campus, Washington Univ. - St. Louis, Univ. of Missouri-St. Louis / Washington Univ., Univ. of Missouri-St. Louis, Washington Univ. in St Louis.*

1:45 **189.04** Repeated propofol exposure impacts on cortical circuit development and function. H. ZHOU*; G. YANG. *Columbia Univ. Med. Ctr.*

2:00 **189.05** Nanoengineered exosomes drive targeted delivery of reprogramming genes to nerve tissue. N. HIGUITA-CASTRO*; L. LEMMERMAN; A. SUNYECZ; S. DUARTE-SANMIGUEL; M. A. RINCON-BENAVIDES; J. T. MOORE; G. P. GUIO-VEGA; A. I. SALAZAR-PUERTA; L. ORTEGA-PINEDA; B. DENG; H. HARRIS; T. NELSON; C. L. RINK; D. GALLEGO-PEREZ. *The Ohio State Univ., Air Force Res. Lab.*

2:15 **189.06** ● Extracellular vesicles activate neuroimmune genes, epigenetics and pathology in hippocampus. L. G. COLEMAN*, Jr; J. Y. ZOU; F. CREWS. *Univ. of North Carolina at Chapel Hill, Univ. North Carolina, Chapel Hill.*

2:30 **189.07** Early low-frequency modulation is related with remnant cognitive processing in disorders of conscious subjects. G. RIVERA*; S. CHENNU; T. BEKINSCHTEIN; E. STAMATAKIS; D. MENON. *Univ. De Chile, Univ. of Kent, Univ. of Cambridge.*

2:45 **189.08** An epilepsy-associated BK mutation channel modulation by leucine-rich repeat-containing protein LRRC55. J. WANG; X. DONG; M. TANG; Y. TEN; Z. ZHANG; Q. TANG*. *Jiangsu Province Key Lab. of Anesthesiology, Xuzhou Med. Univ., Dept. of Pathology, the Affiliated Hosp. of Southwest Med. Univ.*

3:00 **189.09** Brain volume estimates from clinical MRIs of premature and severely underweight infants acquired in the neonatal ICU may help predict neurodevelopment. W. SURENTO*; I. BA GARI; Z. SUN; H. KIM; P. M. THOMPSON; R. CAYABYAB; M. SHIROISHI; N. JAHANSHAD. *Imaging Genet. Center, Stevens Neuroimaging Institute, Univ. of Southern California, LAC+USC Med. Ctr.*

NANOSYMPOSIUM

190. Pain and Itch Behavior, Circuitry, and Novel Techniques

Theme D – Sensory Systems

Sun. 1:00 PM – *McCormick Place, S106*

1:00 **190.01** Optical analysis of spontaneous nociception. D. A. YARMOLINSKY*; J. KIM; A. Z. ZHANG; D. G. TAUB; D. P. ROBERSON; B. BOIVIN; C. J. WOOLF. *Boston Children's Hosp.*

1:15 **190.02** ● Automated pain assessment with millisecond resolution markerless tracking. J. JONES; W. FOSTER*; J. BURDGE; J. PLOTKIN; C. TWOMEY; I. ABDUS-SABOOR. *Univ. of Pennsylvania.*

1:30 **190.03** Antibiotic treatment does not influence basal nociception or pain hypersensitivity after injury. K. HALIEVSKI*; T. H. TAM; M. DRUPALS; M. W. SALTER. *The Hosp. for Sick Children.*

1:45 **190.04** ● Altered adaptation and gain in sensory circuits of the casein kinase 1 delta (CK1δ) mouse model of migraine. P. S. SURYAVANSHI*; P. SAWANT-POKAM; J. GAYNES; K. BRENNAN. *Univ. of Utah.*

2:00 **190.05** Expression of neuropeptide FF by neurons in mouse spinal dorsal horn. M. GUTIÉRREZ MECINAS*; A. M. BELL; E. POLGAR; A. J. TODD. *Univ. of Glasgow.*

2:15 **190.06** Exploring the peripheral and central contributions to offset analgesia with stimulus placement and timing. S. W. G. DERBYSHIRE*; C. L. ASPLUND; V. J. E. LONG; A. KANNANGATH. *Natl. Univ. Of Singapore, Yale-NUS Col.*

2:30 **190.07** Consequences of infrared neuromodulation to the transcriptome of the nodose ganglia. S. JAWAID*; S. MEHTA; P. M. GETSY; G. A. COFFEE; L. THRANE; J. ZHUO; S. J. LEWIS; M. WATANABE; M. W. JENKINS. *Case Western Reserve Univ., Yale Univ., Case Western Reserve Univ., Case Western Reserve Univ., Case Western Reserve Univ., Case Western Reserve Univ.*

2:45 **190.08** Genetic dissection of ascending spinal pathways for affective touch and pain. S. CHOI*; J. HACHISUKA; M. A. BRETT; H. R. KOERBER; S. E. ROSS; D. D. GINTY. *Harvard Med. School/HHMI, Univ. of Pittsburgh/Pittsburgh Ctr. for Pain Res.*

3:00 **190.09** Encoding the mechanical itch circuit: From the periphery to the spinal cord. H. PAN; M. FATIMA*; A. LI; H. LEE; W. CAI; N. ZAHER; C. C. HUR; L. R. HORWITZ; M. CIN; H. SLADE; T. HUANG; X. XU; B. DUAN. *Univ. of Michigan, Univ. of Michigan, Dana-Farber Cancer Institute, Harvard Med. Scho.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

NANOSYMPOSIUM

191. Neuronal Circuits Underlying Binocular Vision and Stereopsis

Theme D – Sensory Systems

Sun. 1:00 PM – *McCormick Place, S505*

1:00 **191.01** Neural mechanisms of binocular convergence in the primate primary visual pathway. K. DOUGHERTY*; B. M. CARLSON; M. A. COX; J. A. WESTERBERG; M. S. SCHALL; J. N. TURCHI; P. R. MARTIN; A. V. MAIER. *Vanderbilt Univ., Univ. of Rochester, Natl. Inst. of Mental Hlth., The Univ. of Sydney.*

1:15 **191.02** Seeing in 3D without a cortex - Neurons for stereopsis in an insect brain. R. ROSNER*; G. TARAWNEH; V. NITYANANDA; J. VON HADELN; J. READ. *Newcastle Univ., Philipps-University Marburg.*

1:30 **191.03** Mice discriminate stereoscopic surfaces without fixating in depth. J. M. SAMONDS*; V. CHOI; N. J. PRIEBE. *Univ. of Texas at Austin.*

1:45 **191.04** Perfect optical correction reveals visual plasticity driven by the retinal image quality. C. J. NG*; D. TADIN; R. BLAKE; M. S. BANKS; G. YOON. *Univ. of Rochester, Univ. of Rochester, Vanderbilt Univ., Univ. of California Berkeley.*

2:00 **191.05** Binocular interactions in V1 neurons of awake macaques raised with strabismus. D. L. ADAMS*; J. R. ECONOMIDES; J. C. HORTON. *UCSF.*

2:15 **191.06** Critical-period monocular deprivation disrupts binocular integration in the mouse thalamocortical circuit. C. HUH*; K. ABDELAAL; K. J. SALINAS; D. GU; J. ZEITOUN; D. X. FIGUEROA VELEZ; J. P. PEACH; C. C. FOWLKES; S. P. GANDHI. *Univ. of California, Irvine, Johns Hopkins Univ.*

2:30 **191.07** Altered interocular balance following STMD revealed by gamma band activity. R. A. MILLER*, III; D. Y. TS'O. *SUNY Upstate Med. Univ., SUNY - Upstate Med. Univ.*

2:45 **191.08** Interocular contrast mismatch leads to shifts in interocular balance. D. Y. TS'O*; R. A. MILLER, III. *SUNY - Upstate Med. Univ.*

3:00 **191.09** Synergistic coding of visual information in columnar networks. S. NIGAM*; S. POJOGA; V. DRAGOI. *McGovern Med. Sch.*

NANOSYMPOSIUM

192. Information Seeking From Flies to Human

Theme F – Integrative Physiology and Behavior

Sun. 1:00 PM – *McCormick Place, N426*

1:00 **192.01** Neural circuits underlying active sensing in the *drosophila* antennal mechanosensory and motor system. M. P. SUVER*; K. I. NAGEL. *NYU Med. Ctr.*

1:15 **192.02** Unsupervised learning of odor sequences in olfactory cortex. A. J. P. FINK*; C. E. SCHOONOVER; R. AXEL. *Columbia Univ.*

1:30 **192.03** Information seeking in mice: A behavioral paradigm and imaging studies of neural circuits for the desire to know. J. J. BUSSELL*; E. S. BROMBERG-MARTIN; R. AXEL. *Columbia Univ., Columbia Univ., Washington Univ. Sch. of Med., Columbia Univ.*

1:45 **192.04** A neural network for information seeking. E. S. BROMBERG-MARTIN*; J. K. WHITE; S. R. HEILBRONNER; K. ZHANG; J. PAI; S. N. HABER; I. E. MONOSOV. *Washington Univ. Sch. of Med., Univ. of Minnesota, Washington Univ., New York Univ., Univ. of Rochester.*

2:00 **192.05** Primates seek information to learn states of complex environments. D. L. BARACK*; C. D. SALZMAN. *Columbia Univ.*

2:15 **192.06** How do stress and anxiety impact the neurobiology of foraging decisions? A. RAMAKRISHNAN*; D. BERKAY; M. L. PLATT. *Univ. of Pennsylvania.*

2:30 **192.07** Deciding to sample: Modeling instrumental information demand and belief updating in humans. N. M. SINGLETARY*; J. P. GOTTLIEB; G. HORGA. *Columbia Univ., Columbia Univ., Columbia Univ.*

2:45 **192.08** Modeling the dynamics of suspense. Z. LI*; N. BRAMLEY; T. GURECKIS. *New York Univ., The Univ. of Edinburgh, New York Univ.*

3:00 **192.09** Neural computations related to uncertainty-driven exploration in the human brain: A human single neuron study. T. AQUINO*; J. COCKBURN; A. MAMELAK; U. RUTISHAUSER; J. P. O'DOHERTY. *Caltech, Caltech, Cedars-Sinai Med. Ctr.*

NANOSYMPOSIUM

193. Functional Role of Sleep

Theme F – Integrative Physiology and Behavior

Sun. 1:00 PM – *McCormick Place, S404*

1:00 **193.01** A key role for locus-coeruleus norepinephrine activity in mediating sensory-evoked awakenings from sleep. H. HAYAT*; N. REGEV; N. MATOSEVICH; A. SALES; E. PAREDES-RODRIGUEZ; A. J. KROM; L. BERGMAN; Y. LI; M. LAVIGNE; E. J. KREMER; O. YIZHAR; A. E. PICKERING; Y. NIR. *Tel Aviv Univ., Univ. of Bristol, Univ. of the Basque Country, Biocruces-Bizkaia Hlth. Res. Inst., Hadassah-Hebrew Univ. Med. Ctr., Univ. of Montpellier, Weizmann Inst. of Sci., Univ. Hosp. Bristol, Tel-Aviv Sourasky Med. Ctr.*

1:15 **193.02** Electrophysiological and non-electrophysiological markers of fulfillment of sleep homeostatic need. B. R. SHETH*; A. SURELIA. *Univ. of Houston.*

1:30 **193.03** FoxP2 cells in the lateral parabrachial area regulate respiratory response to hypercapnia. S. KAUR*; C. B. SAPER. *Beth Israel Deaconess Med. Ctr. and Harvard M.*

1:45 **193.04** A polymorphism of the proinflammatory cytokine TNFα gene is associated with resilience to performance impairment from sleep deprivation and the effectiveness of caffeine. L. SKEIKY; D. A. HANSEN; B. C. SATTERFIELD; M. PETROVICK; T. J. BALKIN; R. H. RATCLIFFE; V. F. CAPALDI; H. P. A. VAN DONGEN; A. J. BRAGER*. *Washington State University, Elson S. Floyd Col. of Med., Univ. of Arizona, MIT Lincoln Labs., Walter Reed Army Insitute of Res.*

2:00 **193.05** Sleep deprivation reverses the contributions of reticular formation and sympathetic tone to cortical activity. E. SHOKRI-KOJORI*; N. D. VOLKOW. *NIH, NIH/NIDA.*

2:15 **193.06** Proboscis extensions during sleep: A new sleep stage in *drosophila* with a functional role in waste clearance. B. VAN ALPHEN*; E. R. SEMENZA; M. YAP; B. VAN SWINDEREN; R. ALLADA. *Northwestern Univ., Queensland Brain Inst.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:30 **193.07** Impact of chronically fragmented sleep on cortical electroencephalogram power spectra in rats. K. A. MAKI*; A. NAKVOSAITE; B. ICZI BALSERAK; M. W. CALIK; A. M. FINK. *Univ. of Illinois at Chicago.*

2:45 **193.08** The interaction between subcortical sleep-wake circuitry and sleep homeostasis. T. YAMAGATA*; M. C. C. GUILLAUMIN; R. G. FOSTER; V. V. VYAZOVSKIY. *Univ. of Oxford, Univ. of Oxford.*

3:00 **193.09** Electroencephalography slow wave slopes as a marker for synaptic down-selection during sleep across development. V. JARAMILLO*; C. VOLK; M. FURRER; S. FATTINGER; S. KURTH; C. LUSTENBERGER; R. HUBER. *Univ. Children's Hosp. Zurich, Univ. Children's Hosp. Zurich, Univ. Hosp. Zurich, ETH Zurich, Psychiatric Hosp. Univ. of Zurich.*

3:15 **193.10** Altered circadian regulation of inflammasome activity in response to chronic sleep deprivation: Implications for Alzheimer's disease. C. SMITH; K. TRAGESER*; F. HERMAN; G. M. PASINETTI. *Icahn Sch. of Med. At Mount Sinai, JJ Peters VA Med. Ctr.*

3:30 **193.11** The synthetic cannabinoid agonist win 55, 212-2 injected in young animals blocks the sleep rebound after total sleep deprivation in adulthood. M. E. DE LA CRUZ DELGADO*; A. VERA-BARRON; K. ROMERO-CORDERO; L. MACIAS-TRIANA; A. TATUM-KURI; G. ARANKOWSKY-SANDOVAL; D. PIOMELLI; E. MURILLO-RODRIGUEZ. *Univ. Anahuac Mayab.*

3:45 **193.12** ▲ Chronic injections of cannabidiol in young rats cause sleep disturbances in adulthood. D. MORALES-LARA*; F. RAMÍREZ-TOSCANO; M. RUZ-ALCOCER; L. VIVAS-SANDOVAL; G. ARANKOWSKY-SANDOVAL; E. MURILLO-RODRÍGUEZ. *Univ. Anáhuac Mayab, Escuela De Medicina, Intercontinental Neurosci. Res. Group, Ctr. de Investigaciones Regionales "Dr. Hideyo Noguchi" Univ. Autónoma de Yucatán.*

4:00 **193.13** ● Detecting cued memory replay during slow-wave sleep and rapid eye movement sleep using EEG classifiers. M. ABDELLAHI*; A. KOOPMAN; L. SANTAMARIA; M. S. TREDER; P. LEWIS. *CUBRIC (Cardiff Univ. Brain Res. Imaging Centre), Cardiff Univ.*

NANOSYMPOSIUM

194. Cortical and Subcortical Mechanisms of Aversive Processing

Theme G – Motivation and Emotion

Sun. 1:00 PM – *McCormick Place, S104*

1:00 **194.01** Reward learning shapes the fear circuit. M. J. SHARPE*; H. M. BATCHELOR; L. E. MUELLER; G. SCHOENBAUM. *UCLA, Natl. Inst. on Drug Abuse Intramural Res. Program.*

1:15 **194.02** Neural mechanisms reflecting aversive Pavlovian learning at ultra-high field (7T). A. X. GORKA*; R. T. PHILIPS; S. TORRISI; A. MANBECK; M. GOODWIN; M. ERNST; C. GRILLON. *NIH, Natl. Inst. of Mental Hlth., NIMH, NIMH-NIH, NIH.*

1:30 **194.03** ▲ Amygdaloid and collicular electrical activity during the acquisition of a visual fear conditioning in anesthetized rats. M. A. CARDENAS*; A. MÚNERA; M. ROJAS; F. P. CÁRDENAS. *Univ. Nacional De Colombia, Univ. De Los Andes.*

1:45 **194.04** Electroencephalograph source network dynamics during emotion transitions. Y. HAO*; L. YAO; G. W. EVANS. *Cornell Univ.*

2:00 **194.05** Reactivation of salient experiences in association cortex links cues to outcomes. A. U. SUGDEN*; L. A. SUGDEN; K. L. MCGUIRE; J. D. ZAREMBA; A. LUTAS; R. N. RAMESH; O. ALTURKISTANI; K. K. LENSJØ; C. R. BURGESS; M. L. ANDERMANN. *Harvard-BIDMC, Duquesne Univ., Harvard Med. Sch.*

2:15 **194.06** A new GABAergic somatostatin projection from the anterior BNST onto accumbal parvalbumin neurons controls anxiety. Q. XIAO*; X. ZHOU; P. WEI; L. XIE; B. WU; Y. HAN; J. WANG; A. CAI; F. XU; F. YANG; J. TU; L. WANG. *Shenzhen Inst. of Advanced Technology, CAS, Dept. of Information Technol. and Electrical Engineering, ETH Zurich, Wuhan Inst. of Physics and Mathematics, CAS.*

2:30 **194.07** Dissecting the accumbal dynorphinergic projections underlying the emotional component of pain. N. MASSALY*; H. YOON; T. MARKOVIC; J. MORON-CONCEPCION. *Washington Univ. in St. Louis, Washington Univ. in St Louis.*

NANOSYMPOSIUM

195. Medial Temporal Lobe in Learning and Memory

Theme H – Cognition

Sun. 1:00 PM – *McCormick Place, S402*

1:00 **195.01** Hippocampal tract integrity relates to hippocampal memory-related activity: A combined dti-fmri study. J. L. KLIPPENSTEIN*; A. VENKATESH; A. ALCARAZ-TORRES; I. J. BENNETT. *Univ. of California, Riverside, Univ. of California, Riverside.*

1:15 **195.02** Structural 3T MRI investigation of hippocampus subfields and amygdala nuclei in patients with developmental amnesia. L. J. CHAREYRON*; F. BASTOS; S. BUCK; R. C. SAUNDERS; M. MISHKIN; D. G. GADIAN; F. VARGHA-KHADEM. *Univ. Col. London, NIMH, NIMH, Univ. Col. London.*

1:30 **195.03** Modulation of hippocampal brain networks produces changes in episodic simulation and divergent thinking. P. P. THAKRAL*; K. P. MADORE; S. E. KALINOWSKI; D. L. SCHACTER. *Harvard Univ., Stanford Univ.*

1:45 **195.04** Temporal integration of narrative information in a hippocampal amnesic patient. X. ZUO*; C. J. HONEY; M. D. BARENSE; D. CROMBIE; K. A. NORMAN; U. HASSON; J. CHEN. *Johns Hopkins Univ., Univ. of Toronto, Ludwig Maximilian Univ. of Munich, Princeton Univ., Princeton Univ.*

2:00 **195.05** Neural signatures of perceptual predictions emerge concurrently in hippocampus and visual cortex during learning. F. AITKEN*; P. A. CABILES; P. KOK. *UCL.*

2:15 **195.06** Rehearsal initiates systems memory consolidation, sleep makes it last. L. HIMMER; M. SCHÖNAUER*; D. HEIB; M. SCHABUS; S. GAIS. *Inst. für Medizinische Psychologie, Princeton Univ., Univ. of Salzburg.*

2:30 **195.07** Posterior-anterior gradient in medial temporal lobe reactivation of details vs. gist. S. SELVAM; R. P. COLEMAN; K. MATTINGLY; W. B. CORLEY; M. IBRAGIMOVA; N. C. HINDY*. *Univ. of Louisville.*

2:45 **195.08** Human cortical neurons phase-lock to hippocampal theta. D. R. SCHONHAUT*; E. A. SOLOMON; N. A. HERWEG; T. D. PHAN; M. J. KAHANA. *Univ. of Pennsylvania.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 **195.09** Hippocampal ripples linked to encoding and free retrieval of visual episodic memories in the human brain. Y. NORMAN*; E. M. YEAGLE; S. KHUVIS; M. HAREL; A. D. MEHTA; R. MALACH. *Weizmann Inst. of Sci., Feinstein Inst. for Med. Res., Donald and Barbara Zucker Sch. of Med. at Hofstra/Northwell.*

POSTER

196. Cell Lineage Analysis

Theme A – Development

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 A1 **196.01** Caveolin-1 promotes neural-lineage commitment by regulating mitochondrial functions in adult hippocampal neural stem cells. G. CHONG*; M. WU; Q. DU; R. DENG; J. SHEN. *The Univ. of Hong Kong.*

2:00 A2 **196.02** Diverse spinal commissural neuron populations revealed by fate mapping and molecular profiling using a novel Robo3^{Cre} mouse. A. TULLOCH*; S. TEO; B. V. CARVAJAL; M. T. TESSIER-LAVIGNE; A. JAWORSKI. *Brown Univ., Rockefeller Univ., Stanford Univ.*

3:00 A3 **196.03** Hopx in precursors from embryonic ventricular zone instructs generation of late-born cells. Q. XIAO*. *Inst. of Neurosci.*

4:00 A4 **196.04** Genetic labeling of neurons derived from direct and indirect neurogenesis in the mouse cerebral cortex. Y. HATANAKA*; Y. KAWAGUCHI; T. HIRATA. *Osaka Univ., Natl. Inst. Physiol Sci., Nat'l Inst. Genet.*

1:00 A5 **196.05** Somatic mutations reveal left versus right asymmetry during early human development. L. FASCHING*; S. TOMASI; T. BAE; M. BRADY; S. ABDALLAH; L. TOMASINI; N. VASMATZIS; A. SZEKELY; T. V. FERNANDEZ; J. F. LECKMAN; A. ABYZOV; F. M. VACCARINO. *Yale Univ., Yale Univ., Mayo Clin., Yale Univ., Yale Univ., Yale Univ.*

2:00 A6 **196.06** Spatial heterogeneity of mouse telencephalic progenitors at single-cell resolution. D. LEE*; C. RHODES; Y. ZHANG; T. PETROS. *NIH/NICHD.*

3:00 A7 **196.07** ▲ Resolving the role of Lhx2 in the neurogenic output of retinal progenitor cells using single-cell RNA sequencing. A. PATEL*; A. FULLER; E. M. LEVINE. *Vanderbilt Univ. Med. Ctr.*

4:00 A8 **196.08** ▲ Multicolor lineage tracing using *in vivo* time-lapse imaging reveals coordinated death of clonally related cells in the developing vertebrate brain. N. L. BROCKWAY; T. LICHTENBERG; N. HO; Z. COOK; Y. A. PAN; T. A. WEISSMAN*. *Lewis & Clark Col., Virginia Tech.*

1:00 A9 **196.09** Stem cell fate decisions in the V-SVZ during normal embryonic and postnatal development. S. E. MAY*; T. NUHAT SHAFIN; P. J. BRIODY; A. A. KALARIA; D. PAN; J. C. CONOVER. *Univ. of Connecticut, Univ. of Connecticut, Univ. Connecticut.*

2:00 A10 **196.10** Elucidating transcriptional trajectories of spinal commissural neuron subtypes. J. ABOLAFIA*; A. J. TULLOCH; D. CROOTE; A. JAWORSKI. *Brown Univ., Brown Univ.*

3:00 A11 **196.11** A progenitor-anchored fate mapping strategy. M. M. PEREIRA LUPPI*; J. POULIN; G. CARONIA-BROWN; C. HOFER; P. HSU; R. AWATRAMANI. *Northwestern Univ.*

4:00 A12 **196.12** Analysis of the ciliary protein, IIIG9, reveals a new localization in cell-cell adhesion in ependymal cells and progenitor radial glial cells. V. BAEZA*; M. J. OVIEDO; F. A. MARTINEZ; M. CIFUENTES; F. J. NUALART; K. A. SALAZAR. *Univ. of Concepcion, Univ. de Málaga.*

1:00 A13 **196.13** A novel subgroup of neurons related to the serotonergic neuronal system: Rhombomere 4-derived Pet1+ cells referred to as "para-serotonergic". Y. CHANG*; B. OKATY; M. RIEHS; R. HAYNES; S. DYMECKI. *Harvard Med. Sch., Boston Children's Hosp. and Harvard Med. Sch.*

2:00 A14 **196.14** Lineage-based organization of the motor system in *Drosophila larvae.* Y. WANG*; C. C. WREDEN; J. L. MENG; Z. D. MARSHALL; E. S. HECKSCHER. *Univ. of Chicago.*

3:00 A15 **196.15** Map3k12 binding inhibitory protein (Mbip) function establishes the appropriate number of cortical interneurons. C. A. SMOOT*; K. A. WASEF; E. S. TUCKER. *West Virginia Univ., West Virginia Univ.*

4:00 A16 **196.16** The multifaceted roles for JNK in forebrain development. J. G. CUNNINGHAM*; S. NTI; J. SCRIPTER; E. S. TUCKER. *West Virginia Univ.*

1:00 A17 **196.17** A novel-genome integrating vector system for direct transgenesis in neural stem cells. T. KUMAMOTO*; F. MAURINOT; R. BARRY; C. VASLIN; S. VANDORMAEL- POURNIN; M. LE; M. COHEN-TANNOUDJI; A. REBSAM; K. LOULIER; S. NÉDELEC; S. TOZER; J. LIVET. *Inst. De La Vision – Sorbonne Univ., Inst. du Fer à Moulin, Inst. Pasteur.*

2:00 A18 **196.18** Direct conversion of microglia into neurons improves neurological recovery after ischemic injury. T. IRIE*; T. MATSUDA; Y. HAYASHI; J. KIRA; K. NAKASHIMA. *Grad. Sch. of Med. Sciences, Kyushu Univ., Grad. Sch. of Med. Sciences, Kyushu Univ., Fac. of Dent. Science, Kyushu Univ.*

3:00 A19 **196.19** Pioneer factor NeuroD1 rearranges transcriptional and epigenetic profiles to execute neuronal conversion from microglia. T. MATSUDA*; T. IRIE; S. KATSURABAYASHI; Y. HAYASHI; K. NAKASHIMA. *Grad. Sch. of Med. Sciences, Kyushu Univ., Fukuoka Univ., Fac. of Dent. Science, Kyushu Univ.*

4:00 A20 **196.20** Limited NG2 glial tropism of recombinant adeno-associated viral (rAAV)-mediated gene delivery for *in vivo* neuronal reprogramming. M. THAQI*; E. REISENBIGLER; R. GREENE; R. A. MARR; D. A. PETERSON. *Rosalind Franklin Univ. of Med. and Sci., Rosalind Franklin Univ. Med. Sci.*

1:00 A21 **196.21** Transdifferentiation of reactive astrocytes into functional neurons causes motor recovery after spinal cord injury. H. AN*. *Inst. for Basic Sci. (IBS).*

POSTER

197. Developmental Mechanisms

Theme A – Development

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 A22 **197.01** Loss of PCDH12 causes cell migration and differentiation defects in human embryonic stem-cell derived neuroprogenitors. J. M. RAKOTOMAMONJY*; L. E. RYLAARSDAM; D. A. THOMAS; S. L. MCDERMOTT; G. LANGUREN; A. D. GUEMEZ-GAMBOA. *Northwestern University, Feinberg Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 A23 **197.02** Reelin regulates the positioning of late-born neurons during hippocampal development. M. HATTORI*; K. ISHII; T. KOHNO. *Grad. Sch. Pharmaceuti. Sci., Nagoya City Univ.*

3:00 A24 **197.03** Extracellular matrix reorganization in the subplate layer is important for the regulation of radial neuronal migration in the developing neocortex. N. KANEKO*; N. MAEDA; K. YURA; C. OHTAKA-MARUYAMA. *Ochanomizu Univ., Tokyo Metropolitan Inst. of Med. Sci., Waseda Univ.*

4:00 A25 **197.04** Development of mouse olfactory tubercle as part of the ventral striatum. E. MARTIN-LOPEZ*; C. XU; T. LIBERIA-VAYA; S. J. MELLER; C. A. GREER. *Yale Univ. Sch. of Med., Harvard Med. Sch.*

1:00 A26 **197.05** Alk inactivation disrupts neurodevelopment of cerebral organoids. Y. KONG*; R. MAO. *Southeast Univ.*

2:00 A27 **197.06** Drebrin regulates cytoskeletal dynamics in migrating GnRH neurons through interaction with CXCR4. Y. SHAN*; S. WRAY. *NIH, NINDS, NIH NINDS.*

3:00 A28 **197.07** Orientations of cellular processes in rhesus macaques during the second half of gestation for biomechanical simulations of cerebral cortical folding. X. WANG; K. E. GARCIA; P. V. BAYLY; C. D. KROENKE*. *Oregon Hlth. & Sci. Univ., Indiana Univ., Washington Univ.*

4:00 A29 **197.08** Jak3 modulates the migration of GABAergic interneurons during development of murine cortex. A. KIM*; J. CHUNG; E. BAIK. *Ajou University, Ajou Univ. Sch. of Med., Ajou Univ. Sch. of Med.*

1:00 A30 **197.09** Ccdc141, a genetic factor of Kallmann syndrome: Isoforms are differently localized in GnRH cells. H. CHO*; S. WRAY. *NIH/NINDS, NIH NINDS.*

2:00 A31 **197.10** The physiological role of the GTPase Rab21 in neuronal migration and the development of the cerebral cortex. S. DUPRAZ; M. PEROTTY; J. BUSTOS PLONKA; S. QUIROGA; L. J. SOSA*. *Axonal Growth and Regeneration, German Ctr. for Neurodegenarative Diseases, CIQUIBIC-CONICET Depto. Química Biológica FCQ-UNC.*

3:00 A32 **197.11** The role of astroglial sphingosine-1-phosphate receptor 1 in the developing brain. P. SHETH*; J. LI. *Texas A&M Univ., Texas A&M Univ.*

1:00 DP01/A33 **197.12** (Dynamic Poster) Role of F-BAR proteins in process extension and neuronal migration in the embryonic cortex. R. J. TAYLOR*; J. CARRINGTON; L. GERLACH; E. W. DENT. *Univ. of Wisconsin Madison, Univ. of Wisconsin.*

1:00 A34 **197.13** Poly (ADP-ribose) polymerase 1 (PARP1) regulates Reelin expression in the embryonic brain. M. M. NELSON; D. R. GRAYSON; G. CORFAS*. *The Univ. of Michigan, Univ. of Illinois at Chicago.*

2:00 A35 **197.14** Gli3 loss-of-function leads to impaired GnRH-1 neuronal migration to the brain. E. M. TAROC*; J. M. LIN; A. NAIK; E. GENIS; G. FUCHS; D. KEEFE; R. BALASUBRAMANIAN; P. E. FORNI. *Univ. at Albany, Massachusetts Gen. Hosp.*

3:00 A36 **197.15** Developmental changes in microglial populations. J. J. GIFFORD*; I. MULLEN; M. KARTHIKEYAN; G. C. WAGNER; A. W. KUSNECOV. *Rutgers Univ.*

4:00 A37 **197.16** JNK signaling coordinates the dynamic behavior of migrating cortical interneurons. S. E. HICKLING*; N. COKER; K. KEEN; E. S. TUCKER. *West Virginia Univ., Bates Univ., West Virginia Univ.*

1:00 A38 **197.17** ▲ Chlorpyrifos-treated *Xenopus laevis show abnormal neural development of non-cholinergic spinal sensory neurons.* K. DEGNER*; M. BRYSON; J. HIDALGO LOPEZ; A. WARD; E. HERRERA; F. WATSON. *Washington and Lee Univ.*

POSTER

198. Synaptogenesis and Activity-Dependent Development II

Theme A – Development

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 A39 **198.01** Presynaptic differentiation at the neuromuscular junction requires $Ca_V1.1$-driven calcium signaling. M. M. KAPLAN*; B. E. FLUCHER. *Med. Univ. Innsbruck.*

2:00 A40 **198.02** Molecular mechanisms underlying specificity of synapse formation in cultured neurons of *Aplysia.* A. ALEXANDRESCU*; T. J. CAREW. *New York Univ.*

3:00 A41 **198.03** Investigating the role of astrocytes in the development of synaptic connectivity in a rodent model of neonatal abstinence syndrome. T. C. BOGGESS*; A. MAZUR; H. SEXTON; W. C. RISHER. *Marshall Univ., Marshall Univ.*

4:00 A42 **198.04** Ubiquitination of neuroligin2 controls dynamics of inhibitory synapse formation. Z. LI; H. TIAN; J. XIA. *Hong Kong Univ. of Sci. and Technol.*

1:00 A43 **198.05** RAB27A coordinates synaptic integration and sensory responses of cortical neurons via extracellular nanovesicle signaling. L. ZHANG*; X. ZHANG; T. LIN; S. TEAW; T. LAM; A. BORDEY. *Yale Sch. of Med.*

2:00 A44 **198.06** A conserved tyrosine residue in Slitrk3 carboxyl-terminus is critical for GABAergic synapse development. J. LI; W. HAN; K. WU; X. GU; L. ZHOU; Y. LI; Q. LIU; W. LU*. *NINDS/NIH.*

3:00 A45 **198.07** At the end of the brainbow: Dissecting chandelier cell connectivity. M. ISAAC; B. NJERI; Y. ZHANG; T. J. PETROS*. *NICHD.*

4:00 A46 **198.08** The role of TMEM132B in inhibitory synapse development and function. D. D. CASTELLANO*; W. HAN; J. LI; K. WU; T. LI; W. LU. *NINDS/NIH.*

1:00 A47 **198.09** Chaperone mediated autophagy modulates synaptic differentiation in hippocampal neurons. J. HORMAZÁBAL; L. YANTEN; J. DE LA CRUZ; N. MARTINEZ; A. O. ARDILES; I. E. ALFARO*. *Fundacion Ciencia Y Vida, Ctr. Interdisciplinario De Neurociencia De Valpa.*

2:00 A48 **198.10** ● Role of MEN1 gene in brain cell connectivity, synaptic plasticity and neurodegeneration. S. BATOOL*; J. M. ZAIDI; B. AKHTER; A. M. GETZ; N. I. SYED. *Univ. of Calgary, Univ. of Calgary, Univ. of Calgary.*

3:00 A49 **198.11** Early electrical synapses in the embryonic zebrafish spinal cord. R. M. LUKOWICZ*; A. ADKE; D. FRIEDMANN; A. C. MILLER. *Univ. of Oregon, NIH, UC Berkeley.*

4:00 A50 **198.12** Interaction of Ankycorbin and Tara regulates dendritic spine dynamics. S. KIM; Y. WOO; S. NOH; Y. WON; E. CHO; S. PARK*. *POSTECH.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 A51 **198.13** S-SCAM is essential for synapse formation and maintenance. N. WITTENMAYER*; J. S. VIOTTI; T. DRESBACH. *Brandenburg Med. Sch., Univ. Med. Ctr. Goettingen.*

2:00 A52 **198.14** Activity-dependent secretion of Cbln1 from lysosomes in granule cell axons. K. IBATA*; M. KONO; S. NARUMI; J. MOTOHASHI; W. KAKEGAWA; K. KOHDA; M. YUZAKI. *St. Marianna Univ. Sch. of Med., Keio Univ. Sch. of Med.*

3:00 A53 **198.15** Circuit growth is stabilized by negative feedback through anterograde trans-synaptic Jelly Belly - Anaplastic lymphoma kinase signaling. P. R. GÄRTIG*; A. D. OSTROVSKY; L. MANHART; T. KOVACEVIC; B. CHWALLA; M. LANDGRAF; S. CACHERO; J. F. EVERS. *Univ. of Heidelberg, Dept. of Zoology, Univ. of Cambridge, MRC Lab. of Mol. Biol.*

4:00 A54 **198.16** Membrane palmitoylated proteins regulate synapse density and function in *C. elegans.* H. W. RICHBURG; B. MARKS; S. J. CHERRA*, III. *Univ. of Kentucky Col. of Med.*

1:00 A55 **198.17** A functional difference between NLGN4X and NLGN4Y. R. HODGE*; M. B. DALVA. *Thomas Jefferson Univ., Thomas Jefferson Univ.*

2:00 A56 **198.18** Ankyrin and CRMP regulate gap junction dynamics through Kinesin in *C. elegance*. L. M. MENG*; C. CHEN; D. YAN. *Duke Univ. Sch. of Med., Duke Univ. Sch. of Med.*

3:00 A57 **198.19** Uncovering the function of a non-canonical neuronal small GTPase. K. MADHWANI*; C. HOGAN; K. O'CONNOR-GILES. *Brown Univ., Univ. of Wisconsin- Madison, Brown Univ., Carney Inst. for Brain Sci.*

4:00 A58 **198.20** A new family of neural wiring receptors across bilaterians defined by phylogenetic, biochemical and structural evidence. S. CHENG*; Y. PARK; J. D. KURLETO; M. JEON; K. ZINN; J. W. THORNTON; E. OZKAN. *The Univ. of Chicago, The Univ. of Chicago, Caltech, The Univ. of Chicago.*

1:00 A59 **198.21** Synthetic antigen binders for structural and functional studies of adhesion GPCRs. S. P. KORDON*; P. DUTKA; K. LEON; J. M. ADAMSKA; J. LI; A. SERETNY; A. A. KOSSIAKOFF; D. ARAC. *Univ. of Chicago.*

2:00 A60 **198.22** Identification of small molecule agonists and antagonists for the adhesion GPCR Latrophilin. J. M. ADAMSKA*; D. ARAC. *THE UNIVERSITY OF CHICAGO.*

3:00 A61 **198.23** Investigating the role of a putative *Drosophila* tRNA methyltransferase in neurons. C. HOGAN*; S. GRATZ; J. BRUCKNER; J. LENTINI; D. FU; K. O'CONNOR-GILES. *Univ. of Wisconsin- Madison, Brown Univ., Univ. of Oregon, Univ. of Rochester.*

4:00 A62 **198.24** GluK2 interacts with KCC2 to promote dendritic spine formation. S. KESAF*; S. KHIRUG; E. DINH; M. GARCIA; T. P. TAIRA; S. E. LAURI; C. RIVERA BAEZA. *Univ. of Helsinki, Univ. of Helsinki, Aix-Marseille Univ., Univ. of Helsinki, Inst. de Neurobiologie de la Méditerranée INMED UMR901.*

1:00 A63 **198.25** Structural basis for teneurin function in circuit-wiring: A toxin motif at the synapse. J. LI*. *Univ. of Chicago.*

2:00 A64 **198.26** Regulatory effects of non-coding RNAs in an iPSC-derived neuron model of human synapse development. M. SOUTSCHEK*; T. WÜST; L. VON ZIEGLER; S. BICKER; P. GERMAIN; G. SCHRATT. *ETH Zürich.*

POSTER

199. Genetic Models for Autism Spectrum Disorders

Theme A – Development

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 A65 **199.01** ASD-associated *de novo* POGZ mutations disrupt cortical development. K. MATSUMURA*; K. SEIRIKI; M. NAGASE; S. AYABE; I. YAMADA; T. FURUSE; K. YAMAMOTO; K. KITAGAWA; M. BABA; A. KASAI; Y. AGO; A. H. TAKANO; N. SHINTANI; T. IGUCHI; M. SATO; S. YAMAGUCHI; M. TAMURA; S. WAKANA; A. YOSHIKI; A. M. WATABE; H. OKANO; K. TAKUMA; R. HASHIMOTO; H. HASHIMOTO; T. NAKAZAWA. *Lab. of Mol. Neuropharmacology, Grad. Sch. of Pharmaceut. Sciences, Osaka Univ., Interdisciplinary Program for Biomed. Sciences, Inst. for Academic Initiatives, Program for Leading Grad. Schools, Osaka Univ., Inst. of Clin. Med. and Research, Jikei Univ. Sch. of Med., Exptl. Animal Division, RIKEN BioResource Res. Ctr., Technol. and Developmental Team for Mouse Phenotype Analysis, RIKEN BioResource Res. Ctr., Lab. of Biopharmaceutics, Grad. Sch. of Pharmaceut. Sciences, Osaka Univ., Mol. Res. Ctr. for Children's Mental Development, United Grad. Sch. of Child Development, Osaka University, Kanazawa University, Hamamatsu Univ. Sch. of Medicine, Chiba Univ. and Univ. of Fukui, Dept. of Anat. and Neuroscience, Grad. Sch. of Medicine, Osaka Univ., United Grad. Sch. of Child Development, Osaka University, Kanazawa University, Hamamatsu Univ. Sch. of Medicine, Chiba Univ. and Univ. of Fukui, Res. Ctr. for Child Mental Development, Univ. of Fukui, Fukui, Japan, Dept. of Morphological Neuroscience, Grad. Sch. of Medicine, Gifu Univ., Ctr. for Highly Advanced Integration of Nano and Life Sciences, Gifu Univ., Dept. of Gerontology, Inst. of Biomed. Res. and Innovation, Dept. of Physiology, Sch. of Medicine, Keio Univ., Dept. of Pharmacology, Grad. Sch. of Dentistry, Osaka Univ., Dept. of Pathology of Mental Diseases, Natl. Inst. of Mental Health, Natl. Ctr. of Neurol. and Psychiatry, Osaka Univ., Div. of Bioscience, Inst. for Datability Science, Osaka Univ., Transdimensional Life Imaging Division, Inst. for Open and Transdisciplinary Res. Initiatives, Osaka Univ.*

2:00 A66 **199.02** Consensus principal component analysis identifies novel clusters of autism spectrum genes. D. L. PARKER; S. HASSANI; J. S. AXNÉR; C. E. REUTER; M. LU; E. HUO; J. A. PINEDA*; W. K. THOMPSON. *UCSD, UCSD, UCSD.*

3:00 A67 **199.03** ● ADNP, a brain protein with muscle and skin activities. O. KAPITANSKY; I. GOZES*. *Sackler Sch. Med/Tel Aviv Univ.*

4:00 A68 **199.04** A mechanistic link between mTOR-dependent deficient synaptic pruning and functional hyper-connectivity in autism. M. PAGANI*; A. BERTERO; A. DE FELICE; A. LOCARNO; I. MISEVICIUTE; S. TRAKOSHIS; C. CANELLA; K. SUPEKAR; V. MENON; A. GALBUSERA; R. TONINI; M. LOMBARDO; M. PASQUALETTI; A. GOZZI. *Functional Neuroimaging Laboratory, Inst. Italiano di Tecnologia, Univ. of Pisa, Fondazione Inst. Italiano Di Tecnologia, Univ. of Cyprus, Inst. Italiano di Tecnologia, Stanford Univ.*

Sun. PM

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 A69 **199.05** Altered L-type channel gating, action potential firing and inhibitory synaptic responses in hippocampal neurons of the autistic Timothy syndrome type-2 mouse. C. CALORIO; E. HIDISOGLU; D. GAVELLO; G. CHIANTIA; C. SALIO; M. SASSOE-POGNETTO; P. DEFILIPPI; E. TURCO; F. BALZAC; G. C. L. BETT; R. L. RASMUSSON; A. MARCANTONI; E. CARBONE*. *Univ. of Torino, Akdeniz Univ., Univ. of Torino, Univ. Torino, Univ. of Torino, The State Univ. of New York.*

2:00 A70 **199.06** ● A novel genome edited mouse model for the ADNP syndrome. G. KARMON*; G. HACOHEN-KLEIMAN; S. SRAGOVICH; I. GOZES. *Tel Aviv Univ.*

3:00 A71 **199.07** The autism-associated *de novo* A749G CACNA1D mutation induced a neurodevelopmental disease phenotype in mice. N. J. ORTNER*; N. HOFER; M. KHARITONOVA; E. PARADISO; P. TULUC; L. GUARINA; A. SAH; L. SCHWANKLER; N. STEFANOVA; F. FERRAGUTI; N. SINGEWALD; E. CARBONE; J. STRIESSNIG. *Univ. of Innsbruck, Med. Univ. of Innsbruck, Univ. of Torino, Med. Univ. of Innsbruck.*

4:00 A72 **199.08** A massively parallel reporter assay to investigate the contribution of noncoding variation in autism spectrum disorder. T. LAGUNAS*, Jr; S. PLASSMEYER; J. D. DOUGHERTY. *Washington Univ. In St. Louis, Washington Univ. in St. Louis, Washington Univ. Sch. of Med.*

1:00 A73 **199.09** Deconvoluting cell type composition of brain organoids derived from autistic patients and controls by single-cell RNA-sequencing. J. MARIANI*; F. WU; A. AMIRI; C. K. NGUYEN; A. JOURDON; A. ABYZOV; F. M. VACCARINO. *Yale Univ., Mayo Clin., Yale Univ.*

2:00 A74 **199.10** Investigating the role of Janus kinase and microtubule interacting protein 1 (JAKMIP1) as an autism candidate gene using CRISPR-Cas9 genome editing technique. N. TAKAMURA*; J. GANDAWIJAYA; R. A. BAMFORD; C. DAVIS; J. K. CHILTON; A. OGURO-ANDO. *Univ. of Tokyo, Univ. of Exeter.*

3:00 A75 **199.11** GABAergic interneuron defects in mice lacking autism-associated gene Slit3. K. MENZEL; S. EDWARDS; C. P. PLACHEZ*. *Hussman Inst. for Autism.*

4:00 A76 **199.12** Deletion of the Kcna1 epilepsy gene modifies autistic-like behaviors. I. JAGADEESWARAN; A. PRUITT; N. M. GAUTIER; K. CRANE; E. GLASSCOCK*. *Southern Methodist Univ., Louisiana State Univ. Hlth. Sci. Ctr.*

1:00 A77 **199.13** Altered neural progenitor proliferation associated with copy number variants in psychiatric disorders. T. BRICKLER*; J. LI; A. BANUELOS; K. MARJON; J. BIAN; S. CHETTY. *Stanford Univ.*

2:00 A78 **199.14** Identifying genetic variants associated with social phenotypes of relevance for autism spectrum disorder (ASD) in juvenile rhesus macaques. Z. A. KOVACS-BALINT*; C. GUNTER; A. R. HARRIS; M. RAVEENDRAN; V. MICHOPOULOS; J. BACHEVALIER; J. RAPER; M. SANCHEZ; J. ROGERS. *Emory Univ., Emory Univ., Children's Healthcare of Atlanta, Emory Univ., Baylor Col. of Med., Emory Univ., Emory Univ.*

3:00 A79 **199.15** Behavioral and cellular deficit in neurodevelopment of Chloride channel-4 knock out mice. Y. KIM*; S. JEON; J. HAN. *Natl. Ctr. For Mental Hlth., Dongguk Univ. Res. Inst., KAIST.*

4:00 A80 **199.16** ▲ Identification of novel alleles of a human specific neocortical gene, NOTCH2NL associated with neurodevelopmental disorders. N. R. HEYER*; C. BOSWORTH; G. MANTALAS; D. HAUSSLER; S. SALAMA. *Univ. Of California, Santa Cruz, California State University, Monterey Bay, Univ. Of California, Santa Cruz, Univ. Of California, Santa Cruz, Howard Hughes Med. Inst.*

1:00 A81 **199.17** Behavioral and neuroanatomical alterations in mouse models of autism spectrum disorder. T. GANDHI*; C. LEE. *Louisiana State Univ.*

2:00 A82 **199.18** Exploring an autism-linked mutation in the PACS1 gene using stem cells and cerebral organoids. L. E. RYLAARSDAM*; A. D. GUEMEZ-GAMBOA. *Northwestern Univ., Northwestern Univ.*

3:00 A83 **199.19** Autistic-like behaviors and atypical connectivity in SHANK3 mutant macaques. Y. ZHOU; J. SHARMA; Q. KE; R. LANDMAN*; S. ANTERAPER; M. SUR; H. ZHOU; A. P. XIANG; R. DESIMONE; G. FENG; S. YANG. *MIT, Shenzhen Inst. of Advanced Technol., MIT, MIT, MIT, Massachusetts Gen. Hosp., Sun Yat-Sen Univ., Guangzhou Regenerative Med. and Hlth. Guangdong Lab., Broad Inst., MIT, MIT, Key Lab. for Stem Cells and Tissue Engin. (Sun Yat-Sen University), McGovern Inst. Brain Res., MIT, South China Agr. Univ.*

4:00 A84 **199.20** Stereotyped behavior in rewarding scenarios in a mouse model of 16p11.2 hemideletion. G. R. ROJAS*; A. HELLER; A. BASTIN; A. DUERR; M. RITCHIE; N. M. GRISSOM. *Univ. of Minnesota, Univ. of St. Thomas, Univ. of Minnesota.*

1:00 A85 **199.21** ASXL3: Linking chromatin to convergent autism spectrum disorder biology. B. MCGRATH*; S. L. BIELAS; A. SRIVASTAVA; S. SALVI; R. KC. *Univ. of Michigan, Univ. of Michigan, Sanjay Gandhi Postgraduate Inst. of Med. Sci., Case Western.*

2:00 A86 **199.22** Genetic effects on domain-specific pathways that alter communication. P. A. PERRINO*; A. R. RENDALL; R. FITCH. *Univ. of Connecticut.*

3:00 B1 **199.23** Crispr activation rescues physiological deficits associated with scn2a haploinsufficiency. P. W. SPRATT*; S. TAMURA; C. KEESHEN; N. MATHARU; N. AHITUV; K. J. BENDER. *Univ. of California San Francisco, Univ. of California San Francisco.*

4:00 B2 **199.24** Dynamic FoxG1 expression levels regulate autism associated behavioral circuits. G. MIYOSHI*; Y. UETA; A. NATSUBORI; H. OSAKI; Y. YAGASAKI; Y. KISHI; G. J. FISHELL; R. MACHOLD; M. MIYATA. *Tokyo Women's Med. Univ., New York Univ. Sch. of Med., Tokyo Women's Med. Univ., Tokyo Metropolitan Inst. of Med. Sci., Tokyo Univ., Harvard Med. Sch.*

1:00 B3 **199.25** The effect of Dyrk1a mutations on neuronal growth, connectivity, and autism-relevant behaviors. J. LEVY*; D. T. PAGE. *The Scripps Res. Inst., The Scripps Res. Inst.*

2:00 B4 **199.26** An atlas-based approach to analysis of neural activity in scn1lab mutant zebrafish. D. S. JIN*; B. ROONEY; C. SAKAI; D. CASETTI; X. PAPADEMETRIS; E. J. HOFFMAN. *Yale Univ., Yale Univ., Yale Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

200. Small-Molecule Neurotransmitter Transport and Signaling

Theme B – Neural Excitability/ Synapses/ and Glia

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 B5 **200.01** Recovery of soman inhibited rat diaphragm by distinct bispyridinium compounds correlates with resensitizing effects in the neuronal human α7 nAChR. T. SEEGER*; C. SCHEFFEL; S. RAPPENGLÜCK; K. T. WANNER; F. WOREK; H. THIERMANN; K. V. NIESSEN. *Bundeswehr Inst. of Pharmacol. & Toxicology, Ctr. for Drug Research, Ludwig-Maximilians-Universität Munich.*

2:00 B6 **200.02** ▲ *In vitro* pharmacological profiles of the bispyridinium non-oxime compound MB327 and its 2- and 3-regioisomers targeting cholinergic systems. K. V. NIESSEN*; S. RAPPENGLUECK; S. SICHLER; H. THIERMANN; F. WOREK; T. SEEGER. *Bundeswehr Inst. of Pharmacol. and Toxicol.*

3:00 B7 **200.03** D-serine rescues cortical parvalbumin GABAergic deficits in alpha7 nicotinic acetylcholine receptor deletion models of schizophrenia. H. LIN*; F. HSU; A. JACOBI; J. PANZER; D. COULTER; D. LYNCH. *Children's Hosp. of Philadelphia and Univ. of Pennsylvania Perelman Sch. of Med., Children's Hosp. of Philadelphia.*

4:00 B8 **200.04** Caffeine regulates GABA uptake via adenosine receptor blockage and cAMP signaling in the developing avian retina. V. P. P. BORGES-MARTINS*; D. D. P. FERREIRA; A. C. SOUTO; J. G. NETO; D. PEREIRA-FIGUEIREDO; K. C. CALAZA; K. J. OLIVEIRA; A. C. MANHAES; R. A. M. REIS; R. C. C. KUBRUSLY. *Univ. Federal Fluminense, Univ. Federal do Rio de Janeiro, Univ. Federal Fluminense, Univ. do Estado do Rio de Janeiro.*

1:00 B9 **200.05** Characterization of N2a neuroblastoma cells as a model of ATP and catecholamine co-release. G. J. JENSEN*; B. KIM; A. DOS SANTOS; D. T. POBURKO. *Simon Fraser Univ.*

2:00 B10 **200.06** L-arginine modulates calcium currents and downstream signaling pathways via nitric oxide in developing avian retinal cells. R. PAES-DE-CARVALHO*; I. DOMITH; T. A. MEJÍA-GARCÍA; A. T. DUARTE-SILVA. *Fluminense Federal Univ.*

3:00 B11 **200.07** Genomewide screen for synaptic vesicle transporters - Identification of SLC35D3 as a vesicular UDP - glucose transporter. C. QIAN; Z. WU; R. SUN; H. YU; J. ZENG; Y. LI*. *State Key Lab. of Membrane Biology, Peking Univ. Sch. of Life Sci., PKU-IDG/McGovern Inst. for Brain Res., Peking-Tsinghua Ctr. for Life Sciences, Acad. for Advanced Interdisciplinary Studies, Chinese Inst. for Brain Res.*

4:00 B12 **200.08** Abnormal copper transporter CTR1 in postmortem schizophrenia hippocampus: A subregion and laminar analysis. R. C. ROBERTS; C. B. FARMER; C. MORGAN; V. SINHA; L. ODOM; K. E. SCHOONOVER*. *Univ. of Alabama, Birmingham, Univ. of Alabama at Birmingham, Univ. of Pittsburgh.*

1:00 B13 **200.09** An evolutionary approach towards decoding the role of endocannabinoids in pain modulation. R. T. PAULSEN*; E. J. KABEISEMAN; B. D. BURRELL. *Univ. of South Dakota.*

2:00 B14 **200.10** Correlating internal alcohol concentration with splicing and behavior in *drosophila.* E. HAUSMAN*; E. PETRUCCELLI. *Southern Illinois Univ. Edwardsville, Southern Illinois Univ. Edwardsville.*

3:00 B15 **200.11** ▲ Function of *Drosophila* CG9098 in alcohol-induced sedation response. K. LAHUE*; E. PETRUCCELLI. *Southern Illinois Univ. Edwardsville, Southern Illinois Univ. Edwardsville.*

4:00 B16 **200.12** Behavioral modifications and alcohol preference following deletion of type two cannabinoid receptors in dopamine neurons and microglia. E. S. ONAIVI*; A. CANSECO-ALBA; B. SANABRIA; T. ROHANI; M. ZAMORA; S. ANGARITA; S. GOMEZ; J. LOUIS; J. BEJARANO; S. SGRO; A. TAGLIAFERRO; S. M. BIERBOWER; K. MARTIN; H. ISHIGURO; Q. LIU. *William Paterson Univ., Cinvestav-IPN, Univ. of Yamanashi, LCI/NIA/NIH.*

1:00 B17 **200.13** ▲ Simultaneous electrical and chemical transmission recording at the nanoscale. M. SHEN*; R. CHEN; J. STARCEZ; S. PHAM. *Univ. of Illinois At Urbana-Champaign, Univ. of Illinois at Urbana-Champaign.*

2:00 B18 **200.14** Identification of KCC2 expression enhancer compounds as a basis for treatment of Rett syndrome. X. TANG*; J. DROTAR; K. LI; C. CLAIRMONT; S. BRUMM; A. SULLINS; H. WU; S. LIU; J. WANG; N. GRAY; M. SUR; R. JAENISCH. *Whitehead Inst. For Biomed. Res., Picower Inst. for Learning and Memory, Univ. of Heidelberg, Dana-Farber Cancer Inst.*

3:00 B19 **200.15** ● CT1812 demonstrates evidence of synapse preservation in Alzheimer's disease patients and abeta oligomer displacement in preclinical models. S. M. CATALANO*; K. MOZZONI; C. REHAK; L. WAYBRIGHT; K. SADLEK; H. SAFFERSTEIN; E. WATTO; N. IZZO; M. GRUNDMAN; S. DEKOSKY; L. SCHNEIDER. *Cognition Therapeut. Inc., CognitionTTherapeutics, Inc, Univ. of Florida, USC.*

4:00 B20 **200.16** ● Alzheimer's disease therapeutic target sigma-2 receptor directly interacts with PGRMC1 in primary cultured neurons. K. T. SADLEK*; N. J. IZZO; C. REHAK; R. YURKO; L. WAYBRIGHT; E. WATTO; N. KNEZOVICH; K. MOZZONI; H. SAFFERSTEIN; S. M. CATALANO. *Cognition Therapeutics, Inc.*

1:00 B21 **200.17** Development of fluorescent small molecules and nanoprobes for the detection of the sigma-2 receptor. C. ABATE*; F. S. ABATEMATTEO; M. NISO; F. BERARDI. *Univ. degli Studi di Bari.*

2:00 B22 **200.18** Autophagy regulates cocaine-induced behaviors via the Becn2 protein. Y. KIM; S. YAMAMOTO; H. Y. MELTZER; C. HE*. *Northwestern Univ., Northwestern Univ. Sch. of Med., Northwestern Univ. - Chicago.*

3:00 B23 **200.19** Characterization of sigma-2 receptor ligand-induced metabolic stimulation in human SK-N-SH neuroblastoma cells. B. M. MCVEIGH; C. Z. LIU; C. R. MCCURDY; W. D. BOWEN*. *Brown Univ., Univ. of Florida.*

4:00 B24 **200.20** The sigma-2 receptor/TMEM97, PGRMC1, and LDL receptor complex are responsible for the cellular uptake of Aβ42 and its protein aggregates. A. RIAD*; Z. LENGYEL; B. JANSSEN; C. ZENG; R. H. MACH. *Univ. of Pennsylvania.*

1:00 B25 **200.21** ● Metabolomic evidence of disease modification of in mild to moderate AD patients by Sigma-2 antagonist CT1812. N. J. IZZO*; C. REHAK; K. M. MOZZONI; G. LOOK; G. RISHTON; L. SCHNEIDER; S. DEKOSKY; M. GRUNDMAN; C. HOUSER; S. M. CATALANO. *Cognition Therapeut. Inc., USC, Univ. of Florida.*

Sun. PM

● Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

201. Nicotinic Acetylcholine Receptors: Physiology and Function

Theme B – Neural Excitability/ Synapses/ and Glia

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 B26 **201.01** The novel procognitive S68890 modulates the human α7 nicotinic receptors. L. DANOBER*; K. KAMBARA; S. BERTRAND; K. LLOPIS; C. LIARD; G. DAS DORES; C. LOUIS; T. PILLOT; A. BENOIST; J. FOURQUEZ; A. CHOLLET; P. GLOANEC; R. JEGGO; D. BERTRAND. *Ctr. for Therapeut. Innovation in Neuropsychiatry, Inst. de Recherches SERVIER, Hiqscreen Sarl, Ctr. for Therapeut. Innovation in Neuropyschiatry, Inst. de Recherches SERVIER, Synaging SAS, Ctr. of Expertise in Chemistry, Inst. de Recherches Servier.*

2:00 B27 **201.02** Green apple tobacco flavorant farnesene is rewarding and reinforcing in a mouse model of vaping-related behavior. S. COOPER*; A. T. AKERS; A. J. AVELAR; B. J. HENDERSON. *Joan C Edwards Sch. of Med. at Marshall Univ.*

3:00 B28 **201.03** Effects of autoantibodies at the human nicotinic acetylcholine receptors. S. BERTRAND*; K. KAMBARA; S. PONS; J. KREYE; N. WENKE; M. ZOURIDAKIS; S. J. TZARTOS; H. PRUESS; D. BERTRAND*; U. MASKOS. *Hiqscreen, Inst. Pasteur, DZNE Berlin, Hellenic Pasteur Inst., NeuroDiagnostics.*

4:00 B29 **201.04** ▲ Mecamylamine increases the excitability of dorsal raphe serotonergic neurons. A. MONDRAGON-GARCIA; O. HERNANDEZ; E. RAMIREZ-SANCHEZ; G. ARENAS-LOPEZ; S. MIHAILESCU; S. HERNANDEZ-LOPEZ*. *Facultad de Medicina.*

1:00 B30 **201.05** ● Prefrontal cortex single cell dynamics and behavior during systemic nicotine exposure. J. WELLBOURNE-WOOD; J. I. WAMSTEEKER CUSULIN*; B. J. HALL. *F. Hoffmann-La Roche Ltd.*

2:00 B31 **201.06** Regulatory effects of cholinergic receptor stimulation on working memory related neuronal activity in primate dorsolateral prefrontal cortex. S. YANG*; V. C. GALVIN; A. F. T. ARNSTEN; M. WANG. *Yale Univ.*

3:00 B32 **201.07** Novel selective positive modulator efficiently decelerates decay of alpha7 nicotinic acetylcholine receptor-mediated current and increases intracellular calcium concentration in hippocampal neurons implying therapeutic potential. L. FODOR; M. THAN; I. PAL; S. KOLOK; A. KERN*; A. VISEGRADY; B. LENDVAI; Z. NEMETHY. *Gedeon Richter Plc.*

4:00 B33 **201.08** ▲ Maturational changes in the recruitment of prefrontal layer 6 neurons by acetylcholine. T. CHEN*; S. VENKATESAN; Y. LIU; E. E. TURNER; E. K. LAMBE. *Univ. of Toronto, Seattle Children's Res. Inst.*

1:00 B34 **201.09** Investigating the role of α_7 nicotinic acetylcholine receptors (nAChRs) in the formation of alcohol-withdrawal induced anxiety within the basolateral amygdala (BLA). S. E. SIZER*; B. C. PARRISH; N. J. ALEXANDER; A. B. KOUCHEKI; B. A. MCCOOL. *Wake Forest Univ., Wake Forest Sch. of Med.*

2:00 B35 **201.10** ● Defining the critical role of lynx2-mediated regulation of nAChRs in the basolateral amygdala for complex anxiety- and fear-related behaviors. K. R. ANDERSON*; K. M. HOFFMAN; J. M. MIWA. *Lehigh Univ., Lehigh Univ.*

3:00 B36 **201.11** Pathogenic beta amyloid 1-42 alters intracellular signaling through the alpha7 nicotinic receptor. P. L. SINCLAIR*; K. ARORA; R. A. NICHOLS; N. KABBANI. *George Mason Univ., John A Burns Shool of Medicine, Univ. of Hawaii, Univ. of Hawaii, Krasnow Inst.*

4:00 B37 **201.12** Alpha7 nAChRs modulation of astrocytic calcium responses in acute hippocampal slices in wildtype and a 15q13.3 microdeletion mouse model using the genetically encoded calcium indicator GCaMP6f. K. A. REES; U. H. WINZER-SERHAN*. *Texas A&M Univ. Hlth. Sci. Ctr., Texas A&M Hlth. Sci. Ctr.*

1:00 B38 **201.13** ▲ Calcium imaging in Chrna5-positive neurons of the interpeduncular nucleus across postnatal development. Y. K. LIU*; S. SIVAKUMARAN; T. CHEN; E. E. TURNER; E. K. LAMBE. *Univ. of Toronto, Seattle Children's Res. Inst.*

2:00 B39 **201.14** Cholinergic signalling dysregulation in the prefrontal cortex of the TgF344 rat model of Alzheimer's disease. S. K. POWER*; S. VENKATESAN; J. MCNABB; J. MCLAURIN; E. K. LAMBE. *Univ. of Toronto, Sunnybrook Res. Inst., Univ. of Toronto, Univ. of Toronto, Univ. of Toronto.*

3:00 B40 **201.15** Cholinergic modulation of ionic currents and a novel oscillatory activity in human fetal cholinergic neurons from the nucleus basalis of Meynert. F. CHERCHI*; E. COPPI; I. FUSCO; E. SARCHIELLI; G. GUARNIERI; G. VANNELLI; F. PEDATA; A. MORELLI; A. M. PUGLIESE. *Univ. of Florence, Univ. of Florence.*

4:00 B41 **201.16** Influence of Chrna5 on signaling properties of the habenulopeduncular pathway. S. SIVAKUMARAN*; Y. LIU; T. CHEN; D. W. SPARKS; E. E. TURNER; E. K. LAMBE. *Univ. of Toronto, Seattle Children's Res. Inst.*

1:00 B42 **201.17** Prefrontal alpha5 nicotinic receptor: Essential for a rapid cholinergic response and its protection from nicotine. S. VENKATESAN*; E. E. TURNER; E. K. LAMBE. *Univ. of Toronto, Seattle Children's Res. Inst.*

2:00 B43 **201.18** Inhibition of α7 nicotinic receptors by R,S-Trihexyphenidyl: Relevance for treatment of organophosphorus intoxication. Y. ARACAVA*; E. X. ALBUQUERQUE; E. F. R. PEREIRA. *Univ. of Maryland Sch. of Med.*

3:00 B44 **201.19** Nicotine-induced golgi fragmentation in cultured cells and neurons expressing α4β2-type nicotinic receptors. A. P. GOVIND*; O. JEYIFOUS; L. NEWELL; A. V. WEIGEL; J. LIPPINCOTT-SCHWARTZ; W. N. GREEN. *Univ. of Chicago, Janelia Res. Campus.*

4:00 B45 **201.20** Nicotine exposure alters the distribution of dispersed Golgi membranes in axons *in vitro* and *in vivo.* O. B. JEYIFOUS*; A. P. GOVIND; L. O. VAASJO; J. L. KORANDA; X. ZHUANG; W. N. GREEN. *Univ. of Chicago.*

1:00 B46 **201.21** Changes in synaptic activity in neurons regulate golgi membrane dispersal and distribution. T. A. RUSSELL*; A. P. GOVIND; O. JEYIFOUS; W. N. GREEN. *Univ. of Chicago.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

202. Homeostatic Synaptic Plasticity

Theme B – Neural Excitability/ Synapses/ and Glia

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 B47 **202.01** Probing the dynamics of presynaptic homeostatic potentiation at the *Drosophila* neuromuscular junction. A. G. NAIR*; M. MUELLER. *Univ. of Zurich.*

2:00 B48 **202.02** The mechanistic transition between the rapid induction and chronic maintenance of homeostatic synaptic plasticity. K. M. LEMBKE*; C. A. FRANK. *Univ. of Iowa.*

3:00 B49 **202.03** Novel links between factors regulating sleep and homeostatic synaptic plasticity. N. S. ARMSTRONG*; C. A. FRANK. *Univ. of Iowa.*

4:00 B50 **202.04** The sleep gene insomniac is required for rapid ubiquitination at postsynaptic compartments and retrograde homeostatic signaling. D. K. DICKMAN*; K. KIKUMA; X. LI; P. GOEL; S. PERRY. *USC, USC.*

1:00 B51 **202.05** The mechanism of LIMKs/cofilin signaling pathway in NGPF2 regulated homeostatic synaptic plasticity. G. HE*; X. ZHANG; Z. ZHOU. *Shanghai Mental Hlth. Ctr., Southeast Univ.*

2:00 B52 **202.06** Social isolation affects inhibitory neural circuits of prefrontal cortex during development. K. OKAMURA*; S. KIMOTO; H. YOSHINO; Y. NISHIHATA; Y. YAMAGUCHI; K. YAMAMURO; M. IKEHARA; M. MAKINODAN; Y. OGAWA; Y. SAITO; T. KISHIMOTO. *Nara Med. Univ., Nara Med. Univ.*

3:00 B53 **202.07** IGF1 receptor is necessary for firing rate homeostatic recovery in response to inactivity. M. KATSENELSON*; I. SHAPIRA; S. AÏD; I. SLUTSKY. *Tel Aviv Univ., Tel Aviv Univ., INSERM and Sorbonne Univ.*

4:00 B54 **202.08** Role of IL-33/ST2 signaling in homeostatic synaptic plasticity in the hippocampus. Y. WANG*; K. HUNG; C. CHUANG; W. FU; A. K. Y. FU; N. Y. IP. *Div. of Life Science, The Hong Kong Univ. of Sci. and Technol., Mol. Neurosci. Center, The Hong Kong Univ. of Sci. and Technol., State Key Lab. of Mol. Neuroscience, The Hong Kong Univ. of Sci. and Technol.*

1:00 B55 **202.09** Phosphorylation in presynaptic plasticity - SRPK2 as a relevant kinase. A. MAYER*; J. BETZIN; J. MÜLLER; D. DIETRICH; S. SCHOCH. *Univ. of Bonn Med. Ctr., Univ. of Bonn Med. Ctr.*

2:00 B56 **202.10** Phosphorylation state of Shank3 is a critical regulator homeostatic scaling. V. TATAVARTY*; C. WU; F. F. WAGNER; J. R. COTTRELL; G. TURRIGIANO. *Brandeis Univ., Brandeis Univ., Broad Inst., Broad Inst. of MIT and Harvard, Brandeis Univ.*

3:00 B57 **202.11** Regulation of Kv7 and Nav channels at the axon initial segment of hippocampal neurons during homeostatic scaling of intrinsic excitability. B. BACULIS*; A. ZHU; D. CHAO; Z. HUANG; K. LEE; H. CHUNG. *Univ. of Illinois Urbana-Champaign, Univ. of Illinois Urbana-Champaign, Univ. of Illinois Urbana-Champaign.*

4:00 B58 **202.12** Neuronal and synaptic parameter degeneracy in central pattern generator activity. K. TIAN*; A. A. PRINZ. *Emory Univ.*

1:00 B59 **202.13** Visual experience facilitates excitatory synaptic scaling via Rab5C-mediated enhancement of AMPA receptor internalization. W. SHEN*; L. ZHENG; Z. GUO; X. QI; Y. LIAO; Y. SONG. *Hangzhou Normal Univ.*

2:00 B60 **202.14** Sleep drives downward firing rate homeostasis in V1 neurons. A. TORRADO PACHECO*; J. BOTTORFF; G. TURRIGIANO. *Brandeis Univ.*

3:00 B61 **202.15** Aldehyde dehydrogenase involves in cortical neuron up-state potentiation of spontaneous excitatory synaptic currents in IGE models. C. ZHOU*; L. DING; C. HANNA; M. J. GALLAGHER; R. L. MACDONALD. *Vanderbilt Univ. Med. Ctr., Vanderbilt Univ. Med. Ctr., Vanderbilt Univ. Sch. of Med., Vanderbilt Univ. Med. Ctr.*

4:00 B62 **202.16** Altered synaptic scaling of PV^+ interneurons underlying sensorimotor gating deficit. J. SHIN*; S. KIM; Y. KIM; H. LEE; Y. HARUNA; H. SHIN; J. PARK; S. KIM. *Seoul Natl. Univ., Inst. for Basic Sci., Tokyo Med. and Dent. Univ.*

1:00 B63 **202.17** Synaptopodin's role in homeostatic upscaling. J. BOATENG*; M. CHAN; P. K. Y. CHANG; J. POPIC; R. MCKINNEY. *McGill.*

2:00 B64 **202.18** Astrocyte production of TNF drives homeostatic synaptic plasticity. D. STELLWAGEN*; R. HEIR; H. ALTIMIMI; M. C. FRANQUIN; P. KOMAL; J. CHAMBON. *McGill Univ., McGill Univ. Ctr. For Res. In Neurosci., Ctr. For Res. In Neurosci., McGill Univ., BITS-Pilani Hyderabad.*

3:00 B65 **202.19** Investigating the roles of homeostatic synaptic scaling in cortex-dependent associative learning. C. WU*; R. A. RAMOS; D. B. KATZ; G. TURRIGIANO. *Brandeis Univ., Brandeis Univ.*

4:00 B66 **202.20** Homeostatic recovery of embryonic spinal activity initiated by compensatory changes in resting membrane potential. C. E. GONZALEZ-ISLAS*; P. A. WENNER. *Emory Univ. Sch. of Med., Univ. Autonoma de Tlaxcala.*

1:00 B67 **202.21** Relationship between quantal amplitude and evoked response during synaptic scaling in embryonic spinal motoneurons. D. PEKALA*; P. WENNER. *Emory Univ. Sch. of Med.*

2:00 B68 **202.22** Preservation of E-I balance despite enhanced OD plasticity and spine density in hippocampus and cortex of mice lacking PirB. M. DJURISIC*; C. J. SHATZ. *Stanford Univ.*

3:00 B69 **202.23** Age-related decline in homeostatic plasticity. C. I. RADULESCU*; N. ZABOURI; S. J. BARNES. *UK Dementia Res. Inst. at Imperial Col. London.*

4:00 B70 **202.24** Time course of activity dependent homeostasis at auditory nerve synapses. N. F. WONG; M. A. XU-FRIEDMAN*. *SUNY Buffalo.*

1:00 B71 **202.25** The influence of sleep on the brain translatome. J. L. SANTOS*. *Univ. of Surrey.*

2:00 B72 **202.26** Input-specific homeostatic synaptic plasticity in the mouse visual cortex. Z. CAI*; M. SCANZIANI; M. XUE. *Baylor Col. of Med., Jan and Dan Duncan Neurolog. Res. Inst. at Texas Children's Hosp., Univ. of California, San Francisco.*

3:00 B73 **202.27** Synaptic retinoic acid receptor signaling mediates mTOR-dependent metaplasticity that controls hippocampal learning. Y. HSU*; J. LI; D. WU; T. C. SUDHOF; L. CHEN. *Stanford Univ., Stanford Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

203. Mechanisms Underlying Seizure Development and Epilepsy

Theme B – Neural Excitability/ Synapses/ and Glia

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 B74 **203.01** ● Reducing glycolytic flux decreases epileptic activity in the CA3 region of the rat hippocampus. Y. PAN*; T. P. SUTULA; P. A. RUTECKI. *Univ. of Wisconsin, William S. Middleton Mem. Veterans Hosp.*

2:00 B75 **203.02** Increasing expression of the delta subunit of the $GABA_A$ receptor in dentate granule cells alters expression of associated alpha 4 and gamma 2 subunits in a mouse model of epilepsy. Z. PENG; N. ZHANG; C. S. HUANG; M. WALLNER; C. R. HOUSER*. *David Geffen Sch. of Med. at UCLA, David Geffen Sch. of Med. at UCLA.*

3:00 B76 **203.03** ▲ Disrupted hippocampal synaptic plasticity in the Scn1b knockout model of Dravet syndrome. A. G. MCCONNELL; J. H. CHANCEY; M. A. HOWARD*. *Univ. of Texas at Austin.*

4:00 B77 **203.04** ● Characteristics of synaptic vesicle glycoprotein 2A (SV2A) binding in rat brain and changes after status epilepticus: A novel approach to measure presynaptic plasticity. J. D. MIKKELSEN*; V. FAGERHOLT; R. S. PETERSEN; B. A. PAZARLAR; S. C. PEDERSEN; M. LABROUZI; S. ALI; H. D. HANSEN; L. PINBORG; C. VERMEIREN; J. P. BANKSTAHL; P. BASCUÑANA; G. M. KNUDSEN. *Univ. Copenhagen - Rigshospitalet, UCB Pharma, Hannover Med. Sch.*

1:00 B78 **203.05** Reclusive chandeliers: Dentate axo-axonic cells are functionally isolated early after experimental status epilepticus. A. PRODDUTUR*; A. GUPTA; J. G. FERNÁNDEZ; V. SANTHAKUMAR. *Univ. of California Riverside, Rutgers NJMS, New Jersey Med. Sch. Dept. of Pharmacol. and Physiol.*

2:00 B79 **203.06** Characterization and functional role of neuronal chloride microdomains. N. RAHMATI*; K. NORMOYLE; J. C. GLYKYS; V. I. DZHALA; K. P. LILLIS; K. J. STALEY. *Harvard Med. Sch. and Massachusetts Gen. Hosp., Univ. of Iowa. Carver Col. of Med.*

3:00 B80 **203.07** Differential contributions from synaptic and extrasynaptic GABA-A receptors support dynamic shifts in circuit patterns during seizure evolution. D. E. NAYLOR*. *Veterans Admin. - UCLA.*

4:00 B81 **203.08** Spontaneous alterations in EEG spike patterns acutely after experimental traumatic brain injury. C. E. SANTANA-GOMEZ*; A. MOUSAVI; G. SMITH; B. RUNDLE; N. G. HARRIS; R. STABA. *David Geffen Sch. of Med. at UCLA, David Geffen Sch. of Med. at UCLA.*

1:00 B82 **203.09** Sex differences in KA-induced seizure propensity by genetic and pharmacological inhibition of brain-specific tyrosine phosphatase STEP. J. WALTERS*; S. JANG; H. JEONG; C. CHRISTIAN; H. CHUNG. *Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign.*

2:00 B83 **203.10** Variability in seizure phenotypes in individual rats with epilepsy. M. NAKATANI*; I. TOYODA; P. BUCKMASTER; C. BERNARD. *Aix-Marseille Université, INSREM U1106, UC Davis Sch. of Vet. Med., Stanford Univ., Aix-Marseille Université, INSREM U1106.*

3:00 B84 **203.11** The potassium channel Kv4.2 regulates dendritic morphology, seizure susceptibility, and electrographic dynamics in mice. D. TIWARI*; T. L. SCHAEFER; L. M. SCHROEDER-CARTER; J. M. KRZESKI; A. T. BUNK; A. SNIDER; R. DANZER; M. T. WILLIAMS; C. V. VORHEES; S. C. DANZER; C. GROSS. *Cincinnati Children's Hosp. Med. Ctr., Cincinnati Children's Hosp. Med. Ctr., Univ. of Cincinnati Col. of Med., Cincinnati Children's Hosp. Med. Ctr., Univ. of Cincinnati Col. of Med.*

4:00 B85 **203.12** Effects of TC-G 1008, GPR39 (zinc receptor) agonist in pentylenetetrazole-induced seizures and epilepsy. U. M. DOBOSZEWSKA*; K. GAWEL; C. V. ESGUERRA; K. SOCALA; M. PIEROG; D. NIEOCZYM; E. WYSKA; P. WLAZ. *Maria Curie Sklodowska Univ., Univ. of Oslo, Jagiellonian Univ. Med. Col.*

1:00 B86 **203.13** Enhanced intrinsic excitability and synaptic integration in CA1 pyramidal cells in the SCN1B mouse model of Dravet syndrome. J. H. CHANCEY*; M. A. HOWARD. *Univ. of Texas at Austin.*

2:00 B87 **203.14** Intramuscular administration of JNJ-55511118, a selective TARP-γ8 dependent AMPA receptor blocker, in the management of diisopropylfluorophosphate (DFP)-induced refractory status epilepticus in rats. A. DHIR*; M. A. ROGAWSKI. *Univ. of California, Davis.*

3:00 B88 **203.15** ● Superbursts: Investigation of abnormal paroxysmal bursting activity in neuronal networks *in vitro.* E. A. ROGERS*; N. SURI; R. SHI. *Purdue, Loyola Univ. Med. Ctr., Purdue Univ.*

4:00 B89 **203.16** Assessment of extracellular matrix in mouse models of acquired epilepsy. D. C. PATEL*; N. SWIFT; B. P. TEWARI; L. CHAUNSALI; H. SONTHEIMER. *Fralin Biomed. Res. Inst., Virginia Tech., Virginia Tech. Sch. of Neurosci.*

1:00 B90 **203.17** ● Vector-mediated pten deletion in adult dentate granule cells triggers *de novo* neuronal growth without apparent adverse consequences. J. M. YONAN*; K. M. YEE; O. STEWARD. *Univ. of California Irvine.*

2:00 B91 **203.18** A vitamin D enriched diet attenuates sex-specific behavioral deficits in the NS-Pten knockout mouse. P. D. WOMBLE*; S. L. HODGES; S. O. NOLAN; M. BINDER; A. HOLLEY; R. HERRERA; S. SENGER; D. JONES; E. KWOK; C. J. HERNANDEZ-ZEGADA; J. N. LUGO, JR. *Baylor Univ., Baylor Univ.*

3:00 B92 **203.19** Pten knockout cell load impacts dentate circuit abnormalities in a model of temporal lobe epilepsy. C. L. LASARGE*; R. Y. PUN; S. C. DANZER. *Cincinnati Children's Hosp. Med. Ctr., Cincinnati Children's Hosp. Med. Ctr., Univ. of Cincinnati.*

POSTER

204. Astrocyte Biology: Cellular, Molecular, and Genetic Mechanisms

Theme B – Neural Excitability/ Synapses/ and Glia

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 DP04/B93 **204.01** (Dynamic Poster) Unraveling ChR2 driven calcium dynamics in astrocytes - A call for new interventional paradigms. L. BALACHANDAR*; A. MOSHKFOROUSH; C. MONCION; M. PEREZ; J. SANTANA; J. RIERA. *Florida Intl. Univ., Florida Intl. Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 B94 **204.02** Developmental exposure to bisphenol A induces astrocytes activation in rat hippocampus. S. L. NORI*; P. DI PIETRO; V. NICOLIN; R. D'AURIA; R. MECCARIELLO; C. VECCHIONE; A. VIGGIANO; A. SANTORO. *Univ. of Salerno, Univ. of Salerno, Univ. of Trieste,Italy Dep of Med. Clin. Chir H, Parthenope Univ. of Naples.*

3:00 B95 **204.03** A new role for cortical astroglial cells in sexual differentiation of the cerebral cortex. G. M. RURAK*; S. SIMARD; A. VAN GEEL; J. STEAD; B. WOODSIDE; G. COPPOLA; N. SALMASO. *Carleton Univ., Concordia Univ., Yale Univ.*

4:00 B96 **204.04** ▲ Off-target recombination labels microglia in GLAST-CreERT2 mice. S. AFZAL; A. URBACH; K. KIRMSE; C. FRAHM; O. W. WITTE; S. SCHMIDT*. *Jena Univ. Hosp.*

1:00 B97 **204.05** Morphology influence the astrocytic bioenergetic preferences but not the chemokine release *in vitro*. P. KABIRAJ*; C. MCCARTHY; O. GAKH; R. JOHNSON; C. LUCCHINETTI; C. L. HOWE. *Mayo Clin.*

2:00 B98 **204.06** Impact of actin waves on ion and water membrane dynamics in astrocytes. K. M. O'NEILL*; E. SARACINO; L. MAIOLO; M. G. MOLA; A. CONVERTINO; V. GUARINO; T. POSATI; M. CAPRINI; G. FORTUNATO; R. ZAMBONI; L. AMBROSIO; G. P. NICCHIA; W. LOSERT; V. BENFENATI. *Univ. of Maryland, Col. Park, Consiglio Nazionale Delle Ricerche Area Della Rice, Consiglio Nazionale Delle Ricerche Area Della Rice, Univ. of Bari, Consiglio Nazionale Delle Ricerche Area Della Rice, Univ. of Bologna, Univ. of Maryland.*

3:00 B99 **204.07** The effect of electrical stimulation at different frequencies on astrocyte intracellular vesicle mobility. Y. WANG*; T. P. BURGHARDT; G. A. WORRELL; H. WANG. *Mayo Clin., Mayo Clin.*

4:00 B100 **204.08** Dynamic DNA methylation as a mechanism of epigenetic regulation in glial cells under excitotoxicity. A. G. RODRIGUEZ-CAMPUZANO*; A. ORTEGA. *Cinvestav-IPN.*

1:00 B101 **204.09** The role of astrocyte calcium signals in production of and response to inflammatory cytokines. M. NOVAKOVIC*; M. PRAKRIYA. *Northwestern Univ., Northwestern Univ. - Chicago.*

2:00 B102 **204.10** Transcriptional regulation of glycogen metabolism in astrocytes. W. L. LIM; A. W. J. TAN; T. H. CH'NG*. *Nanyang Technological Univ., Nanyang Technological Univ.*

3:00 C1 **204.11** Exogenous heme dysregulates Akt/mTOR signaling and downstream immune function in astrocytes. S. SANKAR*; K. SHAH; D. HANNA; M. BRYANT; A. REDDI; L. WOOD. *Georgia Inst. of Technol., Georgia Inst. of Technol., Georgia Inst. of Technol.*

4:00 C2 **204.12** Lactate administration recapitulates the astrocyte-specific neuroplastic effects of exercise. A. J. LUNDQUIST*; T. J. GALLAGHER; G. M. PETZINGER; M. W. JAKOWEC. *USC.*

1:00 C3 **204.13** AAV mediated astrocyte specific gene expression under human ALDH1L1 promoter. S. LEE*; C. J. LEE. *Korea Inst. of Sci. and Technol., Kist.*

2:00 C4 **204.14** The involvement of polyamine uptake and synthesis pathways in proliferation of neonatal astrocytes. C. J. MALPICA-NIEVES*; D. E. RIVERA-APONTE; F. TEJEDA-BAYRON; D. RÍOS-OTERO; A. ZAYAS-SANTIAGO; O. PHANSTIEL; M. J. EATON; S. SKATCHKOV. *Univ. Central Del Caribe-School of Med., Univ. Central Del Caribe-School of Med., Univ. Central Del Caribe-School of Med., Univ. of Central Florida, Univ. Central Del Caribe-School of Med.*

3:00 C5 **204.15** Age and sex-dependent effects of environmental enrichment on behaviour and astroglial plasticity. K. CHANDLER*; G. COPPOLA; H. DOSSO; S. SIMARD; N. SALMASO. *Carleton Univ., Yale Univ.*

4:00 C6 **204.16** Adult zebrafish astroglial response to olfactory organ damage in the olfactory bulb. J. SCHEIB*; C. BYRD-JACOBS*. *Western Michigan Univ.*

1:00 C7 **204.17** FGFR1 signaling in hypothalamic tanycytes. N. A. ESTEVE*; D. J. ROGERS; N. DUNN; R. TRAN; K. M. SMITH. *Univ. of Louisiana at Lafayette, Univ. of Louisiana at Lafayette.*

2:00 C8 **204.18** Differential distribution of Hh-responsive astrocytes in the adult mouse CNS suggest region-specific functions. M. S. RALLO*; H. WANG; Z. XU; Z. XIA; M. P. MATISE. *Rutgers Robert Wood Johnson Med. Sch.*

3:00 C9 **204.19** Assessing astrocyte morphology using Lucifer yellow iontophoresis. S. L. MOYE*; B. DIAZ-CASTRO; M. R. GANGWANI; B. S. KHAKH. *Univ. of California Los Angeles Dept. of Physiol., Univ. of California Los Angeles Dept. of Physiol.*

4:00 C10 **204.20** Immunohistological examination of AKT isoforms in the brain. R. MILSTEAD*; H. WONG; J. LEVENGA; C. HOEFFER, Jr. *Univ. of Colorado Boulder, DSM, Univ. of Colorado Boulder.*

1:00 DP02/C11 **204.21** (Dynamic Poster) Astrocytic mitochondrial populations in the striatum and hippocampus are morphologically and functionally distinct. T. E. HUNTINGTON*; T. PATTERSON; M. VALLE; R. SRINIVASAN. *Texas A&M Univ., Texas A&M Univ. Col. of Med.*

1:00 DP03/C12 **204.22** (Dynamic Poster) S100B alters functional properties in dopaminergic neurons via an extracellular mechanism. E. BANCROFT*; G. PANDEY; S. ZARATE; R. SRINIVASAN. *Texas A&M Univ. Col. of Med.*

3:00 C13 **204.23** ▲ Effects of 17-β estradiol on spatial working memory and AQP4 expression. J. J. MCINVALE*; L. C. KUPER; S. L. LAMBERT; J. BONANNO; L. A. NEWMAN. *Vassar Col., Vassar Col.*

4:00 C14 **204.24** Connexin43, an astrocytic gap junction protein, is selectively degraded by autophagy. S. KIM*; J. CHANG; S. LEE. *Hypoxia-Related Dis. Res. Center, Col. of Medicine, Inha Univ., ,Ajou Univ. Sch. of Med.*

1:00 C15 **204.25** The astrocyte neuron lactate shuttle modulates neuronal activity and sleep/wake cycles. M. CHIACCHIARETTA*; A. BRAGA; J. CLASADONTE; P. HAYDON. *TUFTS Univ. Sch. of Med.*

2:00 C16 **204.26** Sex-dependent effects of astrocyte DISC1 knockdown on glutamate transporter and cognitive behaviors in mice. A. V. SHEVELKIN*; C. TERRILLION; V. MISHENEVA; Y. JOUROUKHIN; O. A. MYCHKO; J. A. CRAWFORD; S. H. KIM; D. FUKUDOME; A. SAWA; A. KAMIYA; M. V. PLETNIKOV. *P.K.Anokhin Inst. Norm Physiol, Johns Hopkins Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 C17 **204.27** A role for hypothalamic astrocytes in regulating gonadotropin-releasing hormone (GnRH) neuron activity and LH release. C. H. VANACKER*; S. M. MOENTER. *Univ. of Michigan, Univ. of Michigan.*

4:00 C18 **204.28** Ceramide regulates interaction of Hsd17b4 with Pex5 and function of peroxisomes. Z. Z. ZHU*; J. CHEN; G. WANG; A. ELSHERBINI; L. ZHONG; X. JIANG; H. QIN; P. TRIPATHI; W. ZHI; S. SPASSIEVA; A. MORRIS; B. ERHARD. *Univ. of Kentucky, Saha Cardiovasc. Res. Center, Dept. of Intrnl. Medicine, Univ. of Kentucky, Lexington , KY, Dept. of Physiology, Univ. of Kentucky, Dept. of Physiology, Univ. of Kentucky, Univ. of Kentucky, Augusta Univ., The Gill Heart and Vascular Institute,University of Kentucky.*

POSTER

205. Mechanisms of Bi-Directional Glia-Neuron Communication

Theme B – Neural Excitability/ Synapses/ and Glia

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 C19 **205.01** Astrocytes enhance neural synchrony after spreading depolarization. N. ZHOU*; D. WU. *ShanghaiTech Univ., China Med. Univ.*

2:00 C20 **205.02** Astrocytic processes associated with synapses to orexin neurons: 3-dimensional analysis using correlative light-electron microscopy. K. SEMBA*; C. BRIGGS; S. HATADA; S. DEURVEILHER; Y. KUBOTA. *Dalhousie Univ., Natl. Inst. Physiol Sci. (NIPS).*

3:00 C21 **205.03** Neuromodulation of astrocytic K^+ clearance. Y. BUSKILA*; A. BELLOT-SAEZ; J. MORLEY. *Western Sydney Univ.*

4:00 C22 **205.04** Control of goal-directed actions by thrombospondin receptor α2δ-1. F. ULLOA SEVERINO*; C. SRIWORARAT; I. KIM; R. N. HUGHES; E. PETTER; H. H. YIN; C. EROGLU. *Duke Univ. Med. Ctr., Duke Univ. Med. Ctr., Univ. of Tennessee Hlth. and Sci. Ctr., Duke Univ. Med. Ctr.*

1:00 C23 **205.05** Activation of astrocytic Gi protein-coupled receptor causes conditioned place preference. M. NAM*; K. HAN; J. LEE; W. WON; W. KOH; J. BAE; J. WOO; J. KIM; E. KWONG; T. CHOI; H. CHUN; S. KIM; K. PARK; S. CHOI; Y. BAE; C. LEE. *KIST, Kyungpook Natl. Univ., Seoul Natl. Univ., Daegu-Gyeongbuk Med. Innovation Fndn.*

2:00 C24 **205.06** Astroglial Ca^{2+} signaling across sleep-wake states. L. BOJARSKAITE*; D. M. BJØRNSTAD; K. H. PETTERSEN; K. S. ÅBJØRSBRÅTEN; K. G. A. VERVAEKE; W. TANG; R. ENGER; E. A. NAGELHUS. *Univ. of Oslo, Univ. of Oslo.*

3:00 C25 **205.07** Ultrasonic neuromodulation via astrocytic TRPA1. S. OH*. *KIST.*

4:00 C26 **205.08** ▲ Role of astrocytes on mouse hippocampal synaptic plasticity and memory. P. M. AGOSTINHO*; M. PEREIRA; I. AMARAL; C. LOPES; P. CANAS; R. A. CUNHA. *Ctr. for Neurosciences and Cell Biol., Fac. of Medicine, Univ. of Coimbra, MIA-Portugal.*

1:00 C27 **205.09** Retinal inputs signal through astrocytes to recruit interneurons into mouse visual thalamus. R. SOMAIYA*; J. SU; N. CHARALAMBAKIS; A. MONAVARFESHANI; U. SABBAGH; W. GUIDO; M. A. FOX. *Virginia Tech., Univ. of Louisville.*

2:00 C28 **205.10** Immunoconfocal analysis of microglia associated with sleep/wake-regulatory orexin and melanin-concentrating hormone neurons in the rat lateral hypothalamus. S. HALL*; S. DEURVEILHER; K. SEMBA. *Dalhousie Univ., Dalhousie Univ., Dalhousie Univ.*

3:00 C29 **205.11** Limited astrocytic ensheathment of axospinous synapses in the rat nucleus accumbens core. S. R. SESACK; P. IYENGAR; G. BURNET; S. BIAGIOTTI; J. BALCITA-PEDICINO; Y. H. HUANG; Y. DONG*. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

4:00 C30 **205.12** Modulation of astrocytic Ca^{2+} activity in the motor cortex with learning. P. RAGUNATHAN*; A. DUNAEVSKY. *Univ. of Nebraska Med. Ctr.*

1:00 C31 **205.13** Circadian control of excitatory synaptic transmission in the hippocampus. J. MCCAULEY*; A. SCIMEMI; M. A. PETROCCIONE; G. TODD; N. AFFINNIH; S. ZAHID. *SUNY Albany, Univ. At Albany - SUNY, Univ. at Albany.*

2:00 C32 **205.14** Noradrenergic modulation of microglial dynamics and synaptic plasticity. R. STOWELL*; G. O. SIPE; A. K. MAJEWSKA. *Univ. of Rochester, MIT, Univ. of Rochester Med. Ctr.*

3:00 C33 **205.15** Astrocyte hypertrophy and increased tripartite formation in motor cortex after training. Y. KE*; Y. ZHENG; X. YANG; L. GENG; W. YUNG. *The Chinese Univ. of Hong Kong.*

4:00 C34 **205.16** Event based tool for assessing astroglial Ca^{2+} signal diversity. D. M. BJØRNSTAD*; K. S. ÅBJØRSBRÅTEN; L. BOJARSKAITE; K. H. PETTERSEN; E. A. NAGELHUS; R. ENGER. *Univ. In Oslo, Univ. of Oslo, Univ. of Oslo, Inst. of Basic Med. Sci., Univ. of Oslo.*

1:00 C35 **205.17** Validation of chemogenetic Gq-mediated astrocyte activation and its effects on synaptic transmission. Y. VAN DEN HERREWEGEN*; D. DE BUNDEL; A. VAN EECKHAUT; Z. A. BORTOLOTTO; I. SMOLDERS. *Vrije Univ. Brussel, Univ. of Bristol.*

2:00 C36 **205.18** Expansion microscopy of mouse prefrontal cortex reveals microglial engulfment of synaptically targeted intrabodies. T. JINADASA*; K. LIU KOT; R. PHADKE; A. COMER; S. MAI; F. HAUSMANN; A. CRUZ-MARTIN. *Boston Univ.*

3:00 C37 **205.19** Neuromodulator-mediated effects on somatosensory adaptation are associated with changes in extracellular potassium clearance. C. A. WOTTON; L. K. BEKAR*. *Univ. of Saskatchewan.*

4:00 C38 **205.20** Loss of the microglial protein AIF1/Iba1 affects synaptic structure-function, cognition and sociability. S. NANDI*; P. J. LITUMA; P. E. CASTILLO; N. E. S. SIBINGA. *Albert Einstein Col. of Med.*

1:00 C39 **205.21** Revealing constraints on behavioral state-dependent astroglia calcium dynamics through simultaneous monitoring of calcium dynamics in neuromodulatory terminals. E. LIM*; A. M. SALINAS; X. XHU; M. PAUKERT. *Univ. of Texas Hlth. San Antonio, Univ. of Texas Hlth. San Antonio.*

2:00 C40 **205.22** Dissecting the mechanisms underlying astroglia Ca^{2+} activation. A. M. SALINAS*; M. PAUKERT. *UT Hlth. San Antonio, UT Hlth. San Antonio.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 C41 **205.23** ● An integrated genomic approach to study astrocyte-induced maturation in human induced glutamatergic neurons. M. KOTTER*; M. ABDUL KARIM; K. BARANES; N. PATIKAS; E. METZAKOPIAN; S. COOPER; E. BELLO; A. BASSETT; D. TOURIGNY; J. O'NEIL. *Univ. of Cambridge, Univ. of Cambridge, Wellcome Sanger Inst., MRC Lab. of Mol. Biol.*

4:00 C42 **205.24** Contribution of astrocytic gap junctions and membrane potential to neocortical potassium redistribution. A. EBRAHIM AMINI*; P. BAZZIGALUPPI; B. STEFANOVIC; P. L. CARLEN. *Toronto Western Hosp., Sunny Brook Hosp., Sunnybrook Hlth. Sci. Ctr., Toronto Western Hosp.*

1:00 C43 **205.25** Glucose regulates astrocyte-neuron signaling in the nucleus tractus solitarii. C. MURAT*; V. ARAQUE; R. LEÃO; P. KOFUJI. *Univ. of São Paulo, Univ. of Minnesota.*

2:00 C44 **205.26** The pyruvate analogon oxamate reduces transacceleration and microstimulation-induced lactate transients in astrocytes and neurons in anesthetized mice. P. MÄCHLER*; M. T. WYSS; V. KAELIN; F. BARROS; B. WEBER. *UCSD, Univ. of Zürich, Univ. of Zurich, Ctr. for Scientific Studies, Inst. of Pharmacol. and Toxicology.*

3:00 C45 **205.27** Excitation states of metabolic networks predict ligand pulse phase signalling and dose-response fingerprinting. J. S. COGGAN*; D. KELLER; H. MARKRAM; F. SCHUERMANN; P. J. MAGISTRETTI. *EPFL, Blue Brain Project, King Abdullah Univ. of Sci. and Technol.*

4:00 C46 **205.28** Simulation of *in vivo* measurements of co-active neural, lactate, and glucose activity in a visual-cortical neuro-energetic network. R. NOACK; R. KOZMA*. *Univ. of Massachusetts Amherst, Univ. of Massachusetts Amherst, Univ. of Memphis.*

1:00 C47 **205.29** Glycogen functions in brain and muscle to maintain the free energy of rapid ATP hydrolysis. R. A. SWANSON*. *U.C.S.F.*

POSTER

206. Molecular and Cellular Mechanisms of Demyelinating Disorders

Theme B – Neural Excitability/ Synapses/ and Glia

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 C48 **206.01** Demyelination and interferon signaling in axons cause retrograde upregulation of neuronal ISGylation pathway genes. B. CLARKSON*; C. L. HOWE. *Mayo Clin.*

2:00 C49 **206.02** Oligodendrocyte-specific NF-κB activation protects mice against experimental autoimmune encephalomyelitis. W. LIN*; Y. YUE. *Univ. of Minnesota Dept. of Neurosci., Univ. of Minnesota.*

3:00 C50 **206.03** ▲ Activation of the necroptosis signaling cascade in cortical neurons in MS. C. PICON MUNOZ*; R. JAMES; N. D. MAZARAKIS; R. REYNOLDS. *Imperial Col. London.*

4:00 C51 **206.04** Role of ferroptosis in experimental autoimmune encephalomyelitis and cuprizone-induced demyelination. P. JHELUM*; E. SANTOS-NOGUEIRA; A. HAUMONT; S. DAVID. *McGill Univ. Hlth. Ctr.*

1:00 C52 **206.05** A mouse model with deletion of the thrombin cleavage site in Neurofascin 155. R. D. FIELDS*; D. J. DUTTA. *NIH, NIH.*

2:00 C53 **206.06** Impairment of small RNAs into mitochondria can cause abnormal myelination and neuronal cell death. M. UEMATSU*; Y. NUMATA-UEMATSU; A. KIKUCHI; R. SATO; N. ARAI-ICHINOI; S. KURE. *Tohoku Univ. Grad. Sch. of Med.*

3:00 C54 **206.07** Epigenomic regulation of nerve injury genes in Schwann cells. P. DUONG; K. MAH; R. RAMESH*; R. AWATRAMANI; J. SVAREN. *Univ. of Wisconsin Madison, Northwestern Univ.*

4:00 C55 **206.08** Dynamic response of microglia/ macrophage polarization following demyelination in mice. T. CHU; Y. ZHANG; Z. TIAN; C. YE; M. ZHU; L. B. E. SHIELDS; G. N. BARNES; C. B. SHIELDS; J. CAI*. *Univ. of Louisville Sch. of Med., Norton Neurosci. Institute, Norton Healthcare, China-Japan Union Hosp. of Jilin Univ., The Second Affiliated Hosp. and Yuying Children's Hosp. of Wenzhou Med. Univ., Univ. of Louisville Sch. of Med., Univ. of Louisville Sch. of Med.*

1:00 C56 **206.09** Subarachnoid hemorrhage results in hippocampal atrophy and suppression of oligodendrocyte genes expression. A. S. REGNIER-GOLANOV*; M. S. HERNANDEZ; C. KARMONIK; L. M. PHAN; L. E. PETERSON; E. V. GOLANOV; G. W. BRITZ. *Houston Methodist Hosp.*

2:00 C57 **206.10** Metabolic manipulation of immune partners in central nervous system inflammation shapes cytotoxic T cell activation. E. M. GRUND*; M. M. STANDIFORD; B. D. S. CLARKSON; C. L. HOWE. *Mayo Clin. Med. Scientist Training Program, Mayo Grad. Sch., Mayo Clin., Mayo Clin.*

3:00 C58 **206.11** Cnp-Cre;Mek1DD/+ mice exhibit attenuated experimental autoimmune encephalomyelitis and increased regulatory B10 cell activation. M. A. JEFFRIES*; A. E. OBR; K. URBANEK; S. L. FYFFE-MARICICH; T. L. WOOD. *Rutgers Univ., Univ. of Pittsburgh.*

4:00 C59 **206.12** Platelet activating factor deteriorates lysophosphatidylcholine-induced demyelination via its receptor-dependent and -independent mechanisms. Z. TIAN; T. CHU*; L. B. E. SHIELDS; Q. ZHU; Y. ZHANG; G. N. BARNES; Y. WANG; C. B. SHIELDS; J. CAI. *China-Japan Union Hosp. of Jilin Univ., Univ. of Louisville Sch. of Med., Norton Neurosci. Institute, Norton Healthcare, Univ. of Louisville Sch. of Med., The First Hosp. Fo Jilin Univ.*

1:00 C60 **206.13** Axonal damage and behavioral correlates in myelin repair after chronic CNS demyelination. G. SAMTANI*; D. MICHAUD; K. KONGANTI; S. KIM; J. LI. *Texas A&M Univ., Texas A&M Univ., Texas A&M Univ.*

2:00 C61 **206.14** Quantifying myelination of single neurons using spatial light interference microscopy (SLIM). Y. LEE*; M. FANOUS; A. LOUIE; A. STEELMAN; C. BEST-POPESCU; G. POPESCU; M. CAPUTO; L. RUND; R. JOHNSON; T. DAS; M. KUCHAN. *Univ. of Illinois Urbana-Champaign, Beckman Inst. for Advanced Sci. and Technol., Beckman Inst. for Advanced Sci. and Technol., Div. of Nutritional Sci., Dept. of Animal Sci., Beckman Inst. for Advanced Sci. and Technol., Univ. of Illinois Urbana-Champaign, Lab. of Integrative Immunol. & Behavior, Abbott Nutr., Abbott Nutr.*

3:00 C62 **206.15** Tracking the evolution of CNS remyelinating lesion with neutral red dye. M. BAYDYUK*; D. S. CHA; J. HU; R. YAMAZAKI; E. M. MILLER; V. N. SMITH; J. K. HUANG. *Georgetown Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 C63 **206.16** ▲ Gcn2 plays a protective role in a pharmacological demyelination model. A. E. BRITO*; P. FALCON; M. ESCANDON; C. JEREZ; Y. MARAMBIO; S. MATUS-MONTERO. *Fundación Ciencia Y Vida.*

1:00 C64 **206.17** ● Small molecule inhibition of the muscarinic M1 acetylcholine receptor by potent, selective antagonists facilitates OPC differentiation. M. M. POON*; K. I. LORRAIN; A. LORENZANA; K. J. STEBBINS; A. BROADHEAD; T. SCHRADER; Y. XIONG; J. BACCEI; A. J. GREEN; J. R. CHAN; D. S. LORRAIN. *Pipeline Therapeut., Pipeline Therapeut., UCSF, Pipeline Therapeut.*

2:00 C65 **206.18** ● PIPE-359, a novel, potent and selective muscarinic M1 receptor antagonist as a therapeutic approach for remyelination in multiple sclerosis. K. J. S. STEBBINS*; M. M. POON; A. BROADHEAD; G. C. EDU; A. LORENZANA; K. I. LORRAIN; T. SCHRADER; Y. XIONG; J. BACCEI; C. BACCEI; A. GREEN; J. R. CHAN; D. S. LORRAIN. *Pipeline Therapeutics, Inc., UCSF, UCSF.*

3:00 C66 **206.19** ● The muscarinic M1 antagonist PIPE-359 demonstrates remyelination *in vivo* through visual evoked potential (VEP) and electron microscopy (EM) in mice with experimental autoimmune encephalitis (EAE). G. C. EDU*; K. J. STEBBINS; A. R. BROADHEAD; M. M. POON; A. O. LORENZANA; T. O. SCHRADER; Y. XIONG; J. BACCEI; A. J. GREEN; J. R. CHAN; D. S. LORRAIN. *Pipeline Therapeut., Univ. of California San Francisco.*

4:00 C67 **206.20** Cell modeling and assay development for Krabbe disease. A. MANAVALAN; A. HERDT; W. CHING; C. LEE*. *Biomed. Res. Inst. of New Jersey.*

1:00 C68 **206.21** ● Developing better biomarkers to track demyelination *in vivo* in a cuprizone mouse model. E. DEFENSOR; M. LIM; L. SCHAEVITZ*. *Vium.*

2:00 C69 **206.22** Oligodendrogenesis from neural stem cells is inhibited by GPNMB. D. Z. RADECKI*; J. SAMANTA. *Univ. of Wisconsin-Madison, Univ. of Wisconsin Madison.*

POSTER

207. Demyelinating Disorders: Human and Animal Studies and Therapeutics

Theme B – Neural Excitability/ Synapses/ and Glia

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 C70 **207.01** Effects of a modified ketogenic diet on motor and cognitive function, peptidylarginine deiminase 2 expression, neural and immune cells in the experimental autoimmune encephalomyelitis (EAE) model of multiple sclerosis. J. WILLIS; B. BETHKE; D. V. WIDZOWSKI*. *Indiana Univ. of Pennsylvania, St. Vincent Col.*

2:00 C71 **207.02** ▲ Gli2 is necessary for remyelination by ventral neural stem cells. H. MESSLING*; D. Z. RADECKI; J. HAGGERTY-SKEANS; J. L. SALZER; J. SAMANTA. *Univ. of Wisconsin - Madison, Univ. of Wisconsin-Madison, NYU Langone Med. Ctr., Univ. of Wisconsin Madison.*

3:00 C72 **207.03** Brain targeted and biodegradable nanoparticles for enzyme replacement therapy in a Krabbe disease mouse model. A. DEL GROSSO*; M. GALLIANI; L. ANGELLA; M. SANTI; I. TONAZZINI; G. PARLANTI; G. SIGNORE; M. CECCHINI. *NEST, Isituto Nanoscienze-CNR and Scuola Normale Superiore, NEST, Isituto Nanoscienze-CNR and Scuola Normale Superiore; Ctr. of Nanotechnology Innovation@NEST, Ctr. of Nanotechnology Innovation@ NEST, NEST, Isituto Nanoscienze-CNR and Scuola Normale Superiore; Ctr. of Nanotechnology Innovation@NEST; Fondazione Pisana per la Scienza ONLUS.*

4:00 C73 **207.04** What is “conventional therapy”? A 10-years systematic review on physical rehabilitation in multiple sclerosis. L. FALCIATI*; L. VACCHI; M. BALDUZZI; M. MAZZUCCHELLI; M. GOBBO. *Univ. of Brescia, Univ. of Milan-Bicocca.*

1:00 C74 **207.05** Progressive multiple sclerosis demonstrates greater sensorimotor function disparity between upper and lower extremities compared to relapsing-remitting and controls. S. SATO*; J. BUONACCORSI; J. D. MIEHM; C. RAJALA; J. LIM; J. A. KENT; R. E. A. VAN EMMERIK. *Univ. of Massachusetts, Amherst, Univ. of Massachusetts, Amherst, Univ. of Massachusetts, Amherst, Texas A&M University, San Antonio.*

2:00 C75 **207.06** Myelin breakdown favors mycobacterium leprae survival in Schwann cells. B. J. DE SOUZA*; E. N. SARNO; F. A. LARA; B. S. MIETTO. *FIOCRUZ, Federal Univ. of Juiz de Fora (UFJF).*

3:00 C76 **207.07** Derivation of human bone marrow -derived glial progenitor cells for remyelination therapy. Y. TSUI; G. LAM; K. WU; Y. CHAN; D. K. SHUM; G. K. SHEA*. *Sch. of Biomedic. Sci., Fac. Med., Univ. Hong Kong, Dept. Orthopaedics & Traumatology., Fac. Med., Univ. Hong Kong.*

4:00 C77 **207.08** Effects of ketogenic diet on remyelination in a cuprizone/rapamycin model of demyelination. N. ALAEIILKHCHI*; K. KOLEHMAINEN; O. SEIRA; W. T. PLUNET; J. LIU; W. TETZLAFF. *Intl. Collaboration on Repair Discoveries, ICORD/UBC, Univ. of British Columbia, Univ. of British Columbia, ICORD.*

1:00 C78 **207.09** ▲ Moderate alcohol consumption affects the gut microbiome in a murine multiple sclerosis model. C. MAGUIRE*; B. CASLIN; A. KARMAKAR; K. HELMSDOERFER; K. MOHLER; J. WARD; D. WYLIE; E. MELAMED. *The Univ. of Texas at Austin, The Univ. of Texas at Austin, The Univ. of Texas at Austin.*

2:00 C79 **207.10** Exploring the physical and behavioral effects of a potassium channel antagonist in young adult male rats. A. D. TROFIMOVA*; P. S. GIFFORD; D. A. HESSINGER; D. L. BELLINGER; R. E. HARTMAN. *Loma Linda Univ., Loma Linda Univ.*

3:00 C80 **207.11** Targeting OPC-expressed extracellular endosulfatase to overcome the local inhibitory microenvironment following demyelination. D. SARASWAT*; H. J. SHAYYA; J. J. POLANCO; R. R. WELLIVER; S. U. POL; J. E. BROOME; M. A. O’BARA; T. V. KUPPERVELT; J. PHILLIPS; F. J. SIM. *Jacob’s Sch. of Med. and Biomed. Sciences, Univ. at Buffalo, Jacob’s Sch. of Med. and Biomed. Sciences,University at Buffalo, Radboud Inst. for Mol. Life Sciences, Radboud Univ. Med. Ctr., Univ. of California.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract’s submitting author

4:00 C81 **207.12** Alterations of neuronal network functionality, brain cytomorphology and behavior following de- and remyelination. M. CERINA*; M. MUTHURAMAN; M. GALLUS; N. KOIRALA; A. DIK; L. WACHSMUTH; P. HUNDEHEGE; P. SCHIFFLER; J. TENBERGE; V. FLEISCHER; G. GONZALEZ-ESCAMILLA; V. NARAYANAN; C. FABER; T. BUDDE; S. GROPPA; S. MEUTH. *Dept. of Neurol. with Inst. of Translational Neurol. - Univ. of Münster, Johannes Gutenberg Univ., Univ. of Münster, Inst. of Physiol. I - Univ. of Münster.*

1:00 C82 **207.13** Characterization of the MOG_{35-55} induced experimental autoimmune encephalomyelitis (EAE) model of MS in mouse by imaging, behavior, gene expression profiling and neurofilament light chain (NfL) quantification. J. TOIVANEN; L. MCMILLAN; K. M. PALDANIUS; K. LEHTIMÄKI; R. NUNAN; R. JENKINSON; J. OKSMAN*; D. MISZCZUK. *Charles River Discovery, Charles River Discovery.*

2:00 C83 **207.14** Predicting conduction delays using structural MRI in multiple sclerosis patients. S. BERMAN*; D. KARUSSIS; N. LEVIN; Y. BACKNER; P. PETROU; A. A. MEZER. *Edmond and Lily Safra Ctr. For Brain Sciences, T, Hadassah Hebrew Univ. Hosp., The Hebrew Univ. of Jerusalem.*

3:00 C84 **207.15** Chronic high fat diet results in mitochondria dysfunction and oligodendrocyte loss in the spinal cord in a NAD-dependent fashion. M. R. LANGLEY*; H. YOON; H. N. KIM; W. SIMON; L. KLEPPE; I. R. LANZA; A. MATVEYENKO; N. LABRASSEUR; C. CHINI; E. CHINI; I. A. SCARISBRICK. *Mayo Clin., Mayo Clin., Mayo Clin., Mayo Clin., Mayo Clin., Mayo Clin.*

4:00 C85 **207.16** The metabotropic receptor agonist, CHPG, reverses clinical signs in mice subjected to experimental autoimmune encephalomyelitis (EAE). T. M. PLANAS FONTANEZ*; A. DE STEFANO; T. SULLIVAN; Y. HUANG; C. F. DREYFUS. *Rutgers Univ., Rutgers Robert Wood Johnson Med. Sch., Rutgers Robert Wood Johnson Med. Sch., Rutgers Univ., Rutgers Robert Wood Johnson Med. Sch.*

1:00 C86 **207.17** Refinement of axonal function during development of the mouse optic nerve. A. BALRAJ*; R. H. MILLER. *George Washington Univ.*

2:00 C87 **207.18** Absence of microglial activation inhibits complete remyelination in cerebellar slices. K. S. GIVEN; Y. LIU; G. P. OWENS; J. L. BENNETT; W. B. MACKLIN*. *Univ. of Colorado:AMC, Univ. of Colorado:AMC.*

3:00 C88 **207.19** Cns pathology and motor deficits observed following injection of multiple sclerosis CSF derived recombinant antibodies is limited to primary progressive MS. F. CALI; A. L. TSE; J. K. WONG; J. LIN*; S. A. SADIQ. *Tisch MS Res. Ctr. of New York.*

4:00 C89 **207.20** ● Cerebrospinal fluid pheresis may have therapeutic value in primary progressive multiple sclerosis. J. K. WONG*; A. K. ROSELLE; S. J. E. SHIMSHAK; L. ZITELLA VERBICK; N. NAZARIAN; A. MCCABE; S. A. SADIQ. *Tisch MS Res. Ctr. of New York, Minnetronix Neuro.*

1:00 C90 **207.21** ● Measuring high field MRI imaging pipeline specificity using novel mouse brain model with diverse lesions. S. U. POL*; J. BONSIGNORE; M. DWYER; M. PREDA; M. SVEINSSON; F. SCHWESER; R. ZIVADINOV. *Univ. at Buffalo, Univ. at Buffalo.*

POSTER

208. Brain Wellness and Aging: Pharmacological and Non-Pharmacological Interventions

Theme C – Neurodegenerative Disorders and Injury

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 C91 **208.01** The potential of plasma lipoprotein profiles as a cognitive biomarker in a dietary intervention for obese females. A. KARSTENS*; S. CORONEL; K. PANCHAPAKESAN; Y. SALEH; B. XIANG; A. C. VALENCIA; M. LADU. *Univ. of Illinois, Chicago, Univ. of Illinois, Chicago.*

2:00 C92 **208.02** Histone deacetylase inhibitor tacedinaline decreases aged related neurological side effects induced by haloperidol. B. M. MCCLARTY*; G. RODRIGUEZ; S. CHAKRABORTY; H. DONG. *Northwestern Univ. Feinberg Sch. of Med.*

3:00 D1 **208.03** Effects of transcranial direct current stimulation of the dorsolateral prefrontal and parietal cortex on dual-task performance involving manual dexterity and cognitive task in healthy old adults. M. R. LJUBISAVLJEVIC; J. OOMMEN; S. FILIPOVIC; J. BJEKIC; N. SZOLICS; N. NAGELKERKE; G. C. BAYLIS*. *Col. of Med. and Hlth. Sci., Inst. for Med. Res., Tawam Hosp., Col. of Medicien and Hlth. Sci., United Arab Emirates Univ.*

4:00 D2 **208.04** ● Light driven neurovascular modulation as a novel treatment method for mild cognitive impairment. W. JEONG*; N. KIM; C. HEO; K. PARK; J. LEE; M. RYU; J. KIM; K. PAK; Y. KIM; Y. SHIN. *Color Seven Co., Ltd., Sung Kyun Kwan Univ., Chonbuk Natl. Univ., Sungkyunkwan Univ., Pusan Natl. Univ. Hosp., Samsung Med. Cntr, Sungkyunkwan Univ., Pusan Natl. Univ. Yangsan Hosp.*

1:00 D3 **208.05** Physical activity context correlates with hippocampal subfield and nuclei of the amygdala volume. S. LOZANO-SEOANE*; L. EZAMA-FORONDA; N. JANSSEN. *Univ. of La Laguna.*

2:00 D4 **208.06** Dorsolateral prefrontal cortex plasiticiy based video game training in older adults. H. LI*; P. WANG. *Inst. of Psychology, Chinese Acad. of Scienc, Inst. of Psychology, Chinese Acad. of Sci.*

3:00 D5 **208.07** Molecular mass spectrometry imaging reveals age-related changes of multiple neurotransmitter systems in response to acetylcholine esterase inhibition. E. FRIDJONSDOTTIR; T. VALLIANATOU; M. SHARIATGORJI; A. NILSSON; P. SVENNINGSSON; P. E. ANDREN*. *Uppsala Univ., Dept. of Clin. Neuroscience; Karolinska Institutet.*

4:00 D6 **208.08** Interplay between 5-HT_4 receptors and GABAergic system within CA1 hippocampal synaptic plasticity. M. BOULOUARD*; P. LECOUFLET; J. BILLARD; P. SCHUMANN-BARD; T. FRERET. *Univ. de Caen / INSERM.*

1:00 D7 **208.09** Diet modulates stability of brain networks in young adults. L. R. MUJICA-PARODI*; A. AMGALAN; S. F. SULTAN; S. SKIENA; A. LITHEN; N. ADRA; E. M. RATAI; N. A. SMITH; R. VEECH; K. CLARKE. *Renaissance Sch. of Medicine, SUNY Stony Brook, Renaissance Sch. of Medicine, SUNY Stony Brook, SUNY Stony Brook, Massachusetts Gen. Hosp., Children's Natl. Hlth. Syst., NIH, Oxford Univ.*

2:00 D8 **208.10** ● Guayusa induced neurotransmitter release in the rat prefrontal cortex. N. MORISOT; L. YU; A. MALIK; J. ROESER; G. PETERSEN; C. FIELDS; H. B. JANSSENS; A. RASSOULPOUR*. *Charles River Labs., Applied Food Sci.*

Sun. PM

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 D9 **208.11** Aging, circadian rhythms, and cannabinoids. E. L. HODGES*; N. M. ASHPOLE. *Univ. of Mississippi.*

4:00 D10 **208.12** Safety and feasibility of PhytoSERM - A selective β-receptor phytoestrogen formulation - for menopausal symptoms and cognitive decline: Phase 1b/2a clinical trial. G. D. HERNANDEZ*; Y. WANG; L. ZHAO; W. J. MACK; L. SCHNEIDER; R. D. BRINTON. *Univ. of Arizona, Univ. of Kansas, USC.*

1:00 D11 **208.13** Individual and synergistic effects of walnut oil and blueberry treatments on reducing neuroinflammation in rat microglial cells *in vitro.* D. R. FISHER; D. S. CAHOON; B. SHUKITT-HALE*. *USDA-ARS Human Nutr. Res. Ctr. on Aging.*

2:00 D12 **208.14** Blueberry extract attenuates the *in vitro* expression of oxidative stress and inflammation markers in adult human neural progenitor cells. D. F. BIELINSKI; B. SHUKITT-HALE; D. STEINDLER; T. ZHENG*. *USDA Human Nutr. Res. Ctr, Tufts Univ.*

3:00 D13 **208.15** A novel strategy to precisely target individual steps in the APP amyloidogenic processing. R. BRANDIMARTI*; J. LUCHETTA; I. G. ERALP; O. MEUCCI. *Drexel Univ. Col. of Med., Univ. of Bologna.*

POSTER

209. Brain Wellness and Aging: Systemic Factors and Brain Function

Theme C – Neurodegenerative Disorders and Injury

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 D14 **209.01** ▲ Short-term chronic systemic inflammation affects spatial memory and central inflammation throughout adulthood. L. L. WILLIAMSON*; M. FREY. *Northern Kentucky Univ., Williams Col.*

2:00 D15 **209.02** Humanin, a bioactive peptide, increases hippocampal acetylcholine level in normal mice. N. IKEGAWA; M. MURAKAMI; T. NIIKURA*. *Sophia Univ.*

1:00 DP05/D16 **209.03** (Dynamic Poster) Sleep-wake cycle, cognitive functions and adult neurogenesis during aging in a non-human primate. J. ROYO*; O. ZOLARIO; F. AUJARD; F. PIFFERI. *Natl. Museum of Natural History (MNHN)/French Ctr. for Scientific Res. (CNRS).*

4:00 D17 **209.04** Sex comparisons of binge ethanol-induced neurodegeneration in a rodent model. R. K. WEST*; J. L. LEASURE. *Univ. of Houston.*

1:00 D18 **209.05** Age-dependent changes in the periodontium and the neuropathological features of 3xTg mice as well as the impact of periodontitis on Alzheimer's disease. R. P. H. WANG*; S. S. Y. ZHANG; X. X. WANG; W. K. LEUNG; J. Y. S. HO; R. C. C. CHANG. *The Univ. of Hong Kong, The Univ. of Hong Kong, The Hong Kong Polytechnic Univ., The Univ. of Hong Kong.*

2:00 D19 **209.06** Targeted metabolomics of mouse brain - Small phenolic molecules from gut microbiota. M. E. OBRENOVICH; C. J. DONSKEY; G. E. JASKIW*. *Louis Stokes Cleveland DVAMC, Louis Stokes Cleveland DVAMC, Louis Stokes Cleveland DVAMC.*

3:00 D20 **209.07** Multimodal MR imaging of environmentally enriched and diet restricted rat model of healthy ageing. E. MACNICOL*; K. RANDALL; C. SIMMONS; E. KIM; M. BERNANOS; F. E. TURKHEIMER; D. CASH. *King's Col. London.*

4:00 D21 **209.08** ▲ Understanding the impact of chronic low-dose, low energy, proton radiation on systemic inflammation and anxiety-like behaviors in mice. P. NOLTE*; V. PARKER; P. A. DEYOUNG; P. D. RIVERA. *Hope Col., Hope Col.*

1:00 D22 **209.09** Alpha peak frequency shifts: The long and short of it. A. PATHAK*; D. ROY; A. BANERJEE. *Natl. Brain Res. Ctr.*

2:00 D23 **209.10** Case study of an aging monkey pre and post mortem: Cognitive decline, Alzheimer's disease markers, immunological response, and neurogenesis. J. J. NEIWORTH*; C. LEPPINK-SHANDS; C. LIPHART. *Carleton Col., Carleton Col.*

3:00 D24 **209.11** The effects of antibiotics and probiotics on memory, depression, and the hippocampus across age groups. A. G. POWELL*; R. M. FARMER; R. P. FORD; E. M. GOTT; C. M. GREGG; A. R. KNIFFIN; S. M. MOSELEY; V. A. WRIGHT; E. A. ZIHAL; M. L. SHOUP-KNOX. *James Madison Univ.*

4:00 D25 **209.12** ▲ The effects of environmental enrichment and high-fat diet on aged mice. P. SONI; P. GHOTRA; T. SIMON; J. MAGANA; K. TIRADO-GONZALEZ; A. LEMUS; K. THOMASSIAN; J. MEISNER; T. UHLENDORF; L. R. BANNER*. *California State Univ. Northridge.*

POSTER

210. Alzheimer's Disease: Genetics

Theme C – Neurodegenerative Disorders and Injury

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 D26 **210.01** Gene expression reveals molecular insight for selective vulnerability in Alzheimer's disease. O. GOZUTOK*; S. PARK; E. OZALTIN; P. OZDINLER. *Northwestern Univ. Feinberg Sch. of Med., Gebze Tech. Univ.*

2:00 D27 **210.02** ● Introduction of deletion mutations associated with Alzheimer's disease into mouse genome. K. SATO*; H. SASAGURI; K. NAGATA; T. OHSHIMA; T. SAIDO. *Ctr. For Brain Science, RIKEN, Waseda Universtiy, Osaka Univ. Grad. Sch. of Med.*

3:00 D28 **210.03** ● ▲ Characterizing the performance of an Alzheimer's disease model rat in the traveling salesperson task (TSP). A. UNAPANTA; B. BUTUK; J. B. HALES; R. BLASER*. *Univ. of San Diego, Univ. of San Diego.*

4:00 D29 **210.04** The correlations among cognitive functions, postmortem brain pathologies and Alzheimer's disease related SNPs: A study based on Human Brain Bank in China. Q. YANG*. *Peking Union Med. Col.*

1:00 D30 **210.05** Exploring the role of MIR-138 in the onset of Alzheimer's disease. E. BOSCHER*; C. GOUPIL; S. HÉBERT. *CRCHU De Québec-Université Laval.*

2:00 D31 **210.06** The role of sigma-1-receptor in endoplasmic reticulum stress and Alzheimer's disease. T. NGUYEN*; K. FERGUSON; R. BERGERON. *Univ. of Ottawa, Ottawa Hosp. Res. Inst.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 D32 **210.07** Rare functional angiotensin I converting enzyme genetic variants increase the risk of Alzheimer's disease. L. K. CUDDY*; D. PROKOPENKO; R. BRIMBERRY; E. CUNNINGHAM; P. SONG; D. PROCISSI; T. HANANIA; S. C. LEISER; R. E. TANZI; R. J. VASSAR. *Northwestern Univ., Massachusetts Gen Hosp, Harvard Med. Sch., Northwestern Univ., Northwestern Radiology, PsychoGenics.*

4:00 D33 **210.08** ▲ Evaluation of polymorphisms in the GSK3, MAPT, and HSP genes, as possible risk markers in refractory epilepsy and Alzheimer's disease. V. CAMPOS-PEÑA*; P. PICHARDO-ROJAS; G. RAMOS; D. GALVEZ; D. TORAL. *Inst. Nacional de Neurología Y Neurocirugía, Univ. Autónoma de Baja California, Mc Gill Univ., UAM, Ctr. de Investigación Y de Estudios Avanzados.*

1:00 D34 **210.09** Cross-species analyses identify Dlgap2 as a mediator of age-related cognitive decline and Alzheimer's disease. S. M. NEUNER*; L. DUMITRESCU; L. ANDERSON; D. M. GATTI; A. R. OUELLETTE; E. MAHONY; J. A. BUBIER; G. CHURCHILL; L. PETERS; H. YANG; C. REITZ; B. KUNKLE; C. C. WHITE; P. L. DE JAGER; J. A. SCHNEIDER; D. A. BENNETT; E. J. CHESLER; T. J. HOHMAN; C. C. KACZOROWSKI. *The Jackson Lab., The Univ. of Tennessee, Vanderbilt Univ. Med. Ctr., The Jackson Lab., The Jackson Lab., Massachusetts Gen. Hospital, Harvard Med. Sch., Brigham and Women's Hospital, Harvard Med. Sch., Broad Inst. of MIT and Harvard, Columbia Univ., Columbia Univ., Columbia Univ., Univ. of Miami, Columbia Univ. Med. Ctr., Rush Univ. Med. Ctr.*

2:00 D35 **210.10** Genetic interaction of PICALM and APOE in Alzheimer's disease. B. R. PLUIMER*; X. W. XIE; Y. WU; J. ZENG; Z. ZHAO. *USC, USC, USC.*

POSTER

211. Tau: Preclinical and Clinical Pathology

Theme C – Neurodegenerative Disorders and Injury

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 D36 **211.01** Temporal and regional mapping of tau expression in the developing human brain. K. L. FIOCK; M. E. SMALLEY; J. F. CRARY; M. M. HEFTI*. *University of Iowa, Icahn Sch. of Med. At Mount Sinai, Univ. of Iowa.*

2:00 D37 **211.02** Oligomeric, hyperphosphorylated, and conformational tau pathology in the medial temporal lobe during the onset of Alzheimer's disease. L. MAHADY*; M. NADEEM; S. PEREZ; B. HE; M. MALEK-AHMADI; E. MUFSON. *Barrow Neurolog. Inst., Banner Alzheimer's Inst.*

3:00 D38 **211.03** Dysregulation of neurotransmitter receptor gene expression is associated with tau oligomerization in cholinergic basal forebrain neurons during the progression of Alzheimer's disease. J. S. BECK; S. D. GINSBERG; N. M. KANAAN; C. T. TIERNAN; E. J. MUFSON; S. E. COUNTS*. *Michigan State Univ., Nathan S Kline Institute/NYU Langone Med. Ctr., Grand Valley State, Barrow Neurolog. Inst., Michigan Alzheimer's Dis. Ctr.*

4:00 D39 **211.04** Frontal cortex spliceosome deficits in early Alzheimer's disease. M. NADEEM*; S. E. PEREZ; B. HE; L. MAHADY; E. J. MUFSON. *Barrow Neurolog. Inst.*

1:00 D40 **211.05** Matrix metalloproteinase-9 and tau are related to white matter hyperintensity burden in individuals with Alzheimer's disease. K. K. LAING*; I. C. TURNEY; H. W. MORENO; F. C. BARONE; A. M. BRICKMAN. *Columbia Univ., SUNY Downstate, SUNY Downstate Med. Ctr.*

2:00 D41 **211.06** Rna binding proteins in tauopathy. R. SPEAR*; M. TAKACS; K. FUSHIMI; J. WU; W. A. MCGEE; A. KAR. *Northwestern Univ., Northwestern Univ., Northwestern Univ. Sch. Med., Northwestern Univ. Feinberg Sch. of Med., NIH.*

3:00 D42 **211.07** Chronic neuronal activation by optogenetics enhances seed-induced Alzheimer's disease like tau pathology spreading. I. NISHIDA*; K. YAMADA; T. WAKABAYASHI; T. IWATSUBO. *The Univ. of Tokyo, The Univ. of Tokyo.*

4:00 D43 **211.08** Truncation of tau at Asp421 ameliorated full-length human tau's toxicity under hyperphosphorylation condition. H. CHI*, Mr; T. SANG. *Natl. Tsing Hua Univ., Natl. Tsing Hua Univ.*

1:00 D44 **211.09** Short- and long-term effects of acute hyperphosphorylation of tau in transgenic mouse models of Alzheimer's disease. J. D. EUN*; H. JIMENEZ; L. ADRIEN; P. DAVIES. *Feinstein Inst. for Med. Res., Donald and Barbara Zucker Sch. of Med. at Hofstra/Northwell, Donald & Barbara Zucker Sch. of Med. at Hofstra/Northwell.*

2:00 D45 **211.10** Pathological gradients along the longitudinal axis of the human hippocampus in Alzheimer's disease. K. S. BRESS*; A. RÁBANO; B. STRANGE. *Fundación Reina Sofía - Ctr. de Investigación de Enfermedades Neurológicas (CIEN), Fundación Reina Sofía - Ctr. de Investigación de Enfermedades Neurológicas (CIEN).*

3:00 D46 **211.11** ● Tau pathology reduction with SM07883, a novel, potent, and selective oral DYRK1A inhibitor. C. LAI*; K. DUONG-POLK; B. GÜNER; S. HABROUN; S. D. ANDERSON; B. MELCHIOR. *Samumed, LLC.*

POSTER

212. Alzheimer's Disease and Therapeutic Strategies I

Theme C – Neurodegenerative Disorders and Injury

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 E1 **212.01** Prostaglandin receptor EP2 antagonism reduces neuroinflammation in 5XFAD mouse model of Alzheimer's disease. A. BANIK*; R. AMARADHI; W. WANG; N. H. VARVEL; R. J. DINGLEDINE; T. GANESH. *Emory Univ. Sch. of Med.*

2:00 E2 **212.02** The effects of treatment with tandem D-peptides in AD model mice. T. VAN GROEN*; I. KADISH; D. WILLBOLD. *Univ. Alabama-Birmingham, Univ. of Alabama Birmingham, Forschungszentrum Jülich Gmbh.*

3:00 E3 **212.03** Response of spike-wave discharges in aged APP/PS1 Alzheimer model mice to antiepileptic, metabolic and cholinergic drugs. N. JIN*; S. ZIYATDINOVA; I. GUREVICIENE; H. TANILA. *Univ. of Eastern Finland.*

4:00 E4 **212.04** Discovery of potent, brain penetrant PROTAC® degrader molecules that significantly reduce pathologic tau protein species in *in vivo* models of tauopathies. J. T. CHANDLER*; J. J. FLANAGAN; M. BERLIN; G. CADELINA; Y. HUANG; S. KEENAN; J. PIZZANO; M. BOOKBINDER; A. P. CREW; C. M. CREWS; I. TAYLOR; J. HOUSTON; A. CACACE. *Arvinas, Yale Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 E5 **212.05** Cytokine regulation via the MyD88-dependent toll-like receptor signaling pathway unveils neuroprotective mechanisms in the transgenic rat model of Alzheimer's disease. G. OLIVEROS*; C. WALLACE; R. SHRESTHA; S. YUMISEBA; S. ALOE; L. XIE; P. A. SERRANO; P. ROCKWELL; M. E. FIGUEIREDO-PEREIRA. *CUNY Hunter Col., CUNY Hunter Col., CUNY Hunter Col.*

2:00 E6 **212.06** ▲ Contribution of NOX4 to Tau pathology. P. TRIGO-ALONSO*; E. LUENGO; C. FERNÁNDEZ-MENDÍVIL; I. BUENDIA; E. DEL SASTRE-LÓPEZ; S. LANTIGUA; A. I. CASAS; H. H. H. W. SCHMIDT; M. G. LOPEZ. *Univ. Autónoma De Madrid, Hosp. Universitario de la Princesa, Univ. Autónoma De Madrid, Cardiovasc. Res. Inst., Univ. Autonoma de Madrid.*

3:00 E7 **212.07** The effects of a novel anti-inflammatory on behavioral tests of cognitive and anxiety in a mouse model of Alzheimer's disease. R. W. BROWN*; H. E. RAUHUFF; W. GILL; H. W. SHELTON; C. W. KERNS; S. P. GABBITA. *East Tennessee State Univ., P2D Bioscience, Inc.*

4:00 E8 **212.08** Alzheimer's preclinical efficacy database (AlzPED): A new data resource for improving the rigor, reproducibility, transparency and translation of drug efficacy in animal models of Alzheimer's disease. L. M. REFOLO*; S. CHAKROBORTY; Z. MARTIN; C. SHEFFIELD; S. S. PETANCESKA. *Natl. Inst. on Aging.*

1:00 E9 **212.09** ● Small molecule co-activation of TrkB/TrkC neurotrophin receptors prevents cholinergic neuron atrophy in an Alzheimer's disease mouse model at an advanced pathological stage. S. GONZALEZ*; D. A. SIMMONS; T. MCHUGH; T. YANG; S. M. MASSA; F. M. LONGO. *Stanford Univ., SFVAMC & UCSF.*

2:00 E10 **212.10** The phosphodiesterase-4 inhibitor roflumilast reverses cognition deficits via cAMP signaling-mediated neuroprotection in 3xTg-AD mice. H. ZHANG*; H. WANG; H. FU; F. ZHANG; Z. XIA; Y. CHEN; W. WANG; X. WANG; L. WANG; W. CHEN; X. XU; Y. GAO; Y. XU; J. ZHANG. *West Virginia Univ. Hlth. Sci. Ctr., Inst. of Pharmacology, Shandong First Med. Univ. & Shandong Acad. of Med. Sci., Sch. of Pharm. and Pharmaceut. Sciences, Univ. at Buffalo, SUNY.*

3:00 E11 **212.11** Optimization of tissue-selective ABCA1 agonists as an effective and tolerated therapy for Alzheimer's disease. M. BEN-AISSA*; C. T. LEWANDOWSKI; K. M. RATIA; B. KARUMUDI; M. LADU; G. THATCHER. *Univ. of Illinois at Chicago (UIC), Univ. of Illinois.*

4:00 E12 **212.12** ● A selective and brain penetrant p38alphaMAPK inhibitor candidate for neurologic and neuropsychiatric disorders that attenuates neuroinflammation and cognitive dysfunction. M. WINDISCH; J. PELLETIER; S. M. ROY; D. M. WATTERSON; O. ARANCIO*. *Neurokine Therapeut., Northwestern Univ., Columbia Univ.*

1:00 E13 **212.13** Three types of fruit extract of Aegle marmelos reduced amyloid-beta toxicity in a transgenic *Caenorhabditis elegans.* R. KEOWKASE*; I. KETKAEW; L. NIRANATHMATEEKUL; W. SITTHITHAWORN. *Srinakharinwirot Univ.*

2:00 E14 **212.14** Lycium barbarum extracts preserve retinal function by rescuing synaptic loss in 3xTg mouse model of Alzheimer's disease. J. LIU*; G. XIONG; Y. LIN; R. CHANG; K. SO; K. CHIU. *The Univ. of Hong Kong.*

3:00 E15 **212.15** ● Non clinical profiling of SUVN-A6077, a fast follow up nonchemotype backup of Phase-2a clinical candidate Masupirdine (SUVN-502) in the symptomatic treatment of AD dementia. R. BADANGE; N. MUDDANA; R. PALACHARLA; R. MEDAPATI; R. SUBRAMANIAN; J. B. THENTU*; V. BENADE; J. TADIPARTHI; N. GANUGA; R. NIROGI. *Suven Life Sci. Ltd.*

4:00 E16 **212.16** Cadmium-induced oxidative stress and consequent memory loss can be resorted by dietary supplementation of nuts. Z. BATOOL*; F. AGHA; S. HAIDER. *Univ. of Karachi, Univ. of Karachi, Liaquat Natl. Med. Col., Univ. of Karachi.*

1:00 E17 **212.17** BRICHOS: A potential therapeutic chaperone in Alzheimer's disease. S. MANCHANDA*; L. G. ACOSTA; G. CHEN; J. JOHANSSON; P. NILSSON. *Karolinska Institutet, Karolinska Institutet, Karolinska Institutet.*

2:00 E18 **212.18** ● Differential effects of treatment with LMTM on rivastigmine and memantine induced changes in acoustic startle response. L. ROBINSON; E. DREESEN; P. ARMSTRONG; C. R. HARRINGTON; C. M. WISCHIK; G. RIEDEL*. *Univ. of Aberdeen, TauRx Therapeut.*

3:00 E19 **212.19** ● Inhibition of tau phosphorylation *in vitro* and *in vivo* by GSK3 alpha isoform-selective antagonists. T. URQUHART; B. AMARAL*; M. CALHOUN; O. GOLONZHKA; S. HE; D. RABAH; S. KOIRALA. *Biogen.*

4:00 E20 **212.20** ● NSX-0527, an M1/M4 selective muscarinic agonist for schizophrenia and Alzheimer's disease. J. D. BECK*; J. OCKULY; S. HANSON; M. HENDRICKSON. *Neurosolis, Inc.*

1:00 E21 **212.21** ● AZP2006 a first in class new neuroprotective compound for the treatment of Alzheimer's disease and related neurodegenerative diseases. P. VERWAERDE*; C. ESTRELLA; S. BURLET; A. HENRIQUES; N. CALLIZOT. *Alzprotect, Neuro-Sys.*

2:00 E22 **212.22** Small molecule ABCA1 inducers as potential multifunctional therapeutics for Alzheimer's disease. C. T. LEWANDOWSKI*; M. BEN AISSA; M. KHAN; O. DUBROVSKYI; B. KARUMUDI; B. LAYDEN; M. LADU; G. THATCHER. *Univ. of Illinois, Col. of Pharm. (UIC), Univ. of Illinois, Chicago.*

3:00 E23 **212.23** Development of pyridazine-derivatives for the treatment of neurological disorders. J. B. FOSTER*; X. WANG; R. LASHLEY; F. ZHAO; Z. XU; K. HODGETTS; C. G. LIN. *The Ohio State Univ., Brigham and Women's Univ.*

4:00 E24 **212.24** The preventive approach for Alzheimer's disease based on the novel neprilysin regulator. N. WATAMURA*; N. KAKIYA; T. SAITO; T. SAIDO. *RIKEN.*

1:00 E25 **212.25** Drug repurposing to block multiple steps in the amyloid beta toxicity cascade. L. G. AGUAYO*; J. GONZALEZ-SANMIGUEL; D. BASCUÑÁN; E. FERNANDEZ-PEREZ; N. RIFFO; C. PETERS; F. BURGOS. *Univ. Concepcion.*

2:00 E26 **212.26** Genetic editing of human amyloid beta 1-42 into a low-aggregating, low-toxic species via CRISPR/Cas9 technology. M. MARCATTI*; M. MICCI; G. TAGLIALATELA. *The Univ. of Med. Br. at Galveston, The Univ. of Med. Br. at Galveston, The Univ. of Med. Br. at Galveston.*

3:00 E27 **212.27** Klotho impact on Alzheimer's disease pathogenesis through TRPC channel modulation. S. CHAKRABORTY*; S. ACHARYA MALKARAM; H. DONG. *Northwestern Med. Chicago, West Virginia State Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

213. Parkinson's Disease: Molecular Mechanisms

Theme C – Neurodegenerative Disorders and Injury

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 E28 **213.01** Dysregulation of sphingolipid expression and metabolism and its role in the pathogenesis of Parkinson's disease. J. S. SCHNEIDER*; V. SINGH. *Thomas Jefferson Univ.*

2:00 E29 **213.02** Investigating neurodegeneration in a novel model of Parkinson's disease: A neuroprotective transcription factor conserved from the fly to mammals. F. MIOZZO*; L. STICKLEY; D. TAS; N. LONCLE; M. DORCIKOVA; E. NAGOSHI. *Univ. of Geneva, Neurimmune Holding AG, CHUV Lausanne Univ. Hosp.*

3:00 E30 **213.03** Cytisine and estrogen exert synergistic neuroprotection in a 6-OHDA mouse model of Parkinson's disease. S. M. ZARATE*; G. PANDEY; N. A. SALEM; B. CUDE; S. STOREY; S. CHILUKURI; J. A. GARCIA; T. E. HUNTINGTON; E. BANCROFT; M. HOOK; R. SRINIVASAN. *Texas A&M Hlth. Sci. Ctr.*

4:00 E31 **213.04** Ameliorating the effects of an environmental toxin in a *drosophila* model of Parkinson's disease. D. WILLIAMS*; H. LAWAL; S. BOPPANA. *Delaware State Univ.*

1:00 E32 **213.05** Pioglitazone increases striatal paraoxonase-2 expression: A novel neuroprotective target in Parkinson's disease. J. K. BLACKBURN*; D. CURRY; A. THOMSEN; R. ROTH; J. ELSWORTH. *Yale Univ.*

2:00 E33 **213.06** CSF-1R promotes neuroinflammation through FYN-NLRP3 signaling axis in experimental Parkinson's disease. M. SAMIDURAI; N. KONDRU; E. MALOVIC; H. JIN; A. VELLAREDDY; A. KANTHASAMY*; A. KANTHASAMY. *Iowa State Univ.*

3:00 E34 **213.07** Synaptic mechanisms underlying caffeine's protective effects in Parkinson's disease. M. J. PATEL*; J. KORANDA; A. C. KROK; L. MO; X. ZHUANG. *Univ. of Chicago, New York Univ.*

4:00 E35 **213.08** GM1 ganglioside as a modifier of alpha-synuclein toxicity *in vivo* and in cell culture. V. SINGH*; R. ARAS; G. SINGH; J. SCHNEIDER. *Thomas Jefferson Univ.*

1:00 E36 **213.09** Improved cell-permeable (iCP)-Parkin has neuro-cytoprotective activity by inducing mitophagy and mitochondria biogenesis. W. NAH*; E. CHUNG; J. PARK; S. PARK; S. KIM; W. LEE; H. CHO; Y. CHOI; D. JO. *Cellivery R&D Inst.*

2:00 E37 **213.10** Transcriptomic analysis of zebrafish CDNF mutant brains. Y. CHEN*; J. T. LEINONEN; E. WIDEN; P. PANULA. *Univ. of Helsinki, Univ. of Helsinki.*

3:00 E38 **213.11** Cell-permeable parkin suppresses accumulation of pathological alpha-synuclein. E. CHUNG; M. JUNG*; H. LEE; S. KIM; S. HWANG; J. JO; Y. CHOI; G. KIM; Y. CHOI; D. JO. *Cellivery Therapeutics, Inc.*

4:00 E39 **213.12** Activation of Nrf2/ARE pathway as a potential mechanism for therapeutic effect of NDGA against 6-OHDA-induced Parkinson's disease in mice. R. K. SODHI*; Y. BANSAL; R. SINGH; P. SAROJ; A. KUHAD. *Univ. Inst. of Pharmaceut. Sci.*

1:00 E40 **213.13** The effects of valproic acid on neuroinflammation in LRRK2 R1441G mice. Y. PARK*; S. SONG; T. KIM; H. NOH; S. KANG; H. SEO. *Hanyang Univ.*

2:00 E41 **213.14** Erythropoietin and granulocyte colony stimulating factor co-treatment restores impaired behaviors in Parkinson's disease. E. CHO*; H. KIM; S. PYO; S. JO; S. SONG; B. NAM; J. HEO; J. YU; Y. SHIN; S. CHO. *YONSEI UNIVERSITY.*

3:00 E42 **213.15** Oxr1 protects against neurodegeneration in experimental Parkinson's disease. N. AMMAL KAIDERY*; M. AHUJA; P. L. OLIVER; B. THOMAS. *Med. Univ. of South Carolina, Med. Univ. of South Carolina, Univ. of Oxford, MRC Harwell Inst., Med. Univ. of South Carolina, Med. Univ. of South Carolina.*

4:00 E43 **213.16** Uric acid enhances neurogenesis in Parkinsonian model. J. LEE*; J. SHIN; H. KIM; D. KIM; P. LEE. *Yonsei Univ. Col. of Med., Yonsei Univ.*

1:00 E44 **213.17** The neuroprotective effects of optogenetic stimulation of astroglia in a rat model of neurodegeneration. J. L. MCNEILL*; G. COPPOLA; C. A. RUDYK; I. TRUJILLO-PISANTY; K. FARMER; N. SALMASO. *Carleton Univ., Yale Univ., Univ. of North Carolina at Chapel Hill, Univ. of Pittsburgh.*

2:00 F1 **213.18** Neuroprotective effect of Yerba Mate (ilex paraguariensis) intake on dopaminergic neurons in a mice model of Parkinson's disease. G. GOMEZ*; L. T. TRIBBIA; A. C. CURA; R. RIVERO; M. A. BERNARDI; J. E. FERRARIO; B. BALDI-CORONEL; O. S. GERSHANIK; E. GATTO; I. R. E. TARAVINI. *Lab. of Exptl. Parkinsonism, Lab. of Exptl. Neurobio. (LNE), Inst. of Pharmacol. Res., Fac. of Bromatology, Inst. of Neurosci. of Buenos Aires.*

3:00 F2 **213.19** Gemfibrozil protects dopaminergic neurons in a mouse model of Parkinson's disease via a PPAR alpha-dependent astrocytic GDNF pathway. C. G. GOTTSCHALK*; A. ROY; K. PAHAN. *Rush Univ., Rush Univ. Med. Ctr., Rush Univ. Med. Ctr.*

4:00 F3 **213.20** RNAseq analysis of the SNpc in Parkinson's disease reveals down-regulation of mid-brain development and differentiation genes. A. VERMA*; E. C. HIRSCH; V. RAVINDRANATH. *Indian Inst. of Sci., INSERM U975, CNRS UMR 7225, UPMC, Ctr. for Brain Research, Indian Insitute of Sci.*

1:00 F4 **213.21** Small molecule aggrephagy modulators ameliorate Parkinson's disease. S. S N*. *Ctr. For Brain Res. (CBR), Indian Inst.*

POSTER

214. Ischemic Stroke II

Theme C – Neurodegenerative Disorders and Injury

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 F5 **214.01** Energy failure drives microglial phagocytosis dysfunction in stroke. A. SIERRA*; S. BECCARI; A. PLAZA-ZABALA; V. SIERRA-TORRE; A. CARRETERO-GUILLÉN; S. CASTAÑO-CASTAÑO; T. UMEKAWA; A. OSMAN; W. HAN; C. DOMINGUEZ; K. BLOMGREN; J. VALERO. *Achucarro Basque Ctr. For Neurosci., Karolinska Inst., Achucarro Basque Ctr. for Neurosci.*

2:00 F6 **214.02** Astrocyte-derived estrogen enhances A2-type astrocyte activation and is neuroprotective after global cerebral ischemia. J. WANG*; G. R. SAREDDY; Y. LU; U. P. PRATAP; F. TANG; R. K. VADLAMUDI; D. W. BRANN. *Augusta Univ., Univ. of Texas Hlth., Augusta Univ., Med. Col. of Georgia.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 F7 **214.03** A single spreading depolarization can induce synaptic synaptic strengthening and BDNF upregulation. J. WEISEND*; K. M. REINHART; A. P. CARLSON; C. W. SHUTTLEWORTH. *Univ. of New Mexico, Univ. of New Mexico.*

4:00 F8 **214.04** GPR3 is upregulated in rodent mast cells immediately after brain ischemia and modulates degranulation. S. TANAKA*; Y. HAMAKAWA; Y. YANASE; M. YAMAMOTO; H. SHIRAKI; K. HARADA; I. HIDE; N. SAKAI. *Hiroshima Univ. Sch. of Biomed. Sci., Hiroshima Univ. Sch. of Biomed. Sci.*

1:00 F9 **214.05** Grape extract enriched diet alters gut microbiome to enhance post-stroke recovery of white matter against ischemia. C. BASTIAN*; D. SCERBO; R. ZHANG; J. DAY; A. MILLER; S. BRUNET; S. BALTAN. *Cleveland Clin. Fndn.*

2:00 F10 **214.06** Toll like receptor 2 mediated oligodendrocyte protective effect is exerted through p38 and NFkB. X. JIN; S. CHOWDHURY; J. CHOI*; B. KIM. *Ajou Univ. Sch. of Med., Ajou Univ. Sch. of Med.*

3:00 F11 **214.07** Cerebral peri-microvascular glycogen utilization has a role in endothelium-pericyte interaction in mice. G. URUK*; S. YILMAZ-OZCAN; B. DONMEZ-DEMIR; H. KARATAS-KURSUN; E. EREN-KOCAK; J. DURAN; J. GUINOVART; T. DALKARA; M. YEMISCI OZKAN. *Hacettepe Univ. Inst. of Neurolog. Sci. and Psychiatry, Hacettepe Univ. Fac. of Med., Inst. for Res. in Biomedicine (IRB Barcelona), Ctr. de Investigación Biomedica en Red de Diabetes y Enfermedades Metabólicas Asociadas (CIBERDEM), Univ. of Barcelona, Hacettepe Univ. Fac. of Med.*

4:00 F12 **214.08** Aquaporin 4 knockout in mice attenuates paravascular space closure and neuronal activity reduction after water intoxication. T. ISHIKAWA*; M. UNEKAWA; Y. TOMITA; J. NAKAHARA; M. YASUI. *Keio Univ., Keio Univ.*

1:00 F13 **214.09** Poldip2 deficiency protects against leukocyte infiltration into the brain following ischemic stroke. L. EIDSON; A. CAMPOS; E. FAIDLEY; B. LASSÈGUE; C. KUAN; Y. SUN; M. G. TANSEY; K. GRIENDLING; M. S. HERNANDES*. *Emory Univ., Hosp. Sírio-Libanês, Univ. of Virginia.*

2:00 F14 **214.10** A1 astrocytes are neurotoxic after stroke. T. C. PETERSON*; A. E. MUNCH; E. BRAHMS; M. M. WEIGEL; K. INOUE; B. BARRES; M. BUCKWALTER; S. A. LIDDELOW. *Univ. of North Carolina - Wilm, Stanford Univ., New York Univ.*

3:00 F15 **214.11** CSF1R antagonism abolishes ischemic preconditioning mediated protection in white matter. M. HAMNER; D. GONG; G. ROJAS; C. LEE; A. MCDONOUGH; B. R. RANSOM; J. R. WEINSTEIN*. *Univ. Washington.*

4:00 F16 **214.12** Beneficial effects of high-frequency repetitive transcranial magnetic stimulation in neuronal cell models of ischemia/reperfusion injury. S. JO*; A. BAEK; J. YU; J. SEO; Y. SHIN; S. WI; S. SONG; B. NAM; S. PYO; E. CHO; J. HEO; J. KIM; S. KIM; S. CHO. *Yonsei Univ., Yonsei Univ., Yonsei Univ., Yonsei Univ., Yonsei Univ., Yonsei Univ.*

1:00 F17 **214.13** Attenuation of mitochondrial Zn^{2+} accumulation during early reperfusion reduces ischemic neuronal injury. Y. V. MEDVEDEVA; H. Z. YIN; E. SHARMAN; A. BAZRAFKAN; G. TIAN; N. MAKI; Y. AKBARI; J. H. WEISS*. *Univ. of California Irvine.*

2:00 F18 **214.14** ● Prior exposure to recurrent hypoglycemia causes post-ischemic ER stress via increased free radical production in treated diabetic rats. A. K. REHNI*; S. CHO; K. R. DAVE. *Univ. of Miami Sch. of Med.*

POSTER

215. Stroke and Ischemia I

Theme C – Neurodegenerative Disorders and Injury

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 F19 **215.01** Proteomic analysis of synaptosomes revealed less inflammatory effect of perinatal ischemic stroke in TMEM35 (NACHO) knockout mice. P. V. TRAN*; A. BARKS; M. BEESON. *Univ. of Minnesota.*

2:00 F20 **215.02** Immediate and delayed decrease of long term potentiation and memory deficits after neonatal intermittent hypoxia. I. GOUSSAKOV; S. SYNOWIEC; A. DROBYSHEVSKY*. *NorthShore Univ. HealthSystems.*

3:00 F21 **215.03** CCR2CreER mice for fate mapping monocytes during brain development and after ischemic stroke. H. CHEN*; Y. SUN; I. KUAN; C. KUAN. *Univ. of Virginia Sch. of Med., Emory Univ.*

4:00 F22 **215.04** Maternal electronic cigarette use can cause cognitive dysfunction in offspring & increased sensitivity to hypoxic-ischemic brain injury. A. E. SIFAT*; S. NOZOHOURI; H. VILLALBA; B. VAIDYA; T. ABBRUSCATO. *Texas Tech. Univ. Hlth. Sci. Ctr.*

1:00 F23 **215.05** Effects of lactate on the brain following neonatal hypoxia-ischemia: Preliminary findings. I. D. TASSINARI*; T. L. RODRIGUES; M. K. G. ANDRADE; D. N. MACHADO; R. B. FABRES; E. B. M. ARAUJO; R. R. NUNES; A. H. PAZ; L. S. DE FRAGA. *Federal Univ. of Rio Grande do Sul, Federal Univ. of Rio Grande do Sul.*

2:00 F24 **215.06** ● Effects of early anti-inflammatory treatment and timing of working memory training on long-term cognitive outcomes in a model of neonatal hypoxia-ischemia. A. B. BRADFORD*; M. HERNANDEZ; E. KEARNEY; L. THEREALT; Y. LIM; B. S. STONESTREET; S. THRELKELD. *Regis Col., Brown Univ., Women & Infants Hosp. of Rhode Island.*

3:00 F25 **215.07** Long-term characterization of the gliofibrotic scar in a model of neonatal hypoxic-ischemic brain injury. L. BOLINI*; D. P. DANTAS; R. MENDEZ-OTERO; A. M. VALE; P. M. PIMENTEL-COELHO. *UFRJ.*

4:00 F26 **215.08** An innovative neuro-protective role for galantamine in a neonatal mouse model of white matter injury. N. ZAGHLOUL*; K. R. AYASOLLA; M. N. AHMED. *Univ. of Arizona, Feinstein Inst. for Med. Res.*

1:00 F27 **215.09** Persistent astrocyte activity in young adult mice following neonatal hypoxia-ischemia. D. SKWARZYNSKA; P. WAGLEY; J. KAPUR; J. BURNSED*. *Univ. of Virginia, Univ. Virginai Hlth. Sci. Ctr.*

2:00 F28 **215.10** Intrauterine growth restriction and hyperoxia downregulates myelin gene expression. J. CHANG; M. H. BASHIR; R. W. DETTMAN*; M. L. V. DIZON. *Northwestern Univ., Anne and Robert H Lurie Children's Hosp., Northwestern University/Prentice Women's Hosp.*

3:00 F29 **215.11** ▲ Cerebrolysin treatment improves motor abilities in neonatal rats with hypoxic ischemic encephalopathy. E. BARRIENTOS ZAVALZA*; A. JIMENEZ-ANGUIANO; B. LEON CHAVEZ; J. A. GONZALEZ-BARRIOS. *Univ. Autónoma Metropolitana, Univ. Autonoma Metropolitana-Iztapalapa, Benemerita Univ. Autonoma Puebla, Hosp Regional Octubre, ISSSTE.*

4:00 F30 **215.12** Repurposing cancer therapeutics to treatment of Huntington's disease via inhibition of VCP. Y. SHANG*; R. WANG; X. SUN; X. QI. *Case Western Reserve Univ. Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 F31 **215.13** Acute global cerebral ischemia decreases the population of pyramidal cells in the CA1 region of the hippocampus in female rats with 15 and 30 days of ovariectomy. O. MONTES-NARVAEZ*; O. GONZALEZ-FLORES; G. MORALI; M. GARCIA-JUÁREZ, SR. *Univ. Autonoma De Tlaxcala, Univ. Autonoma de Tlaxcala, Inst. Mex. Seguro Social, Ctr. De Investigación En Reproducción Animal.*

2:00 F32 **215.14** The role of T cells in regeneration after stroke. S. HEINDL*; A. LIESZ. *Klinikum der Univ. München.*

3:00 F33 **215.15** Cerebral perfusion and cerebrovascular autoregulation after resuscitation from asphyxia cardiac arrest rat model. Q. WANG*; Y. ZENG; H. MODI; J. SENARATHNA; R. GEOCADIN; N. THAKOR. *Johns Hopkins Univ., Johns Hopkins Univ.*

4:00 F34 **215.16** Mitophagy is activated by ischemic preconditioning. T. JOVER-MENGUAL*; H. BYUN; J. HWANG; B. COURT-VAZQUEZ; F. PONTARELLI; R. ZUKIN. *Albert Einstein Col. of Med., Univ. de Valencia, Albert Einstein Col. of Med., Creighton Univ. Sch. of Med., Albert Einstein Col. Med.*

1:00 F35 **215.17** Visualization and assessment of stellate ganglia neronal remodeling in association with myocardial infarction (MI) and coronary artery disease. A. G. ARAUJO*; D. PARK; K. S. STEED; O. A. AJIJOLA; K. SHIVKUMAR; A. MAHAJAN; M. FISHBEIN; N. HAGEMAN; E. STARK; J. J. WISCO. *Boston University, Div. of Grad. Med. Sci., Massachusetts Gen. Hosp., California Hlth. Sci. Univ., David Geffen Sch. of Med. at UCLA, David Geffen Sch. of Med. at UCLA, David Geffen Sch. of Med. at UCLA, David Geffen Sch. of Med. at UCLA.*

2:00 F36 **215.18** Role of ASK1 in functional recovery and white matter integrity after ischemic stroke. Y. WANG*; Z. SHI; W. ZHANG; Y. GAO. *Fudan Univ.*

3:00 F37 **215.19** Pre-treatment with microRNA-338 inhibitor results in increased expression of INSM1 in the hippocampus after global cerebral ischemia in rats. B. B. GRIFFITHS*; O. J. ARVOLA; A. BHUTANI; L. XU; C. STARY. *Stanford Univ.*

4:00 F38 **215.20** ST2/IL-33 signaling promotes long-term recovery after cerebral ischemia. D. XIE*; H. LIU; F. XU; Q. YE; X. HU. *Univ. of Pittsburgh, Sch. of Medicine.*

1:00 F39 **215.21** PYY_{3-36} affords neuroprotection through neuropeptide Y2 receptor. C. T. CITADIN*; C. Y. C. WU; H. E. POSSOIT; G. A. CLEMONS; A. COUTO E SILVA; R. H. LEE; H. W. LIN. *LSU Hlth. Sci. Center- Shreveport, LSU Hlth. Sci. Center- Shreveport.*

2:00 F40 **215.22** Subventricular zone-derived neural precursor cells support tissue remodeling after ischemic cortical lesions. M. R. WILLIAMSON*; S. LE; R. L. FRANZEN; A. K. DUNN; M. R. DREW; T. A. JONES. *Univ. of Texas at Austin, Univ. of Texas at Austin, Univ. Texas Austin.*

3:00 F41 **215.23** The neuroprotective effect and mechanism of IL13 on ischemic stroke in mice. D. CHEN*; P. WEI; W. ZHANG; Y. GAO. *Fudan Univ., Fudan Univ., Fudan Univ., Fudan Univ.*

4:00 F42 **215.24** Proteomic characterization and protective effect against brain ischemia produced by adult mouse neural progenitor cells-derived extracellular vesicles. A. N. CAMPERO-ROMERO*; E. RÍOS-CASTRO; L. TOVAR-Y-ROMO. *Univ. Nacional Autónoma de México, IPN-CINVESTAV.*

1:00 F43 **215.25** ▲ Uptake, distribution and fate of extracellular vesicles in ischemic retina. L. M. ELLYTHY*; B. MATHEW; L. TORRES; S. TRAN; N. MUCKOM; M. CHENNAKESAVALU; L. GAMBOA ACHA; S. RAVINDRAN; S. MEHREEN; S. ROTH. *Univ. of Illinois at Chicago, Univ. of Illinois at Chicago.*

2:00 F44 **215.26** The role of short-chain fatty acids in post-stroke regeneration. R. K. SADLER*; J. CRAMER; S. HEINDL; D. M. BETZ; M. GIERA; A. M. STOWE; A. LIESZ. *Ludwig-Maximilians-Universität München, UT Southwestern Med. Ctr., Leiden Univ. Med. Ctr., Univ. of Kentucky.*

3:00 F45 **215.27** ● W2476, a novel thiordoxin interacting protein inhibitor attenuates post stroke hemorrhagic conversion in hyperglycemia mice subjected to thrombolytic therapy. L. LI; S. ISMAEL; A. YOO*; T. ISHRAT. *The Univ. of Tennessee Hlth. Sci. Ctr.*

4:00 F46 **215.28** Gut microbiome modulates the effects of estrogen treatment in female rats. S. PANDEY*; M. PARK; R. PILLA; A. PANTA; F. SOHRABJI. *Texas A&M Hlth. Sci. Ctr., Texas A&M Univ. Syst.*

1:00 G1 **215.29** Gut dysbiosis after ischemic stroke may contribute to sex differences in stroke outcomes in adult rats. Y. EL-HAKIM*; K. MANI; A. ELDOUH; F. SOHRABJI. *Texas A&M Hlth. Sci. Ctr.*

2:00 G2 **215.30** ● Temporal progression of cardiac inflammation post-insular stroke in the rat. V. JAREMEK*; S. IANKOV; T. MILAZZO; L. WANG; S. N. WHITEHEAD; L. A. SPOSATO. *Western Univ., London Hlth. Sci. Ctr.*

POSTER

216. Stroke and Ischemia II

Theme C – Neurodegenerative Disorders and Injury

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 G3 **216.01** ● Electroencephalographic synchrony measure reflects recovery of post-stroke aphasia. T. KAWANO*; N. HATTORI; Y. UNO; M. HATAKENAKA; H. YAGURA; H. FUJIMOTO; T. YOSHIOKA; M. NAGASAKO; H. OTOMUNE; H. MOCHIZUKI; K. KITAJO; I. MIYAI. *Morinomiya Hosp., Osaka Univ., RIKEN Ctr. for Brain Sci., Osaka Univ., Natl. Inst. for Physiological Sci., The Grad. Univ. for Advanced Studies (SOKENDAI).*

2:00 G4 **216.02** Difference between twice and single refocus spin-echo diffusion sequence in early phase of stroke patients. K. NAKAMURA*; S. MINAKATA; H. TOYOSHIMA; T. KINOSHITA. *Res. Inst. For Brain & Blood Vessels Akita.*

3:00 G5 **216.03** Characterizing changes in neural activity and movement kinematics during an object-manipulation task in patients who regained motor function after stroke. K. A. MAZUREK*; S. MIZOBUCHI; E. PATELAKI; D. RICHARDSON; N. ABRAHAM; S. HOFFMAN; A. C. BUSZA; J. J. FOXE; E. G. FREEDMAN. *Univ. of Rochester Sch. of Med., Univ. of Rochester Sch. of Med., Univ. of Rochester Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 G6 **216.04** No evidence for cortical reorganization after subcortical stroke using resting state fMRI. M. BRANSCHEIDT*; N. EJAZ; J. XU; M. WIDMER; M. D. HARRAN; J. CORTES; T. KITAGO; P. A. CELNIK; S. MORI; A. V. FARIA; C. HERNANDEZ-CASTILLO; J. DIEDRICHSEN; A. R. LUFT; J. W. KRAKAUER. *Univ. Hosp. Zurich, Johns Hopkins Univ., Western Univ., Johns Hopkins Univ., Cereneo Advanced Rehabil. Inst. (CARINg), Johns Hopkins Univ., Burke Neurolog. Inst., Johns Hopkins Univ.*

1:00 G7 **216.05** ● Ipsilesional hippocampal volume is directly associated with motor performance in chronic stroke patients: An ENIGMA stroke recovery analysis. A. ZAVALIANGOS-PETROPULU*; B. BIGJAHAN; M. R. BORICH; T. R. BROWN; C. M. BUETEFISCH; W. D. BYBLOW; S. C. CRAMER; A. DULA; K. GILL; A. GOUD; D. H. HWANG; N. KHOSHAB; H. KIM; A. KUCEYESKI; C. E. LANG; M. LOTZE; B. J. MACINTOSH; A. RAMOS-MURGUIALDAY; A. D. ROBERTSON; P. ROBERTS; M. S. SHIROISHI; C. M. STINEAR; R. C. CRADDOCK; K. A. WONG; G. THIELMAN; N. S. WARD; G. F. WITTENBERG; N. JAHANSHAD; P. M. THOMPSON; S. LIEW. *Imaging Genet. Center, Mark and Mary Stevens Neuroimaging and Informatics Inst. Univ. of Southern California, USC Keck Sch. of Med., Emory Univ., Emory Univ., Univ. of Auckland, Univ. of California, Irvine, Dell Med. Sch. Univ. of Texas Austin, Cedars Sinai Med. Ctr., Sch. of Medicine, UC Irvine, Stevens Inst. for Neuroimaging and Informatics, Radiology, Weill Cornell Med., Washington Univ., Univ. Med. Greifswald, Sunnybrook Res. Inst., Tecnalia Hlth. Div., Univ. of Waterloo, Cedars Sinai Med. Ctr., Univ. of Auckland, Dell Med. Sch. Univ. of Texas Austin, Univ. of Texas at Austin Dell Med. Sch., Univ. of the Sci., UCL Queen Square Instutute of Neurol., Univ. of Pittsburgh, USC.*

2:00 G8 **216.06** Using a novel EMG controlled force tracker task to study relationships between motor learning and multimodal MRI brain characteristics in chronic stroke. E. L. HINSON*; M. K. FLEMING; F. VAN HORSSEN; A. POGOSYAN; W. T. CLARKE; C. J. STAGG. *Univ. of Oxford, Univ. of Oxford.*

3:00 G9 **216.07** Time-varying functional connectivity in acute ischemic stroke. A. K. BONKHOFF*; F. A. ESPINOZA; H. GAZULA; L. HENSEL; A. REHME; L. VOLZ; G. R. FINK; V. CALHOUN; C. GREFKES. *Inst. of Neurology, Univ. of Cologne, The Mind Res. Network, Cognitive Neuroscience, Inst. of Neurosci. and Med. (INM-3), Dept. of Neurology, Psychology and Neurosci., Dept. of Electrical and Computer Engineering, Univ. of New Mexico.*

4:00 G10 **216.08** Intravital microscopy reveals leukocyte recruitment to the cerebrovasculature in both the ischemic and non-ischemic hemispheres in a mouse stroke model. A. BATRA*; N. A. NADKARNI; W. A. MULLER; D. P. SULLIVAN. *Northwestern Univ. Feinberg Sch. of Med., Northwestern Univ. Feinberg Sch. of Med.*

1:00 G11 **216.09** vDISCO-clearing- and omics-analysis of skull meninges connection-facilitated trafficking of immune cells after cerebral ischemic stroke in mice. B. FÖRSTERA*; H. MAI; Z. I. KOLABAS; K. STANIC; Z. RONG; F. HELLAL; M. MOLBAY; H. S. BHATIA; M. STERR; M. LOTFOLLAHI; A. BRUNNER; S. ZHAO; M. I. TODOROV; R. CAI; C. PAN; H. LICKERT; F. THEIS; M. MANN; A. ERTURK. *Klinikum der Univ. München (KUM), Helmholtz Zentrum München, Helmholtz Zentrum München, Max Planck Inst. of Biochem., Tech. Univ. Munich (TUM), Tech. Univ. Munich (TUM), Univ. of Copenhagen (UCPH).*

2:00 G12 **216.10** Ischemic stroke induces non-homogenous inflammatory leukocyte response within the ischemic core and penumbra. D. P. SULLIVAN*; A. BATRA; N. A. NADKARNI; W. A. MULLER. *Northwestern Univ. Feinberg Sch. of Med., Northwestern Univ. Feinberg Sch. of Med.*

3:00 G13 **216.11** Macromolecular proton fraction parameter as a marker of myelin recovery in the model of local ischemia in rats. M. KHODANOVICH*; M. KUDABAEVA; V. GLAZACHEVA; I. GUBSKIY; D. NAMESTNIKOVA; V. YARNYKH. *Tomsk State Univ., Pirogov Russian Natl. Res. Med. Univ., Univ. of Washington.*

4:00 G14 **216.12** MRI maturation of brain ischemic tissue in human patients after stroke. D. KALA; A. POSUSTA; V. SULC; P. JANSKY; A. TOMEK; P. MARUSIC; P. JIRUSKA; J. OTAHAL. *Inst. of Physiology, Czech Acad. of Sci., Czech Tech. Univ. in Prague, Inst. of Physiology, Czech Acad. Of Sci., Motol Univ. Hosp., Inst. of Physiol. CAS.*

1:00 G15 **216.13** A modified recombinant tissue plasminogen activator-responding photothrombotic stroke model. Y. KUO*; Y. SUN; H. CHEN; C. KUAN. *Univ. of Virginia, Natl. Yang-Ming Univ.*

2:00 G16 **216.14** BBB breakdown leads to white matter changes in the mouse model of bilateral carotid artery stenosis. M. T. HUUSKONEN*; Q. LIU; A. MONTAGNE; W. J. MACK; B. V. ZLOKOVIC. *Keck Sch. of Med. of the USC.*

3:00 G17 **216.15** ▲ Heme degradation products are involved in the pathogenesis of early- and late-onset vasospasm following subarachnoid hemorrhage. A. JOERK*; M. RITTER; D. FREITAG; K. HERRMANN; R. A. SEIDEL; N. LANGGUTH; A. SCHAEFGEN; M. RITTER; S. C. SCHRÖDER; D. SCHULZE; G. POHNERT; M. WESTERHAUSEN; J. WALTER; R. KALFF; J. R. REICHENBACH; P. RUTH; O. W. WITTE; K. HOLTHOFF. *Univ. Hosp. Jena, Univ. Hosp. Jena, Inst. of Inorganic and Analytical Chem., Univ. Hosp. Jena, Univ. Hosp. Jena, Univ. Hosp. Jena, Univ. Hosp. Jena, Inst. of Pharm.*

4:00 G18 **216.16** A white matter stroke model induced by injection of a vasoconstrictor in internal capsule. Y. WANG*; M. T. HUUSKONEN; A. MONTAGNE; B. V. ZLOKOVIC. *Keck Sch. of Med. of the Univ. of Southern California, Keck Sch. of Med. of the Univ. of Southern California.*

1:00 G19 **216.17** Role of PGE_2 EP1 receptor antagonist on stroke outcomes in Alzheimer's disease mouse models. F. R. MENDES; J. L. LECLERC; L. LIU; P. K. KAMAT; A. NAZIRIPOUR; D. HERNANDEZ; C. LI; A. S. AHMAD*; S. DORE. *Univ. Federal do ABC, Oregon Hlth. & Sci. Univ., Univ. of Florida, Univ. of Florida.*

2:00 G20 **216.18** ● Long-term persistence of AAV DNA is compromised in neuroglial progenitors by cell proliferation. G. J. HELLER*; D. NGUYEN; M. S. SANDS; E. BONGARZONE. *Univ. of Illinois, Chicago, Univ. of Illinois, Chicago, Washington Univ.*

3:00 G21 **216.19** Regeneration associated cells transplantation reduce the neural death in stroke mice by intravenous injection. T. NAKAYAMA*; E. NAGATA; H. MASUDA; T. ASAHARA; S. TAKIZAWA. *Tokai Univ. Sch. Med., Tokai Univ. Sch. Med., Tokai Univ. Sch. Med.*

4:00 G22 **216.20** Focused ultrasound-induced intracerebral hemorrhage at two distinct pressures causes differing outcomes in mice. C. M. D. COLLIER*; H. ZHANG; E. E. KONOFAGOU; C. M. TROY. *Columbia Univ., Columbia Univ., Columbia Univ. Medl Ctr.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 G23 **216.21** Comparative striatal DA neurotransmission characteristics across cardiac arrest models and severities. D. FINE*; J. STEZOSKI; R. HARUN; R. LEAK; P. M. KOCHANEK; T. DRABEK; A. K. WAGNER. *Univ. of Pittsburgh, Safar Ctr. for Resuscitation Res., Univ. of Pittsburgh, Duquesne Univ., Univ. of Pittsburgh, Univ. of Pittsburgh.*

2:00 G24 **216.22** Three-dimensional architectural images using the whole-brain staining in chronic cerebral hypoperfusion-induced mice. M. HAN*; M. KIM; J. BANG; J. KIM; M. NA; S. CHANG; W. JEON. *Korea Inst. of Sci. and Technol., Korea Inst. of Oriental Med., Seoul Natl. Univ. Col. of Med., Neurosci. Res. Institute, Med. Res. Center, Seoul Natl. Univ. Col. of Med., CRAyON technologies Inc.*

1:00 DP06/G25 **216.23** (Dynamic Poster) A practical method for inducing focal ischemic stroke in non-human primate cortex. K. KHATEEB; Z. YAO; D. J. GRIGGS; S. SONG; V. KHARAZIA; R. WANG; A. YAZDAN-SHAHMORAD*. *Univ. of Washington, Univ. of Washington, Ernest Gallo Clin. and Res. Ctr.*

4:00 G26 **216.24** Comparison of behavioural and imaging outcome between different occlusion time in transient cerebral artery occlusion (tMCAO) model in Balb/c mice. M. DUDEK; T. BRAGGE; A. SHATILLO; A. J. NURMI*; D. MISZCZUK. *Charles River Discovery.*

1:00 G27 **216.25** Reorganization of the neuronal nucleoli in the neocortex, hippocampus and amygdala of white rats after acute ischemia. V. AKULININ*; A. STEPANOV; D. AVDEEV; A. GORBUNOVA. *Omsk State Med. Univ.*

2:00 G28 **216.26** Critical role of monocyte recruitment in optic nerve damage induced by experimental optic neuritis. M. ARANDA*; D. GUERRIERI; G. M. PIÑERO; M. GONZÁLEZ FLEITAS; D. DORFMAN; R. E. ROSENSTEIN. *Northwestern Univ., CEFyBO, Facultad de Farmacia y Bioquímica, UBA, Univ. of Buenos Aires, Sch. of Medicine, UBA, CEFYBO/CONICET, Sch. of Medicine/Cefybo, Univ. of Buenos Ai.*

3:00 G29 **216.27** Cln6-BioID identifies protein cargoes within ER-associated vesicles. C. D. BOOTH*; J. T. CAIN; T. B. JOHNSON; K. WHITE; C. SWANSON; J. BRUDVIG; R. N. LAUFMANN; D. MAY; K. J. ROUX; J. M. WEIMER. *Sanford Res., Sanford Res., Sanford Children's Hosp. Sioux Falls, Sanford Res.*

POSTER

217. Spinal Cord Injury I

Theme C – Neurodegenerative Disorders and Injury

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 G30 **217.01** Corticospinal and reticulospinal contribution to flexor and extensor arm muscles following spinal cord injury. S. SANGARI*; M. A. PEREZ. *Univ. of Miami, Shirley Ryan Ability Lab., Bruce W. Carter Dept. of Veterans Affairs Med. Ctr.*

2:00 G31 **217.02** Absence of IL-12p40 mediates a beneficial effect on recovery after spinal cord injury. J. ROSAS*; N. PELISCH; B. APERI; K. STEHLIK; K. SWARTZ; A. KRONER-MILSCH. *Med. Col. of Wisconsin, Clement J. Zablocki Veterans Affairs Med. Ctr.*

3:00 G32 **217.03** Effect of conditioned media of mesenchymal stem cells in rat model of spinal cord injury. M. CHUDICKOVA*; I. VACKOVA; L. MACHOVA URDZIKOVA; S. KUBINOVA. *Inst. of Exptl. Med.*

4:00 G33 **217.04** Quantification of intrinsic hand muscle atrophy after human cervical spinal cord injury using ultrasound imaging. C. S. KLEIN*; H. LIU; Z. J. MENG; C. N. ZHAO; X. H. YANG. *Guangdong Work Injury Rehabil. Ctr.*

1:00 G34 **217.05** Multimodal parcellated study of the human connectome in patients with advanced cervical myelopathy. D. S. JAYASEKERA*; M. F. GLASSER; T. FRANK; A. H. HAWASLI. *Washington Univ. in St Louis, Washington Univ. Sch. of Med., Washington Univ. in St Louis, Washington Univ. Sch. of Med.*

2:00 G35 **217.06** Urinary function after acute, sub-acute, and chronic spinal cord injury. J. H. GUMBEL*; C. HUBSCHER. *Univ. of Louisville, Univ. Louisville Sch. Med.*

3:00 G36 **217.07** Exploration of reciprocal inhibition during electrical stimulation of spinal cord micro circuits. M. K. CHARDON*; M. D. JOHNSON; J. MILLER; C. HECKMAN. *Northwestern Univ., Northwestern Univ. Feinberg Sch. of Med., Northwestern Univ.*

4:00 G37 **217.08** Muscle pain in lumbar radiculopathy. Y. YU*; Y. CHEN; C. CHEN; J. LIN. *Taipei Med. Univ., Taipei Med. Univ. Hosp., Academia Sinica.*

1:00 G38 **217.09** Decompression surgery in a rat model of cervical spondylotic myelopathy improves sensory but not motor recovery. N. M. GEREMIA; K. RYAN; S. GONCALVES; R. BARTHA; N. DUGGAL; A. BROWN*. *Univ. of Western Ontario, Mayo Clin., Univ. Hospital, London Hlth. Sci. Ctr.*

2:00 G39 **217.10** Effects of different doses of mesenchymal stem cells on functional recovery after compressive spinal-cord injury in mice. B. S. RAMALHO; F. M. ALMEIDA; F. M. PESTANA; C. A. PRINS; F. S. CARDOSO; D. R. CAVALCANTE; B. GUTFILEN; S. A. SOUZA; A. M. B. MARTINEZ*. *UFRJ.*

3:00 G40 **217.11** Topological network analysis of multicenter high-frequency intra-operative measurements in patients with spinal cord injury suggests the optimal MAP range associated with positive motor outcomes. A. TORRES-ESPÍN*; J. HAEFELI; R. EHSANIAN; D. TORRES; C. ALMEIDA; J. R. HUIE; B. DIRLIKOV; C. G. SUEN; J. L. NEILSON; J. TALBOTT; G. T. MANLEY; S. S. DHALL; J. BRESNAHAN; M. BEATTIE; W. D. WHETSTONE; S. L. MCKENNA; J. Z. PAN; A. R. FERGUSON; AND THE TRACK-SCI INVESTIGATORS. *Univ. of California San Francisco, Santa Clara Valley Med. Ctr., Univ. of Minnesota Med. Sch.*

4:00 G41 **217.12** Properties of amniotic fluid and their role in spinal cord injury in myelomeningocele. B. KRYNSKA*; J. ZIEBA; O. GORDIIENKO; K. JANIK; J. A. GERSTENHABER; G. M. SMITH. *Shriners Hosp. Pediatric Res. Center, Lewis Katz Sch. of Med. at Temple Univ., Dept. of Bioengineering, Col. of Engineering, Temple Univ.*

1:00 G42 **217.13** Effects of FABP4 inhibition on functional and autonomic recovery in rats following spinal cord injury. J. C. LICERO CAMPBELL*. *Loma Linda Univ.*

2:00 G43 **217.14** Sexually dimorphic regeneration and cardio-metabolic responses after spinal cord injury. D. BURNS*; A. GHENSIS; O. WUPU; J. BUSHMAN. *Univ. of Wyoming, Univ. of Wyoming.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 G44 **217.15** A data commons infrastructure for private SCI data sharing. J. HUIE*; A. TORRES-ESPIN; C. A. ALMEIDA; D. SCHWERZ DE LUCENA; D. REINKENSMEYER; J. L. BIXBY; V. LEMMON; D. S. MAGNUSON; J. L. NIELSON; J. SCHWAB; C. TAYLOR-BURDS; W. TETZLAFF; E. S. ROSENZWEIG; M. H. TUSZYNSKI; K. FOUAD; M. S. BEATTIE; J. C. BRESNAHAN; M. E. MARTONE; J. S. GRETHE; A. R. FERGUSON. *UCSF, Brain and Spinal Injury Ctr. (BASIC), UCSF, UC Irvine, Univ. Miami, Miller Sch. Med., Univ. of Miami, Univ. of Louisville, Univ. of Minnesota, Ohio State Univ., NIH/NINDS, Univ. of British Columbia, ICORD, Univ. of California San Diego Dept. of Neurosciences, Univ. of California San Diego Dept. of Neurosciences, Univ. of Alberta, Univ. of California San Francisco Dept. of Neurolog. Surgery, UCSF, UCSD, Univ. of California San Diego, Brain and Spinal Injury Ctr. (BASIC), UCSF.*

4:00 H1 **217.16** Blood RNA biomarkers for SCI: Using RNAseq and advanced analytics for discovering diagnostic and prognostic clinical tools. N. KYRITSIS*; X. DUONG-FERNANDEZ; L. THOMAS; P. SCHUPP; D. HEMMERLE; W. WHETSTONE; V. SINGH; L. PASCUAL; J. TALBOTT; M. C. OLDHAM; S. DHALL; G. MANLEY; A. R. FERGUSON; J. C. BRESNAHAN; M. S. BEATTIE. *Univ. of California San Francisco (UCSF), UCSF, Univ. of California, San Francisco, Brain and Spinal Injury Ctr. (BASIC), UCSF, Univ. of California San Francisco Dept. of Neurolog. Surgery.*

1:00 H2 **217.17** Neuromuscular connectivity and muscle function during acute spinal cord injury. M. E. HARRIGAN*; A. R. FILOUS; P. J. BOBBILI; D. CHUGH; J. M. SCHWAB; W. D. ARNOLD. *The Ohio State Univ., The Ohio State Univ.*

2:00 H3 **217.18** ● Selective activation of the cells of origin of the corticospinal tract using a 2-vector system for selective expression of DREADDs. J. LUO*; M. METCALFE; J. YONAN; K. MATSUDAIRA; A. GUNAWAN; J. MIZUFUKA; O. STEWARD. *UCI, Sch. of Basic Medicine, Tongji Med. College, Huazhong Univ. of Sci. and Technol.*

3:00 H4 **217.19** ● Harnessing retro-AAV for gene manipulations on multiple pathways that are interrupted by spinal cord injury. M. METCALFE*; K. YEE; J. MIZUFUKA; R. AZEVEDO; S. P. GANDHI; O. STEWARD. *Univ. of California Irvine, Univ. of California Irvine, Univ. of California Irvine.*

4:00 H5 **217.20** Combinatorial treatment protects identified neurons in brain from retrograde apoptosis after spinal cord injury in lamprey. J. HU*; G. ZHANG; W. RODEMER; L. JIN; M. E. SELZER. *Lewis Katz Sch. of Med. at Temple Univ., Lewis Katz Sch. of Med. at Temple Univ., Temple Univ. Sch. of Med., Lewis Katz Sch. of Med. At Temple Univ.*

1:00 H6 **217.21** The role of PTPσ in lamprey axon regeneration and cell death after spinal cord injury. W. RODEMER*; K. ZHANG; I. SINITSA; J. HU; M. E. SELZER. *Lewis Katz Sch. of Med. at Temple Univ., Col. of Sci. and Technol. at Temple Univ., Lewis Katz Sch. of Med.*

POSTER

218. Somatosensation: Ion Channels

Theme D – Sensory Systems

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 H7 **218.01** The role of TRPM2 in thermosensation and thermoregulation. M. HUANG*; C. GAO; W. SHEN; W. YANG. *Sch. of Basic Med. Sciences, Zhejiang Univ., Shanghai Technol. Univ.*

2:00 H8 **218.02** Platelet-derived growth factor contributes to inflammatory pain by inhibiting Kv7/M channels in nociceptive neurons. O. BARKAI*; S. PUIG; S. LEV; B. TITLE; B. KATZ; L. ELI-BERCHOER; H. B. GUTSTEIN; A. BINSHTOK. *The Hebrew Univ. of Jerusalem, Univ. of Pittsburgh.*

3:00 H9 **218.03** Distinct expression patterns of acid -sensing ion channels in mouse primary sensory afferents. M. PAPALAMPROPOULOU-TSIRIDOU*; F. WANG; Y. DE KONINCK. *Laval Univ.*

4:00 H10 **218.04** The G protein-biased agents PZM21 and TRV130 are partial agonists of μ-opioid receptor-mediated signaling to ion channels. Y. YUDIN*; T. ROHACS. *Rutgers New Jersey Med. Sch.*

1:00 H11 **218.05** Activation mechanism of Tentonin 3/TMEM150C. G. HONG*; S. PAK; J. CHOI; U. OH. *Korea Inst. of Sci. and Technol., Korea Inst. of Sci. and Technol.*

2:00 H12 **218.06** ● Involvement of acid sensing ion channel 1b in the development of chronic muscle pain. C. CHANG*; S. FONG; C. LEE; S. LIN; C. CHEN. *Academia Sinica, Taiwan Mouse Clin. – Natl. Comprehensive Mouse Phenotyping and Drug Testing Center, Academia Sinica, Dana-Farber Cancer Institute, Harvard Med. Sch., Dept. of Neurobiology, Harvard Med. Sch.*

3:00 H13 **218.07** ● Ion channels involved in pain pathways: An automated patch clamp approach. A. R. OBERGRUSSBERGER*; E. DRAGICEVIC; N. BECKER; M. RAPEDIUS; T. A. GOETZE; M. G. ROTORDAM; N. BRINKWIRTH; I. RINKE-WEIß; S. STOELZLE-FEIX; C. HAARMANN; S. FRIIS; T. STRASSMAIER; R. HAEDO; M. GEORGE; A. BRÜGGEMANN; N. FERTIG. *Nanion Technologies GmbH, Nanion Technologies Inc.*

4:00 H14 **218.08** Tentonin 3/TMEM150c expresses in aortic arch and mediates baroreflex function. H. LU; J. CHOI*; G. HONG; U. OH. *Korea Inst. of Sci. and Technol.*

1:00 H15 **218.09** Mechanisms of cold temperatures rate coding by *Drosophila* CIII neurons. N. MAKSYMCHUK*; A. SAKURAI; A. A. PATEL; N. J. HIMMEL; D. COX; G. CYMBALYUK. *Georgia State Univ.*

2:00 H16 **218.10** $Ca_v3.2$ Ca^{2+} channels modulate nociception in healthy and diabetic mice. S. K. SAUER*; T. HOFFMANN; K. KISTNER; S. JOKSIMOVIC; S. M. TODOROVIC; P. W. REEH. *Univ. of Erlangen, Inst. of Physiol. and Pathophysiology, Univ. of Colorado Denver, Anschutz Med. Campus, Univ. of Colorado Anschutz Med. Campus, Univ. Erlangen-Nuremberg.*

3:00 H17 **218.11** Piezo2 and STOML3 mediate mechanical excitability of A delta bone marrow nociceptors. M. MORGAN*; S. NENCINI; J. THAI; J. J. IVANUSIC. *The Univ. of Melbourne.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 H18 **218.12** Piezo2 is an ultrasound-sensitive ion channel that mediates neuromodulation in mammalian peripheral nerve. Y. BABA*; B. U. HOFFMAN; C. TONG; E. E. KONOFAGOU; E. A. LUMPKIN. *Columbia Univ. Med. Ctr., Columbia Univ. Med. Ctr.*

1:00 H19 **218.13** Regulation of piezo2 currents by gi-protein coupled receptors. J. S. DEL ROSARIO*; T. ROHACS. *Rutgers New Jersey Med. Sch.*

2:00 H20 **218.14** Piezo2 channels mediate corneal noxious mechanosensation. J. FERNÁNDEZ-TRILLO; D. FLOREZ-PAZ; A. IÑIGO PORTUGUÉS; O. GONZÁLEZ-GONZÁLEZ; A. GONZÁLEZ; F. VIANA; C. BELMONTE; A. GOMIS*. *Inst. de Neurociencias. UMH-CSIC.*

3:00 H21 **218.15** Piezo1 ion channel is expressed in mouse and human dorsal root ganglion (DRG) neurons. J. ROH; S. HWANG; C. PARK; Y. KIM*. *Col. of Medicine, Gachon Univ.*

4:00 H22 **218.16** A central mechanism of analgesia after $Na_V1.7$ loss-of-function. D. I. MACDONALD*; A. P. LUIZ; E. C. EMERY; R. M. BROWNSTONE; S. SIKANDAR; J. N. WOOD. *UCL, UCL, Queen Mary Univ. of London.*

1:00 H23 **218.17** Dexmedetomidine modulated transient receptor potential ankyrin subtype 1 in mice. K. KIM*; B. LEE; G. CHUNG. *Seoul Natl. Univ. Sch. of Dent., Seoul Natl. Univ., Seoul Natl. Univ.*

2:00 H24 **218.18** Modulation of the TRPA1 ion channel by sigma-1 receptor. E. DE LA PEÑA GARCIA*; A. MARCOTTI; J. FERNÁNDEZ-TRILLO; A. GONZÁLEZ; A. GOMIS; F. VIANA. *Inst. de Neurociencias. UMH-CSIC.*

3:00 H25 **218.19** Transient receptor potential channel 4 as a novel target to relieve psoriasis. S. LEE*; R. TONELLO; Y. CHOI; S. JUNG; T. BERTA. *Univ. of Cincinnati, Hanyang Univ.*

4:00 H26 **218.20** Expression of the cold thermoreceptor TRPM8 in rodent peripheral and brain circuits involved in thermal homeostasis. P. ORDÁS; P. HERNÁNDEZ-ORTEGO; H. VARA; C. FERNÁNDEZ-PEÑA; A. REIMÚNDEZ; C. MORENILLA; A. GUADANO-FERRAZ; A. GOMIS; M. HOON; F. VIANA; R. SENARIS*. *Inst. de Neurociencias UMH-CSIC, CIMUS, Univ. of Santiago de Compostela, Inst. de Investigaciones Biomédicas Alberto Sols, CSIC-UAM, NIH, NIDCR.*

1:00 H27 **218.21** Gαq sensitizes the TRPM8 ion channel to inhibition by decrease in PIP_2 levels. L. LIU; Y. YUDIN; J. NAGWEKAR; N. SHIROKOVA; C. KANG; T. ROHACS*. *Rutgers New Jersey Med. Sch.*

2:00 H28 **218.22** Maintenance mechanism of nociplastic pain in males. K. E. MCDONOUGH*; K. M. HANKERD; J. LA; J. M. CHUNG. *Univ. of Texas Med. Br., Univ. of Texas Med. Br., Univ. of TX Med. Br.*

3:00 H29 **218.23** Estrogen mediates peripherally-maintained persistent central sensitization in nociplastic pain. K. M. HANKERD*; J. LA; J. M. CHUNG. *Univ. of Texas Med. Br.*

4:00 H30 **218.24** ▲ Regulation of pain through the TRPV1 channel by the sigma-1 receptor and progesterone. R. JUÁREZ-CONTRERAS*; M. ORTÍZ-RENTERÍA; R. GONZÁLEZ-RAMÍREZ; L. D. ISLAS; I. LLORENTE; S. A. SIMON; M. HIRIART; T. ROSENBAUM; S. L. MORALES-LÁZARO. *Inst. de Fisiología Celular, Hosp. Gen. Dr. Manuel Gea González, Secretaría de Salud, Facultad de Medicina, Inst. de Fisiología Celular, Duke Univ.*

1:00 H31 **218.25** ● Effect of TRPA1 antagonist AMG0902 in a rat model for postoperative pain. S. E. BEYER*; D. SUGIYAMA; S. G. LEHTO; S. KANG. *Univ. of Iowa, Amgen Inc., Univ. of Iowa Hosp. and Clinics.*

2:00 H32 **218.26** Probing capsaicin-TRPA1 interactions with computational analysis. E. MEDINA-GURROLA*; R. SYRLYBAEVA; M. R. TALIPOV; E. E. SERRANO. *New Mexico State Univ., New Mexico State Univ.*

3:00 H33 **218.27** ▲ Capsaicin reduces the hypertrophy of uterus Hartley guinea pigs induced with polycystic ovary syndrome. V. ALATRISTE*; C. A. ZERÓN-ALVARADO; D. LIMÓN; L. MARTÍNEZ-MENDIETA; I. MARTÍNEZ-GARCÍA; F. LUNA. *BUAP.*

POSTER

219. Somatosensation: Pain Mechanisms

Theme D – Sensory Systems

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 H34 **219.01** Formalin-induced nociceptive response is enhanced by serum exosomes isolated from partial sciatic nerve ligation (PSL) mice. K. HAMAMURA*; S. KATSUYAMA; T. KOMATSU; T. SAKURADA; K. ARITAKE. *Daiichi Univ. of Pharm., Tokyo Univ. of Pharm. and Life Sci.*

2:00 H35 **219.02** Sex differences in TRPV1 expression, activation and associated behavior in two mouse models of oral cancer. N. N. SCHEFF*; H. WILLIAMS; A. BHATTACHARYA; B. L. SCHMIDT. *New York Univ.*

3:00 H36 **219.03** ▲ GRK2 contributes to the resolution of acute pain by controlling protein phosphorylation in the DRG neurons. H. TAKEMURA*; F. AMAYA. *Kyoto Prefectural Univ. of Med.*

4:00 H37 **219.04** Type 1 interferons act directly on nociceptors to produce pain sensitization: Implications for viral infection-induced pain. P. BARRAGAN-IGLESIAS*; U. FRANCO-ENZASTIGA; A. WANGZHOU; T. PRICE. *Univ. of Texas At Dallas.*

1:00 H38 **219.05** Investigation of sex-dependent differentially translated mRNAs in nociceptors. D. TAVARES-FERREIRA*; P. R. RAY; A. WANGZHOU; I. SANKARANARAYANAN; S. SHIERS; P. BARRAGAN-IGLESIAS; A. N. AKOPIAN; T. J. PRICE. *Univ. of Texas at Dallas, UT Hlth. San Antonio.*

2:00 H39 **219.06** Repeated mechanical stimuli at change time intervals have influence on pressure pain thershold. S. NAGAHAMA*. *Teikyo Heisei Univ.*

3:00 H40 **219.07** Legumain induces trigeminal nociceptor hyperexcitability through PAR_2. E. W. C. CHEN*; D. CHO; H. WILLIAMS; L. EDGINGTON-MITCHELL; N. W. BUNNETT; B. L. SCHMIDT. *New York Univ. Col. of Dent., Univ. of Melbourne, Columbia Univ. Col. of Physicians and Surg.*

4:00 H41 **219.08** The physiology of human A-beta high-threshold mechanoreceptors. S. S. NAGI*; A. G. MARSHALL; A. MAKDANI; E. JAROCKA; F. P. MCGLONE; H. OLAUSSON. *Linköping Univ., Univ. of Manchester, Liverpool John Moores Univ., Umeå Univ.*

1:00 H42 **219.09** MNK1/2 inhibition by eFT508 prevents IL-6 induced hyperexcitability in DRG nociceptors. V. JEEVAKUMAR*; A. K. AL-SARDAR; F. MOHAMED; G. DUSSOR; T. PRICE. *The Univ. of Texas At Dallas.*

● Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 H43 **219.10** Involvement of cckergic system on persistent pain and morphine analgesia following chronic inflammation and peripheral nerve injury in mice. D. W. FERREIRA*; L. RUELLE-LE GLAUNEC; C. M. AROKIARAJ; R. P. SEAL. *Univ. of Pittsburgh Sch. of Med., Univ. of Pittsburgh Sch. of Med., Univ. of Strasbourg.*

3:00 H44 **219.11** Characterization of membrane mechanics of acutely dissociated dorsal root ganglion neurons of rats by the laser tweezer optical trapping technique. J. GU*; F. EROL; S. TONOMURA. *Univ. of Alabama At Birmingham.*

4:00 H45 **219.12** Characterization of NeuN, as a tool, within a free open source method of image cytometry in rat dorsal root ganglia for measurement of size and CGRP sub-populations with fluorescent immunohistochemistry during naïve and adjuvant induced arthritis (AIA) conditions. M. B. ANDERSON*; K. E. MILLER. *Oklahoma State Univ. Ctr. for Hlth. Sci.*

1:00 H46 **219.13** Optogenetic activation of primary afferents to identify postsynaptic targets in the dorsal horn. P. J. FLYNN*; D. M. DUBREUIL; B. WAINGER. *Massachusetts Gen. Hosp., Massachusetts Gen. Hosp.*

2:00 I1 **219.14** Targeting the nociceptive system with AAV9 and AAV2retro viral vectors. M. S. RIEDL*; A. G. J. SKORPUT; R. GORE; E. MARRON; K. KITTO; C. A. FAIRBANKS; L. VULCHANOVA. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota.*

3:00 I2 **219.15** Up regulation of nociceptors and their role in the ocular pain physiopathology in a model of dry eye. D. FAKIH*; C. BAUDOUIN; A. REAUX LE GOAZIGO; S. MELIK PARSADANIANTZ. *UMR S 968 Inserm/Cnrs 7210, Inst. de la Vision; Thea, R&D Dept., UMR S 968 Inserm/Cnrs 7210, Inst. de la Vision, Quinze-Vingts Natl. Ophthalmology Hospital, Versailles-Saint-Quentin-en-Yvelines Univ., UMR S 968 Inserm/Cnrs 7210, Inst. de la Vision, UMR S 968 Inserm/Cnrs 7210, Inst. de la Vision.*

4:00 I3 **219.16** Reactive dicarbonyls from the diabetic metabolism and classical inflammatory mediators work in concert to activate cutaneous nociceptors. A. K. BECKER; T. FLEMING; P. W. REEH*; S. K. SAUER. *Univ. of Erlangen-Nuremberg, Univ. of Heidelberg.*

1:00 I4 **219.17** Lionfish venom elicits pain predominantly through the activation of non-peptidergic nociceptors. S. MOUCHBAHANI-CONSTANCE*; L. S. LESPERANCE; H. PETITJEAN; A. DAVIDOVA; S. A. PRESCOTT; R. SHARIF-NAEINI. *McGill Univ., McGill Univ., The Hosp. for Sick Children, Univ. of Toronto.*

2:00 I5 **219.18** Assessing role of non-peptidergic MrgD expressing fibers in cancer-induced bone pain. K. GAUDREAU; J. J. HAVELIN*; T. E. KING. *Univ. of New England, Univ. of Maine.*

3:00 I6 **219.19** Development of a TRPA1 reporter mouse model. S. KIM; P. K. BAHIA; J. HARSANYIOVA; M. KOLLARIK; T. TAYLOR-CLARK*. *Univ. of South Florida, Univ. of South Florida, Univ. of South Florida.*

4:00 I7 **219.20** A novel mechanism for regulation of mitochondrial function by Epac2 contributes to acute hyperalgesia evoked by prostaglandin E2. D. J. GOODE; D. C. MOLLIVER*. *Univ. of New England.*

1:00 DP07/I8 **219.21** (Dynamic Poster) Correlational gene modules in human PNS tissues help identify key regulatory and signalling pathways related to nociception and neuro-immune interactions. P. R. RAY*; A. WANGZHOU; V. JEEVAKUMAR; T. J. PRICE. *The Univ. of Texas at Dallas, Univ. of Texas at Dallas, Univ. of Texas at Dallas, The Univ. of Texas at Dallas.*

2:00 I9 **219.22** Effects of cannabinoid agonist on human sensory neurons. S. DAVIDSON*; A. N. REKER; Z. K. FORD; S. CHEN. *Univ. of Cincinnati, Univ. of Cincinnati, Univ. of Cincinnati Col. of Med.*

3:00 I10 **219.23** Mechanisms that drive enhancement of depolarizing spontaneous fluctuations of membrane potential and associated ongoing activity in nociceptors. E. R. LOPEZ*; M. A. ODEM; A. GARZA-CARBAJAL; A. G. BAVENCOFFE; C. W. DESSAUER; E. T. WALTERS. *The Univ. of Texas Hlth. Sci. Ctr. At Houston, The Univ. of Texas Hlth. Sci. Ctr. At Houston.*

4:00 I11 **219.24** Macrophage migration inhibitory factor (MIF) may contribute to pain after spinal cord injury by promoting ongoing activity in primary nociceptors. A. G. BAVENCOFFE*; A. GARZA CARBAJAL; E. A. SPENCE; O. E. BLOOM; C. W. DESSAUER; E. T. WALTERS. *McGovern Med. Sch. at UTHealth, The Feinstein Inst. for Med. Res.*

1:00 I12 **219.25** Identifying sensory nerve endings that innervate the bone marrow and periosteum using anterograde tracing. J. THAI; M. KYLOH; L. TRAVIS; N. SPENCER; J. J. IVANUSIC*. *Univ. of Melbourne, Flinders Univ.*

2:00 I13 **219.26** Evaluation of incision-induced sensitization of peripheral sensory afferents in muscle using *in vivo* GCaMP3 imaging. D. SUGIYAMA; A. L. KEYES; Y. M. USACHEV; T. J. BRENNAN; S. KANG*. *Univ. of Iowa, Univ. of Iowa, Univ. of Iowa Dept. of Pharmacol., Univ. of Iowa Col. of Med., Universit of Iowa Hosp. and Clinics.*

3:00 I14 **219.27** Correlation between nerve injury and evoked neuropathic pain in chronic constriction injured mice. H. CHI*; J. LEE; R. CHEN; C. YEN. *Natl. Taiwan Univ.*

4:00 I15 **219.28** Submucosa is the load bearing structure of distal colon and rectum. S. SIRI*; F. MAIER; S. SANTOS; D. PIERCE; B. FENG. *Univ. of Connecticut, Univ. of Connecticut.*

1:00 I16 **219.29** Pancreatic sensory neurons in the DRG and nodose ganglion have different immunohistochemical/morphometric signatures for TRPA1, P2X3, NFM, and CGRP. L. E. HAIRE; T. L. REDLER; V. P. DUGAN; A. KUNDU; R. D. JOHNSON*. *Univ. of Florida.*

POSTER

220. Preclinical and Clinical Studies in Peripheral Nerve Injury and Neuropathic Pain

Theme D – Sensory Systems

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 I17 **220.01** Epigenetic profiling of sensory neurons in chronic pain models. S. VILLA*; F. DENK. *King's Col. of London, King's Col. London.*

2:00 I18 **220.02** The role of small extracellular vesicles in chronic neuropathic pain. Z. LIN*; S. K. AJIT; R. JEAN-TOUSSAINT; Y. TIAN; A. SACAN. *Drexel Univ. Col. of Med., Drexel Univ. Col. of Med., Drexel Univ. Sci. & Hlth. Systems.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 I19 **220.03** An RNA-seq based, ligand-receptor interactome between 42 cell-types and subtypes of nociceptors. A. WANGZHOU*; P. R. RAY; C. A. PAIGE; G. O. DUSSOR; T. J. PRICE. *The Univ. of Texas at Dallas, The Univ. of Texas at Dallas.*

4:00 I20 **220.04** p53 induction in the DRG is associated with the pain hypersensitivity after the tissue injury. A. YAMASHITA*; F. AMAYA. *Kyoto Prefectural Univ. of Med.*

1:00 I21 **220.05** The plasticity of spinal γ-aminobutyric acid interneurons reduces analgesic effects of morphine in neuropathic pain. T. HIROKI*; T. SUTO; J. OHTA; S. SAITO; H. OBATA. *Gunma Univ. Grad. Sch. of Med., Fukushima Med. Univ.*

2:00 I22 **220.06** Mechanisms of evoked pain in a mouse model of chronic compression of dorsal root ganglia. T. WANG*; J. TAO; J. ZHU; C. MA. *Inst. of Basic Med. Sciences, Chinese Acade.*

3:00 I23 **220.07** A single injection of capsaicin induces long lasting analgesia for trigeminal neuropathic pain in mice. S. WANG; J. YANG; C. BIAN; Y. GAO; F. WEI; M. CHUNG*. *Univ. of Maryland, Sch. of Dent.*

4:00 I24 **220.08** Identification of stable reference genes for microRNA expression analysis in neuronal tissues in a mouse peripheral nerve injury model. T. KALPACHIDOU*; K. K. KUMMER; M. MITRIĆ; M. KRESS. *Med. Univ. of Innsbruck.*

1:00 I25 **220.09** The roles of $Ca_V2.1$ and CaMKII in hyperglycemic sensitization of peripheral sensory neurons. R. C. EVANS*; Y. ZHANG; R. GOMEZ; N. A. JESKE. *UTHSCSA, UTHSCSA.*

2:00 I26 **220.10** DRG mitochondrial homeostasis in painful diabetic neuropathy and its alteration by calcium and CXCR4 signaling. S. HACKELBERG*; N. D. JAYARAJ; D. REN; D. S. GEORGE; A. BELMADANI; R. J. MILLER; D. M. MENICHELLA. *Northwestern Univ., Northwestern Univ.*

3:00 I27 **220.11** Substance P is an important mediator for acupuncture effects. Y. FAN*; H. KIM; D. KIM; Y. RYU; S. LEE; H. KIM; H. JANG; D. AHN; E. JEONG; Y. YI; C. YANG. *Col. of Korean Medicine, Daegu Haany Univ., Korean Med. Fundamental Res. Division, Korea Inst. of Oriental Med.*

4:00 I28 **220.12** ● Effects of external low intensity focused ultrasound on electrophysiological changes *in vivo* in a rodent model of common peroneal nerve injury. A. HELLMAN; T. MAIETTA; K. BYRAJU; P. NEUBAUER; E. WILLIAMS; C. BURDETTE; D. S. SHIN; G. GHOSHAL; J. QIAN; J. NALWALK; J. G. PILITSIS*. *Albany Med. Col., Acoustic Medsystems, Albany Med. Ctr.*

1:00 I29 **220.13** Expression of pSTAT3 after peripheral nerve damage: Injured and non-injured afferents profile in neuropathic pain models. L. BERNAL; E. CISNEROS; C. ROZA*. *Univ. De Alcala, Univ. de Alcala/CUNIMAD.*

2:00 I30 **220.14** ▲ The cellular basis of protease activated receptor type 2 evoked mechanical and affective pain. A. AHMAD*; S. HASSLER; M. KUME; S. SHIERS; J. MWIRIGI; A. WANGZHOU; D. NAIK; G. DUSSOR; J. VAGNER; S. BOITANO; T. PRICE. *Univ. of Texas At Dallas, Univ. of Arizona, Univ. of Arizona.*

3:00 I31 **220.15** ● CRMP2: Roles pre- and post-synaptic spinal neurotransmission? L. BOINON*; J. YU; A. MOUTAL; A. CHEFDEVILLE; D. L. FEINSTEIN; R. KHANNA. *Univ. of Arizona, Univ. of Illinois at Chicago, The Ctr. for Innovation in Brain Sciences, The Univ. of Arizona Hlth. Sciences, Tucson, Arizona, Regulonix Holding Inc., Tucson, Arizona, BIO5 Institute, Univ. of Arizona.*

4:00 I32 **220.16** Role of histone acetylation in diabetic neuropathy. M. C. CHATTOPADHYAY*; V. S. THAKUR. *Texas Tech. Univ. Hlth. Sci. Ctr. - El Paso.*

1:00 I33 **220.17** The potent protease-activated receptor 2 (PAR2) antagonist C781 inhibits PAR2 mediated mechanical hypersensitivity and hyperalgesic priming in mice. M. KUME*; S. BOITANO; J. VAGNER; G. DUSSOR; T. PRICE. *The Univ. of Texas at Dallas, Univ. of Arizona, Univ. of Arizona.*

2:00 I34 **220.18** Improved white matter health following mindfulness training for neuropathic pain in women treated for breast cancer. A. LEEMING*; L. FANG; T. HATCHARD; O. MIODUSZEWSKI; Y. SHERGILL; E. KHOO; P. POULIN; A. SMITH. *Univ. of Ottawa, Univ. of Ottawa, Univ. of Ottawa, McMaster Univ.*

3:00 I35 **220.19** Repressor element 1-silencing transcription factor is necessary and sufficient for the development of chronic pain. F. ZHANG; S. GIGOUT; Y. LIU; Y. WANG; H. HAO; N. J. BUCKLEY; H. ZHANG; I. C. WOOD; N. GAMPER*. *Hebei Med. Univ., Univ. of Leeds, Univ. of Oxford.*

4:00 I36 **220.20** Nerve injury diminishes cannabinoid analgesia through G9a-mediated transcriptional repression of CB1 receptors in primary sensory neurons. Y. LUO; J. ZHANG*; L. CHEN; S. CHEN; H. CHEN; H. PAN. *Univ. of Texas MD Anderson Cancer Ctr.*

1:00 DP08/I37 **220.21** ● (Dynamic Poster) Rapid *in vitro* detection of drug-induced peripheral neuropathy through electrophysiological and histological analysis of 3D microphysiological "nerve-on-a-chip" cultures. K. J. POLLARD*; H. R. KARIMIAN; L. J. CURLEY; P. KORDJAMSHIDI; M. J. MOORE. *Tulane Univ., AxoSim Inc, Tulane Univ., Tulane Univ.*

2:00 I38 **220.22** Chronic fructose leads to insulin resistance and neuropathic pain in rats. G. GARCÍA*; E. J. GUTIÉRREZ-LARA; V. GRANADOS-SOTO; J. MURBARTIÁN. *Cinvestav, Cinvestav.*

3:00 I39 **220.23** ● Biomarkers for painful vs painless peripheral neuropathy: Diode laser fiber-selective stimulation (DLss) vs. traditional quantitative sensory testing (QST). M. I. NEMENOV*; S. HAROUTOUNIAN. *Lasmed LLC, Stanford Univ., Washington Univ.*

4:00 I40 **220.24** Gut microbiota in chronic pain caused by peripheral nerve injury, cis-platin chemotherapy, and diabetes in mice. P. MA*; C. QIU; G. WU; X. SONG. *Southern Univ. of Sci. and Techology, Washington Univ. in St. Louis.*

1:00 I41 **220.25** Gut bacteria metabolites as novel therapeutic strategies for obesity-related neuropathy. R. BONOMO*; T. COOK; C. GAVINI; L. GAUTRON; B. LAYDEN; V. AUBERT. *Loyola Univ. Chicago, Univ. of Texas Southwestern, Univ. of Illinois Chicago.*

2:00 I42 **220.26** Ectopic activity from injured dorsal root ganglion neurons triggers hyperalgesia and allodynia in rats with spinal nerve ligation. B. PAN*; D. CHAO; G. YU; Q. HOGAN. *Med. Col. of Wisconsin.*

3:00 I43 **220.27** The contribution of Sox11 expression in Nav1.8-positive neurons to nerve regeneration after acute and chronic corneal injury. C. SULLIVAN*; S. LEE; I. MENG. *Univ. of New England, Univ. of Maine, Nihon Univ. Sch. of Dent., Univ. of New England.*

● Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 I44 **220.28** Riboregulation of the essential translation initiation scaffold eIF4G as a strategy to attenuate mechanical hyperalgesia. C. ZHANG; J. DE LA PENA*; Q. ZHOU; T. SHUKLA; E. YETKIN; T. LOU; F. MORCOS; Z. CAMPBELL. *Univ. of Texas at Dallas, UT Dallas.*

1:00 J1 **220.29** Mechanical hypersensitivity through opening of the myelin barrier via tight junction protein knockdown. J. T. S. CHEN; X. HU; I. OTTO; R. BLUM; I. BLASIG; H. L. RITTNER*. *Univ. Hosp. Wuerzburg, Univ. Hosp. of Wuerzburg, Universtity Hosp. of Wuerzburg, Univ. Hosp. Wuerzburg, Leibnitz Forschungsinstitut Mol Pharmakologie.*

2:00 J2 **220.30** Transcriptome analysis of the immune and neuroinflammatory responses associated with peripheral nerve injury. A. KRASOWSKA-ZOLADEK*; D. LOVATT; R. SANOJA; K. TANIS; M. PEARSON; A. TAMBURINO; L. LI; K. ZHANG; V. PETERSON; X. WANG; J. USLANER. *Merck&Co., Merck&Co., Inc, Merck&Co., Inc.*

POSTER

221. Touch: Thalamic-Cortical Processing

Theme D – Sensory Systems

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 J3 **221.01** Integration of tactile information from multiple fingers in human primary sensory cortex measured using high-resolution fMRI. S. ARBUCKLE*; A. PRUSZYNSKI; J. DIEDRICHSEN. *Univ. of Western Ontario, Univ. of Western Ontario, Univ. of Western Ontario.*

2:00 J4 **221.02** Afferent pathway to the ipsilateral somatosensory cortex in human. D. ISHII*; K. ISHIBASHI; Y. KAKU; H. YUINE; S. YAMAMOTO; A. YOZU; Y. KOHNO. *Ibaraki Prefectural Univ. of Hlth. Sci., Chiba Univ. Grad. Sch. of Med., Ibaraki Prefectural Univ. of Hlth. Sci. Hosp., Ibaraki Prefectural Univ. of Hlth. Sci., Ibaraki Prefectural Univ. of Hlth. Sci.*

3:00 J5 **221.03** The effect of acute aerobic pedaling exercise on the inhibitory pathway in the primary somatosensory cortex and somatosensory function. Y. YAMAZAKI*; K. YAMASHIRO; H. ONISHI; N. OTSURU; S. KOJIMA; K. SAITO; D. SATO. *Niigata Univ. of Hlth. and Welfare.*

4:00 J6 **221.04** Dorsal and ventral streams of somatosensory processing - A combined DCS and high-gamma band mapping study. S. RYUN*; M. KIM; J. KIM; C. CHUNG. *Seoul Natl. Univ., Seoul Nat Univ., Seoul Natl. Univ.*

1:00 J7 **221.05** Focal stroke affects tactile processing in neocortical neurons at large distances from the lesion. A. WAHLBOM*; J. M. D. ENANDER; F. BENGTSSON; H. JÖRNTELL. *Neural Basis of Sensorimotor Control.*

2:00 J8 **221.06** Macaques as a model for haptic object recognition. R. L. MILLER*; D. L. SHEINBERG. *Brown Univ.*

3:00 J9 **221.07** Neuronal evidence for adaptive reconfiguration during subanesthetic doses of inahled nitrous oxide. M. WILLSEY*; C. S. NU; S. R. NASON; K. E. SCHROEDER; B. HUTCHISON; E. J. WELLE; P. G. PATIL; C. A. CHESTEK; G. A. MASHOUR. *Univ. of Michigan, Univ. of Michigan, Columbia Univ., Univ. of Michigan, Univ. of Michigan.*

4:00 J10 **221.08** Posterior thalamic nucleus axon terminals have different structure and functional impact in the motor and somatosensory vibrissal cortices. D. CASAS TORREMOCHA*; C. PORRERO; J. RODRÍGUEZ-MORENO; M. GARCÍA-AMADO; J. H. LUBKE; Á. NÚÑEZ; F. CLASCÁ. *Autónoma De Madrid Univ., Res. Ctr. Juelich.*

1:00 J11 **221.09** The functional logic of higher-order thalamocortical axons branching to innervate multiple areas. C. PORRERO*; M. RUBIO-TEVES; D. CASAS-TORREMOCHA; J. RODRIGUEZ-MORENO; M. GARCIA-AMADO; M. C. BALLESTEROS-BRIONES; C. SMERDOU; T. FURUTA; F. CLASCA. *Autonoma de Madrid Univ., CIMA, Univ. de Navarra and Idisna, Osaka Univ.*

2:00 J12 **221.10** Mouse S1 and V1 each initiates a feedback circuit to itself via higher-order thalamus. A. J. MILLER*; S. M. SHERMAN. *Univ. of Chicago.*

3:00 J13 **221.11** Axons from a higher-order thalamic nucleus innervating separate cortical areas establish structurally different synapses in each area. J. RODRIGUEZ-MORENO*; C. PORRERO; A. ROLLENHAGEN; L. ALONSO-NANCLARES; R. YAKOUBI; A. SANTUY; A. MERCHAN-PEREZ; J. DEFELIPE; J. LÜBKE; F. CLASCA. *Autonoma de Madrid Univ., Res. Ctr. Juelich, Univ. Politecnica de Madrid.*

4:00 J14 **221.12** Patterns of corticofugal layer 5 projections to thalamic and extrathalamic targets. J. A. PRASAD*; B. J. CARROLL; S. M. SHERMAN. *Univ. of Chicago.*

1:00 J15 **221.13** Impact on intracellular responses to tactile inputs of information resident in the neocortical network. J. NORRLID*; J. M. D. ENANDER; H. MOGENSEN; H. JÖRNTELL. *Lund Univ.*

2:00 J16 **221.14** Predicting psychophysical response from multi-electrode spike recordings in rat SI cortex. S. ÖZTÜRK*; B. GÜÇLÜ. *Boğaziçi Univ.*

3:00 J17 **221.15** Evoked local field potentials from the hindpaw representation of rat SI cortex due to vibrotactile stimulation of the glabrous skin. B. GÜÇLÜ*; F. T. DUVAN. *Boğaziçi Univ.*

4:00 J18 **221.16** ▲ Divergent inputs to different classes of layer 6 corticothalamic neurons in primary somatosensory cortex. C. M. WHILDEN*; M. CHEVEE; S. P. BROWN. *Johns Hopkins Sch. of Med.*

1:00 J19 **221.17** Neural correlates of anticipation in mouse primary somatosensory and prelimbic cortices. R. GUZULAITIS*; L. M. PALMER. *Florey Institute, Univ. of Melbourne, Florey Institute, Univ. of Melbourne.*

2:00 J20 **221.18** Calcium-activated TRPM4 conductances mediate persistent firing in neurons of the thalamic reticular nucleus. J. O'MALLEY; G. S. STEPHENS; F. SEIBT; J. CHIN; M. BEIERLEIN*. *McGovern Med. Sch. At UTHealth, Baylor Col. of Med.*

3:00 J21 **221.19** Thalamic modulation and the shaping of cortical sensory representations in the awake and anesthetized mouse. P. Y. B. BORDEN*; N. C. WRIGHT; A. J. SEDERBERG; C. WAIBLINGER; B. HAIDER; G. B. STANLEY. *Georgia Inst. of Technol., Georgia Inst. of Technol., Georgia Tech. and Emory Univ., Georgia Inst. of Technol.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 J22 **221.20** Cerebellocortical coupling via the medial posterior thalamus: A role in whisker-dependent texture discrimination. H. BABA AISSA*; A. VARANI; J. L. FRONTERA; M. DIANA; J. CARCAUD; T. TARPIN; P. COULON; C. LENA; D. POPA. *Inst. de Biologie de l'Ecole Normale Superieure, Inst. de Biologie Paris-Seine, Inst. de Neurosciences de La Timone.*

1:00 J23 **221.21** Activity in secondary sensory thalamus during whisker-based detection of relevant objects. G. M. PIERCE*; A. K. KINNISCHTZKE; D. Y. PARK; H. C. MACOMBER; R. M. BRUNO. *Columbia Univ., Columbia Univ.*

2:00 J24 **221.22** Cortico-thalamo-cortical loops of forelimb somatosensory cortex. K. GUO*; N. YAMAWAKI; M. TAPIES; G. M. SHEPHERD. *Northwestern Univ., Northwestern Univ.*

3:00 J25 **221.23** Astrocytes modulate sensory-evoked neuronal network activity. J. W. LINES*; P. KOFUJI; J. R. AGUILAR; A. ARAQUE. *Univ. of Minnesota, Hosp. Nacional Paraplejicos.*

4:00 J26 **221.24** Pupil-linked arousal dependent sensory processing in awake somatosensory thalamus. Z. FAZLALI*; Y. ZHANG; C. RODENKIRCH; Q. WANG. *Columbia Univ.*

POSTER

222. Auditory Processing

Theme D – Sensory Systems

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 J27 **222.01** An active multisensory motor strategy to sound localization in virtual reality. C. VALZOLGHER*; G. VERDELET; R. SALEMME; L. LOMBARDI; A. FARNÉ; F. PAVANI. *Ctr. de Recherche en Neurosciences de Lyon, IMPACT, Univ. of Trento, Neuro-immersion, Univ. of Trento.*

2:00 J28 **222.02** Imaging the representation of sound location in the auditory cortex of awake marmoset. C. CHEN*; X. SONG; Y. GUO; X. WANG. *Johns Hopkins Univ. Sch. Med.*

3:00 J29 **222.03** Temporal weighting functions for binaural cues in rats. K. LI*; C. H. K. CHAN; A. P. MISHRA; J. W. H. SCHNUPP. *City Univ. of Hong Kong, City Univ. of Hong Kong Shenzhen Res. Inst.*

4:00 J30 **222.04** Evaluating nonlinear auditory steady-state responses in EEG using multi-spectral phase-coherence analysis. L. WANG; E. NOORDANUS; Y. YANG; J. A. VAN OPSTAL*. *Donders Ctr. for Neuroscience, Radboud Univ., Donders Ctr. for Neuroscience, Radboud Uni., Northwestern University, Feinberg Sch. of Medic, Radboud Univ. Nijmegen, Donders Inst. Brain Cogn. Behaviour, Dept. Biophysics.*

1:00 J31 **222.05** Allocentric sound localization in ferrets. S. M. TOWN*; J. K. BIZLEY. *UCL Ear Inst.*

2:00 J32 **222.06** Binaural hearing in the naked mole-rat. E. MCCULLAGH*; J. PEACOCK; A. KLUG; T. PARK; D. J. TOLLIN. *Univ. of Colorado Anschutz, Univ. of Illinois Chicago.*

3:00 J33 **222.07** The effect of anticipated cue reliability on neural adaptation and novelty detection in barn owls. K. SHADRON*; R. FERGER; J. L. PENA. *Albert Einstein Col. of Med.*

4:00 J34 **222.08** Competing stimuli in the owl's auditory space map - Evidence supporting a population vector readout. R. FERGER*; M. BECKERT; K. SHADRON; B. J. FISCHER; J. L. PENA. *Albert Einstein Col. of Med., Seattle Univ.*

1:00 J35 **222.09** Neural evidence of location constancy for auditory spectral processing in marmoset auditory cortex. Y. ZHOU*; J. BRAASCH. *Arizona State Univ., Rensselaer Polytechnic Inst.*

2:00 J36 **222.10** Acoustic space perception: Relating explicit spatial confidence and performance accuracy. G. RABINI; G. LUCIN; G. MONITTOLA; A. FARNÈ; D. BALDAUF; F. PAVANI. *Univ. of Trento, Univ. of Trento, Ctr. de Recherche en Neurosci. de Lyon (CRNL).*

3:00 J37 **222.11** Noise effect on the auditory evoked responses to different sound locations in unilateral deafness: Hemispheric asymmetry and relationships to speech perception. J. LEE*; J. HAN; H. LEE. *Hallym Univ. Col. of Med., Hallym Univ. Col. of Med.*

4:00 J38 **222.12** Chronic bilateral stimulation through cochlear implants during development can reverse the effect of early-onset deafness on neural ITD sensitivity. W. SUNWOO; B. DELGUTTE; Y. CHUNG*. *Massachusetts Eye and Ear.*

1:00 J39 **222.13** Enhancement of spontaneous glutamate release by group I mGluRs in the medial nucleus of the trapezoid body. K. PENG; X. WANG; Y. WANG; D. LI; H. HUANG; Y. LU*. *Northeast Ohio Med. Univ., Florida State Univ., Florida State Univ., Tulane Univ.*

2:00 J40 **222.14** Two-photon calcium imaging of auditory processing in the echolocating bat. M. J. WOHLGEMUTH, III; J. LAWLOR*; C. F. MOSS; K. V. KUCHIBHOTLA. *Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ.*

3:00 J41 **222.15** Evidence of in-flight head stabilization behavior in the Egyptian fruit bat: Association with wingbeat cycle and vocal emissions. J. ROSSBOROUGH; L. STIDSHOLT; A. SALLES; P. MADSEN; C. F. MOSS; L. F. HOFFMAN*. *Geffen Sch. of Med., Aarhus Univ., Johns Hopkins Univ.*

4:00 J42 **222.16** Prediction strategies for target tracking in the echolocating bat, Eptesicus fuscus. A. SALLES*; C. DIEBOLD; C. F. MOSS. *Johns Hopkins Univ.*

1:00 J43 **222.17** Comparison of dendritic spine density/size for anterior auditory field neurons from early-deaf and hearing cats. M. A. MEREDITH*; S. G. LOMBER; H. CLEMO. *Virginia Commonwealth Univ. Sch. Med., McGill Univ.*

2:00 J44 **222.18** Spectral cues are essential for the auditory azimuthal topographic map in the mouse superior colliculus. S. ITO*; Y. SI; D. FELDHEIM; A. M. LITKE. *Univ. of California, Santa Cruz, UC Santa Cruz.*

3:00 J45 **222.19** Age-related differences in auditory ERP responses to sounds of varying loudness in autism and typical development. P. DWYER*; R. DE MEO-MONTEIL; C. D. SARON; S. M. RIVERA. *Univ. of California, Davis, Univ. of California, Davis.*

4:00 J46 **222.20** Source localization of auditory-evoked potentials in preterm human neonates. D. ARZOUNIAN*; V. DELATTRE; J. DUBOIS; L. HERTZ-PANNIER; C. CHIRON; F. WENDLING; M. HASSAN; A. KAMINSKA. *Inserm, CEA, Univ. Rennes, Inserm, AP-HP, Necker-Enfants Malades Hopistal.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

223. Auditory Processing: Perception, Cognition, and Action

Theme D – Sensory Systems

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 K1 **223.01** A cortical network model for solving the cocktail party problem using spatial attention. K. F. CHOU*; M. SHIREY; E. A. ROBERTS; H. COLBURN; K. K. SEN. *Boston Univ.*

2:00 K2 **223.02** Pet and MR evidence of cognitive deficit after hearing loss in 5xFAD mice. J. KIM; M. PARK*; H. LEE; S. LEE; H. LEE; Y. JEONG; Y. SON; J. KIM; Y. LEE. *KIRAMS, Radiological and Medico-Oncological Sciences, Univ. of Sci. and Technol., Boramae Med. Center, Seoul Metropolitan Governm, Seoul Natl. Univ. Col. of Med., KIRAMS, Korea Univ.*

3:00 K3 **223.03** Neural correlates of figure-ground segregation in anterolateral fields of the monkey auditory cortex. F. SCHNEIDER*; F. BALEZEAU; Y. KIKUCHI; C. I. PETKOV; A. THIELE; T. D. GRIFFITHS. *Newcastle Univ.*

4:00 K4 **223.04** Predictive rhythmic tapping to auditory metronomes in the nonhuman primate. Y. A. AYALA*; L. PRADO; H. MERCHANT. *Inst. de Neurobiología, Univ. Nacional Autónoma de México.*

1:00 K5 **223.05** Prediction error signalling in the auditory cortex: Neural omission responses in anaesthetised rats. R. AUKSZTULEWICZ*; N. S. HARPER; V. RAJENDRAN; J. W. SCHNUPP. *City Univ. of Hong Kong, Max Planck Inst. for Empirical Aesthetics, Univ. of Oxford.*

2:00 K6 **223.06** Neural correlates of auditory stream segregation in the auditory pathways of macaque monkeys. T. BANNO*; J. LEE; Y. I. FISHMAN; Y. E. COHEN. *Univ. of Pennsylvania, Albert Einstein Col. Med.*

3:00 K7 **223.07** Autonomic nervous system correlates of speech categorization revealed through pupillometry. G. A. LEWIS*; G. M. BIDELMAN. *Univ. of Memphis.*

4:00 K8 **223.08** ▲ Dissociating the role of cholinergic signaling in task acquisition versus expression during sensorimotor learning. S. ELNOZAHY*; T. RAAM; A. WANG; S. OSTOJIC; K. V. KUCHIBHOTLA. *Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ., Ecole Normale Superieure, Johns Hopkins Univ.*

1:00 K9 **223.09** Decision making modulates neuronal responsiveness and functional connectivity in primary auditory cortex. N. A. FRANCIS*; A. SHEIKHATTAR; B. BABADI; P. KANOLD. *Univ. of Maryland.*

2:00 K10 **223.10** Cortical circuit mechanism underlying anticipatory movement. J. ZHANG; T. LI*; J. GUAN; X. LIAO; X. CHEN. *Third Military Med. Univ., Southwest Univ., Chongqing Univ.*

3:00 K11 **223.11** Learning related population dynamics of the dorsal medial geniculate body in mice. A. GILAD*; I. MAOR; A. MIZRAHI. *The Hebrew Univ. Jerusalem.*

4:00 K12 **223.12** Neural correlates of auditory perception. P. KRAUSS*. *Univ. of Erlangen-Nurnberg.*

1:00 K13 **223.13** The role of saccadic vs. environmental visual rhythms in regulating auditory cortical excitability. M. N. O'CONNELL*; A. BARCZAK; T. MCGINNIS; S. NEYMOTIN; P. LAKATOS. *Nathan S Kline Inst.*

2:00 K14 **223.14** Neural encoding and decoding of auditory cortex during perceptual decision making. A. FUNAMIZU*; F. MARBACH; A. M. ZADOR. *Cold Spring Harbor Lab., Cold Spring Harbor Lab.*

3:00 K15 **223.15** Exploring the effect of pre-trial population activity in the auditory cortex on trial outcome during delayed frequency discrimination in mice. D. REATO*; R. STEINFELD; A. TACAO-MONTEIRO; A. RENART. *Champalimaud Ctr. for the Unknown.*

4:00 K16 **223.16** Neuronal signatures of task acquisition versus context-dependent expression in the auditory cortex. C. DRIEU*; Z. ZHU; S. OSTOJIC; K. V. KUCHIBHOTLA. *Johns Hopkins Univ., Johns Hopkins Univ., Ecole Normale Superieure, Johns Hopkins Univ.*

1:00 K17 **223.17** Resolution of a perceptual decision across the layers of the auditory cortex. R. STEINFELD*; T. COSTA; D. REATO; A. TACÃO-MONTEIRO; A. RENART. *Champalimaud Fndn.*

2:00 K18 **223.18** Neuronal ensembles for auditory deviance detection in posterior parietal cortex. A. B. VAN DERVEER*; A. D. FERRELL; M. L. GREENE; J. T. HOLMES; V. KUBRICKA; J. P. HAMM. *Georgia State Univ., Georgia State Univ.*

3:00 K19 **223.19** Antagonistic modulation of frequency selectivity by the amygdalocollicular and corticocollicular pathways. J. LEE; J. LIN; Z. YU; A. SWIERCZ; P. J. MARVAR; G. K. WU*. *The George Washington Univ., The George Washington Univ.*

4:00 K20 **223.20** Characteristics of the auditory cortical response of the male rat. D. PEREZ-HERNANDEZ; A. GALAN COLORADO; O. LARA-GARCIA; M. A. LARA GARCIA*; P. PACHECO. *Univ. Veracruzana, Univ. Autónoma de Tlaxcala, Univ. Nacional Autonoma de México.*

1:00 K21 **223.21** Rats and VRats: Using virtual rats to study the behavior and neural activity of freely moving rats in a complex environment. A. KAZAKOV*; M. M. JANKOWSKI; A. POLTEROVICH; J. NIEDIEK; I. NELKEN. *The Hebrew Univ. of Jerusalem, The Hebrew Univ. of Jerusalem.*

2:00 K22 **223.22** Behavior of freely moving rats in a complex environment modeled by reinforcement learning with informational constraints. J. NIEDIEK*; M. M. JANKOWSKI; A. POLTEROVICH; A. KAZAKOV; I. NELKEN. *The Hebrew Univ. of Jerusalem, The Hebrew Univ. of Jerusalem.*

POSTER

224. Human Auditory Processing II

Theme D – Sensory Systems

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 K23 **224.01** ▲ Classification of electroencephalographic oscillations during relative pitch imagery. S. SAKAMOTO*; A. KOBAYASHI; K. MATSUSHITA; R. SHIMIZU; A. AOYAMA. *Keio Univ.*

2:00 K24 **224.02** Relation between EEG rhythms and sensorimotor synchronization in auditory and visual modalities. M. SASAKI*; H. OKAWA; T. TANAKA. *Tokyo Univ. of Agr. and Technol.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 K25 **224.03** The queen square tests of auditory cognition: Defining hearing deficits and disability in dementia. J. JOHNSON*; C. HARDY; H. SIVASATHIASEELAN; E. BENHAMOU; M. REQUENA-KOMURO; L. RUSSELL; C. GREAVES; J. ROHRER; D. BAMIOU; J. WARREN. *Univ. Col. London.*

4:00 K26 **224.04** Auditory prediction and prediction error in self-generated tones. S. LESKE*; J. I. LUBELL; A. O. BLENKMANN; A. LLORENS; I. FUNDERUD; M. D. FOLDAL; P. G. LARSSON; J. IVANOVIC; T. MELING; R. T. KNIGHT; A. DANIELSEN; T. ENDESTAD; A. SOLBAKK. *Univ. of Oslo, Univerty of Aarhus, Helen Wills Neurosci. Institute, UC Berkeley, Oslo Univ. Hosp., Hôpitaux Universitaires de Genève, Univ. of California Berkeley, Univ. of Oslo.*

1:00 K27 **224.05** Morphological development of human cochlear nucleus - A stereological study. S. SAINI*; 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.*

2:00 K28 **224.06** Phase of ongoing EEG oscillations predict auditory perception. I. T. TAL*; M. LESZCZYNSKI; N. MESGARANI; C. E. SCHROEDER. *Nathan Kline Inst. For Psychiatric Res., Columbia Univ., Columbia Univ. Col. of Physicians and Surgeons.*

3:00 K29 **224.07** Enhanced anticipatory predictions in the auditory system of individuals with tinnitus. M. PARTYKA; G. DEMARCHI; W. SEDLAY; W. SCHLEE; N. WEISZ*. *Univ. of Salzburg, Univ. of Newcastle, Univ. of Regensburg.*

4:00 K30 **224.08** Eye movement-related contextual modulation of auditory cortical activity. A. BARCZAK*; M. N. O'CONNELL; T. MCGINNIS; S. A. NEYMOTIN; C. E. SCHROEDER; P. LAKATOS. *Nathan Kline Inst., Columbia Univ. Col. of Physicians and Surgeons, NYU Langone Med. Ctr.*

1:00 K31 **224.09** Alpha oscillatory activity reflects infants' emerging link between sounds and cognition. K. WOODRUFF CARR*; D. R. PERSZYK; E. S. NORTON; J. L. VOSS; S. R. WAXMAN. *Northwestern Univ., Northwestern Univ., Northwestern Univ.*

2:00 K32 **224.10** Neural representation of speech in spatial multi-speaker speech perception. P. M. PATEL*; J. L. HERRERO; A. D. MEHTA; N. MESGARANI. *Columbia Univ., The Feinstein Inst. For Med. Res., Hofstra North Shore LIJ Sch. of Med.*

3:00 K33 **224.11** Binding the components of a complex stream during segregation. M. REZAEIZADEH*; H. LU; A. J. OXENHAM; S. A. SHAMMA. *Univ. of Maryland, Univ. of Minnesota, Univ. of Maryland, Ecole Normale Superieure.*

4:00 K34 **224.12** Is there a contribution of true oscillatory activity in the processing of rhythmic speech sounds? Evidence from MEG and tACS. B. ZOEFEL*; S. VAN BREE; E. SOHOGLU; M. H. DAVIS. *Univ. of Cambridge.*

1:00 K35 **224.13** Multi and single unit activity in human Heschls gyrus during speech perception and production. A. RAMIREZ-CARDENAS*; R. BEHROOZMAND; C. K. KOVACH; P. E. GANDER; R. KELLEY; K. V. NOURSKI; H. OYA; H. KAWASAKI; M. A. HOWARD, III; J. D. GREENLEE. *Univ. of Iowa, Univ. of South Carolina.*

2:00 K36 **224.14** Effect on entrainment by selective attention to music and speech. R. MATSUI*; T. TANAKA. *Tokyo Univ. of Agr. and Technol.*

3:00 K37 **224.15** Enhancing perception of speech in noise using electrical brain stimulation. B. KHALIGHINEJAD*; J. L. HERRERO; A. D. MEHTA; N. MESGARANI. *Dept. Electrical Engineering, Columbia Univ., The Feinstein Inst. For Med. Res., Hofstra North Shore LIJ Sch. of Med., Columbia Univ.*

4:00 K38 **224.16** A comparison between electrical muscle stimulation and auditory stimulation in tempo-changing beat perception. R. KONNO*; P. SAVAGE; P. LOPES; S. FUJII. *Keio Univ., Univ. of Chicago.*

POSTER

225. Mechanisms of Retinal Circuit Assembly and Function

Theme D – Sensory Systems

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 K39 **225.01** A nitric oxide synthase expressing wide-field amacrine cell's role in shaping retinal output. J. LEFFLER*; W. TAYLOR. *Univ. of California Berkeley, Oregon Hlth. and Sci. Univ., Univ. of California Berkeley, Helen Wills Neurosci. Inst.*

2:00 K40 **225.02** Mouse horizontal cells express subunits of rho-containing GABA(a) receptors. A. A. HIRANO*; S. A. BARNES; N. C. BRECHA. *David Geffen Sch. of Med. at UCLA, Vaglahs, Doheny Eye Inst., Geffen Sch. of Med. at UCLA, David Geffen Sch. Med. at UCLA, Stein Eye Institute, Geffen Sch. of Med. at UCLA.*

3:00 L1 **225.03** Adenylate cyclase 1 links calcium signaling to CFTR-dependent cytosolic chloride elevations in chick amacrine cells. L. ZHONG*; E. L. GLEASON. *Louisiana State Univ.*

4:00 L2 **225.04** Cell types of the human retina and its organoids at single cell resolution: Developmental convergence, transcriptomic identity, and disease map. C. S. COWAN*; M. RENNER; B. G. SCHERF; D. GOLDBLUM; M. MUNZ; J. KROL; T. SZIKRA; P. PAPASAIKAS; R. CUTATT; A. WALDT; R. DIGGELMANN; C. PATINO-ALVAREZ; N. GERBER-HOLLBACH; S. SCHURIER; Y. HOU; A. SRDANOVIC; M. BALOGH; P. HASLER; A. KUSNYERIK; A. SZABO; M. STADLER; A. HIERLEMANN; H. SCHOLL; G. ROMA; F. NIGSCH; B. ROSKA. *Inst. of Mol. and Clin. Ophthalmology Basel, Friedrich Miescher Inst., Novartis Inst. for Biomed. Res., Univ. Hosp. Basel, Friedrich Miescher Inst. For Biomed. Resear, ETH Zurich, Semmelweis Univ., Univ. of Basel.*

1:00 L3 **225.05** Mixed GABA glycine synapses mediate postsynaptic inhibition on mouse on alpha retinal ganglion cells. A. A. SAWANT*; A. BLECKERT; C. GAMLIN; B. N. EBBINGHAUS; W. YU; R. WONG; R. SINHA; M. HOON. *Univ. of Wisconsin-Madison, Univ. of Washington, Univ. of Wisconsin-Madison.*

2:00 L4 **225.06** A characterization of genetic tools for the identification of intrinsically photosensitive retinal ganglion cells. K. C. MIGUEL*; R. H. IBRAHIM; E. CONTRERAS; A. M. MENZIE; T. BOZZA; T. M. SCHMIDT. *Northwestern Univ.*

3:00 L5 **225.07** Classification of FoxP2-expressing retinal ganglion cells in mice. A. FULLER*; T. C. BADEA. *Natl. Eye Inst.*

4:00 L6 **225.08** An on-primary retinal ganglion cell receives off input via a heterotypic RGC gap junction. S. COOLER*; G. W. SCHWARTZ. *Northwestern Univ., Northwestern Univ.*

Sun. PM

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 L7 **225.09** Synaptic basis of velocity tuning in direction selective circuits. M. T. SUMMERS*; M. FELLER. *Univ. of California, Berkeley.*

2:00 L8 **225.10** Visual experience influences the orientation of DSGC dendrites while maintaining asymmetric wiring of the DS circuit. M. Y. EL-QUESSNY*; M. B. FELLER. *Univ. of California, Berkeley, Univ. of California, Berkeley.*

3:00 L9 **225.11** Mechanisms underlying J-RGC's direction selectivity. B. WANG*; Y. ZHANG. *Inst. of Neuroscience, Chinese Acad. of Sci.*

4:00 L10 **225.12** Single cell proteomic mapping of mice retinal cells by CyTOF (cytometry by time of flight). J. GAO*; A. V. DEUSEN; C. DEPPMANN; E. ZUNDER; X. LIU. *Univ. of Virginia, Univ. of Virginia.*

1:00 L11 **225.13** Developing tools to study the molecular landscape of intrinsically photosensitive retinal ganglion cell subtypes. J. L. JAVIER*; E. CONTRERAS; M. THOMSEN; A. M. MENZIE; T. BOZZA; T. M. SCHMIDT. *Northwestern Univ., Johns Hopkins Univ.*

2:00 L12 **225.14** Mapping synaptic fields of inhibitory interneurons with super-resolution imaging. J. MINEHART*; J. SINGER; C. SPEER. *Univ. of Maryland.*

3:00 L13 **225.15** Argonaute 2 translocates to nucleus during the retinal development, and it is involved in the differentiation of specific neuronal subtypes. M. I. MÓVIO*; L. T. WALTER; A. H. KIHARA. *UFABC, Univ. Federal Do ABC, Univ. Federal do ABC.*

4:00 L14 **225.16** GABA transporters and metabotropic receptors interact to regulate synaptic transmission in a direction-selective retinal circuit. J. POTTACKAL*; J. H. SINGER; J. B. DEMB. *Yale Univ., Univ. of Maryland, Yale Univ., Yale Univ., Yale Univ.*

1:00 L15 **225.17** Dendritic voltage-gated K+ currents stabilize rod-driven responses throughout growth on a computational model of a teleost mixed-input ON bipolar cell. K. LEOPOLDO*; M. KAMERMANS; C. JOSELEVITCH. *Univ. De São Paulo, Netherlands Inst. for Neurosci.*

2:00 L16 **225.18** Localization of transient receptor potential vanilloid type 1 in the monkey retina. J. BOUSKILA*; R. PALMOUR; J. BOUCHARD; M. PTITO. *Univ. of Montreal, McGill Univ.*

3:00 L17 **225.19** Pannexin3 as a novel marker for ganglion cells in the feline retina. W. WANG*; Y. NAN; L. LUAN; J. GAO; K. DU; Y. TIAN; T. HUANG; M. PU. *Peking Univ., Peking Univ. Hlth. Sci. Ctr., Karolinska Inst.*

4:00 L18 **225.20** Extracellular ATP-evoked signal transduction cascade underlying H+ efflux from retinal Müller glia. B. TCHERNOOKOVA; B. GOEGLEIN; T. LEUSCHNER; A. POWELL; A. SCHANTZ; R. P. MALCHOW; M. A. KREITZER*. *Univ. of Illinois at Chicago Dept. of Biol. Sci., Indiana Wesleyan Univ.*

1:00 L19 **225.21** Glutamate transporters contribute to non-linear signaling and the mammalian cone photoreceptor synapse. S. H. DEVRIES*. *Northwestern Univ.*

2:00 L20 **225.22** Electrophysiological and morphological properties of the retinal ganglion cell subtypes which project to amygdala. D. GREER*; G. SCHWARTZ. *Northwestern Univ.*

1:00 DP09/L21 **225.23** (Dynamic Poster) A layered retina structure to study neuronal circuits in human stem cell-derived organoids. M. RIZZI*; K. POWELL; M. BRANCH; M. BASCHE; E. LANNING; M. KLOC; R. MASWOOD; A. GONZALEZ-CORDERO; E. WEST; A. SMITH; R. ALI. *UCL.*

4:00 L22 **225.24** Glycine receptor subunit expression in mouse ON-OFF direction selective retinal ganglion cells. I. S. PYLE*; M. A. MCCALL. *Univ. of Louisville, Univ. of Louisville.*

1:00 L23 **225.25** Anoctamin 1: A potential partner for CFTR-mediated nitric oxide-induced chloride release in retinal amacrine cells. T. RODRIGUEZ*; L. ZHONG; A. RADER; H. SIMPSON; E. L. GLEASON. *LSU Biol. Sci., Louisiana State Univ., LSU.*

2:00 L24 **225.26** Unable to Attend
Melanopsin-containing subpopulation analysis of retinal ganglion cells in culture. S. WU*; X. MO. *Eye, Ear, Nose & Throat Hosp. of Fudan Univ.*

3:00 L25 **225.27** Improved receptive-field characterization of retinal ganglion cells using a large field-of-view light stimuli. R. DIGGELMANN*; M. ŽNIDARIč; A. BUCCI; A. HIERLEMANN; F. FRANKE. *ETH Zürich.*

4:00 L26 **225.28** How the coupling strength of horizontal cells effects the retinal processing of spatio-temporal light stimuli - Model and experiments. A. BUCCI*; R. DIGGELMANN; M. ŽNIDARIč; B. ROSKA; R. DA SILVEIRA; A. HIERLEMANN; F. FRANKE. *ETH Zürich, IOB, ENS.*

1:00 L27 **225.29** *Ex vivo* mouse retinal recordings using HD-MEA systems: From characterizing single cells to analyzing populations. M. ŽNIDARIč*; R. DIGGELMANN; A. BUCCI; A. HIERLEMANN; F. FRANKE. *ETH Zürich.*

POSTER

226. Eye Movements and Perception

Theme D – Sensory Systems

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 L28 **226.01** Task-based fMRI of the visuomotor network in the marmoset monkey: Comparison with human visuomotor network topology. D. J. SCHAEFFER*; K. GILBERT; Y. HORI; L. HAYRYNEN; K. D. JOHNSTON; J. GATI; R. S. MENON; S. EVERLING. *Univ. of Western Ontario.*

2:00 L29 **226.02** ● Visual looming and receding stimuli activate a large brain network in the common marmoset. J. C. CLÉRY*; D. J. SCHAEFFER; Y. HORI; K. M. GILBERT; J. S. GATI; R. S. MENON; S. EVERLING. *Univ. of Western Ontario, Univ. of Western Ontario.*

3:00 L30 **226.03** Neuronal mechanisms of pre-saccadic attention in middle temporal area of the marmoset monkey. S. H. COOP*; J. L. YATES; J. F. MITCHELL. *Univ. of Rochester.*

4:00 L31 **226.04** Cerebral information dynamics from visual input to motor output with a whole-hemisphere electrocorticography (ECoG). T. KANEKO*; M. KOMATSU; N. ICHINOHE; H. OKANO. *RIKEN Ctr. For Brain Sci., Keio Univ. Sch. of Med., Natl. Ctr. of Neurol. and Psychiatry.*

1:00 L32 **226.05** Modulations of visual perception across the foveola. M. POLETTI*; N. SHELCHKOVA. *Univ. of Rochester.*

2:00 L33 **226.06** Decoding 3D spatial location across saccades in human visual cortex. X. ZHANG*; C. M. JONES; J. D. GOLOMB. *Ohio State Univ.*

3:00 L34 **226.07** Bottom-up attention in association with microsaccade rate. S. NOGUCHI*; T. KOHAMA; H. YOSHIDA. *Kindai Univ., Kindai Univ., Kindai Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 L35 **226.08** Modeling the trial-by-trial influence of fixational eye movements on visual discrimination. Y. LIN*; M. RUCCI; J. D. VICTOR. *Weill Cornell Med. Col., Boston Univ., Weill Cornell Med. Col.*

1:00 L36 **226.09** Task irrelevant visual forms facilitate saccadic eye movements. A. R. BOGADHI*; Z. M. HAFED. *Hertie Inst. for Clin. Brain Res.*

2:00 L37 **226.10** Foveal action for the control of extra-foveal vision. Z. M. HAFED*; X. TIAN. *Werner Reichardt Ctr. For Integrative Neurosci., NINDS/NIH.*

3:00 L38 **226.11** Eye movements enhance visual sensitivity outside the fovea. J. INTOY*; N. R. BOWERS; J. D. VICTOR; M. POLETTI; M. RUCCI. *Boston Univ., UC Berkeley, Weill Cornell Med. Col., Univ. of Rochester, Univ. of Rochester.*

4:00 L39 **226.12** Comparing dynamic effects of expectation on motion perception and pursuit eye movements. X. WU*; A. C. ROTHWELL; M. SPERING; A. MONTAGNINI. *Univ. of British Columbia, Univ. of British Columbia, CNRS & Aix-Marseille Univ.*

1:00 L40 **226.13** Fixation related neural dynamics during free viewing of static and dynamic images changes with the pattern of exploration. M. LESZCZYNSKI*; S. BICKEL; B. E. RUSS; M. NENTWICH; I. TAL; L. C. PARRA; A. D. MEHTA; C. E. SCHROEDER. *Columbia Univ., Nathan Kline Inst., Hofstra Northwell Sch. of Med., Nathan S. Kline Inst. for Psychiatric Res., City Col. of New York, Nathan Kline Inst. for Psychiatric Res., City Col. of New York, Hofstra North Shore LIJ Sch. of Med., Columbia Univ. Col. of Physicians and Surgeons.*

2:00 L41 **226.14** Tracing the neural basis of integration of spatial information across a saccade in extrastriate visual cortex. A. AKBARIAN*; K. NIKNAM; K. CLARK; B. NOUDOOST; N. NATEGH. *Univ. of Utah, Univ. of Utah.*

3:00 L42 **226.15** Naturalistic viewing paradigm using 360° panoramic video clips and real-time field-of-view change via eye gaze. H. KIM; S. JIN; S. JO; J. LEE*. *Korea Univ., Korea Univ.*

4:00 L43 **226.16** Spontaneous rhythmic eye movement induces active perception under ambiguity. W. CHOI*; S. PAIK. *Dept. of Bio and Brain Engineering, KAIST, Program of Brain and Cognitive Engineering, KAIST.*

1:00 L44 **226.17** Prior expectation of motion direction reduces the pursuit direction variation and interneuronal correlations in macaque area MT. J. PARK*; S. KIM; J. LEE. *Sungkyunkwan Univ., Ctr. for Neurosci. Imaging Research, Inst. for Basic Sci. (IBS).*

2:00 L45 **226.18** Eye movement-based assessment of the perceptual consequences of ophthalmic disorders. R. S. SOANS*; A. GRILLINI; T. K. GANDHI; R. SAXENA; F. W. CORNELISSEN. *Indian Inst. of Technol. - Delhi, Univ. of Groningen, All India Inst. of Med. Sci.*

3:00 L46 **226.19** Anti-Bayesian judgments of visual stability across saccades: Psychophysics and modeling. D. SUBRAMANIAN*; M. A. SOMMER. *Duke Univ., Duke Univ.*

4:00 M1 **226.20** Predictive neural network model of perisaccadic visual responses in the oculomotor system. A. ALERS*; J. J. CHOU; M. A. SOMMER. *Duke Univ.*

1:00 M2 **226.21** Comparison of receptive field remapping around saccadic onset between lateral intraparietal area and frontal eye field in macaques. L. YANG*; C. ZHANG; X. WANG; N. QIAN; M. ZHANG. *Beijing Normal Univ., Beijing Normal Univ., Columbia Univ.*

2:00 M3 **226.22** Properties of smooth pursuit initiation and visual motion reaction time. S. ONO*; K. MIURA; T. KIZUKA. *Univ. of Tsukuba, Grad. Sch. of Medicine, Kyoto Univ.*

3:00 M4 **226.23** Modeling circuit mechanisms of receptive field remapping in LIP and FEF in non-human primates. X. WANG*; C. ZHANG; L. YANG; M. ZHANG; N. QIAN. *Beijing Normal Univ., Beijing Normal Univ., Columbia Univ.*

4:00 M5 **226.24** Visual-only mechanisms underlie selective peri-saccadic suppression of low spatial frequencies. M. BAUMANN*; S. IDREES; T. A. MUENCH; Z. M. HAFED. *Werner Reichardt Ctr. for Integrative Neuroscien, Hertie Inst. for Clin. Brain Res., IMPRS for Cognitive and Systems Neurosci., Inst. for Ophthalmic Res.*

1:00 M6 **226.25** Simultaneous recording of electroencephalogram and eye tracker for investigation of visuospatial attention. M. SANEFUJI*; Y. SHIOTSUKA; H. YAMASHITA; Y. SONODA; M. TORIO; Y. ICHIMIYA; Y. SAKAI; K. YOSHIDA; K. IRAMINA; S. OHGA. *Kyushu Univ., Kyushu Univ., Kyushu Univ. Hosp., Dept. of Pediatrics, Kyushu Univ., Kyushu Univ., Mental Clin. Iris.*

2:00 M7 **226.26** A model of perceived location of a test-flash presented before, during and after smooth pursuit eye movement. J. POLA*; H. J. WYATT. *SUNY Col. Optometry.*

3:00 M8 **226.27** Suppression of previously-fixated locations in superior colliculus during visual search. R. NANJAPPA*; R. M. MCPEEK. *SUNY Col. of Optometry, SUNY Col. of Optometry.*

4:00 M9 **226.28** Characterization of natural head and eye movements driving retinal flow. P. R. MACNEILAGE*; C. SINNOTT; P. HAUSAMANN. *Univ. of Nevada, Reno, Tech. Univ. of Munich.*

1:00 M10 **226.29** Visual-vestibular conflict detection is modulated by motor signals. S. J. HALOW*; J. LIU; P. R. MACNEILAGE. *Univ. of Nevada, Reno, Univ. of Nevada, Reno, Univ. of Nevada, Reno.*

POSTER

227. Sensorimotor Coordination in Motor Control

Theme E – Motor Systems

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 M11 **227.01** Is visuo-motor integration innate? Evidence from a prosthesis reaching task with individuals born without a hand. R. O. MAIMON-MOR*; A. A. FAISAL; T. R. MAKIN. *Univ. of Oxford, Univ. Col. London, Imperial Col. London.*

2:00 M12 **227.02** Online modulation of proprioceptive reflex gain depending on uncertainty in multisensory state estimation. S. ITO*; H. GOMI. *NTT Communication Sci. Labs.*

3:00 M13 **227.03** Sensorimotor interplay in motor cortex during flexible manual interception. Y. ZHANG*; C. LI; T. WANG; H. CUI. *Inst. of Neuroscience, CAS.*

4:00 M14 **227.04** Cognitive-motor integration performance predicts future concussion occurrence in varsity athletes. A. E. PIERIAS*; D. J. GORBET; J. HURTUBISE; T. MELOCHE; L. HYNES; L. E. SERGIO. *York Univ., York Univ., Univ. of Winnipeg, York Univ.*

1:00 M15 **227.05** The non-dominant arm is more accurate in unpredictable reaching conditions. B. FOSAAEN*; R. L. SAINBURG. *The Pennsylvania State Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 M16 **227.06** Differential effects of somatosensory and visual feedback on proprioceptive acuity and motor performance during a forearm pointing task. Q. HUANG*; N. ELANGOVAN; J. KONCZAK. *Univ. of Minnesota Twin Cities, Univ. of Minnesota, Univ. of Minnesota.*

3:00 M17 **227.07** Inability to see during the swing phase of the stride prolongs the following stance in cats. C. T. NGUYEN*; G. S. IYER; M. A. VOLGUSHEV; I. N. BELOOZEROVA. *UCSD, Washington Univ., Univ. of Connecticut Dept. of Psychology, Georgia Inst. of Technol.*

4:00 M18 **227.08** Assessing real-world arm function in children with peripheral nerve injury. M. E. GATWARD*; L. J. YANG; S. H. BROWN. *Univ. of Michigan, Michigan Med., Univ. of Michigan.*

1:00 M19 **227.09** Presynaptic inhibition acts as a spatiotemporal dynamic filter of proprioceptive afferent input during voluntary movement. S. TOMATSU*; G. KIM; S. KUBOTA; K. SEKI. *Natl. Inst. For Physiological Science, NIPS, Natl. Inst. of Neuroscience, Natl. Ctr. of Neurol. and Psychiatry.*

2:00 M20 **227.10** Spinal stretch reflexes in elbow muscles help support efficient reaching. J. WEILER*; P. L. GRIBBLE; A. PRUSZYNSKI. *Western Univ., Western University, Canada, Western Univ.*

3:00 M21 **227.11** Rapid modification of an ongoing reach using touch. S. RESCHECHTKO*; A. PRUSZYNSKI. *Univ. of Western Ontario.*

4:00 M22 **227.12** The pontine nuclei as a link for cortico-cerebellar communication in the control of dexterous movement. J. GUO; B. SAUERBREI*; J. COHEN; M. MISCHIATI; F. PISANELLO; K. M. BRANSON; A. HANTMAN. *Janelia Res. Campus, Inst. Italiano di Tecnologia.*

1:00 M23 **227.13** Gaze location changes manual size estimations of the bisecting segment of the vertical-horizontal illusion. S. YAN; T. M. SIGUR; J. M. HONDZINSKI*. *Louisiana State Univ.*

2:00 M24 **227.14** ▲ Feline head movement during locomotion over complex surfaces. B. D. GOPAL*; H. N. ZUBAIR; I. N. BELOOZEROVA. *Barrow Neurolog. Inst., Barrow Neurolog. Inst., Georgia Inst. of Technol.*

3:00 M25 **227.15** Pyramidal neuron types and cortical networks encoding sensorimotor activity coordinating hand-mouth synergy during eating. H. MOHAN*; X. AN; S. MUSALL; P. P. MITRA; A. K. CHURCHLAND; J. Z. HUANG. *Cold Spring Harbor Lab.*

4:00 M26 **227.16** Speed of hand movement does not affect proprioception during reaching. C. R. COFFMAN*; A. L. YOSS; W. G. DARLING. *Univ. of Iowa.*

1:00 M27 **227.17** Rapid scaling of corrective responses with movement speed. S. V. POSCENTE*; R. M. PETERS; J. G. CASHABACK; T. CLUFF. *Univ. of Calgary, Univ. of Calgary.*

2:00 M28 **227.18** Characterizing the functional organization of spinal internal copy pathways for dexterous forelimb movement. E. J. SANDERS*; N. S. BALTAR; P. FENTON; H. NEDELESCU; P. NGUYEN; E. AZIM. *Salk Inst., The Scripps Res. Inst., Salk Inst. for Biol. Studies.*

3:00 M29 **227.19** A paradigm for physiological examination of naturalistic climbing behavior in mice. A. D. SARUP; A. MIRI*. *Northwestern Univ.*

4:00 M30 **227.20** Task-dependent responses of the eye and hand during online movement corrections. A. J. DE BROUWER*; H. M. BROWN; M. SPERING. *Univ. of British Columbia.*

1:00 M31 **227.21** What can audiovisual illusions teach us about gaze vs. action related spatial attention? T. LORIA*; K. TANAKA; K. WATANABE; L. TREMBLAY. *Univ. of Toronto, Waseda Univ., Waseda Univ.*

2:00 M32 **227.22** Healthy aging delays sensorimotor transformation when planning movements to somatosensory targets. R. GOODMAN*; V. CRAINIC; L. TREMBLAY. *Univ. of Toronto.*

3:00 M33 **227.23** Assessing the usefulness of tablet-based visuomotor tasks to evaluate concussion. J. LIVERMORE; H. LEHMANN; L. E. BROWN*. *Trent Univ., Trent Univ.*

4:00 M34 **227.24** The impact of viscous and elastic loads on a bimanual reach task. A. PABST*; R. BALASUBRAMANIAM. *Univ. of California, Merced.*

1:00 M35 **227.25** A grammar of mouse cerebral cortical activity revealed by mesoscopic Ca^{2+} imaging during natural behaviors. L. S. POPA*; S. WEST; J. ARONSON; R. E. CARTER; L. GHANBARI; S. B. KODANDARAMAIAH; T. J. EBNER. *Univ. of Minnesota, Univ. of Minnesota.*

2:00 M36 **227.26** Wide field-of-view calcium imaging of dynamic cortical networks underlying locomotion. S. L. WEST*; J. D. ARONSON; L. S. POPA; A. C. SHEKHAR; R. E. CARTER; L. GHANBARI; S. B. KODANDARAMAIAH; T. J. EBNER. *Univ. of Minnesota, Univ. of Minnesota.*

3:00 M37 **227.27** An amygdala circuit for experience-dependent exploratory arrest. P. BOTTA*; A. FUSHIKI; A. VICENTE; A. C. MOSBERGER; R. M. COSTA. *Columbia Univ., Columbia Univ., Columbia Univ.*

POSTER

228. Motor Control in Primates and Humans

Theme E – Motor Systems

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 M38 **228.01** Dynamics of the neural state in premotor and parietal cortex during multi-attribute decision-making. A. NAKAHASHI*; P. E. CISEK. *Univ. of Montreal, Univ. of Montreal.*

2:00 M39 **228.02** ● Successive failures caused by exploratory action in a reinforcement-based motor task. R. SAITO; M. KODAMA; D. NOZAKI; M. TAKEMI*. *The Univ. of Tokyo, NTT Network Innovation Labs., JST PRESTO.*

3:00 M40 **228.03** Task complexity can influence kinematics of goal-directed arm reaching movements in chronic stroke survivors - A pilot study. B. KIM*; G. MAMMOLITO; T. AGAG; J. PABULAYAN; J. GIRNIS; V. WALLS; T. NOBILING. *SUNY Upstate Med. Univ.*

4:00 M41 **228.04** ● Go/No-go decision making under severe time constraints interferes with hitting task performance. A. KOBAYASHI*; T. KIMURA. *NTT Communication Sci. Labs.*

1:00 M42 **228.05** Wrist orthoses lead to kinematic changes associated with an increased risk of shoulder dysfunction. H. T. TUCCI; E. M. BAILLARGEON*; D. LUDVIG; A. L. SEITZ; E. J. PERREAULT. *Federal Univ. of Sao Paulo, Northwestern Univ., Shirley Ryan AbilityLab, Northwestern Univ., Northwestern Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 DP11/M43 **228.06** (Dynamic Poster) Manipulating complex objects in the face of perturbations: Predictability through stability. S. BAZZI*; D. STERNAD. *Northeastern Univ., Northeastern Univ.*

3:00 M44 **228.07** Dynamic primitives account for human constrained motion. J. R. HERMUS*; D. STERNAD; N. HOGAN. *MIT, Northeastern Univ. Dept. of Biol., MIT.*

4:00 N1 **228.08** Conceptual similarities between targets and distractors influence visually-guided reaching. C. B. MARTIN*; Z. CHENG; J. PANG; M. D. BARENSE. *Univ. of Toronto.*

1:00 N2 **228.09** Is visual search for target objects that will be acted upon influenced by motor costs? J. B. MOSKOWITZ*; S. A. BERGER; M. S. CASTELHANO; J. P. GALLIVAN; J. R. FLANAGAN. *Queen's Univ.*

2:00 N3 **228.10** High-dimensional posture-space analysis for upper extremity in a proctored virtual reality game. B. A. COHN*; R. BARMAKI; K. HAYASHIDA; F. J. VALERO-CUEVAS. *USC, Univ. of Delaware, USC, USC.*

3:00 N4 **228.11** Monkeys choke under pressure. N. PAVLOVSKY*; A. D. DEGENHART; P. MARINO; A. P. BATISTA; S. M. CHASE. *Univ. of Pittsburgh, Carnegie Mellon Univ., Carnegie Mellon Univ.*

4:00 N5 **228.12** How does reward of the goal target modify reaching movements? A. DE COMITE*; F. CREVECOEUR; P. LEFEVRE. *Univ. Catholique De Louvain.*

1:00 N6 **228.13** Dynamical organization of the effective network via beta-gamma oscillations within the prefrontal cortex during the visual-motor mapping task. W. NIU; J. HYLTON; S. CHOU; R. C. SAUNDERS; A. R. MITZ; D. PLENZ; S. YU*. *Inst. of Automation, Chinese Acad. of Sci., Natl. Inst. of Mental Health, NIH.*

2:00 N7 **228.14** Dimension of distality: Body-, tool- and effect-related separations of motor memories. L. LANGSDORF*; R. SCHWEEN; J. A. TAYLOR; M. HEGELE. *Justus Liebig Univ., Princeton Univ.*

3:00 N8 **228.15** Input shaping and submovements to control dynamically complex objects. D. E. S. DA SILVA*; S. BAZZI; D. STERNAD; N. HOGAN. *Harvard-MIT Hlth. Sci. and Technol., Northeastern Univ., Northeastern Univ. Dept. of Biol., MIT.*

1:00 DP10/N9 **228.16** (Dynamic Poster) Functional electrical stimulation helps support the weight of the arm during reaching and grasping movements. A. B. THOMAS*; R. L. HARDESTY, JR; A. ADCOCK; C. L. BRANDMEIR; V. GRITSENKO. *West Virginia Univ., West Virginia Univ., West Virginia Univ.*

1:00 N10 **228.17** The extent of visuomotor adaptation depends on one's awareness of the perturbation, independent of reaching errors experienced. D. O. WIJEYARATNAM*; R. D. BISHOUTY; Z. CHENG-BOIVIN; E. K. CRESSMAN. *Univ. of Ottawa.*

2:00 N11 **228.18** Dominant limb selection frequency increases under restricted movement planning time. A. PRZYBYLA*; S. AKPINAR; R. L. SAINBURG. *Univ. of North Georgia, Nevsehir Haci Bektas Veli Univ., Penn State Univ.*

3:00 N12 **228.19** Eye movements necessary for perceptual decisions interfere with eye-hand coordination during rapid reaching. D. A. BARANY*; M. SCHRAYER; A. M. GOMEZ GRANADOS; T. SINGH. *Univ. of Georgia.*

4:00 N13 **228.20** Oculomotor deficits in older adults may contribute to deficits in perceptual decision-making and limb motor performance in a rapid sensorimotor task. A. M. GOMEZ GRANADOS*; D. A. BARANY; M. SCHRAYER; T. SINGH. *Univ. of Georgia.*

1:00 N14 **228.21** Distinct temporal frequency-dependent modulations of direct and indirect visual motion effects on reaching adjustments. H. UEDA*; N. ABEKAWA; S. ITO; H. GOMI. *NTT Communication Sci. Labs.*

2:00 N15 **228.22** Prolonged reaction times for curved trajectories are associated with delayed initiation of the motor planning. L. SHMUELOF*; G. FEINSTEIN. *Ben-Gurion Univ. of the Negev, Ben-Gurion Univ. of the Negev, Beer-Sheva, Israel.*

3:00 N16 **228.23** Representational dissimilarity analysis of EEG patterns reveals the time course and computational hierarchy of grasp features during grasp planning and execution. L. GUO*; Y. SHAMLI OGHLI; A. FROST; M. NIEMEIER. *Univ. of Toronto, York Univ.*

POSTER

229. Sensorimotor Learning I

Theme E – Motor Systems

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 N17 **229.01** Does latency of motor-evoked potentials influence changes in decreased short-interval intracortical inhibition and scores of force control practice? A. MARUYAMA*; D. SATO; K. YAMASHIRO; K. KURIHARA; I. TOCHIKURA; Y. SUEYOSHI; A. NURUKI; S. ETOH; M. HAMADA. *Kagoshima Univ., Niigata Univ. of of Hlth. and Welfare, The Univ. of Tokyo.*

2:00 N18 **229.02** Elimination of internally generated errors due to motor output noise from the signal driving motor adaptation. T. RANJAN*; M. A. SMITH. *Harvard Univ., Harvard Univ.*

3:00 N19 **229.03** Reinforcement does not create a new baseline. J. MAGNARD*; J. CESONIS; R. SCHWEEN; R. L. SAINBURG; D. W. FRANKLIN; N. SCHWEIGHOFER. *USC, Tech. Univ. of Munich, Justus-Liebig-Universität, Penn State Univ.*

4:00 N20 **229.04** ▲ Encoding the control position relative to hand in motor memory for manipulating a tool. H. HARA*; M. TAKEMI; S. HAGIO; D. NOZAKI. *Grad Sch. of Edu, Univ. of Tokyo, JST PRESTO.*

1:00 N21 **229.05** Effects of task error history and time on adaptation. L. LEOW*; E. REUTER; W. MARINOVIC; T. J. CARROLL. *The Univ. of Queensland, Univ. of Queensland, The Univ. of Queensland, The Univ. of Queensland.*

2:00 N22 **229.06** Motor adaptation in response to changing movement goals. D. P. SADAPHAL*; A. KUMAR; P. K. MUTHA. *Indian Inst. of Technol. Gandhinagar, Indian Inst. of Technol. Gandhinagar.*

3:00 N23 **229.07** Sensorimotor adaptation to novel muscle dynamics induced by electrical stimulation. S. HAGIO*; D. NOZAKI. *Grad. Sch. of Education, The Univ. of Tokyo.*

4:00 N24 **229.08** The relationship between implicit and explicit visuomotor task learning in hippopcampus and parietal cortex. R. LIENKÄMPER*; M. SAIF-UR-REHMAN; S. DYCK; Y. PARPALEY; J. WELLMER; C. KLAES. *Knappschaftskrankenhaus Bochum.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 N25 **229.09** Divisively normalized processing of redundant visual error information by visuomotor adaptation system. Y. MAKINO*; T. HAYASHI; D. NOZAKI. *Grad Sch. of Edu, Univ. of Tokyo, Sch. of Engin. and Applied Sci. Harvard Univ.*

2:00 N26 **229.10** Unable to Attend Targeted TDCS improves proximal and distal upper limb function: Evidence from motor adaptation. M. WEIGHTMAN*; J. BRITTAIN; C. MIALL; N. JENKINSON. *Univ. of Birmingham, Univ. of Birmingham.*

3:00 N27 **229.11** Retention and interlimb generalization of motor skill learning have common features. G. YADAV*; P. K. MUTHA. *Indian Inst. of Technol.*

4:00 N28 **229.12** Online changes in movement representations could be preserved in memory for at least 500ms. P. LEFEVRE*; J. MATHEW; F. CREVECOEUR. *ICTEAM and Inst. of Neuroscience, Univ. Catholique de Louvain.*

1:00 N29 **229.13** ▲ Recreating the prism adaptation paradigm in an immersive virtual environment. A. T. KAARIAINEN*; R. E. JOHNSON; J. D. WILL. *Valparaiso Univ., Valparaiso Univ.*

2:00 N30 **229.14** Examining the changes in the temporal stability of explicit and implicit learning due to normal aging. W. ZHOU*; R. D. NORTH; W. M. JOINER. *Univ. of California Davis, Univ. of California Davis.*

3:00 N31 **229.15** Intermittent theta-burst magnetic stimulation over somatosensory cortex increases consolidation of motor learning. N. KUMAR*; T. M. MANNING; D. J. OSTRY. *McGill Univ., Indian Inst. of Technol. Gandhinagar, Haskins Labs.*

4:00 N32 **229.16** Aging, movement variability and motor adaptation. L. LUSTIC*; L. BROWN. *Trent Univ.*

1:00 N33 **229.17** Multiple motor memories are formed for different control units linking the controlled point on a manipulated object and the target location. M. R. MCGARITY-SHIPLEY*; J. B. HEALD; J. N. INGRAM; J. P. GALLIVAN; D. M. WOLPERT; J. R. FLANAGAN. *Queen's Univ., Columbia Univ., Queen's Univ.*

2:00 N34 **229.18** Somatosensory versus cerebellar contributions to complex motor skill learning: A theta burst stimulation study. J. L. MIRDAMADI*; H. J. BLOCK. *Indiana Univ.*

3:00 N35 **229.19** Network interactions of frontoparietal regions during visuomotor adaptation. D. J. GALE*; C. ARESHENKOFF; J. Y. NASHED; D. STANDAGE; J. FLANAGAN; J. P. GALLIVAN. *Queen's Univ., Univ. of Birmingham, Queen's Univ.*

4:00 N36 **229.20** Network-level interactions during sensorimotor adaptation learning and generalization. C. N. ARESHENKOFF*; A. J. DE BROUWER; J. NASHED; D. GALE; J. P. GALLIVAN. *Queens Univ., Univ. of British Columbia.*

1:00 N37 **229.21** Using a chopping task to compare expert and competent motor memory. A. H. NEPOTIUK*; L. E. BROWN. *Trent Univ.*

2:00 N38 **229.22** Sensory dissociation reveals postural influences on motor adaptation. J. J. FITZGERALD*; W. ZHOU; S. M. CHASE; W. M. JOINER. *Univ. of California Davis, Univ. of California, Davis, Carnegie Mellon Univ.*

3:00 N39 **229.23** The role of an explicit strategy in the savings of adaptation to novel dynamics. R. D. NORTH*; W. ZHOU; W. M. JOINER. *Univ. of California Davis.*

4:00 N40 **229.24** Acquisition, short-term and long-term retention of sensorimotor adaptation in healthy aging and early Alzheimer's disease. B. E. DUROCHER*; A. T. WATRAL; L. RAJESHKUMAR; K. M. TREWARTHA. *Michigan Technological Univ., Michigan Technological Univ.*

1:00 N41 **229.25** ▲ Does visual capture explain adaptation to simultaneous visuomotor and manuomotor perturbations? D. PETERS*; D. LANTAGNE; J. HOELZLE; C. S. SMITH; D. G. THOMAS; L. A. MROTEK; R. A. SCHEIDT. *Marquette Univ. and Med. Col. of Wisconsin, Marquette Univ., Marquette Univ., Med. Col. Of Wisconsin, Northwestern Univ., Natl. Sci. Fndn.*

2:00 N42 **229.26** Motor performance error contributes more strongly than sensory prediction error to short-term implicit motor adaptation. H. OH*; M. A. SMITH. *Harvard Univ., Harvard Univ.*

3:00 N43 **229.27** The effect of visual feedback latencies on the adaptation and generalization of motor adaptation. G. ABRAHAM*; T. RANJAN; M. A. SMITH. *Harvard Univ., Harvard Univ., Harvard Univ.*

4:00 N44 **229.28** Can we unlearn how to ride the bicycle? J. MAGNARD; T. MACAULAY; E. SCHROEDER; J. GORDON; N. SCHWEIGHOFER*. *USC.*

1:00 N45 **229.29** On the encoding capacity of human motor adaptation. S. YEO*; S. KIM; J. KWON; J. KIM; F. PARK. *Univ. of Birmingham, Seoul Natl. Univ.*

POSTER

230. Cells, Circuits, and Motor Patterns

Theme E – Motor Systems

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 N46 **230.01** The functional significance of a tonic current induced during one type of motor activity may not become apparent unless there is a subsequent task switch. Y. WANG*; K. R. WEISS; E. C. CROPPER. *Icahn Sch. of Med. at Mount Sinai Hosp.*

2:00 O1 **230.02** The complement of projection neurons that triggers motor activity can determine whether a persistent state is created. C. G. EVANS*; M. A. BARRY; M. H. PERKINS; J. JING; K. R. WEISS; E. C. CROPPER. *Icahn Sch. of Med. At Mount Sinai, Nanjing Univ.*

3:00 O2 **230.03** Population-level analysis of motor pattern initiation, selection, and termination in *Aplysia.* S. C. PATWARDHAN*; R. M. COSTA; R. HOMMA; D. A. BAXTER; J. H. BYRNE. *The Univ. of Texas Hlth. Sci. Ctr. at Houston, Texas A & M Hlth. Sci. Ctr. - Houston.*

4:00 O3 **230.04** Characterization and comparison of two coupled CPGs as a function of temperature. D. J. POWELL*; S. A. HADDAD; S. GORUR-SHANDILYA; M. RUE; E. E. MARDER. *Brandeis Univ., Max Planck Inst. for Brain Res., Volen Ctr.*

1:00 O4 **230.05** Temperature compensation in model pyloric networks. L. M. ALONSO*; E. MARDER. *Brandeis Univ., Brandeis Univ.*

2:00 O5 **230.06** Seasonal variation in robustness to elevated extracellular potassium in pyloric neurons of the crab, Cancer borealis. M. RUE*; E. MOROZOVA; L. HE; D. J. POWELL; E. E. MARDER. *Brandeis Univ., Brandeis Univ., Volen Ctr.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 O6 **230.07** Within and between animal variability in the firing properties of identified leech neurons. J. CHAO; A. LADRILLANO; A. SISON; V. PASMURTSEV; J. AMMARI; T. MCDOUGAL; C. PAYAN; T. M. WRIGHT*, Jr. *California State University, Sacramento.*

4:00 O7 **230.08** Molecular and physiological correlates of neuronal cell identity in a small central pattern generating network. A. J. NORTHCUTT*; D. R. KICK; A. G. OTOPALIK; B. M. GOETZ; J. SANTIN; H. A. HOFMANN; E. MARDER; D. J. SCHULZ. *Univ. of Missouri-Columbia, Columbia Univ., Univ. of Texas at Austin, Univ. of North Carolina - Greensboro, Marine Biol. Lab., Volen Ctr.*

1:00 O8 **230.09** Detailed biologically realistic model of a crustacean cardiac ganglion network. D. DOPP*; T. BANKS; P. SAMARTH; D. KICK; D. SCHULZ; S. NAIR. *Univ. of Missouri.*

2:00 O9 **230.10** Impact of an inhibitory network onto individual premotor neurons with single synapse resolution *in vivo*. R. EGGER*; M. A. LONG. *NYU Sch. of Med., NYU Sch. of Med.*

3:00 O10 **230.11** Establishing behaviorally relevant subclasses of GABAergic interneurons within a songbird premotor circuit. E. HOZHABRI*; M. A. LONG. *NYU Sch. of Med., NYU Sch. of Med.*

4:00 O11 **230.12** Imaging axons of motor thalamus in HVC of the singing zebra finch. F. W. MOLL*; D. KRANZ; M. A. LONG. *NYU Sch. of Med.*

1:00 O12 **230.13** The role of inferior frontal gyrus in speech planning for rapid conversational turn-taking. G. A. CASTELLUCCI*; J. D. GREENLEE; M. A. LONG. *NYU Langone Med. Ctr., Haskins Labs., Univ. of Iowa.*

2:00 O13 **230.14** Understanding the neural substrates of sequence generation through sleep replay. M. ELMALEH*; M. A. LONG. *NYU Langone Med. Ctr., NYU Sch. of Med.*

3:00 O14 **230.15** Comparison of canonical and novel stimulation paradigms that produce spinally-mediated locomotor activity. J. E. MONTGOMERY*; S. WAHLSTROM-HELGREN; K. T. VANPELT; M. A. MASINO. *Univ. of Minnesota.*

4:00 O15 **230.16** Optogenetic activation of spinal glutamatergic neurons elicits swimming in zebrafish larvae. S. WAHLSTROM-HELGREN*; J. E. MONTGOMERY; K. T. VANPELT; S. L. BILTZ; M. A. MASINO. *Univ. of Minnesota.*

1:00 O16 **230.17** Development of a dual-conditional transgenic mouse model for genetic targeting of Renshaw cells in adult animals. A. R. LANE*; F. J. ALVAREZ. *Emory Univ.*

2:00 O17 **230.18** Evi1 and Prdm16 define motoneuron subtypes necessary for fast/intermediate speed swimming. K. P. D'ELIA*; D. SCHOPPIK; J. DASEN. *New York Univ. Sch. of Med., New York Univ. Langone Med. Ctr.*

3:00 O18 **230.19** A size principle dictates bistability in neonatal mouse alpha motoneurons. R. M. HARRIS-WARRICK*; R. BOS; F. BROCARD. *Cornell Univ., CNRS UNR7289, Aix-Marseille Univ., Inst. de Neurosciences de la Timone.*

4:00 O19 **230.20** Examining the effect of V3 interneurons and astrocytes on embryonic stem cell-derived motoneuron maturation *in vitro*. A. H. HANDS*; J. B. BRYSON; R. BROWNSTONE; L. GREENSMITH. *Univ. Col. London.*

1:00 O20 **230.21** Synchronization and coordination of neuronal firing by astrocytes in the chewing central pattern generator. M. COUILLARD-LAROCQUE*; S. CONDAMINE; A. KOLTA. *Univ. of Montreal.*

POSTER

231. Respiration: Modulation and Regulation

Theme E – Motor Systems

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 O21 **231.01** Comparison of physical properties of coughing and huffing in healthy humans. T. TSUJIMURA*; A. YAWATA; K. NAGOYA; M. INOUE. *Niigata Univ. Grad. Sch. of Med. and Dent. Sci.*

2:00 O22 **231.02** Effects of water deprivation on respiratory motor outputs during hypercapnia. E. F. SILVA; L. B. NAKAI; J. V. MENANI; D. S. A. COLOMBARI; D. B. ZOCCAL; E. COLOMBARI*. *Sch. of Dent. of Araraquara - UNESP.*

3:00 O23 **231.03** Expiratory inhibition is a mechanism for adaptive control of breathing. W. H. BARNETT*; K. C. FLOR; M. K. AMARANTE; D. B. ZOCCAL; Y. I. MOLKOV. *Georgia State Univ., Sao Paulo State Univ., Georgia State Univ.*

4:00 O24 **231.04** Delivery of morphine to mouse prefrontal cortex alters minute ventilation. Z. T. GLOVAK*; C. B. O'BRIEN; H. A. BAGHDOYAN; R. LYDIC. *Univ. of Tennessee, Univ. of Tennessee, Oak Ridge Natl. Lab.*

1:00 O25 **231.05** Dual orexin receptor antagonism and ventilatory function in mice. I. FUKUSHI*; S. YOKOTA; K. TAKEDA; J. TERADA; Y. OKADA. *Murayama Med. Ctr., Iryo Sosei Univ., Shimane Univ., Fujita Hlth. Univ., Chiba Univ.*

2:00 O26 **231.06** Cholinergic neurons in the pedunculopontine tegmental nucleus modulate breathing in rats by direct projections to the retrotrapezoid nucleus. J. D. LIMA*; C. R. SOBRINHO; L. K. SANTOS; B. FALQUETTO; A. T. TAKAKURA; D. K. MULKEY; T. S. MOREIRA. *Univ. of Sao Paulo, Univ. of Sao Paulo, Dept of Pharmacology, Inst. of Biomed. Science, Univ. of Sao Paulo, Univ. Connecticut.*

3:00 O27 **231.07** Cell-type specific effects of substance P facilitate recurrent excitation to increase breathing frequency. N. A. BAERTSCH*; J. RAMIREZ. *Seattle Children's Res. Inst.*

4:00 O28 **231.08** Modulation of respiratory networks by substance P in the metamorphosing frog. D. COMBES*; J. SIMMERS; M. CABIROL. *Univ. of Bordeaux, CNRS UMR 5287.*

1:00 O29 **231.09** Functional multiplexing of airway behaviors along the ventral respiratory column in ventrolateral medulla. N. M. MELLEN*; T. PITTS; A. HUFF; M. M. REED. *Univ. of Louisville, Univ. of Louisville.*

2:00 O30 **231.10** Active expiratory oscillator regulates nasofacial and oral motor actions in rats. D. J. MORAES*; M. DA SILVA; A. DE BRITTO. *Sch. of Med. of Ribeirao Preto, USP., SCHOOL OF MEDICINE OF RIBEIRÃO PRETO/ UNIVERSITY OF SÃO PAULO.*

3:00 O31 **231.11** The central amygdala (CeA) plays a key role in ventilatory arrest and SUDEP in a Dravet syndrome mouse model (DS). E. BRAVO*; A. MARINCOVICH; Y. KIM; M. S. CROTTS; F. A. TERAN; B. J. DLOUHY; G. B. RICHERSON. *Univ. of Iowa, Univ. of iowa, Univ. of Iowa, Univ. of Iowa.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 O32 **231.12** Phox2b expression defines premotor neurons in the intermediate reticular formation involved in oro-motor behavior. B. DEMPSEY; G. FORTIN*. *CNRS, Paris-Saclay Inst. of Neurosci.*

1:00 O33 **231.13** The properties of the neurons considered the coordination of nociception-respiration in the parabrachial nucleus. A. ARATA*; S. TONOMURA; Y. TSUKAMOTO; K. NOGUCHI. *Hyogo Col. of Med., Univ. of Alabama at Birmingham, Hagoromo Univ. Intl. Studies, Hyogo Coll Med.*

2:00 O34 **231.14** Adaptive respiratory pacing restores ventilatory function in incomplete spinal cord injured rats. R. SIU*; J. J. ABBAS; B. K. HILLEN; R. JUNG. *Florida Intl. Univ., Arizona State Univ.*

3:00 O35 **231.15** Automated detection of apneas and hypopneas from rodent plethysmography. J. A. PFAMMATTER*; J. N. OUELLETTE; J. G. WELTMAN; M. V. JONES; T. BAKER-HERMAN; J. J. WATTERS. *Univ. of Wisconsin Madison, Univ. of Wisconsin, Univ. of Wisconsin Madison, Univ. Wisconsin.*

4:00 O36 **231.16** ▲ Assessing lung priming burst characteristics and CO_2 sensitivity in bullfrog tadpole brainstems across metamorphosis. M. G. CARMEL; I. MAJEWSKA; M. D. REED; M. B. HARRIS; B. E. TAYLOR; K. E. ICEMAN*. *Valparaiso Univ., Univ. of Alaska Fairbanks, Univ. of Louisville, California State Univ. Long Beach.*

1:00 O37 **231.17** ▲ The effects of acute and chronic intermittent hypoxia on sympathetic tone and body weight regulation in mice. H. R. PETERSON*; S. N. FRAMNES-DEBOER; D. M. ARBLE. *Marquette Univ.*

2:00 O38 **231.18** Gestational intermittent hypoxia sex-dependently impairs the neural control of breathing and alters the microglial transcriptome in adult offspring. J. J. WATTERS; A. L. MEZA; M. G. GUMNIT; C. R. MICKELSON; A. C. EWALD; E. A. KIERNAN; J. N. OUELLETTE; T. L. BAKER*. *Univ. of Wisconsin.*

3:00 O39 **231.19** Chemosensitivity of acutely dissociate serotonergic raphe neurons. Y. WU; E. BRAVO; G. B. RICHERSON*. *Univ. of Iowa.*

4:00 O40 **231.20** Prenatal hypoxia modulates the influence of $GABA_A$ and glycine receptors on fictive breathing in newborn rat. C. CARAVAGNA; A. R. CASCIATO; J. O. COQ; S. LIABEUF; C. BROCARD; L. BODINEAU; J. PEYRONNET; F. CAYETANOT*. *Inst. de Neurosciences de La Timone, Sorbonne Univ. Inserm.*

1:00 O41 **231.21** Improvement of hypoventilation in Phox2b mutant mice modelling the congenital central hypoventilation syndrome by etonogestrel, a potent progestin. Perspectives for a possible potentiation by serotoninergic drugs. A. R. CASCIATO*; L. BIANCHI; N. RAMANANTSOA; B. MATROT; P. CARDOT; J. GALLEGO; F. CAYETANOT; L. BODINEAU. *Sorbonne Univ., Paris Diderot Univ.*

2:00 O42 **231.22** Orexin neurons contribute to central modulation of the respiratory drive by progestins on *ex vivo* rodent preparations, a potential outcome for central hypoventilations. C. LOISEAU; A. R. CASCIATO; F. CAYETANOT; L. BODINEAU*. *Sorbonne Univ. - Inserm.*

3:00 O43 **231.23** PHOX2B mutation mediated by Atoh-1 expression in the retrotrapezoid nucleus impaired respiratory rhythm and ventilatory responses to hypoxia. C. B. FERREIRA*; P. E. SILVA; F. C. SOUSA; T. M. SILVA; J. J. OTERO; T. S. MOREIRA; A. C. TAKAKURA. *Univ. of Sao Paulo, Univ. of Sao Paulo, The Ohio State Univ. Col. of Med.*

4:00 O44 **231.24** Maternal obesity promotes active expiration and increases baseline sympathetic activity in offspring. M. KARLEN-AMARANTE; R. M. BARBOSA; J. V. MENANI; E. COLOMBARI; D. B. ZOCCAL; D. S. COLOMBARI*. *UNESP Sch. of Dent.*

1:00 P1 **231.25** Astrocyte Kir4.1 channels contribute to the ventilatory response to CO2/H+ in the retrotrapezoid nucleus. C. CLEARY; B. FLYNN; P. ROBSON; D. K. MULKEY*. *Univ. Connecticut, The Jackson Lab. for Genomic Med.*

2:00 P2 **231.26** P2Y2 receptors contribute to the specialized CO2/H+ regulation of vascular tone in the retrotrapezoid nucleus. C. CLEARY*; T. S. MOREIRA; A. T. TAKAKURA; D. MULKEY. *Univ. of Connecticut, Univ. of Sao Paulo, Dept of Pharmacology, Inst. of Biomed. Science, Univ. of Sao Paulo.*

3:00 P3 **231.27** Leptin receptor-expressing neurons in the NTS match breathing to diet-induced increases in body mass. J. DO; M. MARTINA; D. R. MCCRIMMON*. *Northwestern Univ., Northwestern Univ. Med. Sch., Northwestern Univ.*

POSTER

232. Vocalization and Social Behavior in Songbirds I

Theme F – Integrative Physiology and Behavior

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 P4 **232.01** A software tool for determining subthreshold ionic currents in HVC neurons of the zebra finch. A. DAVENPORT; R. L. HYSON; F. JOHNSON; R. BERTRAM*. *Florida State Univ., Florida State Univ., Florida State Univ.*

2:00 P5 **232.02** Role of mu-opioid receptors in the motivation to sing and acoustic features of female-directed songs in male zebra finches. S. KUMAR*; A. N. MOHAPATRA; U. DIN; H. SHARMA; S. SHARMA; U. A. SINGH, Jr; V. ARORA; N. KAMBI; A. DUTTA; T. VELPANDIAN; R. RAJAN; S. IYENGAR. *Natl. Brain Res. Ctr., All India Inst. of Med. Sci., Indian Inst. of Sci. Educ. and Res.*

3:00 P6 **232.03** Experience-dependent changes in I_h in neurons that contribute to learned vocalizations. A. BRUNICK*; R. BERTRAM; F. JOHNSON; R. L. HYSON. *Florida State Univ., Florida State Univ.*

4:00 P7 **232.04** Neural circuit mechanisms underlying different forms of vocal learning in adult songbirds. J. N. MCGREGOR*; P. I. JAFFE; A. L. GRASSLER; A. L. JACOB; M. S. BRAINARD; S. J. SOBER. *Emory Univ., UCSF, Emory Univ., UCSF Ctr. For Integrative Neurosci.*

1:00 P8 **232.05** Neuromotor agility in the songbird: Tools and goals. A. PACK*; J. S. YAN; A. N. WOOD; K. H. SRIVASTAVA; M. PASQUALI; C. P. ELEMANS; S. J. SOBER. *Emory Univ., Rice Univ., Univ. of Southern Denmark.*

2:00 P9 **232.06** Neuromotor agility in the songbird: Flexible multielectrode arrays with 3-dimensional contacts to enhance electromyogram recordings. M. ZIA*; B. CHUNG; M. BAKIR; S. J. SOBER. *Georgia Inst. of Technol., Emory Univ., Emory Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 P10 **232.07** Neuromotor agility in the songbird: Distributed spike codes across populations of motor units. B. CHUNG*; R. E. CONN; M. ZIA; M. BAKIR; I. NEMENMAN; S. J. SOBER. *Emory Univ., Georgia Inst. of Technol., Georgia Inst. of Technol., Emory Univ., Emory Univ.*

4:00 P11 **232.08** Neuromotor agility in the songbird: Efficient algorithms for data analysis. R. E. CONN*; B. CHUNG; N. J. MARSHALL; M. M. CHURCHLAND; I. NEMENMAN; S. J. SOBER. *Emory Univ., Columbia Univ., Emory Univ., Emory Univ.*

1:00 P12 **232.09** Effects of dopamine depletion on neural activity in the songbird basal ganglia. A. N. WOOD*; A. L. JACOB; S. J. SOBER. *Emory Univ.*

2:00 P13 **232.10** Inferring latent descriptions of animal vocalizations. J. GOFFINET*; S. BRUDNER; V. MICHAEL; J. SINGH ALVARADO; T. HARMON; K. TSCHIDA; R. MOONEY; J. PEARSON. *Duke Univ.*

1:00 DP12/P14 **232.11** (Dynamic Poster) Pharmacological or genetic reduction of miR-128 enhances learned vocal communication. C. M. AAMODT*; S. A. WHITE. *UCLA, UCLA.*

4:00 P15 **232.12** ● Calcium imaging and machine learning tools for birdsong annotation reveal stability and neural correlates of canary song syntax. Y. COHEN*; J. SHEN; D. SEMU; D. P. LEMAN; W. A. LIBERTI, III; N. PERKINS; D. A. NICHOLSON; T. J. GARDNER. *Boston Univ., UC Berkeley, Emory Univ.*

1:00 P16 **232.13** *In vivo* calcium imaging of singing-related neural activities in premotor nuclei of Bengalese finches. R. O. TACHIBANA*; K. OKANOYA. *The Univ. of Tokyo.*

2:00 P17 **232.14** Exploring portals in the zebra finch expression brain atlas (ZEBrA;www.zebrafinchatlas.org). P. V. LOVELL*; C. V. MELLO. *Oregon Hlth. and Sci. Univ. Sch. of Med., Oregon Hlth. and Sci. Univ. Sch. of Med.*

3:00 P18 **232.15** Computing courtship: Song circuit modulation of mating posture in a female songbird. A. PERKES*; J. BURKE; N. KOLOTOUROS; K. DANIILIDIS; M. F. SCHMIDT. *Univ. of Pennsylvania.*

4:00 P19 **232.16** Update on the NSF EDGE consortium project (2018-2019): “Developing gene manipulation tools and resources for a vocal learning species”. C. V. MELLO*; T. VELHO; A. KEYTE; A. Y. M. SOARES; M. T. BIEGLER; P. V. LOVELL; K. M. JUNG; J. Y. HAN; C. LOIS; E. D. JARVIS. *Oregon Hlth. and Sci. Univ. Sch. of Med., Federal Univ. of Rio Grande do North, The Rockefeller Univ., Duke Univ., Seoul Natl. Univ., Caltech.*

1:00 P20 **232.17** GABAergic neurons of vocal- and non-vocal learning hummingbirds. C. R. OLSON*; K. BERNIER; S. MACKEY. *Midwestern Univ., Midwestern Univ., Midwestern Univ.*

2:00 P21 **232.18** Transcriptional regulatory divergence underpinning species-specific learned vocalization in songbirds. H. WANG*; A. SAWAI; N. TOJI; R. SUGIOKA; Y. JI; S. HAYASE; S. AKAMA; J. SESE; K. WADA. *Grad. Sch. of Life Science, Hokkaido Univ., Fac. of Science, Hokkaido Univ., Natl. Inst. of Advanced Industrial Sci. and Technol., Hokkaido Univ.*

3:00 P22 **232.19** Fine-tuning birdsong: The role of delta opioid receptors in the development of song structure. U. A. SINGH*; S. IYENGAR. *Natl. Brain Res. Ctr.*

4:00 P23 **232.20** Characterizing distinct cell types in HVC of male zebra finches using single-cell RNA sequencing. D. P. MERULLO*; A. KULKARNI; M. CO; G. KONOPKA; T. F. ROBERTS. *UT Southwestern Med. Ctr.*

1:00 P24 **232.21** Expression patterns of CRF-family peptides in the zebra finch brain. K. A. AHMADIZADEH*; C. OLSON. *Midwestern Univ.*

2:00 P25 **232.22** Molecular specializations of the songbird motor cortex. A. A. NEVUE*; P. V. LOVELL; C. V. MELLO. *OHSU, Oregon Hlth. and Sci. Univ. Sch. of Med.*

POSTER

233. Vocalization and Social Behavior in Songbirds II

Theme F – Integrative Physiology and Behavior

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 P26 **233.01** Differential contributions of auditory feedback-dependent and independent mechanisms to the maintenance of song acoustic structure in adult zebra finches. D. MIZUGUCHI*; S. KOJIMA. *Korea Brain Res. Inst. (KBRI).*

2:00 P27 **233.02** Regulation of repetitive syllable sequence by the excitatory and inhibitory balance in the basal ganglia song nucleus in songbirds. Y. JI*; M. SÁNCHEZ-VALPUESTA; K. WADA. *Hokkaido Univ., Hokkaido Univ.*

3:00 P28 **233.03** Social modulation of auditory activity in a songbird VTA/SNc. S. YANAGIHARA*; M. IKEBUCHI; C. MORI; R. O. TACHIBANA; K. OKANOYA. *The Univ. of Tokyo, RIKEN.*

4:00 P29 **233.04** How social interactions affect attention and song perception in juvenile zebra finches during song learning. J. KATIC*; Y. YAZAKI-SUGIYAMA. *Okinawa Inst. of Sci. and Technol. (OIST) Grad. Univ.*

1:00 P30 **233.05** Evolutionary mechanisms in the bengalese finch’s song: Parallels and implications for the study of human speech. M. FARIAS-VIRGENS*; T. DEACON; K. OKANOYA; S. A. WHITE; E. HUERTA-SANCHEZ. *Univ. of California Los Angeles, Univ. of California Berkeley, Univ. of Tokyo and Riken Brain Sci. Inst., Univ. of California Los Angeles, Brown Univ.*

2:00 P31 **233.06** Long-term change in neural activity of basal ganglia prior to vocal behavior in Java sparrow. S. UMEMOTO*; S. YANAGIHARA; K. OKANOYA. *The Univ. of Tokyo.*

3:00 P32 **233.07** The neural basis of auditory restoration for familiar zebra finch song. M. C. BJORING*; C. D. MELIZA. *Univ. of Virginia.*

4:00 P33 **233.08** Synchronous effects in cortical neurons of songbirds. A. AMADOR*; S. BOARI; G. B. MINDLIN. *Univ. of Buenos Aires.*

1:00 P34 **233.09** From perception to action: Sensory cortices and motor pathways underlying female mate choice. J. F. PRATHER*; K. S. LAWLEY; N. A. STILL; J. L. DUNNING. *Univ. of Wyoming, Texas A&M Univ., Univ. of Wyoming, Vanderbilt Univ.*

2:00 P35 **233.10** Analyzing the role of distance and feedback from the female on zebra finch courtship song. H. SURI; R. RAJAN*. *Univ. of Michigan, Indian Inst. of Sci. Educ. and Res. Pune.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract’s submitting author

3:00 P36 **233.11** Shared preference for variations of duet songs between female and male plain-tailed wrens. N. F. DAY; P. RIVERA-PARRA; E. S. FORTUNE; M. J. COLEMAN*. *Univ. of California Los Angeles, Escuela Politécnica Nacional, New Jersey Inst. of Technol., Claremont McKenna, Pitzer and Scripps Colleges.*

4:00 P37 **233.12** Dynamic feedback between song development and motor behavior in zebra finches. J. HYLAND BRUNO*. *Columbia Univ.*

1:00 P38 **233.13** The role of thalamus in maintenance and patterning of persistent cortical activity. N. NIKBAKHT*; M. S. FEE. *MIT.*

2:00 P39 **233.14** ▲ Attentive listening behavior predicts vocal imitation. F. FERNANDEZ; M. INSERRA; O. AJALA; M. LANDSTROM; W. LIU*. *Colgate Univ.*

3:00 P40 **233.15** Delayed auditory feedback interferes with song initiation in zebra finches. G. FETTERMAN*; D. MARGOLIASH. *Univ. of Chicago, Univ. of Chicago, Univ. of Chicago.*

4:00 P41 **233.16** Dopamine action in a sensorimotor region. A. A. MERCER*; R. D. MOONEY. *Duke Univ., Duke Univ. Dept. of Neurobio.*

1:00 P42 **233.17** Identifying LMAN-dependent and learning-related spectrotemporal patterns in juvenile zebra finch song syllables. S. N. BRUDNER*; J. GOFFINET; J. M. PEARSON; R. MOONEY. *Duke Univ., Duke Univ.*

2:00 Q1 **233.18** Knockdown of the autism-associated gene FoxP1 in corticostriatal song neurons blocks the cultural transmission of birdsong. F. GARCIA-OSCOS; V. K. DALIPARTHI; M. CO; F. AYHAN; T. KOCH; D. P. MERULLO; H. PANCHOLI; J. E. HOLDWAY; A. KULKARNI; G. KONOPKA; T. F. ROBERTS*. *UT Southwestern Med. Ctr., Univ. of Texas Southwestern Med. Ctr., Univ. of Texas Southwestern Med. Ctr., UT Southwestern Med. Ctr.*

3:00 Q2 **233.19** Older and newer memories activate distinct regions in the auditory forebrain of songbirds raised with two tutors. P. ARYA*; S. PETKOVA; P. P. KULKARNI; N. H. KOLODNY; S. M. H. GOBES. *Wellesley Col., Univ. of California, Davis, Northeastern Univ. Dept. of Psychology, Wellesley Col.*

4:00 Q3 **233.20** Respiratory antecedents of song initiation and termination. J. DUKES; S. WHARTON; B. VO; A. B. DUPLECHAIN; A. M. FARIAS; B. G. COOPER*. *Texas Christian Univ.*

1:00 Q4 **233.21** A neural circuit for more than just singing in the female songbird. J. BURKE*; C. MESSIER; J. JARMULA; M. WILD; M. SCHMIDT. *Univ. of Pennsylvania, Univ. of Aukland.*

2:00 Q5 **233.22** The developmental regulation of sex-linked genes in sexually dimorphic song nucleus RA. S. R. FRIEDRICH*; C. V. MELLO. *Oregon Hlth. & Sci. Univ.*

3:00 Q6 **233.23** Effects of inactivation of the periaqueductal gray on song production in testosterone-treated male canaries (Serinus canaria). C. M. HAAKENSON*; F. N. MADISON; N. H. PRIOR; G. F. BALL. *Univ. of Maryland, Univ. of Maryland.*

4:00 Q7 **233.24** Neural correlations in a cortical circuit that generates behavioral variability. G. F. LYNCH*; M. S. FEE. *MIT.*

1:00 Q8 **233.25** Intrinsic sex differences in steroid hormone-modulated neuroplasticity in canaries (Serinus canaria). F. N. MADISON*; C. M. HAAKENSON; A. R. WHITAKER; A. M. KAWIISO; G. F. BALL. *Univ. of Maryland, Univ. of Maryland, Univ. of Maryland.*

2:00 Q9 **233.26** ▲ Making a move: The effects of flight movement on vocal imitation and juvenile neurogenesis. C. M. SENNECA*; A. GILMAN; M. CEALIE; M. LANDSTROM; W. LIU. *Colgate Univ.*

3:00 Q10 **233.27** Experience dependent plasticity in the auditory preferences of female songbirds. E. M. WALL*; S. C. WOOLLEY. *McGill Univ., McGill Univ.*

4:00 Q11 **233.28** Individual specific intrinsic neuronal properties in the bird song system. A. DAOU; D. MARGOLIASH*. *Univ. of Chicago.*

1:00 Q12 **233.29** Habenula lesions in songbirds cause species-atypical vocalizations. A. C. ROESER*; J. H. GOLDBERG. *Cornell Univ.*

2:00 Q13 **233.30** Assessing the contributions of genetics and sensorimotor learning in a population of forebrain song system neurons. N. D. MEDINA*; D. MARGOLIASH. *Univ. of Chicago, Univ. of Chicago, Univ. of Chicago.*

POSTER

234. Reward, Value, and Decisions

Theme G – Motivation and Emotion

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 Q14 **234.01** Superior collicular neurons code the timing and the value of the reward in monkeys. H. NISHIMARU*; Q. V. LE; J. MATSUMOTO; Y. TAKAMURA; E. HORI; T. ONO; H. NISHIJO. *Univ. of Toyama.*

2:00 Q15 **234.02** Trait and state-dependent risk attitude of monkeys measured in a single-option response task. A. FUJIMOTO*; T. MINAMIMOTO. *Natl. Inst. For Quantum and Radiological S, Icahn Shool of Med. at Mount Sinai.*

3:00 Q16 **234.03** Accumbal encoding of effortful output. B. A. MATIKAINEN-ANKNEY*; A. V. KRAVITZ. *NIH, Washington Univ. of St. Louis.*

4:00 Q17 **234.04** Neural coding of reward value in richly modulated spike patterns in monkey ventrolateral prefrontal neurons. R. FALCONE*; M. MCDOUGALL; D. B. WEINTRAUB; T. SETOGAWA; B. J. RICHMOND. *NIMH, NINDS.*

1:00 Q18 **234.05** Dopamine neuron response to reward presentation in adolescents: Double dissociation of age and learning system. A. M. MCCANE*; M. A. WEGENER; B. MOGHADDAM. *Oregon Hlth. and Sci. Univ., Ctr. For Neurosci. Univ. of Pittsburgh.*

2:00 R1 **234.06** ▲ Effects of repeated intermittent episodes of social stress on the acquisition and extinction of a reward-seeking task. L. SULLIVAN; H. SHAFFER; A. DEL ARCO*. *The Univ. of Mississippi.*

3:00 R2 **234.07** Reward-encoding across the hippocampus - Nucleus accumbens - Ventral pallidum circuit during a Pavlovian conditioning approach task. D. SIU*; A. M. AHRENS; M. VALERA; V. HETRICK; O. J. AHMED. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 R3 **234.08** Spatiotemporal dynamics of reward processing in basal ganglia and cortex revealed by magnetoencephalography. L. SEPE-FORREST; F. W. CARVER*; R. QUENTIN; T. HOLROYD; A. C. NUGENT. *NIMH, NINDS.*

1:00 R4 **234.09** Reward processing and functional connectivity in psychiatric patients with substance use problems. H. OH*; S. GOSNELL; R. SALAS. *Baylor Col. of Med., Baylor Col. of Med.*

2:00 R5 **234.10** Influences of nutrient rewards on food choice in monkeys. F. HUANG*; M. SUTCLIFFE; F. GRABENHORST. *Univ. of Cambridge, Univ. of Cambridge, Wellcome Trust-MRC Inst. of Metabolic Sci.*

3:00 R6 **234.11** Transcranial alternating current stimulation alters reward-dependent corticostriatal interactions. D. V. SMITH*; Y. LIU; B. KREKELBERG. *Temple Univ., Rutgers Univ.*

4:00 R7 **234.12** Comparison of motivated behaviors: Incentive and rewarding values of paced mating and voluntary wheel running. M. BEDOS*; A. RIVERA; R. MENDEZ; F. FARIAS; R. G. PAREDES. *Escuela Nacional de Estudios Superiores, Unidad Juriquilla, Inst. de Neurobiología, Univ. Nacional Autónoma de México, Inst. de Neurobiología and Escuela Nacional de Estudios Superiores, Unidad Juriquilla UNAM.*

1:00 R8 **234.13** Neuronal responses to actions and outcomes in rat ventral pallidum. E. KRELL; M. J. FRANCOEUR*; K. DEEGAN; G. MACEDONIA; B. M. GIBSON; R. G. MAIR. *Univ. of New Hampshire.*

2:00 R9 **234.14** Striatal stimulation reinforces, but does not select, naturalistic untrained behavior. A. T. HODGE*; M. A. NICHOLAS; J. T. DUDMAN; E. A. YTTRI. *Carnegie Mellon Univ., HHMI.*

3:00 R10 **234.15** Neurocircuitry facilitating coordination between action plan switching and selection regions. C. KORPONAY*; L. TRAMBAIOLLI; W. TANG; S. HABER. *McLean Hosp.*

4:00 R11 **234.16** Distinguishing value-coding neurons from random walk neurons in block-structured experiments. T. HIWATASHI*; A. Y. WANG; N. UCHIDA; K. MIURA. *Kwansei Gakuin Univ., Harvard Univ.*

1:00 R12 **234.17** Nucleus accumbens D1- and D2-MSNs drive both reward and aversion. C. SOARES-CUNHA*; N. A. VASCONCELOS; B. COIMBRA; A. DOMINGUES; J. M. SILVA; I. SOTIROPOULOS; R. GASPAR; N. SOUSA; A. RODRIGUES. *ICVS, Univ. of Minho, Dept. de Física, Univ. Federal de Pernambuco, 50670-901 Recife, Pernambuco, Brazil, Life and Hlth. Sci. Res. Inst. (ICVS), ICVS, Med. School, Univ. Minho, Coimbra Inst. for Clin. and Biomed. Res. (iCBR), Fac. of Medicine, Univ. of Coimbra, Portugal, Life and Hlth. Sci. Res. Inst. (ICVS), Univ. of Minho, Univ. of Minho, Life and Hlth. Sci. Res. Inst. (ICVS).*

2:00 R13 **234.18** Striatal neurons monitor dynamically changing reward value by their sustained activity in monkeys. O. TOYOSHIMA*; Y. WANG; H. YAMADA; M. MATSUMOTO. *Univ. of Tukuba, Univ. of Tsukuba.*

3:00 R14 **234.19** Tonic firing of midbrain dopamine neurons monitors dynamically changing reward value in monkeys. Y. WANG*; O. TOYOSHIMA; J. KUNIMATSU; H. YAMADA; M. MATSUMOTO. *Univ. of Tsukuba, Univ. of Tsukuba.*

4:00 R15 **234.20** Serotonin neurons drive metalearning during dynamic foraging. C. D. GROSSMAN*; B. A. BARI; A. S. GINSBERG; E. E. LUBIN; J. Y. COHEN. *Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ.*

1:00 R16 **234.21** Subthreshold basis for bidirectional persistent activity in neocortex. E. KIM*; B. A. BARI; J. Y. COHEN. *Johns Hopkins Sch. of Med.*

2:00 R17 **234.22** Somatic marker influences a decision making under uncertainty. J. KIM*; B. JEONG. *Korea Advanced Inst. of Sci. and Technol., KAIST.*

3:00 R18 **234.23** Decoding of cognitive flexibility state across multiple days using temporal and pre-frontal cortical local field potential during the performance of a multi-source interference task. J. MIRSKY; I. BASU*; A. YOUSEFI; Y. AMIDI; A. C. PAULK; R. ZELMANN; G. BELOK; K. FARNES; D. D. DOUGHERTY; Z. WILLIAMS; S. S. CASH; U. EDEN; A. S. WIDGE. *Massachusetts Gen. Hosp., Boston Univ., Univ. of Minnesota.*

4:00 R19 **234.24** Assessing the effects of deep brain stimulation of the mid and ventral striatum in cognitive flexibility. A. E. REIMER*; M. LO; A. R. DE OLIVEIRA; G. J. SIMANDL; A. S. WIDGE. *Univ. of Minnesota, Univ. of Minnesota, Univ. Federal de Sao Carlos.*

1:00 R20 **234.25** Open source software tools to measure and control oscillatory synchrony of brain regions. M. J. SCHATZA*; E. B. BLACKWOOD; M. LO; A. S. WIDGE. *Univ. of Minnesota.*

2:00 S1 **234.26** No effect of repeated orbitofrontal-striatal optogenetic stimulation on repetitive behaviors and behavioral flexibility in rats. A. R. DE OLIVEIRA*; A. E. REIMER; G. SIMANDL; A. S. WIDGE. *Federal Univ. of Sao Carlos (UFSCar), Univ. of Minnesota.*

3:00 S2 **234.27** ● The effects of latent infection of *toxoplasma gondii on the domestic cat.* M. ALYETAMA*; A. HOFFMANN; S. WOMACK; G. EVAH-NZOUGHE; K. HIGGINS; J. STECKELBERG; B. A. CHASE. *Univ. of Nebraska at Omaha, Univ. of Nebraska at Omaha, Univ. of Nebraska at Omaha, Iowa State Univ.*

POSTER

235. Emotion: Positive and Negative Emotional States

Theme G – Motivation and Emotion

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 S3 **235.01** Stimulus intensity affects emotion regulation success and neural responses in subcortical and cortical regions. C. MORAWETZ*; S. BERBOTH; C. WINDISCHBERGER. *Med. Univ. Vienna, Charité Universitätsmedizin Berlin.*

2:00 S4 **235.02** Investigating the dynamic changes in functional brain networks during emotion regulation using fMRI-informed EEG source localization. F. FANG*; T. POTTER; R. LI; T. NGUYEN; Y. ZHANG. *Univ. of Houston.*

3:00 S5 **235.03** ● Effects of written emotional expression on health outcomes and salivary cortisol. M. E. KNEAVEL*; E. LOSCALZO. *La Salle Univ., Methodist Hosp.*

4:00 S6 **235.04** A lack of the negativity bias in schizotypy: A late positive potential study. A. WELBORN; D. BANUELOS; R. HURTADO; N. PAREDES; E. SANTANA; Y. ESCOBAR-VALENCIA; S. KANG*. *California State Univ.*

1:00 S7 **235.05** Psychological states and personality traits associated with laughter yoga — Evidence from a Japanese sample. Y. SASE; H. MIYATA*. *Waseda Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 S8 **235.06** The relationship between stress and neural markers of food motivation among African American women: A pilot study. E. ONIANWA; L. MARTIN*; C. BEFORT; C. R. SAVAGE. *Univ. Of Kansas Sch. of Med., Univ. of Kansas Med. Ctr., Univ. of Nebraska.*

3:00 S9 **235.07** ▲ The role of head trauma in emotion dysregulation among victims of physical intimate partner violence. A. M. FRYC*; R. NELSON; M. M. RISI; N. H. WEISS. *Univ. of Rhode Island.*

4:00 S10 **235.08** Meaning vs. pleasure: Two types of happiness and the divergent evidence of molecular well-being. S. LEE*; I. CHOI; S. W. COLE. *Seoul Natl. Univ., UCLA Sch. of Med.*

1:00 S11 **235.09** Electroencephalographic activity during breastfeeding in primiparous mothers. J. P. GARCÍA-HERNÁNDEZ*; M. PÉREZ-HERNÁNDEZ; R. M. HIDALGO-AGUIRE; C. GÓMEZ-NAVARRO; M. HERNÁNDEZ-GONZÁLEZ; M. A. GUEVARA. *Univ. De Guadalajara.*

2:00 S12 **235.10** ▲ Incentive contrast in humans: Behavioral and electroencephalographic measures of reward relativity during a game-playing task. M. R. HARMON; E. L. STEWART; S. YUAN; M. SCHWARZMAN; H. C. CROMWELL*. *Bowling Green State UNiversity, Bowling Green State Univ.*

3:00 S13 **235.11** An implicit association learning of smart-device pictures and emotion words influences EEG oscillations and evaluations of real-life smart technology news reports. H. KIM*; T. LEE; Y. JEONG; S. KIM; S. KIM. *Korea Univ., Ulsan Natl. Inst. of Sci. and Technol.*

4:00 S14 **235.12** Effects of affective valence and attentional relevance on visually evoked event-related potentials and event-related spectral perturbations. R. A. HICKS*; W. R. STAINES. *Univ. of Waterloo.*

1:00 S15 **235.13** Distracted by affective pictures: Neural mechanism revealed by multivariate analysis. K. BO*; N. M. PETRO; A. KEIL; M. DING. *Univ. of Florida, Univ. of Nebraska at Lincoln, Univ. of Florida.*

2:00 S16 **235.14** Mean diffusivity of the dopaminergic system associated with subjective well-being in young healthy adults. C. TERAO*; H. TAKEUCHI; R. NOUCHI; R. YOKOYAMA; Y. KOTOZAKI; S. NAKAGAWA; A. SEKIGUCHI; S. HANAWA; T. ARAKI; C. M. MIYAUCHI; K. SAKAKI; T. NOZAWA; S. IKEDA; S. YOKOTA; D. MAGISTRO; Y. SASSA; R. KAWASHIMA; Y. TAKI. *I.D.A.C., Tohoku Univ., I.D.A.C., Tohoku Univ., I.D.A.C., Tohoku Univ., Smart Aging Res. Center, Tohoku Univ., Sch. of Medicine, Kobe Univ., Medical-Industry Translational Res. Center, Fukushima Med. Univ. Sch. of Med., Tohoku Med. and Pharmaceut. Univ., I.D.A.C., Tohoku Univ., Natl. Inst. of Mental Health, NCNP, Tohoku Med. Megabank Organization, Tohoku Univ., ADVANTAGE Risk Mgmt. Co., Ltd, I.D.A.C., Tohoku Univ., Res. Ctr. for the Earth Inclusive Sensing Empathizing with Silent Voices, Tokyo Inst. of Technol., I.D.A.C., Tohoku Univ., Kyushu Univ., Sch. of Sci. and Technol. Nottingham Trent Univ.*

3:00 S17 **235.15** Combined representation of emotional salience and decision signals in primate dorsal raphe nucleus. M. YASUDA*; Y. UEDA; K. NAKAMURA. *Kansai Med. Univ., Kansai Med. Univ.*

4:00 S18 **235.16** Interaction between the endocannabinoid and oxytocin system within the PFC: Implication for social behavior. G. CONTARINI*; F. MALTESE; V. FERRETTI; F. PAPALEO. *Inst. Italiano di Tecnologia.*

1:00 T1 **235.17** Neural mechanisms of affective states in non-human primates. J. A. MUNOZ*; M. YOUNG; E. BLISS-MOREAU; P. RUDEBECK. *Icahn Sch. of Med. at Mt. Sinai, Univ. of California, Davis.*

2:00 T2 **235.18** Infralimbic cortex ensembles encode hedonic valence. S. W. HURLEY*; R. M. CARELLI. *Univ. of North Carolina At Chapel Hill.*

3:00 T3 **235.19** Segregated and overlapped processing of social and reward information in primate amygdala. K. KURAOKA*; K. NAKAMURA. *Kansai Med. Univ.*

4:00 T4 **235.20** Central amygdala somatostatin neurons modulate both reward and aversive learning. T. YANG*; K. YU; X. ZHANG; B. LI. *Cold Spring Harbor Lab., Cold Spring Harbor, Cold Spring Harbor Lab.*

1:00 T5 **235.21** The posterior cortical amygdala is required for the full expression of aggressive behavior. A. V. AUBRY*; M. FLANIGAN; H. ALEYASSIN; L. LI; K. LECLAIR; L. PARISE; S. RUSSO. *Icahn Sch. of Med.*

2:00 T6 **235.22** The establishment sexual defeat rat model. L. L. QULU*; A. WILKINS. *Univesity of KwaZulu-Natal, Med. Physiol. Durban 4000, Univ. of KwaZulu-Natal.*

3:00 T7 **235.23** Hangry - An analysis of its behavioural pharmacology. T. A. HORMAN*; B. MELANSON; M. SCOTT; F. LERI. *Univ. of Guelph, Univ. of Guelph.*

4:00 T8 **235.24** Boredom-like behavior in an unadorned mouse room. Y. YAWATA*; Y. IKEGAYA. *Grad Sch. Pharma Sci, Univ. Tokyo.*

1:00 T9 **235.25** Back to nature: Icariin increases emotional resilience in male Long-Evans rats. M. BARDI*; K. JOHNSON; K. NWACHUKWU; E. RHOADS; S. MEEK. *Randolph-Macon Col.*

POSTER

236. Depression: Pathology

Theme G – Motivation and Emotion

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 T10 **236.01** N-3 polyunsaturated fatty acids promote neurotrophic factor production in human nsc-derived glial cells from subject with major depressive depression. J. YU*; J. WANG; R. PERLIS; M. M. RASENICK. *Univ. of Illinois at Chicago Col. of Med., Massachusetts Gen. Hosp., Univ. of Illinois at Chicago Col. of Medicine, Jesse Brown VA Med. Ctr.*

2:00 T11 **236.02** ● Polyunsaturated fatty acids affect a depression biosignature in lymphoblast cell lines from depressed human subjects. P. CHUKAEW*; M. M. RASENICK. *Mahidol Univ., Univ. of Illinois at Chicago, Col. of Med., Univ. of Illinois at Chicago, Col. of Med., Jesse Brown VA Med. Ctr.*

3:00 T12 **236.03** ● Impairment of lipid raft Gs signaling persists following antidepressant withdrawal. N. B. SENESE*; M. M. RASENICK. *Univ. of Illinois at Chicago Col. of Med., Jesse Brown VA Med. Ctr., Univ. of Illinois at Chicago Col. of Med.*

4:00 T13 **236.04** ● A biomarker-based high-throughput screen for antidepressant efficacy. J. M. SCHAPPI*; M. BEN AISSA; J. R. HICKOCK; M. M. RASENICK. *Col. of Pharm. (UIC), Pax Neurosci., Univ. of Illinois at Chicago Col. of Med., Jesse Brown VAMC, Univ. of Illinois at Chicago.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 T14 **236.05** Cellular identification of corticotropin-releasing hormone in the anterior cingulate cortex of human subjects. H. OH*; D. A. LEWIS; E. SIBILLE. *CAMH, Univ. Pittsburgh, CAMH - Univ. of Toronto.*

2:00 T15 **236.06** snRNA-seq in the post-mortem prefrontal cortex implicates OPCs and deep layer excitatory neurons in major depressive disorder. M. MAITRA*; C. NAGY; A. TANTI; M. SUDERMAN; J. F. THÉROUX; M. A. DAVOLI; K. PERLMAN; V. YERKO; S. TRIPATHY; P. PAVLIDIS; N. MECHAWAR; J. RAGOUSSIS; G. TURECKI. *McGill Group for Suicide Studies, Douglas Mental Hlth. Univ. Inst., Bristol Med. Sch., Univ. of British Columbia, McGill Univ. and Genome Quebec Innovation Ctr.*

3:00 T16 **236.07** Profiling brain-derived exosomes in the prefrontal-cortex of individuals with major depressive disorder. P. IBRAHIM*; C. NAGY; J. THEROUX; G. TURECKI. *McGill, Douglas Hosp. Res. Ctr., McGill.*

4:00 T17 **236.08** Oligodendrocyte lineage cells and myelination in the human uncinate fasciculus of adults with a history of child abuse. K. PERLMAN*; J. KIM; A. TANTI; M. DAVOLI; D. MIRAULT; N. MECHAWAR. *Douglas Mental Hlth. Univ. Inst.*

1:00 T18 **236.09** Small nucleolar RNAs in major depression and antidepressant response. R. LIN*; J. LOPEZ; L. FIORI; J. THEROUX; Z. AOUABED; H. PENG; C. ERNST; E. IBRAHIM; C. CRUCEANU; R. BELZEAUX; C. AN-BIND WORKING GROUP; J. A. FOSTER; S. KENNEDY; G. TURECKI. *McGill Group for Suicide Studies, Douglas Mental Hlth. Univ. Institute, McGill Univ., Aix Marseille Univ, CNRS, INT, Inst. Neurosci Timone UMR 7289, The Canadian Biomarker Integration Network in Depression (www.canbind.ca), McMaster Univ., Dept. of Psychiatry, Univ. Hlth. Network, Univ. of Toronto.*

2:00 T19 **236.10** Characterizing signal transduction networks in postmortem depressed-suicide subjects. S. M. O'DONOVAN*; E. BENTEA; K. ALGANEM; R. E. MCCULLUMSMITH. *Univ. of Toledo, Univ. of Cincinnati.*

3:00 T20 **236.11** ▲ Epitranscriptomic modifications of the 5-HT_{2C} receptor predict completed suicide. K. LOTESTO*; M. SODHI. *Loyola Univ. Chicago.*

4:00 U1 **236.12** ● DNA methylation markers of early onset major depressive disorder disorder. H. YAMAGATA*; H. OGIHARA; K. MATSUO; S. UCHIDA; T. SEKI; M. KOBAYASHI; K. HARADA; C. CHEN; S. MIYATA; M. FUKUDA; M. MIKUNI; Y. WATANABE; S. NAKAGAWA. *Yamaguchi Univ. Sch. of Med., CREST, JST, Grad. Sch. of Sci. and Technol. for Innovation, Yamaguchi Univ., Saitama Med. Univ., Kyoto Univ. Grad. Sch. of Med., Yamaguchi Univ. Sch. of Med., Gunma University, Psychiatry and Neurosci., Gunma Univ. Grad. Sch. of Med., Hokkaido University, Grad. Sch. of Med., Southern Tohoku Gen. Hosp.*

1:00 U2 **236.13** Increased cell number with reduced nitric oxide levelin the anterior-pituitary region of suicide completers. F. GARCIA-DOLORES*; E. BALTAZAR-GAYTAN; H. TENDILLA-BELTRAN; R. VAZQUÉZ-ROQUE; F. DE LA CRUZ; M. SUSANO-POMPEYO; G. FLORES. *Inst. De Ciencias Forenses, Benemérita Univ. Autónoma de Puebla, Escuela Nacional de Ciencias Biologicas, Univ. Autonoma de Puebla / Inst. de Fisiologia.*

POSTER

237. Genetic and Molecular Mechanisms Underlying Alcohol Dependence

Theme G – Motivation and Emotion

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 U3 **237.01** The effect of DNA methylation and demethylation in a rat model of alcohol use disorder. K. NIINEP*; K. ANIER; T. ETELÄINEN; P. PIEPPONEN; A. KALDA. *Univ. of Tartu, Univ. of Helsinki.*

2:00 U4 **237.02** ▲ Tip60 as a significant player in the creation of alcohol tolerance. L. RAMOS-RODRIGUEZ*; C. BILLINI-GUZMAN; E. M. FIGUEROA-PAGAN; J. L. AGOSTO-RIVERA; A. GHEZZI. *Univ. of Puerto Rico Rio Piedras Campus.*

3:00 U5 **237.03** Cellular aging in alcohol use disorder. L. M. CARVALHO*; C. WIERS; P. MANZA; H. SUN; M. SCHWANDT; G. WANG; R. GRASSI-OLIVEIRA; A. BRUNIALTI GODARD; N. VOLKOW. *NIAAA, Pontifical Catholic Univ. of Rio Grande do Sul, Federal Univ. of Minas Gerais.*

4:00 U6 **237.04** Clusterin gene polymorphisms associated to drug abuse. I. PALLARDO; J. R. MUÑOZ-RODRÍGUEZ; C. GONZALEZ-MARTIN; L. F. ALGUACIL*. *Univ. CEU San Pablo, Univ. Gen. Hosp. of Ciudad Real.*

1:00 U7 **237.05** Ethanol exerts its influence on dopaminergic GABA co-release via its metabolite acetaldehyde in the striatum. K. KAGANOVSKY*; S. GANESAN; J. KIM; S. WANG; L. CHEN; J. B. DING. *Stanford Univ., Stanford Univ., Stanford Univ.*

2:00 U8 **237.06** Prevention of glutamate excitotoxicity in lateral habenula alleviates ethanol withdrawal induced somatic and behavioral effects in ethanol dependent mice. S. G. GAKARE*; S. S. VARGHESE; R. R. UGALE. *Univ. Dept. of Pharmaceut. Sciences.*

3:00 U9 **237.07** Ndrg1 and myelin-related disease: Alcoholism, peripheral neuropathy, and sensitivity to CIPN. G. HARRIS*; W. TOMA; D. HUEY; A. D. VAN DER VAART; M. N. DRIVER; M. DAMAJ; M. F. MILES. *Virginia Commonwealth Univ., Virginia Commonwealth Univ., Virginia Commonwealth Univ.*

4:00 U10 **237.08** Deletion of chloride intracellular channel 4 (Clic4) alters voluntary ethanol consumption in mice. R. M. WESTON*; D. J. HUEY; M. N. DRIVER; G. M. HARRIS; A. VAN DER VAART; M. F. MILES. *Virginia Commonwealth Univ., Virginia Commonwealth Univ.*

1:00 U11 **237.09** Cortical proteomic profiles associated with ethanol-induced impulsivity and reward seeking behaviors in mice. P. A. STARSKI*; S. HONG; L. PEYTON; A. OLIVEROS; K. WININGER; S. KANG; D. CHOI. *Mayo Clin., Mayo Clin. Col. of Med., Mayo Clin., Mayo Clin., Mayo Grad. Sch. of Biomed. Sci., Mayo Clin. Col. of Med.*

2:00 U12 **237.10** The BDNF valine 68 to methionine polymorphism decreases alcohol reward sensitivity, causes alcohol-dependent recognition memory deficits and reduces alcohol's anxiolytic effects in mice. Y. EHINGER*; J. J. MOFFAT; S. A. SAKHAI; D. RON. *Univ. of California San Francisco, Univ. of California, San Francisco, Univ. of California, San Francisco, UCSF.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 U13 **237.11** Circuit-specific CRISPR/Cas9 gene editing reveals an extended amygdala neuropeptide receptor signaling mechanism driving alcohol drinking, anxiety, and avoidance. W. J. GIARDINO*; H. YAMAGUCHI; L. DE LECEA. *Stanford Univ.*

4:00 U14 **237.12** mTORC1-dependent translation of microRNA machinery genes in the nucleus accumbens of mice excessively consuming alcohol. E. L. WHITELEY*; S. LAGUESSE; F. LIU; D. RON. *Univ. of California, San Francisco.*

1:00 U15 **237.13** Involvement of prelimbic cortex pituitary adenylate cyclase-activating polypeptide in excessive drinking. M. A. MINNIG*; S. G. QUADIR; A. EVANS-STRONG; M. RILEY; P. COTTONE; V. SABINO. *Boston Univ. Sch. of Med., Northeastern Univ.*

2:00 U16 **237.14** Differential regulation of excessive alcohol consumption by the transcriptional regulator LMO4. R. MAIYA*; M. B. POMRENZE; T. TRAN; G. R. TIWARI; R. D. MAYFIELD; R. O. MESSING. *The Univ. of Texas At Austin, Univ. of Texas at Austin, The Univ. of Texas at Austin, The Univ. of Texas At Austin.*

3:00 U17 **237.15** Characterization of the G protein coupled receptor kinase 2 in alcohol induced behaviors in *Drosophila melanogaster.* Y. KANG*; E. ENGDORF; T. T. MCKENZIE; R. DEL ABRA; G. W. ROMAN. *Univ. of Houston Downtown, Univ. of Houston Downtown, Univ. of Houston-Downtown, Univ. of Mississippi.*

4:00 U18 **237.16** P2X4 receptor cross-talk in the VTA: Implications in alcohol addiction and drug development. L. RODRIGUEZ*; C. YOU; J. J. WOODWARD; M. S. BRODIE; D. L. DAVIES. *USC, Univ. of Illinois At Chicago, Med. Univ. of South Carolina, Univ. Illinois-Chicago, USC.*

1:00 U19 **237.17** Comprehensive analysis of miRNA expression in ethanol dependence in mice. K. MIZUO*; T. YAMAGUCHI; S. WATANABE. *Sapporo Med. Univ.*

2:00 U20 **237.18** ▲ Estrogen receptor alpha and beta modulation of ethanol withdrawal-induced anxiety. L. ENGEL*; E. HOWELL; P. J. CURRIE. *Reed Col.*

3:00 U21 **237.19** Peripheral mechanoreceptor activation modulates mesolimbic GABA and dopamine neurons and ameliorates withdrawal symptoms in ethanol dependent rats. K. BILLS*; K. CREECH; J. PRUETT; D. OBRAY; S. C. STEFFENSEN. *Brigham Young Univ.*

4:00 U22 **237.20** Deficient endocannabinoid signaling in the lateral habenula underlies hyperalgesia during alcohol withdrawal. J. YE*; R. FU; Y. TANG; X. CHEN; Y. ZOU; W. ZUO; A. BEKKER. *Rutgers, The State Univ. of New Jersey, New Jersey Med. Sch., Rutgers, The State Univ. of New Jersey, New Jersey Med. Sch., Rutgers, The State Univ. of New Jersey, New Jersey Med. Sch.*

1:00 U23 **237.21** Upregulation of the sodium calcium exchanger precedes the onset of alcohol withdrawal seizures. P. N'GOUEMO*; L. R. AKINFIRESOYE; J. NEWTON; S. SUMAN; K. DATTA. *Georgetown Univ. Med. Ctr., Georgetown Univ. Med. Ctr.*

2:00 U24 **237.22** The HDAC inhibitor SAHA alleviates depression-like behavior and normalizes HDAC2 and acetylated histone H3 levels in the hippocampus during alcohol withdrawal. W. CHEN*; H. ZHANG; E. GOTTA; H. CHEN; S. C. PANDEY; A. W. LASEK. *Univ. of Illinois at Chicago, Univ. of Illinois at Chicago, UIC, Univ. of Illinois at Chicago.*

3:00 U25 **237.23** ▲ Social environments alters alcohol responses. C. M. SIERRA*; V. VALLES; P. SABANDAL; K. HAN. *The Univ. of Texas at El Paso.*

POSTER

238. Addiction Treatment

Theme G – Motivation and Emotion

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 U26 **238.01** Diacylglycerol lipase a therapeutic target for alcohol use disorder. G. BEDSE*; S. E. YOHN; A. ASTAFYEV; T. A. PATRICK; J. UDDIN; P. CONN; L. J. MARNETT; S. PATEL. *Vanderbilt Univ. Med. Ctr., Vanderbilt Univ.*

2:00 U27 **238.02** The effect of cocaine and amphetamine treatment on DNA methylation and demethylation in human peripheral blood mononuclear cells. K. ANIER*; M. URB; M. ALTTOA; K. SIKK; K. SOMELAR; A. KALDA. *Univ. of Tartu.*

3:00 U28 **238.03** Nociceptin attenuates alcohol drinking in a sex dependent manner. P. GHAZAL*; K. PLEIL. *Weil Cornell Med. Col.*

4:00 U29 **238.04** ● ▲ Intranasal glial cell line-derived neurotrophic factor gene therapy for opioid use disorder. M. J. KYADA; S. IRIAH; O. SESENOGLU-LAIRD; L. PADEGIMAS; M. J. COOPER; B. L. WASZCZAK*. *Northeastern Univ., Copernicus Therapeutics, Inc., Abeona Therapeutics, Inc.*

1:00 U30 **238.05** Effects of a CRFR1 antagonist on alcohol drinking and affiliative behavior in prairie voles. S. POTRETZKE*; M. ROBINS; A. RYABININ. *Oregon Hlth. & Sci. Univ.*

2:00 U31 **238.06** Changes in resting state networks in cocaine addicts after rTMS treatment on the left DLPFC. S. FERNANDEZ; R. ALCALA-LOZANO; S. ALCAUTER; J. J. GONZÁLEZ-OLVERA; E. A. GARZA-VILLARREAL*. *Inst. of Neurobiology, Univ. Nacional Autonoma de Mexico (UNAM), Inst. Nacional de Psiquiatria, Inst. De Neurobiologia. Univ. Nacional Autonoma de Mexico, INSTITUTO NACIONAL DE PSIQUIATRIA.*

3:00 U32 **238.07** Effect of lorcaserin and atomoxetine in two tests of compulsive action. G. A. HIGGINS*; M. BROWN; C. MACMILLAN; L. B. SILENIEKS. *InterVivo Solutions Inc.*

4:00 U33 **238.08** Portable transcranial direct current stimulation (tDCS) to reduce craving in cocaine addiction: A double-blind sham-controlled phase 1 clinical trial. P. GAUDREAULT*; A. DATTA; P. MALAKER; A. WAGNER; M. A. PARVAZ; E. NAKAMURA-PALACIOS; L. C. PARRA; N. ALIA-KLEIN; R. Z. GOLDSTEIN. *Icahn Sch. of Med. at Mount Sinai, Soterix Med. Inc., Federal Univ. of Espirito Santo, City Col. of New York.*

1:00 U34 **238.09** ▲ Ghrelin: From a gut hormone to a potential therapeutic target for alcohol addiction. V. MUNJAL*; M. FAROKHNIA; M. R. LEE; M. L. SCHWANDT; L. A. FARINELLI; F. AKHLAGHI; L. LEGGIO. *NIH, NIH, NIH, Univ. of Rhode Island, Col. of Pharm., Natl. Inst. on Drug Abuse, Brown Univ.*

2:00 U35 **238.10** Deep brain stimulation suppresses cocaine-seeking behavior by selectively depotentiating accumbens shell D2DR-containing neurons. M. T. RICH*; S. E. SWINFORD-JACKSON; P. J. HUFFMAN; R. C. PIERCE. *Univ. of Pennsylvania.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 U36 **238.11** Troriluzole reduces development, and enhances extinction, of oxycodone conditioned place preference and attenuates cocaine relapse and locomotor sensitization in rats. V. W. LI; S. NAYAK; T. JENNINGS; S. GAO; V. DUSZAK; G. NEALE; M. WATSON; A. B. REITZ; R. W. SCOTT; K. M. FREEMAN; A. SHAIKH; Z. STUBLAREC; S. LOPEZ; A. WARREN; J. A. SCHROEDER*; S. M. RAWLS. *Connecticut Col., Lewis Katz Sch. of Medicine, Temple University, Ctr. for Substance Abuse Res., Fox Chase Chem. Diversity Ctr.*

4:00 U37 **238.12** Sex-specific effects of the monoamine stabilizer (-)-OSU6162 on relapse of oxycodone seeking after electric barrier-induced voluntary abstinence. S. V. APPLEBEY*; J. M. BOSSERT; Y. SHAHAM; I. FREDRIKSSON. *IRP-NIDA, NIH.*

1:00 U38 **238.13** Opioid maintenance delivery of the biased agonist TRV130 decreases relapse to oxycodone seeking and prevents acute opioid-induced brain hypoxia. J. M. BOSSERT*; E. KIYATKIN; H. KORAH; J. K. HOOTS; I. FREDRIKSSON; B. E. BLOUGH; Y. SHAHAM. *IRP/NIDA/NIH, Ctr. for Drug Discovery, Res. Triangle Inst.*

2:00 U39 **238.14** Role of orbitofrontal cortex in relapse to fentanyl seeking after food-choice induced voluntary abstinence. D. J. REINER*; O. M. LOFARO; M. VENNIRO; C. CIFANI; J. M. BOSSERT; Y. SHAHAM. *IRP-NIDA, NIH, Univ. of Camerino, Sch. of Pharm.*

3:00 U40 **238.15** Targeting PTPRD D1 phosphatase: Message and address? G. R. UHL*; D. A. JOHNSON; W. WANG; T. PRISINZANO. *Univ. of New Mexico and NMVAHCS, Univ. of Kansas, Univ. of Arizona, Univ. of Kentucky.*

POSTER

239. Neural Mechanisms of Addiction: Amphetamines

Theme G – Motivation and Emotion

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 V1 **239.01** Amphetamine-induced rise in glutamate in anterior cingulate correlates with positive incentive emotion in healthy women. M. A. GONSALVES*; T. L. WHITE. *Brown Univ., Brown Univ.*

2:00 V2 **239.02** Opposing effects of glucocorticoids in the ventral hippocampus in stimulating accumbal dopamine release within amphetamine withdrawn vs. drug naïve rats. G. L. FORSTER*; K. A. CLEMENT; M. A. WEBER; B. BRAY. *Univ. of Otago, Univ. of South Dakota, Univ. of Iowa.*

3:00 V3 **239.03** D1 and D3 dopamine receptors coactivation enhances camp accumulation in low responding amphetamine treated rats, opposite effect in high responding rats. D. G. MELCHOR*; A. AVALOS; F. PAZ; B. FLORAN. *Ctr. De Investigacion Y De Estudios Avanzados De.*

4:00 V4 **239.04** Methylenedioxypyrovalerone (MDPV) increases plasmalemmal and vesicular dopamine transport. C. P. MAGEE*; C. L. GERMAN; Y. H. SIRIPATHANE; A. L. MARTIN; D. J. ANDERSON; G. R. HANSON; D. G. WILKINS; A. E. FLECKENSTEIN. *Univ. of Utah.*

1:00 V5 **239.05** Cell-specific spinophilin function following psychostimulant-induced behavioral sensitization regimens. D. S. WATKINS*; A. J. BAUCUM II. *Indiana Univ. Sch. of Med., Indiana University-Purdue Univ. Indianapolis.*

2:00 V6 **239.06** Chronic methamphetamine alters activation and expression patterns of CRF and CRFR1 neurons in stress-associated brain regions. J. S. JACOBSKIND*; Z. J. ROSINGER; R. M. DE GUZMAN; K. L. STURM; M. A. SARTORI; D. G. ZULOAGA. *State Univ. of New York at Albany.*

3:00 V7 **239.07** Behavioral evidence for the role of vesicular monoamine transporter in stimulant sensitization: The intracellular redistribution hypothesis. A. VASQUEZ*; V. GARCIA; S. A. COLLINS; P. PARADA; A. CRUZ; E. CASTAÑEDA. *Univ. of Texas At El Paso, Texas A&M Univ.*

4:00 V8 **239.08** Neuronal cell type-specific effects of primary cilia loss on stimulant-induced behaviors in mice. J. C. MCINTYRE*; C. A. RAMOS; J. B. ROBERTS; K. R. JASSO; A. K. FIREK; B. SETLOW. *Univ. of Florida, Univ. of Florida.*

1:00 V9 **239.09** Sex-specific differences in the role of central amygdala neuronal subtypes in drug-related behaviors. A. BOUHUIS*; B. LI. *Cold Spring Harbor Lab., Univ. of Amsterdam.*

2:00 V10 **239.10** ▲ Changes in gene expression related to structural plasticity during the development and incubation of behavioral sensitization to amphetamine in rats. V. ROJAS-GARBANZO*; J. C. BRENES; A. SEQUEIRA-CORDERO. *Univ. of Costa Rica, Univ. of Costa Rica, Univ. of Costa Rica.*

3:00 V11 **239.11** ▲ The role of rearing diet on drug seeking behavior and DeltaFosB accumulation following amphetamine exposure. J. SAKACH; K. YANG; S. OO; K. PONDER*; A. M. ANCH. *St. Louis Univ.*

4:00 V12 **239.12** Role of nucleus accumbens core but not shell in incubation of methamphetamine craving after voluntary abstinence. L. ROSSI*; I. REVERTE; J. MODONI; D. RAGOZZINO; A. BADIANI; M. VENNIRO; D. CAPRIOLI. *Sapienza Univ. of Rome, IRCCS Santa Lucia Fndn., IRCCS Santa Lucia Fndn., Univ. of Sussex, Natl. Inst. On Drug Abuse.*

1:00 V13 **239.13** Effect of social choice-induced voluntary abstinence on incubation of methamphetamine craving and glutamate receptor expression in nucleus accumbens core. I. REVERTE*; L. M. ROSSI; J. MODONI; L. LO IACONO; M. FULLONE; R. MIELE; M. VENNIRO; D. CAPRIOLI. *Sapienza Univ. of Rome, IRCSS Santa Lucia Fndn., IRCCS Santa Lucia Fndn., Sapienza Univ. of Rome, Sapienza Univ. of Rome, Natl. Inst. on Drug Abuse.*

2:00 V14 **239.14** ▲ The effect of exercise on relapse to methamphetamine seeking. H. R. JENKINS*; A. S. PAINE; B. R. FINE; A. N. FRICKS-GLEASON. *Regis Univ.*

3:00 V15 **239.15** ▲ The effects of exercise on methamphetamine-induced cognitive deficits. A. S. PAINE*; H. R. JENKINS; B. R. FINE; A. N. FRICKS-GLEASON. *Regis Univ.*

4:00 V16 **239.16** ▲ Elucidating the mechanisms of exercise-induced attenuation of methamphetamine neurotoxicity and cognitive deficits. B. R. FINE*; H. R. JENKINS; A. S. PAINE; A. N. FRICKS-GLEASON. *Regis Univ.*

1:00 V17 **239.17** *In vivo* reduction of striatal D1 receptors by RNA interference is associated with changes in methamphetamine self-administration and intracellular protein expression. A. D. KREISLER*; M. J. TERRANOVA; S. S. SOMKUWAR; D. C. PUROHIT; S. WANG; B. P. HEAD; C. D. MANDYAM. *VA San Diego Healthcare Syst., VA San Diego.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 V18 **239.18** Methamphetamine learning induces persistent nonmuscle myosin II-dependent spine motility in the basolater amygdala. E. J. YOUNG*; G. RUMBAUGH; C. A. MILLER. *Scripps Res. Inst., Scripps Res. Inst.*

POSTER

240. Opioids: Mechanisms of Dependence

Theme G – Motivation and Emotion

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 V19 **240.01** Acute and chronic amitifadine, a triple monoaminergic re-uptake inhibitor reduces self-administration of both nicotine and the opiate remifentanil. A. H. REZVANI*; C. WELLS; G. BLAIR; A. VIERLING; J. ROSE; E. D. LEVIN. *Duke Univ.*

2:00 V20 **240.02** Impact of fear conditioning on extinction of morphine conditioned place preference in mouse. N. L. JOHNSON*; J. A. BABB; G. B. KAPLAN. *Boston Univ. Sch. of Publ. Hlth., VA Boston Healthcare System/Harvard Med. Sch., VA Boston Healthcare System/Boston Univ. Sch. Med.*

3:00 V21 **240.03** Optogenetic stimulation of the NAc - VTA GABAergic pathway is rewarding and potentiates heroin-taking and seeking. E. J. GALAJ*; C. JORDAN; Z. XI. *NIDA IRP.*

4:00 V22 **240.04** Transcriptional reprogramming of the brain reward system by heroin self-administration. C. J. BROWNE*; R. FUTAMURA; A. GODINO; F. MARTÍNEZ-RIVERA; A. MINIER-TORIBIO; A. RAMAKRISHNAN; A. TORRES-BERRÍO; E. M. PARISE; D. M. WALKER; L. SHEN; E. J. NESTLER. *Icahn Sch. of Med. at Mount Sinai.*

1:00 V23 **240.05** Single cell sequencing of the medial habenula in response to oxycodone self-administration. C. FILLINGER*; R. SEBRA; A. HAKE; K. G. BEAUMONT; M. WILLIAMS; P. J. KENNY. *Icahn Sch. of Med. at Mount Sinai.*

2:00 V24 **240.06** Changes in intracranial self-stimulation following intermittent abstinence during oxycodone self-administration are associated with kappa opioid receptor signaling. J. D. NGUYEN*; Y. GRANT; M. A. TAFFE. *Univ. of California San Diego.*

3:00 V25 **240.07** The opioid agonist remifentanil does not induce subjective pleasure pre-surgery: An observational open-label study. S. LEKNES*; G. ERNST; R. MEIR; M. EIKEMO. *Univ. Oslo, Univ. of Oslo.*

4:00 V26 **240.08** ▲ One trial fentanyl-induced sensitization in adolescent and adult rats. O. OROZCO; H. DIAZ; D. L. SANCHEZ; C. A. CRAWFORD*. *California State Univ.*

1:00 V27 **240.09** Distributions of kappa opioid receptor (KOR) in paraventricular thalamic nucleus (PVT) and habenula (Hb) in the mouse brain. P. HUANG*; C. CHEN; L. LIU-CHEN. *Temple Univ. Lewis Katz Sch. of Med.*

2:00 V28 **240.10** ▲ Are naltrexone's discriminative stimulus effects mediated by kappa-opioid receptors in rats with chronic, intermittent sucrose access? H. R. STUTT*; J. W. ZAJAC; H. M. DORN; A. M. PETREY; C. E. HERZBERG; M. A. MAREK; D. C. JEWETT. *Univ. of Wisconsin Eau Claire.*

3:00 V29 **240.11** Hippocampal and amygdalar BDNF in the extinction of morphine place preference. M. E. LLORET TORRES*; R. N. AYALA PAGAN. *Univ. of Puerto Rico Med. Sci. Campus.*

4:00 V30 **240.12** Chronic voluntary nicotine consumption increases future concurrent morphine intake and alters nucleus accumbens synapses. S. L. WOLFMAN*; D. J. KALAMARIDES; R. S. PATEL; J. A. DANI. *Univ. of Pennsylvania Perelman Sch. of Medi, Univ. of Pennsylvania.*

1:00 V31 **240.13** Pro-inflammatory cytokine modulation following chronic fentanyl self-administration in rats. A. N. DAO*; N. J. BEACHER; A. W. KUSNECOV; M. O. WEST. *Rutgers Univ.*

2:00 V32 **240.14** Morphine preference in mice is decreased by fibroblast growth factor 21 (FGF21). L. DORVAL*; B. I. KNAPP; J. M. BIDLACK. *Univ. of Rochester.*

3:00 V33 **240.15** Adolescent nicotine alters adult morphine preference and ventral tegmental area inhibitory circuitry in mice. D. J. KALAMARIDES*; S. L. WOLFMAN; R. S. PATEL; J. A. DANI. *Univ. of Pennsylvania.*

4:00 V34 **240.16** Metabolic effects of ceftriaxone in a model of opioid reinstatement. J. REIGLE; G. LABILLOY; R. MCCULLUMSMITH; J. MELLER; Y. SARI; A. FUNK*. *Univ. of Cincinnati, Univ. of Toledo.*

1:00 V35 **240.17** Neural mechanisms underlying secondary trauma-induced relapse to opioid seeking in mice. J. C. GEWIRTZ*; T. MATVEEVA; A. H. FROST; M. T. PISANSKY. *Univ. of Minnesota, Univ. of Minnesota.*

2:00 V36 **240.18** ▲ Stress interferes with conditioned place aversion induced by morphine in rats. Y. LU*; A. C. W. HUANG. *Fo Guang Univ.*

3:00 V37 **240.19** Chronic morphine exposure and extended abstinence elicit changes in gene expression in the nucleus accumbens of male and female rats. H. L. MAYBERRY*; D. R. PETERSON; S. H. DOWNEY; S. BHAKTA; A. R. BONGIOVANNI; A. S. ELLIS; A. B. TOUSSAINT; M. E. WIMMER. *Temple Univ., Univ. of Pennsylvania.*

4:00 V38 **240.20** Paternal morphine exposure causes maladaptive behavior in male progeny. A. R. BONGIOVANNI*; A. B. TOUSSAINT; A. S. ELLIS; S. BHAKTA; M. C. KNOUSE; A. S. THOMAS; H. MAYBERRY; L. LIU-CHEN; M. E. WIMMER. *Temple Univ., Univ. of Pennsylvania, Temple Univ. Lewis Katz Sch. of Med.*

1:00 V39 **240.21** Withdrawal-induced anhedonia after opioid exposure: Searching for molecular signals that predict subsequent opioid self-administration. Y. SWAIN*; S. X. LIU; M. GADES; P. MUELKEN; M. G. LESAGE; P. V. TRAN; J. C. GEWIRTZ; A. C. HARRIS. *Univ. of Minnesota Twin Cities, Hennepin Healthcare Res. Inst., Univ. of Minnesota Twin Cities, Univ. of Minnesota Twin Cities.*

2:00 V40 **240.22** Characterization of oxycodone self-administration and withdrawal-associated negative affect in male and female rats. S. K. GUHA*; N. J. CONSTANTINO; E. H. CHARTOFF. *McLean Hospital, Harvard Med. Sch.*

3:00 V41 **240.23** Targeting the orexin system for prescription opioid use disorder: Efficacy of orexin-1 receptor antagonist SB334867 in preventing oxycodone taking and seeking in rats. A. MATZEU*; R. MARTIN-FARDON. *The Scripps Res. Inst.*

4:00 V42 **240.24** Chronic morphine-induced changes in gene expression within dopaminergic ventral tegmental area neurons. A. L. GARRISON*; S. E. C. SIMMONS; E. A. HELLER; Q. HU; M. S. MAZEI-ROBISON. *Michigan State Univ., Uniformed Services Univ. of the Hlth. Sci., Univ. of Pennsylvania, Michigan State Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 V43 **240.25** SGK1 activity in VTA dopamine neurons regulates cocaine and morphine reward behaviors. M. A. DOYLE*; V. BALI; E. S. WILLIAMS; A. R. STARK; A. J. ROBISON; M. S. MAZEI-ROBISON. *Michigan State Univ., Michigan State Univ., Michigan State Univ., Michigan State Univ.*

2:00 V44 **240.26** ▲ Use of fentanyl to investigate regulation of drug reward by VTA SGK1. A. R. STARK*; M. A. DOYLE; M. S. MAZEI-ROBISON. *Michigan State Univ., Michigan State Univ.*

3:00 V45 **240.27** ▲ Oxycodone injections not paired with conditioned place preference have little effect on the hippocampal opioid system in female and male rats. E. ASHIROVA*; N. H. CONTOREGGI; M. A. JOHNSON; F. J. AL-KHAYAT; G. A. CALCANO; B. REICH; E. M. O'CINNEIDE; Y. ZHANG; Y. ZHOU; B. S. MCEWEN; M. KREEK; T. A. MILNER. *Weill Cornell Med., Weill Cornell Med., The Rockefeller Univ., The Rockefeller Univ.*

4:00 V46 **240.28** ▲ Sex and chronic stress differentially alter phosphorylated mu and delta opioid receptor levels in the rat hippocampus following oxycodone conditioned place preference. J. R. BELLAMY*; B. REICH; A. ZVEROVICH; Y. ZHOU; N. H. CONTOREGGI; J. D. GRAY; B. S. MCEWEN; M. J. KREEK; T. A. MILNER. *Feil Family Brain and Mind Res. Inst., The Lab. of the Biol. Addictive Diseases, The Rockefeller Univ., Harold and Margaret Milliken Hatch Lab. of Neuroendocrinology, The Rockefeller Univ.*

1:00 W1 **240.29** Sex differences in the mRNA expression of opioid peptides and receptors in the rat hippocampus. M. A. JOHNSON*; N. H. CONTOREGGI; J. KOGAN; M. BRYSON; B. REICH; J. D. GRAY; M. KREEK; B. S. MCEWEN; T. A. MILNER. *Weill Cornell Med., Weill Cornell Med., The Rockefeller Univ., The Rockefeller Univ., Weill Cornell Med., The Rockefeller Univ., Rockefeller Univ., Rockefeller Univ.*

2:00 W2 **240.30** Mouse FMRI reveals mu opioid receptor-mediated effects of buprenorphine on whole brain functional connectivity. E. DARCQ*; M. D. T. NASSEEF; L. WELSCH; J. PUNEET SINGH; B. L. KIEFFER. *McGill/Douglas Res. Ctr., McGill/Douglas Res. Ctr.*

POSTER

241. Decision Making: Rodent Medial Prefrontal Cortex

Theme H – Cognition

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 W3 **241.01** Optogenetically induced neuronal activity mimicking epileptic discharges from hypothalamus to mediodorsal nucleus of thalamus and to lateral habenula deteriorates performance of working memory tasks. M. SONODA*; H. AIMI; K. KAWASAKI; H. TODA; S. HIRAI; R. MEGURO; M. HORIE; H. OKADO; S. KAMEYAMA; T. YAMAMOTO; I. HASEGAWA. *Wayne State Univ., Niigata Univ. Sch. of Med., Yokohama City Univ., Niigata Univ. of Hlth. and Welfare, Tokyo Metropolitan Inst. of Med. Sci., Niigata Univ., Niigata Col. of Nursing, Nishi-Niigata Chuo Natl. Hosp.*

2:00 W4 **241.02** Impact of reward probability and reversal criterion on two-armed bandit performance. T. K. SWANSON*; B. B. AVERBECK; M. LAUBACH. *American Univ., NIMH/NIH.*

3:00 W5 **241.03** Learning to choose: Rats deliberate in a test of the sequential choice model. M. LAUBACH*; M. W. PRESTON, JR; S. R. WHITE. *American Univ., NIH NINDS.*

4:00 W6 **241.04** Optogenetic inhibition of rat medial prefrontal cortex increases measures of impulsivity during delay discounting. S. M. WHITE*; C. C. LAPISH; C. L. CZACHOWSKI. *Indiana University-Purdue University, Indianapolis.*

1:00 W7 **241.05** Neural population activity in the rat medial prefrontal cortex underlying proactive behavior in a delay discounting task. E. DE FALCO*; M. MORNINGSTAR; D. N. LINSENBARDT; C. C. LAPISH. *IUPUI, Indiana Univ. - Purdue Univ. Indianapolis, IUPUI.*

2:00 W8 **241.06** Neuronal repertoire for adaptive task-dependent decision making in mouse prefrontal cortex. D. HÄHNKE*; A. RANGANATH; T. W. BERNKLAU; S. N. JACOB. *Tech. Univ. of Munich.*

3:00 W9 **241.07** The causal contributions of medial prefrontal cortex to value-based decisions in mice. H. ATILGAN*; C. MURPHY; J. A. FRAGA; A. KWAN. *Yale Univ.*

4:00 W10 **241.08** Visual decision-making in a dynamically changing environment: Comparing mouse behavior to ideal observer models. L. ACERBI; A. E. URAI; V. AGUILLON-RODRIGUEZ; D. E. ANGELAKI; N. BONACCHI; M. CARANDINI; F. CAZETTES; G. A. CHAPUIS; A. K. CHURCHLAND; Y. DAN; E. E. J. DEWITT; M. FAULKNER; M. HAUSSER; F. HUI; I. C. LARANJEIRA; Z. F. MAINEN; G. T. MEIJER; N. J. MISKA; T. D. MRSIC-FLOGEL; J. NOEL; A. PAN-VAZQUEZ; C. ROSSANT; K. Z. SOCHA; M. J. WELLS; C. J. WILSON; O. WINTER; I. B. WITTEN; A. M. ZADOR; . IBL COLLABORATION; A. POUGET*. *Univ. of Geneva, Cold Spring Harbor Lab., New York Univ., Champalimaud Ctr. for the Unknown, Univ. Col. London, UC Berkeley, Princeton Univ.*

1:00 W11 **241.09** Decoupled evidence accumulation and reaction times in expectation-guided perceptual decisions. L. HERNÁNDEZ-NAVARRO*; A. HERMOSO-MENDIZABAL; J. DE LA ROCHA; A. HYAFIL. *IDIBAPS, CRM.*

2:00 W12 **241.10** ● Infralimbic BDNF is necessary for the therapeutic effects of extinction after chronic stress in male and female rats. D. PAREDES*; D. A. MORILAK. *Univ. of Texas Hlth. Sci. Ctr. San Anto.*

3:00 W13 **241.11** State-dependent modeling of psychophysical behavior during decision making. Z. C. ASHWOOD*; N. A. ROY; A. E. URAI; V. AGUILLON RODRIGUEZ; N. BONACCHI; F. CAZETTES; G. A. CHAPUIS; A. K. CHURCHLAND; M. FAULKNER; F. HU; C. KRASNIAK; I. C. LARANJEIRA; G. T. MEIJER; N. J. MISKA; J. NOEL; A. PAN-VAZQUEZ; C. ROSSANT; K. Z. SOCHA; I. R. STONE; M. J. WELLS; C. J. WILSON; O. WINTER; . IBL COLLABORATION; J. W. PILLOW. *Princeton Univ., Cold Spring Harbor Lab., Champalimaud Ctr. for the Unknown, Univ. Col. London, Univ. of California, Berkeley, New York Univ.*

4:00 W14 **241.12** Alpha and gamma power in medial prefrontal cortex reinforces reward contingencies and predicts asymptotic performance in a cognitive flexibility task. H. J. GRITTON*; N. M. JAMES; J. C. NOCON; M. ABDULKERIM; K. K. SEN; X. HAN. *Boston Univ.*

1:00 W15 **241.13** Patch-based foraging by head-fixed mice in virtual reality. J. WEBB*; A. BANTA; Z. H. MRIDHA; W. ZHANG; D. LEE; C. KEMERE; M. J. MCGINLEY. *Baylor Col. of Med., Rice Univ., Yale Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 W16 **241.14** A novel weight lifting task to investigate persistence in rodents. B. S. PORTER*; K. HILLMAN. *Univ. of Otago.*

3:00 W17 **241.15** Dysfunction in the anterior cingulate cortex and the ventral tegmental area in relation to decision making and motivation in an animal model of schizophrenia. E. R. CROY*; T. W. ELSTON; D. K. BILKEY. *Univ. of Otago, Univ. of Tübingen.*

4:00 W18 **241.16** Role of medial prefrontal cortex in rat category learning. M. B. BROSCHARD*; J. KIM; J. H. FREEMAN. *Univ. of Iowa.*

1:00 W19 **241.17** Prefrontal cortex enables cognitive flexibility and contextual bias. O. GSCHWEND*; B. LI. *Cold Spring Harbor Lab., Cold Spring Harbor Lab.*

2:00 W20 **241.18** Prelimbic cortex inactivation during training does not impair later devaluation in a cued-trial multiple-response/multiple reinforcer operant devaluation task in rats. H. FISHER*; A. PAJSER; C. L. PICKENS. *Kansas State Univ.*

3:00 W21 **241.19** Contribution of primary somatosensory and medial prefrontal cortices to sensorimotor transformation during goal-directed behavior in mice. A. ORYSHCHUK*; V. ESMAEILI; E. CHARRIÈRE; C. C. H. PETERSEN; S. CROCHET. *École Polytechnique Fédérale de Lausanne.*

4:00 W22 **241.20** Tracking choice and reward value in single neurons over several days. M. MOLTESEN*; J. S. L. YEPEZ; D. KVITSIANI. *Aarhus Univ.*

1:00 W23 **241.21** Inhibition of neuronal activity in the prefrontal cortex after systemic administration of fluoxetine during the execution of an operant conditioning task. A. E. PEREYRA; C. J. MININNI; B. S. ZANUTTO*. *Inst. de Biología y Medicina Exptl., Inst. de Ingeniería Biomédica.*

POSTER

242. Learning and Memory: Cortical-Hippocampal Interactions I

Theme H – Cognition

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 W24 **242.01** Distinct role of the agranular and granular retrosplenial cortex in remote contextual fear memory in mice. T. TSAI*; K. HSU. *Natioanal Cheng Kung Univ., Natl. Cheng Kung Univ.*

2:00 W25 **242.02** Differences in intrinsic connectivity patterns of layer Vb neurons between the lateral and medial entorhinal cortex. S. OHARA*; R. R. NAIR; S. BLANKVOORT; C. KENTROS; M. P. WITTER. *Kavli Inst. for Systems Neurosci. and Ctr. for Neural Computation, NTNU, Tohoku Univ. Grad. Sch. of Life Sci.*

3:00 W26 **242.03** Encoding temporal traces within hippocampal-cortical circuits. A. CICVARIC*; Y. WANG; N. YAMAWAKI; L. Y. REN; M. MEYER; V. JOVASEVIC; A. L. GUEDEA; Y. HAN; O. A. MORENO-RAMOS; N. KHALATYAN; V. GRAYSON; G. M. SHEPHERD; J. N. SAVAS; J. M. RADULOVIC. *Northwestern Univ., Northwestern Univ., Northwestern Univ., Northwestern Univ. - Chicago, Northwestern Univ., Xuzhou Med. Univ., Northwestern Univ., Lake Forest Col., Northwestern Univ., Northwestern Univ.*

4:00 W27 **242.04** Hippocampal efferents to the lateral septum and retrosplenial cortex differentially mediate memory acquisition and retrieval. A. N. OPALKA*; D. V. WANG. *Drexel Univ.*

1:00 W28 **242.05** Docetaxel-induced impairments in visuospatial cognition and executive function. A. M. ASHER*; D. A. MORILAK. *UTHSCSA, Univ. of Texas Hlth. Sci. Ctr. at San Antonio.*

2:00 W29 **242.06** ▲ Effects of medial entorhinal cortex lesions in rats on the traveling salesman problem. L. R. OLIVAS*; E. A. PETTY; R. BLASER; J. B. HALES. *Univ. of San Diego, Univ. of San Diego.*

3:00 W30 **242.07** Lesions of the retrosplenial cortex impair unimodal sensory preconditioning. D. I. FOURNIER*; R. R. MONASCH; T. P. TODD; C. P. PUSKAS; D. J. BUCCI. *Dartmouth Col.*

4:00 W31 **242.08** Hippocampal-dependent spatial memory impairment in acute and chronic hyperglycemic mice. D. I. DEL MORAL*; T. MOLINA-JIMÉNEZ; C. J. JUÁREZ-PORTILLA; T. MEZA-MENCHACA; F. GARCÍA-ORDUÑA; M. FLORES-MUÑOZ; Ó. LÓPEZ-FRANCO; R. C. ZEPEDA; G. R. ROLDAN. *Ctr. De Investigaciones Biomédicas, Facultad de Químico Farmacéutico Biólogo, Univ. Veracruzana, Lab. de Genómica Humana, Facultad de Medicina, Univ. Veracruzana, Inst. de Neuroetología, Inst. de Ciencias de la Salud, Natl. Autonomous Univ. of Mexico.*

1:00 W32 **242.09** Closed-loop sinusoidal stimulation of ventral hippocampal terminals in prefrontal cortex preferentially entrains circuit activity at distinct frequencies and delays. M. V. M. MYROSHNYCHENKO*; D. A. KUPFERSCHMIDT; J. A. GORDON. *Natl. Inst. of Neurolog. Disorders and Stroke, Natl. Inst. of Neurolog. Disorders and Stroke, Natl. Inst. of Mental Hlth.*

2:00 W33 **242.10** The interaction between hippocampus and temporal cortex during memory consolidation and recall. S. TAKAMIYA*; S. YUKI; J. HIROKAWA; Y. SAKURAI. *Doshisha Universuty.*

3:00 W34 **242.11** Cell type-specific responses in the neocortex during hippocampal sharp wave ripples. A. R. CHAMBERS*; K. VERVAEKE. *Univ. of Oslo.*

4:00 W35 **242.12** Postnatal stimuli modulate cortico-hippocampal network dynamics. Y. SHINOHARA*; S. KOKETSU; H. HIRASE; T. UEKI. *Nagoya City Univ., Nagoya City Univ., RIKEN Brain Sci. Inst. - Wako, Nagoya City Univ.*

1:00 W36 **242.13** Superior cognitive flexibility and associated changes in resting brain networks in male middle-aged marmosets compared to females. M. LACLAIR; M. FEBO; B. NEPHEW; N. GERVAIS; G. POIRIER; K. WORKMAN; C. M. MOORE*; J. A. KING; A. LACREUSE. *Fairfield Univ., Univ. of Florida, Worcester Polytechnic Inst., Univ. of Toronto, Umass Med. Sch., Univ. of Massachusetts Amherst, Univ. of Massachusetts Med. Sch.*

2:00 W37 **242.14** Electrophysiological analysis of neocortical-hippocampal interplay in rats performing a spatially cued object recognition task. O. J. RAUHALA*; J. GELINAS; D. KHODAGHOLY. *Columbia Univ., Columbia Univ. Med. Ctr.*

3:00 W38 **242.15** Early infant experiences shape the adult allocentric spatial performance and the associated functional brain circuitry in rats. M. P. CONTRERAS*; M. MENDEZ; J. BORN; M. INOSTROZA. *Univ. of Tübingen, Intl. Max Planck Res. Sch., Univ. of Oviedo, Univ. of Tübingen.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 W39 **242.16** Activation of hippocampal CA2 region precedes CA3 following perforant-path stimulation and spontaneously occurring dentate spikes. C. A. WILHITE*; R. S. WITTE; S. L. COWEN. *The Univ. of Arizona, The Univ. of Arizona.*

1:00 W40 **242.17** Granular subdivision of retrosplenial cortex (A29) is critically required for retrieval of contextual threatening memories. S. DE OLMOS*; E. SIGWALD; A. LORENZO. *Inst. de Investigacion Medica Mercedes y Martin Ferreyra-INIMEC-CONICET-Universidad Nacional de Cordoba.*

2:00 W41 **242.18** Changes in cortico-hippocampal functional networks as a result of stroke-induced diaschisis. Z. IP*; G. RABILLER; J. HE; Z. YAO; Y. AKAMATSU; Y. NISHIJIMA; J. LIU; A. YAZDAN-SHAHMORAD. *Univ. of Washington, UC Med. Ctr, UCSF and SFVAM, Univ. of Washington.*

3:00 W42 **242.19** Arc mRNA quantification in CA1 and perirhinal/lateral entorhinal cortex during weak and strong object memory consolidation in male C57BL/6J mice. D. A. CINALLI*, Jr; S. J. COHEN; P. A. GAJEWSKI-KURDZIEL; R. W. STACKMAN, JR. *Florida Atlantic Univ., Florida Atlantic Univ., Florida Atlantic Univ. (FAU), Florida Atlantic Univ.*

4:00 W43 **242.20** Acetylcholine supports EC-CA1 coupling by suppressing competing drivers. D. M. LAYFIELD*; J. HERNÁNDEZ; B. SCHRITTER; E. L. NEWMAN. *Indiana Univ., Indiana Univ., Indiana Univ. Bloomington.*

1:00 W44 **242.21** ▲ Pathway specific activation of ventral hippocampal cells projecting to the prelimbic cortex diminishes fear renewal. J. H. VASQUEZ*; K. LEONG; C. M. GAGLIARDI; B. HARLAND; A. APICELLA; I. A. MUZZIO. *Univ. of Texas At San Antonio, Trinity Univ.*

2:00 X1 **242.22** Behavior-related spectral modes of hippocampal activity comprise distinct delta- and theta-dominated network states, including temporally-evolving ‘absence’ seizures in rats chronically exposed to lead (Pb2+). N. W. SCHULTHEISS*; J. L. MCGLOTHAN; D. R. BROOKS; T. R. GUILARTE; T. A. ALLEN. *Florida Intl. Univ., Florida Intl. Univ.*

3:00 X2 **242.23** Two separate populations of medial prefrontal cortex cells project to nucleus reuniens and perirhinal cortex in support of different memory retrieval strategies. M. SCHLECHT*; M. JAYACHANDRAN; S. B. LINLEY; S. V. MAHLER; R. P. VERTES; T. A. ALLEN. *Florida Intl. Univ., Florida Intl. Univ., Florida Atlantic Univ., Univ. of California Irvine Dept. of Neurobio. and Behavior, FAU/Ctr Complex Systems.*

4:00 X3 **242.24** Learning related changes in hippocampal and caudate activations for conditional associations. A. G. HAMM*; A. T. MATTFELD. *Florida Internation Univ., Florida Intl. Universit.*

1:00 X4 **242.25** Dissociable effects of the thalamic nucleus reuniens and ventromedial prefrontal cortex in executive functioning in the rat. A. K. P. ROJAS*; M. SCHREIBER; A. ATHANASON; T. A. ALLEN; S. B. LINLEY; R. P. VERTES. *Florida Atlantic Univ., Florida Intl. Univ., FAU/Ctr Complex Systems.*

2:00 X5 **242.26** Chemogenetic inhibition of the nucleus reuniens of the thalamus mediates anxiety-like behavior in the rat. A. ATHANASON*; M. SCHREIBER; S. B. LINLEY; R. P. VERTES. *Florida Atlantic Univ., FAU/Ctr Complex Systems.*

3:00 X6 **242.27** Valence specific discrimination/generalization bias evident with increasing hippocampal and amygdala-hippocampal maturity. A. KIMBLER*; D. L. MCMAKIN; A. T. MATTFELD. *Florida Intl. Univ.*

4:00 X7 **242.28** Thalamocortical interactions in memory for elapsed time. S. B. LINLEY*; K. LAMOTHE; V. Z. MONDRAGON; M. SCHREIBER; R. P. VERTES; T. A. ALLEN. *Florida Atlantic Univ., Florida Atlantic Univ., Florida Atlantic Univ., FAU/Ctr Complex Systems, Florida Intl. Univ.*

1:00 X8 **242.29** Delta and theta dynamics in medial prefrontal cortex and the hippocampus of behaving rats. T. D. VIENA*; N. W. SCHULTHEISS; J. MCGLOTHAN DZIEDZIC; T. R. GUILARTE; T. A. ALLEN. *Florida Intl. Univ., Florida Intl. Univ.*

Sun. PM

POSTER

243. Memory Engrams

Theme H – Cognition

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 X9 **243.01** Hippocampus and amygdala fear memory engrams re-emerge after contextual fear reinstatement. W. MAU*; Y. ZAKI; C. R. CINCOTTA; O. P. MCKISSICK; M. SHPOKAYTE; A. HAMIDI; E. DOUCETTE; S. L. GRELLA; N. J. MURAWSKI; E. MERFELD; S. RAMIREZ. *Boston Univ., Mount Sinai Icahn Sch. of Med., Boston Univ., Northeastern Univ., Boston Univ., Broad Inst., Boston Univ., Harvard Univ.*

2:00 X10 **243.02** Population and projection-specific segregation of fear and reward engrams. M. SHPOKAYTE*; O. P. MCKISSICK; E. RUESCH; E. KRAMER; S. LIU; K. E. KITKO; S. L. GRELLA; E. DOUCETTE; E. MERFELD; S. RAMIREZ. *Boston Univ., Hosp. For Sick Children, Whitehead Inst. for Biomed. Res., Vanderbilt Univ.*

3:00 X11 **243.03** ▲ Optogenetic induced extinction-like behaviors in ethanol withdrawn mice. C. R. CINCOTTA*; N. J. MURAWSKI; S. L. GRELLA; O. P. MCKISSICK; E. DOUCETTE; S. RAMIREZ. *Boston Univ., Harvard Univ., Boston Univ., Northeastern Univ., Boston Univ.*

4:00 X12 **243.04** Differentially driving defensive-like behaviors with the same activated fear engram. K. DORST*; O. P. MCKISSICK; J. H. BLADON; S. RAMIREZ. *Boston Univ., Brown Univ., Boston Univ., Boston Univ.*

1:00 X13 **243.05** Social and affective events modulate reactivation of memory ensembles. A. B. FINKELSTEIN*; H. LEBLANC; T. GALLERANI; R. COLE; A. HAMIDI; Y. ZAKI; S. RAMIREZ. *Boston Univ., Broad Inst., Mount Sinai Icahn Sch. of Med.*

2:00 X14 **243.06** Perturbation of dorsal hippocampal ensembles disrupts memory stability. S. L. GRELLA*; J. H. BLADON; A. H. FORTIN; Y. ZAKI; C. R. CINCOTTA; O. P. MCKISSICK; M. SHPOKAYTE; E. DOUCETTE; E. MERFELD; S. RAMIREZ. *Boston Univ., Mount Sinai Icahn Sch. of Med., Northeastern Univ., Boston Univ., Boston Univ.*

3:00 X15 **243.07** Imaging the hippocampus to investigate the specificity and stability of long-term contextual fear memories. N. R. KINSKY*; D. J. ORLIN*; E. A. RUESCH; S. RAMIREZ. *Boston Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract’s submitting author

4:00 X16 **243.08** Mapping single neuron projections and input-output circuitry of the ventral hippocampus. M. M. GERGUES*; K. HAN; B. BROWN; K. CLAUSING; H. CHOI; V. S. TURNER; M. KHEIRBEK. *Univ. of California San Francisco, Univ. of California San Francisco, Univ. of California San Francisco.*

1:00 X17 **243.09** Encoding of innate and learned stimuli in the ventral hippocampus. J. BIANE*; M. A. LADOW; F. STEFANINI; S. P. BODDU; D. L. APODACA-MONTANO; A. FAN; N. I. WOODS; S. CHIEN; M. KHEIRBEK. *UC San Francisco, Columbia Univ.*

2:00 X18 **243.10** Visualizing the basolateral amygdala engram. E. E. KRAMER*; P. E. STEADMAN; A. D. JACOB; A. PARK; P. W. FRANKLAND; S. A. JOSSELYN. *Hosp. for Sick Children.*

3:00 X19 **243.11** Whole brain mapping of networks engaged during encoding and retrieval of contextual fear memory. C. A. COELHO*; S. A. JOSSELYN; P. W. FRANKLAND. *The Hosp. For Sick Children (sickkids), Univ. of Toronto, Univ. of toronto, Univ. of toronto, Canadian Inst. for Advanced Res. (CIFAR), Univ. of toronto, Canadian Inst. for Advanced Res. (CIFAR).*

4:00 X20 **243.12** Computational evidence for the role of neurogenesis in memory generalization. L. M. TRAN*; A. SANTORO; S. A. JOSSELYN; B. A. RICHARDS; P. W. FRANKLAND. *The Hosp. For Sick Children, Google DeepMind, Hosp. For Sick Children, Univ. of Toronto Scarborough, Hosp. For Sick Children.*

1:00 X21 **243.13** Imaging neuronal allocation to an episodic-like memory in the rodent hippocampus. A. J. MOCLE*; A. I. RAMSARAN; B. A. RICHARDS; P. W. FRANKLAND; S. A. JOSSELYN. *Univ. of Toronto, The Hosp. for Sick Children, Univ. of Toronto Scarborough, Hosp. for Sick Children, Hosp. for Sick Children.*

2:00 X22 **243.14** Neurogenesis impairs fear expression and alters CA1 population dynamics during memory recall. A. I. RAMSARAN*; A. J. MOCLE; L. M. TRAN; A. D. JACOB; J. C. JIMENEZ; M. KHEIRBEK; S. A. JOSSELYN; P. W. FRANKLAND. *The Hosp. for Sick Children, Univ. of Toronto, Univ. of Toronto, Columbia Univ., Univ. of California, San Francisco, Hosp. for Sick Children, Hosp. for Sick Children.*

3:00 X23 **243.15** Potentiated synapses are included into memory engram through a two-step mechanism. Y. JEONG*; H. CHO; M. KIM; J. OH; M. KANG; M. YOO; H. LEE; J. HAN. *Korea Advanced Inst. of Sci. and Technol. (KAIST).*

4:00 X24 **243.16** Inactivation of old engram cells during memory update by retraining. H. CHO*; H. LEE; J. HAN; Y. LEE; J. HAN. *KAIST.*

1:00 X25 **243.17** Nmda receptor is required for systems consolidation and sequential printing of fear memory engrams. M. T. HASAN*; I. BERTOCCHI; G. K. DOGBEVIA; F. ROCHA-ALMEIDA; M. TREVINO VILLEGAS; P. BOTTA; P. MELE; J. WEISLOGEL; E. TUNKL; M. ROβMANITH; D. ARCOS-DIAZ; M. CAMBIAGHI; A. CARRETERO-GUILLEN; M. E. LARKUM; A. GRUART; H. BADING; R. SPRENGEL; V. GRINEVICH; J. M. DELGADO-GARCIA. *Achucarro Basque Ctr. For Neurosci., Max Planck Inst. for Med. Res., Ikerbasque - Basque Fndn. for Sci., Neurocure, Charite-Universitatsmedizin, Neurosci. Inst. Cavalieri-Ottolenghi (NICO) - Univ. of Turin, Univ. Pablo de Olavide, Univ. de Guadalajara, Friedrich Miescher Inst. for Biomed. Res., Columbia Univ., IZN at the Univ. of Heidelberg, Univ. di Torino, Humboldt Univ. of Berlin, German Cancer Res. Ctr.*

2:00 X26 **243.18** Connectivity of engram cells during fear memory consolidation. L. DIXSAUT*; J. GRAFF. *Brain and Mind Institute, EPFL.*

3:00 X27 **243.19** Odor discrimination training enhances intracortical synaptic connectivity to stabilize neural ensemble representations in piriform cortex. M. CANTO-BUSTOS*; C. BASSI; S. F. MEHAN; K. FRIASON; A. M. OSWALD. *Univ. of Pittsburgh.*

4:00 X28 **243.20** ● Two parallel ensembles within a distributed neocortical circuit encode essential information for an advanced cognitive task, visual shape discrimination learning. A. I. GELLER*; A. NAGAYACH; M. GHAFARI; Y. ZHAO; G. S. COLLINS; A. SINGH. *LSUHSC.*

1:00 X29 **243.21** Intracellular dynamics of CA3 pyramidal cells supporting sparse coding during theta and large irregular activity. C. MULLE*; A. KEES; M. MALÉZIEUX. *Interdisciplinary Inst. For Neurosci.*

POSTER

244. Hippocampus and Cognition

Theme H – Cognition

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 X30 **244.01** Generalisation of temporal memory in rodents. S. SHRIDHAR*; V. P. SINGH; S. KUNDU; R. SHARMA; B. JAYAPRAKASH. *Indian Inst. of Science, Bengaluru, Indian Inst. for Sci., Indian Inst. for Sci., Indian Inst. of Sci. Malleshwaram Bangalore.*

2:00 X31 **244.02** Differential effects of energy dense diets on object recognition memory in young adult male and female Long Evans rats. S. L. NEESE*; V. SUKOLOWSKY; P. ORT; J. RHOADES. *Cornell Col.*

3:00 X32 **244.03** Encoding of elapsed time in the order of minutes by the hippocampus and striatum. Y. SHIKANO*; Y. IKEGAYA; T. SASAKI. *Keio Univ., Univ. of Tokyo.*

4:00 X33 **244.04** Dopamine in the ventral hippocampus signals novelty. J. TITULAER; C. BJORKHOLM; K. FELTMANN; B. SCHILSTROM; A. K. KONRADSSON-GEUKEN*. *Uppsala Univ., Karolinska Institutet.*

1:00 X34 **244.05** Effects of theta phase specific modulation of engram neurons in mice hippocampus on memory recall. B. RAHSEPAR*; K. GHAEMI; J. NOUEIHED; B. LAHNER; M. H. QUICK; S. RAMIREZ; J. A. WHITE. *Boston Univ., Boston Univ.*

2:00 X35 **244.06** Structure, neuronal content, and functional significance of hippocampal astrocytic domains. A. DORON*; R. REFAELI; A. BENMELECH-CHOVAV; T. KREISEL; I. GOSHEN. *Hebrew Univ.*

3:00 X36 **244.07** ▲ Does spatial memory require hippocampus during orienting behavior? N. P. SIDELL*; E. L. NEWMAN; K. BLANKENBERGER. *Indiana Univ., Indiana Univ. Bloomington, Indiana Univ.*

4:00 X37 **244.08** Hippocampal circuit mechanisms encoding experience as abstract, ordered, and transferable chunks. C. SUN*; W. YANG; J. MARTIN; S. TONEGAWA. *MIT, NYU, MIT.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 X38 **244.09** Mnemonic and spatial representations in primate retrosplenial cortex. N. A. KAMBI*; J. M. PHILLIPS; M. J. REDINBAUGH; S. MOHANTA; B. WANG; S. CHANNABASAPPA KENCHAPPA; Y. B. SAALMANN. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin, Madison, Univ. of Wisconsin, American Family Insurance, Univ. of Wisconsin - Madison.*

2:00 X39 **244.10** Vector maps of flow is sensitive in determining the centre of intended search, uncertainty surrounding the search and the absolute error associated with the spatial memory in water maze. M. PRABOD KUMAR*; D. MEHROTRA; N. NRUTHYATHI; B. JAYAPRAKASH. *Indian Inst. of Sci., Indian Inst. of Sci. Malleshwaram Bangalore.*

3:00 X40 **244.11** Optogenetic suppression of the medial septum impaired choice accuracy on a working memory dependent conditional discrimination task. Z. M. GEMZIK*; A. L. GRIFFIN. *Univ. of Delaware.*

4:00 X41 **244.12** ▲ Raccoon brains by the numbers: Insights on problem-solving competency. S. BENSON-AMRAM; M. KENT; S. DANIELS; J. H. DRAKE*; R. FANELLI; A. T. GILBERT; S. R. JOHNSON; A. LAI; A. MILLER; N. NATALE; S. HERCULANO-HOUZEL; K. LAMBERT. *Univ. of Wyoming, Univ. of Richmond, USDA/APHIS Natl. Wildlife Res. Ctr., Vanderbilt Univ.*

1:00 X42 **244.13** Exploring the role of ventral hilar mossy cells in social and aggressive behaviors. C. WILSON; S. LOWREY; M. E. JOFFE; P. CONN; M. PICCIOTTO; A. S. LEWIS*. *Vanderbilt Univ., Vanderbilt Univ. Med. Ctr., Vanderbilt Univ., Yale Sch. of Med.*

POSTER

245. Time Perception

Theme H – Cognition

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 X43 **245.01** Temporal scaling of neural trajectories in secondary motor cortex during a differential anticipatory timing task. S. ZHOU*; D. V. BUONOMANO; S. C. MASMANIDIS. *Univ. of California, Los Angeles, UCLA, UCLA.*

2:00 X44 **245.02** Scalable representation of elapsed time with hippocampal cell assembly. A. SHIMBO*; E. IZAWA; S. FUJISAWA. *RIKEN Brain Sci. Inst., Keio Univ.*

3:00 X45 **245.03** Coordination of hippocampal phase precession is compromised in a maternal immune activation model of schizophrenia risk, providing a novel mechanism for disorganized temporal processing in schizophrenia. L. J. SPEERS*; K. R. CHEYNE; E. CAVANI; R. SCHMIDT; D. K. BILKEY. *Otago Univ., Max Planck Inst. for Biol. Cybernetics, Univ. of Sheffield.*

4:00 X46 **245.04** Temporal expectations of methamphetamine vapor delivery. J. MORGAN-AGRICOLI; M. S. MATELL*. *Villanova Univ.*

1:00 Y1 **245.05** The generation of time in the hippocampal memory system. E. T. ROLLS*; P. MILLS. *Oxford Ctr. for Computat. Neurosci.*

2:00 Y2 **245.06** Encoding of time and space magnitudes in the frontal lobe of the Rhesus monkey. G. MENDOZA*; J. C. MENDEZ; H. MERCHANT. *Inst. de Neurobiologia UNAM Juriquilla, McGovern Inst. For Brain Res.*

3:00 Y3 **245.07** Decoding the tapping tempo from simultaneously recorded cell populations in the primate medial premotor cortex during beat entrainment to auditory or visual metronomes. A. BETANCOURT-VERA*; J. A. GAMEZ; G. MENDOZA; H. MERCHANT. *Inst. de Neurobiologia UNAM, Campus Juriquilla.*

4:00 Y4 **245.08** Effect of atomoxetine on interval timing with appetitive distracters. A. R. MATTHEWS*; B. S. BEERS; M. BUHUSI; C. V. BUHUSI. *Utah State Univ., Utah State Univ.*

1:00 Y5 **245.09** How does the brain associate events that do not co-occur? S. BHATTACHARJEE*; K. ANANTHAMURTHY; D. SINGH; U. S. BHALLA. *Natl. Ctr. for Biol. Sci.*

2:00 Y6 **245.10** ▲ Hippocampus lesions impair time discrimination in rats. N. S. TABRIZI*; G. MARSHALL; A. MCLAGAN; L. LEIJA; M. SABARIEGO; J. B. HALES. *Univ. of San Diego, Mount Holyoke Col.*

3:00 Y7 **245.11** ▲ Modeling interval timing with recurrent neural nets. T. RAPHAN*; E. DOROKHIN; A. DELAMATER. *Brooklyn Col. of CUNY, Brooklyn Col. of CUNY.*

4:00 Y8 **245.12** Behavioral and neural mechanisms of long-interval timing. B. AKDOGAN*; K. R. LIGHT; B. K. GERSTEN; B. COTTEN; E. H. SIMPSON; P. D. BALSAM. *Columbia Univ., Barnard Col., New York State Psychiatric Inst.*

1:00 Y9 **245.13** Time discrimination in the macaque: Contrasting striatal to hippocampal activity. F. ROLANDO; J. DUHAMEL; V. DOYERE; S. C. WIRTH*. *Inst. des Sci. Cognitives, CNRS-UMR 9197 Neuro-Psi.*

2:00 Y10 **245.14** Thalamofrontal circuits in timing behavior. B. J. DE CORTE*; K. HESLIN; H. E. HALVERSON; K. L. PARKER. *Univ. of Iowa, Univ. of Iowa, Univ. of Iowa, Univ. of Iowa.*

3:00 Y11 **245.15** Population overlap in neural of duration selectivity determines the scalar property of temporal processing in the primate frontal lobe and the basal ganglia. O. PÉREZ*; H. MERCHANT. *Inst. de Neurobiologia, UNAM, Inst. de Neurobiologia UNAM.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

246. Cognitive Aging I

Theme H – Cognition

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 Y12 **246.01** Relation of daily activity patterns to cortical gray matter maps in the healthy oldest old: Findings from the McKnight Brain Aging Registry. D. A. RAICHLEN; P. K. BHARADWAJ; M. K. FRANCHETTI; S. A. SIMS; R. F. REZAEI; S. S. MERRITT; C. J. JESSUP; E. C. PORGES; D. GELDMACHER; G. A. HISHAW; N. ALPERIN; T. P. TROUARD; V. G. WADLEY; B. E. LEVIN; A. J. WOODS; T. RUNDEK; K. M. VISSCHER; R. A. COHEN; G. E. ALEXANDER*. *Univ. of Arizona Evelyn F. McKnight Brain Inst., Univ. of Arizona and Evelyn F. McKnight Brain Inst., Univ. of Alabama At Birmingham, Univ. of Florida and Evelyn F. and William L. McKnight Brain Inst., Univ. of Florida and Evelyn F. and William L. McKnight Brain Inst., Univ. of Miami Miller Sch. of Med. and Evelyn F. McKnight Brain Inst., Univ. of Alabama At Birmingham, Univ. of Arizona Evelyn F. McKnight Brain Inst., Univ. of Miami Miller Sch. of Med. and Evelyn F. McKnight Brain Inst., Univ. of Arizona Evelyn F. McKnight Brain Inst., Univ. of Miami Miller Sch. of Med. and Evelyn F. McKnight Brain Inst., Univ. of Arizona and Evelyn F. McKnight Brain Inst.*

2:00 Y13 **246.02** Functional connectivity in the healthy oldest old: Findings from the McKnight brain aging registry. K. M. VISSCHER*; P. STEWART; S. A. SIMS; P. K. BHARADWAJ; M. FRANCHETTI; R. F. REZAEI; S. MERRITT; C. JESSUP; D. A. RAICHLEN; E. C. PORGES; D. GELDMACHER; G. A. HISHAW; T. P. TROUARD; N. ALPERIN; V. G. WADLEY; B. E. LEVIN; A. J. WOODS; T. RUNDEK; R. A. COHEN; G. E. ALEXANDER. *Univ. of Alabama, Birmingham, Univ. of Alabama, Birmingham, Univ. of Alabama At Birmingham, Univ. of Arizona, Univ. of Arizona, Univ. of Florida, Univ. of Miami, Univ. of Arizona, Univ. of Arizona, Univ. of Florida, Univ. of Alabama, Birmingham.*

3:00 Y14 **246.03** The effect of low-intensity eccentric exercise on motor learning and emotional processing in aging: A preliminary study. L. RAJESHKUMAR*; C. B. MAANIKA; J. J. DUROCHER; S. J. ELMER; K. M. TREWARTHA. *Michigan Technological Univ., Central Michigan Univ., Michigan Technological Univ., Michigan Technological Univ.*

4:00 Y15 **246.04** Age related decreases in cortical GABA concentrations assessed over the lifespan abate in cognitively intact adults over 85 years of age. E. C. PORGES*; G. JENSEN; P. K. BHARADWAJ; M. FRANCHETTI; S. A. SIMS; R. REZAEI; M. FORBES; S. MERRITT; C. JESSUP; D. A. RAICHLEN; D. GELDMACHER; G. HISHAW; N. ALPERIN; T. TROUARD; V. WADLEY; B. LEVIN; A. J. WOODS; T. RUNDEK; K. M. VISSCHER; R. COHEN; G. E. ALEXANDER; B. FOSTER; N. PUTS. *Univ. of Florida, Columbia Univ., Univ. of Arizona, Univ. of Alabama at Birmingham, Univ. of Miami Miller Sch. of Med., Univ. of Arizona, Univ. of Alabama at Birmingham Sch. of Med., Univ. of Arizona, Univ. of Miami Miller Sch. of Med., Univ. of Arizona, Univ. of Alabama at Birmingham Sch. of Med., Univ. of Alabama, Birmingham, Univ. of Arizona, Johns Hopkins Univ. Sch. of Med.*

1:00 Y16 **246.05** A new approach to studying age differences in white matter using a multimodal symmetric voxel-wise fusion of three MRI data types. A. MENDEZ COLMENARES*; H. WANG; V. CALHOUN; E. MCAULEY; A. F. KRAMER; A. BURZYNSKA. *Colorado State Univ., Colorado State Univ., The Mind Res. Network, Georgia State Univ., Univ. of Illinois at Urbana-Champaign, Northeastern Univ., Colorado State Univ.*

2:00 Y17 **246.06** Differences in motor inhibition of aging musicians and non-musicians. E. L. STEGEMOLLER*; P. IZBICKI; A. F. ZAMAN. *Iowa State Univ., Iowa State Univ., Iowa State Univ. Dept. of Kinesiology.*

3:00 Y18 **246.07** Differences in cognitive inhibition of aging musicians and non-musicians. P. IZBICKI*; K. RUMEL; E. STEGEMOLLER. *Iowa State Univ.*

4:00 Y19 **246.08** ▲ The effect of music listening on cognitive inhibition. A. MEYER*; C. ELKIN; E. GETTES; E. GUSTAFSON; M. NORMAN; P. IZBICKI; E. STEGEMOLLER. *Iowa State Univ.*

1:00 Y20 **246.09** Altered cholesterol homeostasis in the aging CNS- A contributor to age-related CNS functional decline. E. T. CRESSWELL*; M. J. CUMMINS; D. W. SMITH. *Univ. of Newcastle.*

2:00 Y21 **246.10** Hemodynamic activity while driving and conducting secondary tasks in younger and older adults. R. STOJAN*; C. VOELCKER-REHAGE. *Chemnitz Univ. of Technol.*

3:00 Y22 **246.11** Role of thalamus in reorganisation of cortical hubs with aging. M. DAS*; A. BANERJEE; D. ROY. *Natl. Brain Res. Ctr.*

4:00 Y23 **246.12** Cross-sectional and longitudinal assessment of cognitive function in healthy women. S. DOLAN*; L. JAMES; A. P. GEORGOPOULOS. *Minneapolis VA Hlth. Care Syst., Univ. of Minnesota/Minneapolis VAHCS, Univ. Minnesota.*

1:00 Y24 **246.13** ABCA7 genotype moderates the effects of aerobic fitness and exercise on hippocampus-related cognitive function in healthy older African Americans. C. BERG*; N. SINHA; M. A. GLUCK. *New York Univ., Rutgers Univ., Rutgers Univ.*

2:00 Y25 **246.14** Analysis of neuropsychological performance of healthy older adults practicing aerobic exercise vs. theater. Á. F. VILLALVA-SÁNCHEZ*; H. SALGADO-CEBALLOS; J. BERNAL; M. RODRIGUEZ-CAMACHO. *UNAM, Med. Res. Unit Neurol Disease, CMN Siglo XXI, IMSS.*

1:00 DP13/Y26 **246.15** (Dynamic Poster) Gaze driven video games for cognitive training in older adults. L. CHUKOSKIE*; S. HACKER; T. L. SIMMONS; A. ENGLER; L. HILL; J. TOWNSEND. *UC San Diego, UC San Diego, UC San Diego.*

4:00 Y27 **246.16** Posterior cingulate cortical thickness distinguishes SuperAgers from other cognitively normal individuals in the oldest-old. E. N. DOMINGUEZ*; M. M. CORRADA; C. KAWAS; S. M. STARK; C. E. STARK. *UC Irvine, Univ. of California, Irvine, Univ. of California Irvine.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 Y28 **246.17** Age related neural-vascular uncoupling impairs modulation of neural resources in response to variations in cognitive demand. Y. ZHAO*; D. H. ABDELKARIM; M. P. TURNER; K. WEST; J. HUTCHISON; D. SIVAKOLUNDU; G. BATCHALLI MARUTHY; B. P. THOMAS; H. LU; B. P. RYPMA. *Univ. of Texas at Dallas, Univ. of Texas at Dallas, Univ. of Texas at Dallas, Univ. of Texas at Dallas, Univ. of Texas at Dallas, Univ. of Texas Southwestern Med. Ctr., Johns Hopkins Univ., Univ. of Texas at Dallas.*

2:00 Y29 **246.18** The relationship of EEG parameters during rest with mild cognitive impairment in adults 80 years and older. S. FROEHLICH*; C. VOELCKER-REHAGE; K. MUELLER; D. F. KUTZ. *Chemnitz Univ. of Technol.*

3:00 Y30 **246.19** Cognitive reserve and neuropsychological performance in healthy aging. M. A. GÓMEZ LÓPEZ*; Y. DEL RÍO-PORTILLA; T. FERNANDEZ-HARMONY. *UNAM, UNAM, UNAM.*

4:00 Y31 **246.20** Age-related differences in the principal gradient of macroscale cortical organization. M. GIRN*; A. J. LOWE; A. LOCKROW; R. SETTON; L. MWILAMBWE-TSHILOBO; D. S. MARGULIES; B. BERNHARDT; G. R. TURNER; N. SPRENG. *McGill Univ. (MNI), McGill Univ., Ctr. Natl. de la Recherche Scientifique (CNRS), York Univ., McGill Univ.*

1:00 Y32 **246.21** Regional variation in neurovascular coupling changes: Effects of age and task demand. M. P. TURNER*; Y. ZHAO; D. H. ABDELKARIM; K. WEST; J. HUTCHISON; B. P. THOMAS; H. LU; B. P. RYPMA. *Univ. of Texas at Dallas, Univ. of Texas at Dallas, Univ. of Texas at Dallas, Univ. of Texas Southwestern Med. Ctr., Johns Hopkins Univ., Univ. of Texas at Dallas.*

2:00 Y33 **246.22** Playing the video game Minecraft improves hippocampal memory in middle-aged adults. G. D. CLEMENSON*; C. E. STARK. *Univ. of California Irvine.*

3:00 Y34 **246.23** ▲ Neural dysfunction and alexithymia interact to contribute to subjective cognitive complaints in cognitively intact older adults. S. A. EVANS; E. R. PAITEL; K. A. NIELSON*. *Marquette Univ.*

4:00 Y35 **246.24** ● Conjoint estimation of age-related changes in cognitive and perceptual phenomena. K. L. HEISEY*; K. XIE; J. E. PEELLE; D. L. BARBOUR. *Washington Univ. Sch. of Med., Washington Univ., Washington Univ. in St. Louis.*

1:00 Y36 **246.25** Rann specific functional connectivity in younger and older adults. G. ARGIRIS; Y. STERN*; C. HABECK. *Cognitive Neurosience Division, Columbia Univ., Columbia Univ.*

2:00 Y37 **246.26** Infant malnutrition predicts brain changes associated with accelerated aging in middle-aged Barbadian adults. A. G. RABINOWITZ; M. JAHANSHAHI; J. BOSCH-BAYARD; L. GALAN-GARCIA; A. CALZADO-REYES; T. DE LOS A VIRUES ALBA; M. BRINGAS VEGA; P. VALDES-SOSA; J. R. GALLER*. *Montreal Neurolog. Institute, McGill Univ., Univ. Col. London, Cuban Neurosciences Ctr., Cuban Neurosciences Ctr., Cuban Neurosciences Ctr., Univ. of Electronic Sci. and Technol. of China, Harvard Med. Sch.*

3:00 Y38 **246.27** Age and sex-related differences in default mode network in healthy middle-aged adults. J. K. BLUJUS*; L. E. KORTHAUER; I. DRISCOLL. *Univ. of Wisconsin-Milwaukee, Alpert Med. Sch. of Brown Univ.*

4:00 Y39 **246.28** Optimization of lobular electric field distribution in cerebellar transcranial direct current stimulation (ctDCS) for age groups of 18-89 years. Z. REZAEE*; A. DUTTA. *State Univ. of New York At Buffalo.*

POSTER

247. Cognitive Aging Disorders in Humans

Theme H – Cognition

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 Y40 **247.01** Cognitive and motor aspects of cancer-related fatigue. L. R. FENG*; J. REGAN; L. SALIGAN. *NIH.*

2:00 Y41 **247.02** Detection of tauopathy by measurement of phosphorylated tau protein in cerebrospinal fluid for elderly major psychiatric patients. M. TAKEBAYASHI*; K. ITAGAKI; W. OMORI; N. KAJITANI; M. OKADA-TSUCHIOKA; H. ABE; A. MACHINO. *Kumamoto Univ., Kure Med. Ctr., Hiroshima Citizens Hosp.*

3:00 Y42 **247.03** Relationship between anxiety and cognition in patients with mental illness. K. TAKAI*; M. YAMAMOTO; T. SHIOIRI. *Gifu Univ. Grad. Sch. of Med.*

4:00 Y43 **247.04** ▲ Prolonged cognitive deficits in young adults with a history of a concussion from high school. A. CAFFEY; M. DALECKI*. *Louisiana State Univ.*

1:00 Y44 **247.05** A novel kit for early diagnosis of Alzheimer's disease using a fluorescent nanoparticle imaging. J. PARK*; S. KIM; S. KIM; M. JO; M. CHOI; M. KIM. *Gyeongsang Natl. Univ., Seoul Natl. Univ. Bundang Hosp., Res. and Develop. Center, Phytos Inc.*

2:00 Z1 **247.06** Longitudinal trajectories of conversational ability in Alzheimer's disease and behavioral variant frontotemporal dementia. M. L. HEALEY*; M. GROSSMAN. *Univ. of Pennsylvania.*

3:00 Z2 **247.07** Evaluation of cognitive function using neural network analysis before and after revascularization surgery for internal carotid artery stenosis. M. KOHTA*; Y. FUJIMOTO; A. FUJITA; E. KOHMURA. *Kobe Univ. Grad. Sch. of Med.*

4:00 Z3 **247.08** Modification of functional connectivity as an early mechanism of impairment in spatial memory in patients with cognitive impairment. I. PLAZA-ROSALES*; S. MADARIAGA; M. BEHRENS; A. PAULA-LIMA; P. E. MALDONADO. *Univ. of Chile. Fac. of Med., Biomed. Neurosci. Inst., Univ. of Chile. Fac. of Med., Univ. of Chile. Fac. of Med., Ctr. de Investigación Clínica Avanzada, Univ. of Chile. Fac. of Dent.*

1:00 Z4 **247.09** Frontal volume and function predict physical exercise efficacy in healthy elderly people: The Mihama-Kiho scan project. K. TABEI*; M. SATOH; J. OGAWA; T. TOKITA; N. NAKAGUCHI; K. NAKAO; H. KIDA; H. TOMIMOTO. *Advanced Inst. of Industrial Technology, Tokyo Metropolitan Univ., Mie Univ., YAMAHA Music Fndn., Mihama Town Hall, Kiho Town Hall, Kinan Hosp., Shiokawa Hospital, (current) Iryohojinshadan Shokenkai, Mie Univ.*

2:00 Z5 **247.10** White matter integrity and cognitive outcomes in hemodialysis patients. W. T. RICHERSON*; D. F. WOLFGRAM; B. D. SCHMIT. *Marquette Univ. and Med. Col. of Wisconsin, Med. Col. of Wisconsin.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 Z6 **247.11** The association between adult human neurogenesis, cognition and Alzheimer's disease. A. M. DISOUKY*; M. K. TOBIN; K. MUSARACA; A. SHETTI; A. BHERI; W. G. HONER; N. KIM; R. J. DAWE; D. A. BENNETT; K. ARFANAKIS; O. LAZAROV. *Univ. of Illinois at Chicago, Ctr. for Complex Disorders, BCMHARI, Rush Univ.*

4:00 Z7 **247.12** Altered cortical thickness and curvature of the prefrontal lobe after home-based cognitive training. A. HATTORI*; M. KURAMOCHI; Y. MOTOI; Y. SHIMO; K. KAMAGATA; S. AOKI. *Juntendo Univ. Sch. Med., Tokyo Metropolitan Univ. Grad. Sch. of Human Hlth. Sci., Juntendo Univ. Sch. Med., Juntendo Univ.*

1:00 Z8 **247.13** Pre-probe EEG microstates of visual Sternberg task: A biomarker of cognitive dysfunction in primary open angle glaucoma. R. SAMANCHI*; S. MUTHUKRISHNAN; T. DADA; R. SIHOTA; S. KAUR; N. MEHTA; R. SHARMA. *All India Inst. of Med. Sci., All India Inst. of Med. Sci.*

2:00 Z9 **247.14** ● Eye tracking-based cognitive assessment as a screening tool for the early detection of cognitive impairment. A. OYAMA*; S. TAKEDA; Y. ITO; T. NAKAJIMA; Y. TAKAMI; Y. TAKEYA; K. SUGIMOTO; K. YAMAMOTO; H. RAKUGI; R. MORISHITA. *Osaka Univ. Sch. of Med., Osaka Univ. Sch. of Med., Grad. Sch. of Medicine, Osaka Univ., Osaka Univ. Sch. of Med., Grad. Sch. of Medicine, Osaka Univ.*

3:00 Z10 **247.15** Can current cognitive and functional assessments for Alzheimer's disease diagnosis be optimized? A data analytics approach. N. MCCOMBE*; X. DING; G. PRASAD; S. TODD; D. P. FINN; P. L. MCLEAN; K. WONG-LIN. *Univ. of Ulster, Western Hlth. and Social Care Trust, Natl. Univ. of Ireland, Univ. of Ulster.*

4:00 Z11 **247.16** Cognitive dysfunction and sex differences in Parkinson's disease. T. H. REEKES*; C. R. LEDBETTER; E. A. DISBROW. *Louisiana State Univ. Hlth. Sci. Ctr., Louisiana State Univ. Hlth. Sci. Ctr., Louisiana State Univ. Hlth. Sci. Ctr.*

1:00 Z12 **247.17** Alzheimer's disease research participation in underserved minorities. N. GLASSY; C. ARNOLD; T. DAVIS; E. DISBROW*. *LSUHSC, LSUHSC.*

2:00 Z13 **247.18** Measuring age-related changes in locus coeruleus intensity and its relationship to cognitive aging. E. RILEY*; S. STEINBERG; L. CHEN; K. M. SWALLOW; E. D. DE ROSA; A. K. ANDERSON. *Cornell Univ., Cornell Univ.*

3:00 Z14 **247.19** Mild and severe cognitive impairment by MoCA test in older adults of a Mexico population is related with their education level. A. CÁRDENAS-PÉREZ; E. DOMÍNGUEZ-GÓMEZ; R. SALAS-CORONADO; N. SANTOS-SÁNCHEZ; B. HERNÁNDEZ-CARLOS; M. MERAZ-RÍOS; K. LIRA-DE LEON*. *Univ. Autonoma De Queretaro-Fac Quimica, Univ. Tecnológica de la Mixteca, CINVESTAV-IPN.*

4:00 Z15 **247.20** ERP changes linked to spatial attentional losses in aging and early Alzheimer's. C. T. LOCKWOOD*; C. J. DUFFY. *Univ. of Rochester, Penn State Hlth.*

1:00 Z16 **247.21** Tract specific white matter reductions in amnestic mild cognitive impairment. E. GOZDAS*; H. FINGERHUT; L. CHROMIK; H. HOSSEINI. *Stanford Univ.*

2:00 Z17 **247.22** ● A smRNA-seq study using post-mortem brain tissue samples in patients with Alzheimer's disease compared to cognitively normal control subjects. D. CAI; Q. S. LI*. *Janssen R&D LLC.*

3:00 Z18 **247.23** Evaluating bold variability as a function of age and as a potential biomarker of Alzheimer's disease. P. R. MILLAR*; D. A. BALOTA; S. E. PETERSEN; B. M. ANCES; B. A. GORDON; S. E. SCHINDLER; A. M. FAGAN; T. L. S. BENZINGER; J. C. MORRIS. *Washington Univ. In St. Louis.*

4:00 Z19 **247.24** ● Effects of computerized cognitive training on cognition and resting state brain networks in older adults. J. D. WARING*; S. E. WILLIAMS; A. POGARCIC; E. J. LENZE. *St. Louis Univ., Washington Univ. in St Louis Sch. of Med.*

1:00 Z20 **247.25** ● Impact of CSF Ab1-42 on functional brain network dynamics and cognitive intraindividual variability in older adults. K. L. MEEKER*; B. M. ANCES; B. A. GORDON; A. M. FAGAN; D. A. BALOTA; T. L. BENZINGER; J. C. MORRIS; J. D. WARING. *St. Louis Univ., Washington Univ.*

2:00 Z21 **247.26** ● Aging and working memory training: Testing the compensation related utilization of neural circuits hypothesis (CRUNCH). A. D. IORDAN*; K. A. COOKE; K. D. MOORED; B. KATZ; M. BUSCHKUEHL; S. M. JAEGGI; T. A. POLK; S. J. PELTIER; J. JONIDES; P. A. REUTER-LORENZ. *Univ. of Michigan, Johns Hopkins Univ., Virginia Tech., MIND Res. Inst., Univ. of California.*

3:00 Z22 **247.27** ● Functional connectivity in autosomal dominant Alzheimer's disease (ADAD) versus late onset Alzheimer's disease (LOAD). J. F. STRAIN*; A. TANENBAUM; A. ASCHENBRENNER; B. GORDON; J. HASSENSTAB; J. MORRIS; T. BENZINGER; R. BATEMAN; B. ANCES. *Washington Univ., Washington Univ. Sch. of Med.*

4:00 Z23 **247.28** Correlation between hippocampal cornu ammonis 1 thickness and default mode network connectivity at rest in non-demented older adults. J. ZHOU*; M. A. TUBI; D. KOTHAPALLI; N. HAZRA; S. I. THOMOPOULOS; M. D. SWEENEY; X. HUI; L. S. SCHNEIDER; E. B. JOE; J. M. RINGMAN; H. N. YASSINE; M. G. HARRINGTON; B. V. ZLOKOVIC; A. W. TOGA; H. C. CHUI; M. N. BRASKIE. *Imaging Genet. Center, Mark and Mary Stevens Neuroimaging and Informatics Institute, Keck Sch. of Med. of the Univ. of Southern California, Zilkha Neurogenetic Institute, Keck Sch. of Medicine, Univ. of Southern California, Dept. of Neurology, Keck Sch. of Medicine, Univ. of Southern California, Dept. of Psychiatry and the Behavioral Sciences, Keck Sch. of Medicine, Univ. of Southern California, Dept. of Medicine, Keck Sch. of Medicine, Univ. of Southern California, Huntington Med. Res. Inst., Dept. of Physiol. and Neuroscience, Keck Sch. of Medicine, Univ. of Southern California, Lab. of Neuro Imaging, Stevens Neuroimaging and Informatics Institute, Keck Sch. of Medicine, Univ. of Southern California.*

1:00 Z24 **247.29** Intra-individual variability of event-related potential amplitude suggests decreased neural efficiency in cognitively intact human carriers of the apolipoprotein-E ε4 allele. E. R. PAITEL*; S. A. EVANS; K. A. NIELSON. *Marquette Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

248. Human: Timing and Temporal Processing

Theme H – Cognition

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 Z25 **248.01** ▲ Characterization of the power spectrum of the EEG in basal condition, simple learning processes and their correlation with attention and memory. Y. M. SERRATO*; H. BRUST*. *Univ. Nacional Autonoma De Mexico, Inst. Nacional de Rehabilitación.*

2:00 Z26 **248.02** Internal clock in Parkinsonism - Is it slow or fast and does it correlate with the clinical stage? Y. TERAO*; T. MIYAZAKI; M. HONMA; S. TOKUSHIGE; S. INOMATA-TERADA; A. UCHIBORI; Y. ICHIKAWA; A. CHIBA; Y. UGAWA; M. SUZUKI. *Kyorin Univ., Kyorin Univ., Showa Univ., Fukushima Med. Univ., Jikei Univ.*

3:00 Z27 **248.03** Mechanisms of temporal perceptual learning through ^{1}H-magnetic resonance spectroscopy. R. XU*; E. G. WALSH; T. WATANABE; Y. SASAKI. *Brown Univ., Brown Univ., Brown Univ., Brown Univ.*

4:00 Z28 **248.04** Post-interval evoked potentials in temporal information processing. E. ÖZOĞLU*; R. THOMASCHKE. *Albert-Ludwigs Univ. of Freiburg.*

1:00 Z29 **248.05** Accuracy and precision of stimulus timing and reaction times with Unreal Engine and SteamVR. M. WIESING*; G. R. FINK; R. WEIDNER. *Res. Ctr. Jülich, Res. Ctr. Jülich, Dept. of Neurology, Univ. Hosp. Cologne, Cologne Univ., Res. Ctr. Juelich, Dept. of Psychology, Univ. of Cologne, Cologne Univ.*

2:00 Z30 **248.06** Musical expertise generalizes to superior temporal scaling in a Morse code tapping task. M. SLAYTON*; J. L. ROMERO-SOSA; K. S. SHORE; D. V. BUONOMANO; I. VISKONTAS. *San Francisco Conservatory of Music, UCLA, UCLA, Univ. of San Francisco.*

3:00 Z31 **248.07** Dissociation of sensory from motor related signals for rhythm perception in the primate striatum and deep cerebellar nuclei. M. KAMEDA*; M. TANAKA. *Hokkaido Univ., Hokkaido Univ. Sch. Med.*

4:00 Z32 **248.08** Structural neuroanatomy of temporal experience in dementia. M. REQUENA-KOMURO*; C. R. MARSHALL; R. L. BOND; L. L. RUSSELL; C. GREAVES; K. M. MOORE; E. BENHAMOU; H. SIVASATHIASEELAN; J. L. AGUSTUS; C. J. D. HARDY; J. D. ROHRER; J. D. WARREN. *Univ. Col. London.*

1:00 Z33 **248.09** Spatiotemporal dynamics of the processing of lexical information in word recognition revealed by intracerebral potentials. Y. LIU*; G. SHI; M. LI; Y. GUAN; Z. HAN. *Beijing Normal Univ., Beijing Language and Culture Univ., Sanbo Brain Hospital, Capital Med. Univ.*

2:00 Z34 **248.10** Temporal circuit of macroscale dynamic brain activity supports human consciousness. Z. HUANG*; J. ZHANG; A. G. HUDETZ. *Univ. of Michigan, Fudan Univ.*

3:00 Z35 **248.11** Distinct roles of alpha- and beta-band oscillations in temporal anticipation for perception or action in different modalities. A. BRESKA*; K. T. DUBERG; R. IVRY. *Univ. of California, Berkeley, Stanford Sch. of Med., Univ. California.*

4:00 Z36 **248.12** Effects of order on episodic memory of event times. M. NAIM*; M. KATKOV; M. V. TSODYKS. *Weizmann Inst. of Sci.*

1:00 Z37 **248.13** The human brain tracks probability of temporal deviance in regular auditory patterns. M. D. FOLDAL; A. O. BLENKMANN; A. LLORENS; T. ENDESTAD; A. SOLBAKK. *Dept. of Psychology, Univ. of Oslo, Helen Wills Neurosci. Institute, UC Berkeley, Dept. of Neuropsychology, Helgeland Hosp., Dept. of Neurosurgery, Oslo Univ. Hosp.*

2:00 Z38 **248.14** Subjective time estimation in humans relates to endogenous neural oscillations and geometry. E. M. MILLON*; A. E. HADDAD; L. NAJAFIZADEH; T. J. SHORS. *Rutgers Univ., Rutgers Univ., Rutgers Univ.*

3:00 Z39 **248.15** An action-based predictive processing model of episodic memory explains time perception in the past, present and future. Z. FOUNTAS*; A. SYLAIDI; K. NIKIFOROU; W. ROSEBOOM; A. SETH; M. SHANAHAN. *Univ. Col. London, Imperial Col. London, Univ. of Sussex.*

4:00 Z40 **248.16** ▲ The timing of music appraisal judgments. S. SPIVACK*; A. POINCOT; S. E. MCCLELLAND; D. TOSSAVAINEN; L. E. CRANMER; G. IENNER; P. WALLISCH. *New York Univ., New York Univ.*

1:00 Z41 **248.17** High-order brain network dynamics support cognitive processing. L. L. OWEN*; J. R. MANNING. *Dartmouth Col.*

2:00 Z42 **248.18** Cognitive refractory state caused by spontaneous epileptic high frequency oscillations in the human brain. S. LIU*; J. PARVIZI. *Stanford Univ.*

3:00 AA1 **248.19** Prior asynchrony causes a positive aftereffect on tactile synchrony judgement. K. WIDJAJA*; K. SAITO; K. KANNAGA; D. YOSHIOKA; Y. ITAGUCHI; M. MIYAZAKI. *Shizuoka Univ., Shizuoka Univ., Shizuoka Univ.*

4:00 AA2 **248.20** Linear vector models of time perception accurately and specifically simulate temporal distortions associated with stimulus novelty and saccades. A. H. GHADERI*; J. D. CRAWFORD. *York Univ., York Univ., York Univ., York Univ., York Univ.*

1:00 AA3 **248.21** Temporal and spatial ensemble statistics are formed by distinct mechanisms. H. XU*; H. YING; E. BURNS; A. M. CHOO. *Nanyang Technological Univ., Soochow Univ., Univ. of Richmond.*

POSTER

249. Human Social Cognition: Behavior, Mechanisms, and Disorders II

Theme H – Cognition

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 AA4 **249.01** Cortical functionality in homosexual and heterosexual men in response to visual sexual stimuli. C. AMEZCUA*; D. LOZANO-MARTÍNEZ; M. HERNÁNDEZ-GONZÁLEZ; E. HERNÁNDEZ-ARTEAGA; M. GUEVARA. *Univ. De Guadalajara.*

2:00 AA5 **249.02** Information flow among brain networks in depressive states by using transfer entropy and phase synchronization with human EEG. M. KAWASAKI*; K. AIBA; E. MIYAUCHI. *Univ. of Tsukuba.*

3:00 AA6 **249.03** Cellular representations of human theory of mind. M. JAMALI*; B. GRANNAN; R. BÁEZ-MENDOZA; Z. WILLIAMS. *Massachusetts Gen. Hospital/Harvard Med. Sch.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 AA7 **249.04** Neural mechanisms of shared social attention revealed by independent measures of eye movement typicality. M. RAMOT*; C. WALSH; G. E. REIMANN; A. MARTIN. *NIH/NIMH.*

1:00 AA8 **249.05** Response to perceived fairness is associated with reduced connectivity within reward circuitry in older adults. K. HACKETT*; N. M. HENNINGER; V. KELLY; T. GIOVANNETTI; D. S. FARERI; D. V. SMITH. *Temple Univ., Temple Univ., Adelphi Univ.*

2:00 AA9 **249.06** The effect of action contingency on social perception are prolonged after interaction with others. Y. HAMAMOTO*; Y. TAKAHARA; K. KAWATA; T. KIKUCHI; S. SUZUKI; R. KAWASHIMA; M. SUGIURA. *Tohoku Univ., IDAC, Tohoku Univ., Tohoku Univ., Intl. Res. Inst. of Disaster Science, Tohoku Univ.*

3:00 AA10 **249.07** A systematic review of sex difference in human neonatal social orientation. L. KARSON; H. MINHAS; J. DAVIES; M. DHESI; J. PATEL; L. S. ELIOT*. *Rosalind Franklin Univ., Rosalind Franklin Univ. of Med. & Sci.*

4:00 AA11 **249.08** Social processing in autism spectrum disorders using a machine learning approach to visual stimulus segmentation. G. E. REIMANN*; M. RAMOT; C. WALSH; P. MCCLURE; F. PEREIRA; A. MARTIN. *Natl. Inst. of Mental Hlth., Natl. Inst. of Mental Hlth.*

1:00 AA12 **249.09** Being in a social majority enhances decision confidence and activates frontostriatal neuroarchitecture. J. FUJIWARA*; P. N. TOBLER; S. EIFUKU. *Dept Sys Neurosci, Fukushima Med. Univ., Univ. of Zurich.*

2:00 AA13 **249.10** Habituation in subjects with and without suicide attempt. O. H. HERNANDEZ*; F. I. SANTOS-GALLEGOS. *Univ. Autonoma de Campeche, Hosp. Gen. de Especialidades JBO.*

3:00 AA14 **249.11** Familial and lifetime history of depression: Alterations in the neural circuitry underlying reward and social cognition. L. J. TEPFER*; L. B. ALLOY; D. V. SMITH. *Temple Univ., Temple Univ.*

4:00 AA15 **249.12** Is socioeconomic status associated with different neural pathways to cognitive control? C. N. CASCIO*; M. J. FARAH; G. M. LAWSON; E. B. FALK. *Univ. of Wisconsin Madison, Univ. Pennsylvania, Univ. of Pennsylvania.*

1:00 AA16 **249.13** Transcranial alternating current stimulation aimed at the inferior frontal gyrus affects face perception and working memory but not self perception in healthy humans. T. A. BLESS; N. M. R. GOODMAN; P. MULVANY; J. L. CRAMER; J. HONG*; B. HARO; S. SCHUGAR; F. SINGH; J. A. PINEDA. *UCSD, Brown Univ.*

2:00 AA17 **249.14** Impulsivity and risk behaviors correlated in adolescence. A. R. WILLHELM*; A. S. PEREIRA; R. M. DE ALMEIDA. *Univ. Federal Do Rio Grande Do Sul, Univ. Federal do Rio Grande do Sul, UFRGS.*

3:00 AA18 **249.15** Specific neural correlates integrate flow and social experience. M. H. SHEHATA*; M. CHENG; D. WU; C. TSENG; S. NAKAUCHI; S. SHIMOJO. *Caltech, Toyohashi Univ. of Technol., The Univ. of Hong Kong, NTT Communication Sci. Labs., Tohoku Univ.*

4:00 AA19 **249.16** Dorsal anterior cingulate cortex activation linked with executive and attentional functioning in bipolar disorder. K. SRETAVAN WONG*; T. CHOU; A. TESTO; K. K. ELLARD; D. DOUGHERTY; T. DECKERSBACH. *Massachusetts Gen. Hosp.*

1:00 AA20 **249.17** Political moralization enhances ERPs to social information and decreases social conformity. K. J. YODER*; J. DECETY. *Univ. of Chicago.*

2:00 AA21 **249.18** Patients with damage to the amygdala report increased authoritarianism and religious fundamentalism. E. W. ASP*; L. KHAN; D. TRANEL. *Univ. of Iowa, Hamline Univ., Univ. Iowa.*

3:00 AA22 **249.19** Single-neuron, sEEG and fMRI recordings in human epilepsy patients during movie watching: An alternate window on neural selectivity. J. DUBOIS*; J. M. TYSZKA; C. M. REED; J. M. CHUNG; R. ADOLPHS; A. N. MAMELAK; U. RUTISHAUSER. *Cedars-Sinai Med. Ctr., Caltech, Cedars-Sinai Med. Ctr.*

4:00 AA23 **249.20** ● Effects of social cognitive training on the neural system of theory of mind in healthy adults. V. G. PATRON ROMERO*; C. I. HOOKER; K. M. HAUT; D. DODELL-FEDER; E. GUTY; M. NAHUM. *Rush Univ. Med. Ctr., Rush Univ. Med. Ctr., Rush Univ. Med. Ctr., Univ. of Rochester, Penn State Univ., mornah@ekmd.huji.ac.il.*

1:00 AA24 **249.21** The effect of a brain training session on attention and consistency of optimal response on implicit bias. A. N. CAYCE; W. O. NEESE; P. EBO; K. A. MAGAÑA; J. P. ABARA*. *California State Univ. Northridge.*

2:00 AA25 **249.22** An association of subjective experience on planning and visual thoughts with resting-state EEG dynamic. G. PORTNOVA; K. LIAUKOVICH; V. MOISEEVA*; O. MARTYNOVA. *Inst. of Higher Nervous Activity and Neurophysiol. of RAS, The Pushkin State Russian Language Inst., Higher Sch. of Econ., Inst. of Higher Nervous Activity and Neurophysiol. of RA.*

POSTER

250. Transcriptomic and Genomic Analyses

Theme I – Techniques

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 AA26 **250.01** Tumour necrosis factor-alpha (TNF-α) gene polymorphisms and risk of intracerebral hemorrhage in North Indian population: A hospital based study. R. SAGAR*; A. KUMAR; A. K. YADAV; D. PATHAK; A. MISHRA; D. RAWAT; D. DASH; A. K. SRIVASTAVA; S. VIVEKANANDHAN; G. GUPTA; K. PRASAD. *All India Inst. of Med. Sciences, New Delhi, All India Inst. of Med. Sciences, New Delhi, All India Inst. of Med. Sciences, New Delhi, Dept. of Biotechnology, Ministry of Sci. & Technology, Govt. of India.*

2:00 AA27 **250.02** Comparison of human plasma microRNA expression analysis techniques in paediatric epilepsy patients: RNASeq versus nanostring. N. ENRIGHT*; G. BRENNAN; N. NGYUEN; M. D. KING; D. HENSHALL. *Royal Col. of Surgeons In Ireland, Childrens Univ. Hosp. Temple Street.*

3:00 AA28 **250.03** Characterization of the gene regulatory network of HTT. J. COCHRAN*; B. S. ROBERTS; M. MACKIEWICZ; E. PARTRIDGE; B. A. MOYERS; A. A. HARDIGAN; K. R. DAY; K. NEWBERRY; D. E. MOORE; R. M. MYERS. *Hudsonalpha Inst. For Biotech.*

4:00 AA29 **250.04** Toward an *in vivo* method for cell-type specific, multiplex assays of neuropsychiatric-trait associated transcriptional elements. B. MULVEY*; B. COHEN; J. D. DOUGHERTY. *Washington Univ. In St Louis, Washington Univ. Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 AA30 **250.05** Polygenic contributions to antipsychotic response in schizophrenia spectrum illness. M. R. HAMBORG*; D. P. EISENBERG; B. KOLACHANA; M. D. GREGORY; B. ZOLTICK; J. A. APUD; K. F. BERMAN. *Natl. Inst. of Mental Hlth., Natl. Inst. of Mental Hlth., Natl. Inst. of Mental Hlth., NIMH/NIH, NIH, Natl. Inst. of Mental Hlth., NIH/ National Inst. of Mental Hlth.*

2:00 AA31 **250.06** Integrative DNA methylation and gene expression analysis of prefrontal cortex samples from Mexicans suicides. A. L. ROMERO PIMENTEL*, Sr; S. MONTERO-MUÑOZ; R. MENDOZA-MORALES; M. MORALES. *Inst. Nacional De Medicina Genomica, Inst. Nacional de Medicina Genomica, Inst. de Ciencias Forenses.*

3:00 AA32 **250.07** Gene network alterations in the cerebellum and striatum of mice selectively bred for increased voluntary wheel running behavior. P. ZHANG*; J. S. RHODES; T. GARLAND, Jr.; S. D. PEREZ; B. R. SOUTHEY; S. L. RODRIGUEZ-ZAS. *Univ. of Illinois Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Beckman Inst. for Advanced Sci. and Technol., Univ. of California, Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign.*

4:00 AA33 **250.08** Multiplatform transcriptomic analysis of the primary motor cortex in adult mice. B. TASIC*; Z. YAO; L. GRAYBUCK; T. NGUYEN; K. SMITH; C. VAN VELTHOVEN; N. DEE; D. BERTAGNOLLI; J. GOLDY; O. FONG; B. LEVI; S. SUNKIN; M. HAWRYLYCZ; H. ZENG. *Allen Inst. For Brain Sci.*

1:00 AA34 **250.09** Predicting cell type-specific gene regulatory elements through integrated analysis of single cell transcriptomes and epigenomes in mouse primary motor cortex. K. KOLODZIEJ*; F. XIE; C. VUONG; W. I. DOYLE; E. ARMAND; J. NERY; R. CASTANON; J. LUCERO; C. LUO; S. PREISSL; Z. YAO; B. TASIC; H. ZENG; E. M. CALLAWAY; M. BEHRENS; B. REN; J. R. ECKER; E. A. MUKAMEL. *Univ. of California San Diego, Univ. of California San Diego, Salk Inst. for Biol. Sci., Univ. of California San Diego, Salk Inst. for Biol. Sci., Univ. of California San DIego, Allen Inst. for Brain Sci., Salk Inst. for Biol. Sci.*

2:00 AA35 **250.10** Integrated analysis of human and mouse cortical cell type epigenomes and transcriptomes reveals conserved and divergent neural regulation. F. XIE*; C. LUO; W. I. DOYLE; E. J. ARMAND; J. NERY; R. CASTANON; J. LUCERO; M. BEHRENS; J. R. ECKER; E. A. MUKAMEL. *Univ. of California San Diego, Salk Inst., Univ. of California San Diego, Salk Inst.*

3:00 AA36 **250.11** Towards a multimodal cell type atlas of neurons in primary motor cortex of adult mice using Patch-seq. F. SCALA*; M. BERNABUCCI; D. KOBAK; J. R. CASTRO, JR; Y. BERNAERTS; S. LATURNUS; L. HARTMANIS; C. R. CADWELL; E. MIRANDA; D. RAMSKÖLD; Z. YAO; O. PENN; K. R. TOLIAS; B. TASIC; R. SANDBERG; X. JIANG; H. ZENG; P. BERENS; A. S. TOLIAS. *Baylor Col. of Med., Univ. of Tübingen, Karolinska institute, UCSF, Allen Inst. for Brain Sci., Allen Inst. For Brain Sci., Allen Inst. for Brain Sci.*

4:00 AA37 **250.12** Predicting electrophysiological, morphological, and computational features from single-cell transcriptomics data. S. TRIPATHY*. *Univ. of Toronto.*

1:00 AA38 **250.13** High-resolution transcriptomic cell type atlas reveals shared and distinct signatures across all cortical and hippocampal areas of mouse brain. Z. YAO*; L. T. GRAYBUCK; T. NGUYEN; K. A. SMITH; C. VAN VELTHOVEN; N. DEE; D. BERTAGNOLLI; J. GOLDY; O. FONG; B. P. LEVI; S. M. SUNKIN; M. J. HAWRYLYCZ; B. TASIC; H. ZENG. *Allen Inst. for Brain Sci., Allen Inst. For Brain Sci., Allen Inst. For Brain Sci., Allen Instiute for Brain Sci., Allen institute for Brain Sci., Allen Inst. for Brain Sci., Allen Inst. Brain Sci., Allen Inst. For Brain Sci., Allen Inst. for Brain Sci.*

2:00 AA39 **250.14** Transcriptomic cell types of the mouse thalamus. C. T. J. VAN VELTHOVEN*; Z. YAO; L. T. GRAYBUCK; T. NGUYEN; K. A. SMITH; N. DEE; D. BERTAGNOLLI; J. GOLDY; O. FONG; B. P. LEVI; S. M. SUNKIN; M. HAWRYLYCZ; B. TASIC; H. ZENG. *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., Allen Inst. for Brain Sci.*

3:00 AA40 **250.15** Defining cellular diversity in the caudal region of the hypothalamus through single cell transcriptomic analysis. L. E. MICKELSEN; M. BOLISETTY; P. ROBSON; A. C. JACKSON*. *Univ. of Connecticut, Bristol-Myers Squibb, The Jackson Lab. for Genomic Med.*

4:00 AA41 **250.16** Surveying cellular diversity in the adult human whole brain. K. SILETTI; R. D. HODGE*; T. E. BAKKEN; S. DING; A. YANNY; T. CASPER; N. DEE; D. HIRSCHSTEIN; L. HU; N. JORSTAD; P. LONNERBERG; S. MOK; J. NYHUS; N. SHAPOVALOVA; S. M. SUNKIN; E. LEIN; S. LINNARSSON. *Karolinska Inst., Allen Inst. for Brain Sci.*

1:00 AA42 **250.17** Resolving cellular and molecular diversity along the hippocampal anterior-to-posterior axis in humans. F. AYHAN*; A. KULKARNI; C. DOUGLES; B. C. LEGA; G. KONOPKA. *UT Southwestern Med. Ctr., UT Southwestern Med. Ctr.*

2:00 AA43 **250.18** Nested tree probabilistic graphical models to trace the evolutionary histories and spatial patterns across neural cell types. M. KLEYMAN*; J. HE; B. E. OZTURK; M. WIRTHLIN; L. BYRNE; W. R. STAUFFER; A. R. PFENNING. *Carnegie Mellon Univ., Univ. of Pittsburgh, Univ. of Pittsburgh.*

3:00 AA44 **250.19** A novel state-of-the-art system for the single cell transcriptome analysis based on planar patch clamp. S. ISHIGAKI*; H. UNO; Z. WANG; Y. UKITA; R. BHARDWAJ; P. T. TUE; S. IWABUCHI; S. HASHIMOTO; T. OKA; K. KAWAHARA; Y. TAKAMURA; T. URISU; G. SOBUE. *Nagoya Univ. Grad. Sch. of Med., Nagoya Univ. Inst. of Innovation for Future Society, Dept. of Interdisciplinary Research, Grad. Sch. of Univ. of Yamanashi, Japan Advanced Inst. of Sci. and Technol., Grad Sch. of Med. Sci, Kanazawa Univ., World fusion Inc.*

4:00 BB1 **250.20** Single cell RNAseq in neuronal tissues: Impact of enzymatic dissociation on gene expression. M. K. DREWS*; M. B. CHEN; I. A. MARIN; S. R. QUAKE; C. J. SHATZ. *Stanford Univ., Stanford Univ., Chan Zuckerberg Biohub, Stanford Univ., Stanford Univ., Stanford Univ.*

1:00 BB2 **250.21** Effect of post-mortem interval on ribosome-profiling in mouse frontal cortex. A. D. BROWN*; L. FIORI; J. F. THÉROUX; G. TURECKI. *McGill Univ., Douglas Mental Hlth. Univ. Inst.*

2:00 BB3 **250.22** A novel technique for analyzing brain microvascular endothelial cell DNA methylation in mouse cerebral cortex and hippocampus. D. COLIN-CASTELAN*; S. ZAINA. *Univ. de Guanajuato.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

251. Anatomic Methods: Circuit Tracing

Theme I – Techniques

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 BB4 **251.01** Magnetic resonance imaging of the brain of a diprotodontid marsupial, the quokka (setonix brachyurus). J. THITTAMRANAHALLI KARIYAPPA*; A. BONGERS; K. W.S.ASHWELL. *Univ. of New South Wales.*

2:00 BB5 **251.02** Concomitant top-down innervations from the prefrontal cortex onto functionally connected interneurons and noradrenergic neurons in locus coeruleus. Y. KUO*; M. MIN; C. KUO; J. HSIEH; H. YANG. *Dept. of Life Science, Natl. Taiwan Univ., Dept. of Biomed. Sci. Chung-Shan Med. Univ.*

3:00 BB6 **251.03** The output network of the zone of uncertainty. R. KERY*; L. CHEN; H. LIU; Q. XIONG; S. GE. *Stony Brook Univ., Stony Brook Univ. Sch. of Med.*

4:00 BB7 **251.04** Diffusion tractography at 10.5T in nonhuman primates. M. D. GRIER*; J. ZIMMERMAN; S. MOELLER; G. ADRIANY; R. LAGORE; N. HAREL; E. YACOUB; R. ZHANG; C. LENGLET; K. UGURBIL; S. R. HEILBRONNER. *Univ. of Minnesota Twin Cities, Univ. of Minnesota Twin Cities.*

1:00 BB8 **251.05** A method to measure myeloarchitecture of the murine cerebral cortex *in vivo* by intrinsic third-harmonic generation. M. REDLICH; H. LIM*. *Hunter College, CUNY.*

2:00 BB9 **251.06** Anatomical characterization of estrogen receptor expression in lateral habenula projection neurons in female rats. A. D. CHISHOLM; S. M. CLAYPOOL; P. R. SILVA; J. F. NEUMAIER; S. G. NAIR*. *Univ. of Washington, Univ. of Washington.*

3:00 BB10 **251.07** Quantifying stimulus-based neuronal activity in rat brain using high-resolution photoacoustic imaging. J. I. MATCHYNSKI*; R. MADANGOPAL; V. A. LENNON; R. MANWAR; K. J. KRATKIEWICZ; B. T. HOPE; S. A. PERRINE; A. C. CONTI; M. R. N. AVANAKI. *Wayne State Univ. Sch. of Med., Natl. Inst. On Drug Abuse IRP, Natl. Inst. On Drug Abuse, Wayne State Univ., NIH/NIDA, Wayne State.*

4:00 BB11 **251.08** A novel sparse labeling strategy for brain-wide individual neuron reconstruction. S. JIN*; X. LI; S. TAO; A. LI; F. XU; H. GONG. *Hust-Suzhou Inst. For Brainsmatics, Wuhan Natl. Lab. For Optoelectronics, Wuhan Inst. of Physics and Mathematics.*

1:00 BB12 **251.09** Bricseq bridges brain-wide interregional connectivity to neural activity and gene expression in single animals. L. HUANG*; J. M. KEBSCHULL; D. FURTH; S. MUSALL; M. T. KAUFMAN; A. K. CHURCHLAND; A. M. ZADOR. *Cold Spring Harbor Lab., Univ. of Chicago.*

2:00 BB13 **251.10** ▲ Quantification of nerve endings in mouse colorectum by optical tissue clearing and automatic image processing. S. PATEL*; N. GANESHBABU; T. GUO; M. HAN; B. FENG. *Univ. of Connecticut, Univ. of Connecticut.*

3:00 BB14 **251.11** Neuron assembler: A Vaa3D submodule enables semi-automated neuron tracing with fragment units in real time. H. KUO*; Y. WANG; E. SHEN; A. FEINER; P. LESNAR; H. PENG. *Allen Inst.*

4:00 BB15 **251.12** Automatic large-scale, deep learning-assisted synapse recognition in the central nervous system. L. DELLA SANTINA*; A. K. YU; Y. OU. *Univ. of California, San Francisco.*

1:00 BB16 **251.13** Anterograde transsynaptic AAV techniques for probing neural circuitry. B. ZINGG*; B. PENG; H. TAO; L. ZHANG. *USC.*

2:00 BB17 **251.14** High resolution MRI/DTI and tractography study of the postmortem human basilar pons. C. SKLIROS*; K. W. ASHWELL; A. JOHNSON; E. CALABRESE; M. AGGARWAL; G. PAXINOS. *NeuRA - UNSW, UNSW, Ctr. for In Vivo Microscopy, Russel H. Morgan Dept. of Radiology, Neura - UNSW.*

3:00 BB18 **251.15** Brain-wide quantitation of monosynaptic inputs to subdivisions of the claustral complex. J. S. GRIMSTVEDT*; C. H. BERNDTSSON; S. BLANKVOORT; R. R. NAIR; M. P. WITTER; C. G. KENTROS. *Kavli Inst. Systems Neuroscience, Norw. Univ. Sci. & Tech., MH Fac. Admin., The Kavli Inst. For Systems Neurosci. / CNC.*

4:00 BB19 **251.16** Optimizing techniques to visualize and quantify alcohol-induced changes to myelinated axons of the medial prefrontal cortex. A. SILVA-GOTAY*; K. LUCIER; H. N. RICHARDSON. *Univ. of Massachusetts Amherst, Univ. of Massachusetts Amherst.*

1:00 BB20 **251.17** Anatomical characterization of neuronal cell types of the mouse brain. H. DONG*; G. A. ASCOLI; B. LIM; I. R. WICKERSHAM; H. HINTIRYAN. *Keck Sch. of Med. of USC, George Mason Univ., UCSD, MIT, USC.*

2:00 BB21 **251.18** Unsupervised construction of a data-driven cortical hierarchy in mouse. H. CHOI; K. E. HIROKAWA; J. D. WHITESELL; N. GRADDIS; C. KOCH; H. ZENG; J. A. HARRIS*; S. MIHALAS. *Univ. of Washington, Allen Inst. for Brain Sci.*

1:00 DP14/BB22 **251.19** ● (Dynamic Poster) Crowdsourcing the connectome of the female adult fly brain. T. MACRINA*; C. E. MCKELLAR; K. LEE; S. YU; J. WU; R. LU; N. L. TURNER; B. NEHORAN; S. POPOVYCH; Z. JIA; E. MITCHELL; M. CASTRO; A. HALAGERI; N. KEMNITZ; W. SILVERSMITH; S. DORKENWALD; M. MURTHY; H. SEUNG. *Princeton Univ., MIT, Princeton Univ.*

1:00 DP15/BB23 **251.20** (Dynamic Poster) The Janelia MouseLight Project: A platform for brain-wide reconstructions and molecular characterization of individual neurons in the mouse brain. T. A. FERREIRA*; J. WINNUBST; E. BAS; A. RECKNAGEL; J. DUDMAN; C. GERFEN; A. HANTMAN; W. KORFF; S. MURPHY; N. SPRUSTON; S. STERNSON; K. SVOBODA; J. CHANDRASHEKAR. *HHMI - Janelia Res. Campus.*

1:00 BB24 **251.21** Mouse connectome project (MCP): Towards the construction of the whole brain wiring diagram. H. HINTIRYAN*; M. BIENKOWSKI; N. N. FOSTER; I. BOWMAN; L. GOU; M. BECERRA; M. ZHU; M. Y. SONG; N. L. BENAVIDEZ; L. GAO; K. COTTER; S. YAMASHITA; C. CAO; S. AQUINO; N. KHANJANI; D. LO; D. L. JOHNSON; G. DAN; T. BOESEN; S. USTRELL; M. FAYZULLINA; L. GARCIA; L. KOROBKOVA; S. WANG; H. XU; B. ZHANG; H. DONG. *USC.*

2:00 BB25 **251.22** Cross-species circuit identification of components of the posteromedial cortex. M. E. MONKO*; L. TOKA; P. KANDIKONDA; A. SETHI; S. R. HEILBRONNER. *Univ. of Minnesota.*

3:00 BB26 **251.23** Use of viral tools in the analysis of neuronal circuits in nonhuman primates. A. CUSHNIE*; M. WANG; E. MARRON; M. MONKO; M. GRIER; T. CASTA; S. HEILBRONNER. *Univ. of Minnesota, Univ. of Minnesota.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 BB27 **251.24** Functional annotation of single-neuron whole-brain axonal projections in the cerebral cortex in mice. W. ZHOU*; Y. CAO; J. CHANG; H. GONG. *Britton Chance Ctr. for Biomed. Photonics, Wuhan Natl. Lab. for Optoelectronics-Huazhong Univ. of Sci. and Technol.*

1:00 BB28 **251.25** ▲ Whole brain map of long-range input of different interneurons in CFA. X. LI*; Z. DUAN. *Wuhan Natl. Lab. For Optoelectronics, Huazhong Univ. of Sci. and Technol.*

2:00 BB29 **251.26** NCTracer web application for registration, visualization, and neuron tracing in large-scale light microscopy datasets. S. MOUSAVI KAHAKI*; A. VYAS; C. LIU; R. LI; S. WANG; M. RIEDEWALD; A. B. STEPANYANTS. *Northeastern Univ.*

3:00 BB30 **251.27** Registrar software for spatial and time-lapse registration of light microscopy images. S. MOUSAVI KAHAKI; C. LIU; A. VYAS; S. WANG; R. LI; M. RIEDEWALD; A. B. STEPANYANTS*. *Northeastern Univ.*

POSTER

252. Connectomics Analytics III

Theme I – Techniques

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 BB31 **252.01** Comparison of low-frequency resting-state fMRI and breath-hold metrics of cerebrovascular reactivity. N. J. FESHARAKI*; W. E. HUDDLESTON; J. REUSS; J. PILLAI; E. A. DEYOE. *Med. Col. of Wisconsin, Univ. of Wisconsin-Milwaukee, Univ. of Wisconsin - Milwaukee, Prism Clin. Imaging, Inc., Johns Hopkins Univ. Sch. of Med., Med. Col. of Wisconsin.*

2:00 BB32 **252.02** Distance-based functional criticality of human brain: Intelligence and emotional intelligence correlates. L. JIANG*; K. QIAO; C. LI. *Inst. of Psychology Chinese Acad. of Sci.*

3:00 BB33 **252.03** Group analysis and visualization of intracranial EEG data in RAVE. J. F. MAGNOTTI*; Z. WANG; P. KARAS; M. LI; M. BEAUCHAMP. *Baylor Col. of Med., Rice Univ.*

4:00 BB34 **252.04** Cardiac-related modulation of the extracellular action potential *in vivo* reveals multiple cell classes in the human hippocampus. C. P. MOSHER*; Y. WEI; J. KAMINSKI; A. NANDI; A. N. MAMELAK; C. A. ANASTASSIOU; U. RUTISHAUSER. *Cedars-Sinai Med. Ctr., Allen Inst. for Brain Sci.*

1:00 BB35 **252.05** Dynamic causal network analysis of intracranial EEG during a memory task. J. KOPAL*; J. HLINKA; E. DESPOUY; J. CUROT; M. DENUELLE; L. VALTON; E. J. BARBEAU; J. SOL. *Univ. Toulouse III - Paul Sabatier, Inst. of Computer Sci. of the Czech Acad. of Sci., Univ. of Chem. and Technol., Natl. Inst. of Mental Hlth., Univ. Hosp. Purpan.*

2:00 BB36 **252.06** Revealing hierarchical relationships among cognitive functions as a concept lattice using formal concept analysis. H. KURASHIGE*; Y. YAMASHITA; R. OSU; Y. OTAKA; T. HANAKAWA; M. HONDA; H. KAWABATA. *Tokai Univ., Natl. Ctr. of Neurol. and Psychiatry, Waseda Univ., Shool of Medicine, Fujita Hlth. Univ., Tokyo Bay Rehabil. Hosp., Natl. Ctr. of Neurol. and Psychiatry, Keio Univ.*

3:00 BB37 **252.07** Neuromuscular adaptations associated with muscle fatigue during the 6-minute walk test. M. BIELMANN*; M. BERTRAND-CHARETTE; G. GOURDE; J. ROY; L. J. BOUYER*. *Univ. Laval.*

4:00 BB38 **252.08** ▲ Comparing the effects of pre-stimulus periodic and aperiodic activity on post-stimulus event-related potentials. F. ZHANG*; T. DONOGHUE; B. VOYTEK. *UC San Diego.*

1:00 BB39 **252.09** Classification of working memory contents using estimated cortical currents from EEG data during N-back task. K. MORISHIGE*; Y. GAMANO; H. TAKANO; K. IDO. *Toyama Prefectural Univ., Toyama Prefectural Univ., Toyama Prefectural Univ.*

2:00 BB40 **252.10** Conserved and divergent electrophysiological and morphological properties of mouse and human transcriptomically-defined cell types. A. BUCHIN*; T. CHARTRAND; T. BAKKEN; J. MILLER; R. HODGE; N. GOUWENS; S. GRATIY; B. KALMBACH; B. TASIC; C. LEE; J. LEE; G. MURPHY; H. ZENG; J. TING; S. SORENSEN; J. BERG; E. LEIN; C. A. ANASTASSIOU. *Allen Inst. For Brain Sci., Univ. of Washington, Univ. of British Columbia.*

3:00 BB41 **252.11** Depth- and size-dependent intrinsic membrane properties of human supragranular pyramidal cells: Functional predictions in biophysical models from cross-modality single cell data. T. CHARTRAND*; A. NANDI; A. BUCHIN; C. KOCH; E. S. LEIN; B. E. KALMBACH; C. A. ANASTASSIOU. *Allen Inst. for Brain Sci., Univ. of Washington Sch. of Med., Univ. of Washington, Univ. of British Columbia.*

4:00 BB42 **252.12** Dissociating contributions of periodic and aperiodic neural activity in human visual working memory. Q. VAN ENGEN*; G. CHAU; B. VOYTEK. *Univ. of Amsterdam, UCSD, UC San Diego, Univ. of California San Diego, UCSD, UCSD, UCSD.*

1:00 BB43 **252.13** A content analysis of data analytic reporting practices in cognitive neuroscience journals. A. A. CONLEY*; T. K. LAFFERTY; T. C. HATVANY; J. D. GRIFFITH. *Shippensburg Univ.*

2:00 BB44 **252.14** Intrinsic membrane properties, morphology and transcriptomic profile of a rare human L5-projection neuron type. B. E. KALMBACH*; R. DE FRATES; L. GRAYBUCK; T. DAIGLE; P. CHONG; X. OPITZ-ARAYA; M. WALKER; J. BERG; N. C. DEMBROW; W. SPAIN; G. HORWITZ; C. COBBS; R. ELLENBOGEN; R. GWINN; A. KO; J. G. OJEMANN; D. SILBERGELD; B. TASIC; E. LEIN; J. TING. *Allen Inst. For Brain Sci., Univ. of Washington Dept. of Physiol. and Biophysics, Swedish Neuoscience Inst., Univ. of Washington.*

3:00 BB45 **252.15** The efficacy of the deep learning approach for generalization of the seizure prediction algorithm. S. YAMAMOTO*; T. YANAGISAWA; R. FUKUMA; H. KISHIMA. *Osaka Univ. Grad. Sch. of Med., Osaka Univ., Osaka Univ. Grad. Sch. of Med.*

4:00 BB46 **252.16** Altered within-region local organization in temporal lobe epilepsy based on high-resolution structural connectivity. X. CHEN; Y. WANG; S. KOPETZKY; M. BUTZ-OSTENDORF; P. TAYLOR; M. KAISER*. *Newcastle Univ., China Univ. of Petroleum (East China), Biomax Informatics AG, TUM Sch. of Life Sci., Jiao Tong Univ.*

1:00 BB47 **252.17** *In vivo* cortical circuit characterization in a large-animal model through massively parallel extracellular Neuropixels recordings. Y. WEI*; D. J. DENMAN; I. KIM; V. KREMEN; S. CHANG; H. J. JO; C. KOCH; G. A. WORRELL; C. ANASTASSIOU. *Allen Inst. for Brain Sci., Mayo Clin.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 BB48 **252.18** Disentangling motor inhibition and attentional detection in rIFC lesion patients with Bayesian hierarchical approach. Y. CHOO*; D. MATZKE; M. BOWREN; D. TRANEL; J. R. WESSEL. *Univ. of Iowa, Univ. of Amsterdam, Univ. of Iowa Hosp. and Clinics.*

3:00 BB49 **252.19** The Oscillatory ReConstruction Algorithm (ORCA) adaptively detects and quantifies neural oscillations aross species. A. WATROUS*; R. J. BUCHANAN. *Univ. of Texas at Austin, Seton Brain and Spine Inst.*

4:00 BB50 **252.20** Neuromorphic algorithms enhance medical database analysis. P. L. FOLLETT*; G. D. KARPMAN; D. R. FOLLETT; P. J. HENDRICKSON. *Lewis Rhodes Labs.*

1:00 BB51 **252.21** Assessing the structure-function relationship in the human brain: A control-theoretic perspective. B. CHIÊM*; F. CREVECOEUR; J. DELVENNE. *Univ. Catholique de Louvain, Univ. Catholique de Louvain.*

2:00 BB52 **252.22** How to spend less time on data management and more on the science: Open tools for efficient data organization, reproducible workflows, and collaboration. A. KOUTSOU; M. SONNTAG; J. VANEK; C. GARBERS; C. J. KELLNER; J. GREWE; T. WACHTLER*. *Ludwig-Maximilians-Universität München, Eberhard-Karls-Universität Tübingen.*

3:00 BB53 **252.23** Fully automated parcellation of the primary auditory cortex. K. BYEON*; B. PARK; H. S. LEE; S. KIM; H. PARK. *Sungkyunkwan Univ., Inst. for Basic Sci., Max Planck Inst. For Empirical Aesthetics, Sungkyunkwan Univ., Sungkyunkwan Univ.*

4:00 BB54 **252.24** Parcellation of the belt area in the human auditory cortex using multi-modal magnetic resonance imaging. H. S. LEE*; B. PARK; K. BYEON; H. PARK; D. POEPPEL. *Max Planck Inst. For Empirical Aesthetics, Sungkyunkwan Univ., SKKU, Max-Planck-Institute For Empirical Aesthetics.*

1:00 BB55 **252.25** Silence localization: First validation on real data. A. CHAMANZAR*; M. BEHRMANN; P. GROVER. *Carnegie Mellon Univ.*

2:00 BB56 **252.26** Machine learning distinguishes Parkinson's disease from epilepsy on MRI. R. O'DWYER*; B. COZZI; D. GARIBAY; K. OGDEN; J. G. GOLDMAN; T. R. STOUB. *Rush Univ. Med. Ctr., Rush Univ. Med. Ctr., Upstate Med. Center, SUNY, Northwestern Univ., Rush Univ.*

3:00 BB57 **252.27** A statistical/fuzzy metaphor for fMRI/EEG oscillations: are EM-clouds controlled and functionally connected by the thalamus? J. F. G. GOMEZ*. *Intl. Group of Neurosci. (IGN).*

4:00 BB58 **252.28** Dimensionality reduction in systems analysis of a drug vs. complex phenotype relationship: Lithium, BDNF, and neural disease. T. MANGETI GONCALVES; E. JAKOBSSON*. *Washington Univ., Univ. of Illinois At Urbana-Champaign.*

POSTER

253. Optogenetics I

Theme I – Techniques

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 BB59 **253.01** Distinct roles of VTA glutamate, GABA and glutamate-GABA neurons in motivated behavior. D. H. ROOT; D. J. BARKER; D. J. ESTRIN; J. A. MIRANDA-BARRIENTOS; B. LIU; S. ZHANG; F. VAUTIER; C. RAMAKRISHNAN; Y. S. KIM; L. E. FENNO; K. DEISSEROTH; M. F. MORALES*. *NIH, Natl. Inst. on Drug Abuse, NIDA, NIDA/NIH, Natl. Inst. of Health, Natl. Inst. on Drug Abuse, IRP, NIDA/IRP, Stanford Univ., Stanford, Stanford Univ., IRP, NIDA, NIH.*

2:00 BB60 **253.02** Dopamine-glutamate neurons facilitate behavioral switching under circumstances of altered cue-reinforcer contingencies. S. MINGOTE*; S. ZTAOU; A. AMSELLEM; A. KEMPF; S. OH; E. O'LEARY; R. LOGAN; F. WEISEL; Z. FREYBERG; Y. KIM; L. E. FENNO; C. RAMAKRISHNAN; K. DEISSEROTH; S. RAYPORT. *Advance Sci. Res. Ctr., Columbia University/ NYS Psychiatric Inst., Univ. of Pittsburgh, Univ. of Pittsburgh, Stanford Univ.*

3:00 BB61 **253.03** The role of fronto-striatal connectivity in value-based decision-making. F. GORE*; C. RAMAKRISHNAN; R. C. MALENKA; K. DEISSEROTH. *Stanford Univ.*

4:00 BB62 **253.04** Optogenetic stimulation of astrocytes alters synaptic transmission in hippocampal CA1 in an opsin- and stimulation-specific manner. C. D. COURTNEY*; C. SOBIESKI; N. M. WOJNOWSKI; C. RAMAKRISHNAN; R. A. DEFAZIO; K. DEISSEROTH; C. A. CHRISTIAN. *Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Stanford Univ., Univ. of Michigan.*

1:00 BB63 **253.05** A convergent hypothalamus-brainstem circuit for rapid avoidance of homeostatic threats. M. LOVETT-BARRON*; R. CHEN; S. BRADBURY; A. S. ANDALMAN; M. WAGLE; S. GUO; K. DEISSEROTH. *Stanford Univ., Univ. of California San Francisco, Univ. California - San Francisco, Stanford University, HHMI.*

2:00 BB64 **253.06** Minimally-invasive optogenetics in mice and non-human primates with a new high-sensitivity opsin. X. GONG*; D. MENDOZA-HALLIDAY; J. T. TING; T. KAISER; X. SUN; A. BASTOS; R. D. WIMMER; C. WU; B. BARAK; K. DEISSEROTH; E. K. MILLER; M. M. HALASSA; G. BI; R. DESIMONE; G. FENG. *MIT, Univ. of Sci. and Technol. of China, Allen Inst. for Brain Sci., Dept. of Physiol. and Biophysics, Zhejiang Univerisity, Stanford Univ. Dept. of Psychology.*

3:00 BB65 **253.07** INTRSECT 2.0: Enabling viral targeting of multiply-defined populations of neurons. L. E. FENNO*; C. RAMAKRISHNAN; Y. KIM; K. E. EVANS; S. VESUNA; M. INOUE; M. K. LO; K. CHEUNG; N. PICHAMOORTHY; K. DEISSEROTH. *Stanford Univ., Stanford Univ., Harvard Med. Sch.*

4:00 BB66 **253.08** Neuronal dynamics regulating brain and behavioral state transitions. A. S. ANDALMAN*; V. M. BURNS; M. LOVETT-BARRON; M. BROXTON; B. POOLE; S. J. YANG; L. GROSENICK; T. N. LERNER; R. CHEN; T. BENSTER; P. MOURRAIN; M. LEVOY; K. RAJAN; K. DEISSEROTH. *Stanford Univ., Icahn Sch. of Med. at Mount Sinai, Stanford Univ. Dept. of Psychology.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 BB67 **253.09** Genetically-targeted optical control of endogenous G protein-coupled receptors. P. C. DONTHAMSETTI*; N. WINTER; S. LAMMEL; D. TRAUNER; E. ISACOFF. *UC Berkeley, Univ. of Bristol, UC Berkeley, NYU.*

2:00 BB68 **253.10** Blue light induced gene expression alterations in cultured neurons are the result of phototoxic interactions with neuronal culture media. C. G. DUKE*; K. E. SAVELL; R. A. PHILLIPS; J. J. DAY. *Univ. of Alabama at Birmingham.*

3:00 BB69 **253.11** Effects of X-irradiation on neuronal and circuit function. A. F. BARTLEY*; J. A. BARNES; D. N. FRENCH; T. R. TOTSCH; G. M. GRAY; L. L. MCMAHON; L. E. DOBRUNZ. *Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham.*

4:00 BB70 **253.12** Tapered fiber optrode for simultaneous ChR2 activation and electrical recording over small brain volumes. B. SPAGNOLO*; L. SILEO; R. PEIXOTO; M. PISANELLO; F. PISANO; E. MAGLIE; B. L. SABATINI; F. PISANELLO; M. DE VITTORIO. *Inst. Italiano di Tecnologia, Harvard Med. Sch., Dept. di Ingeneria dell'Innovazione, Univ. del Salento, Dept. of Neurobiology, Howard Hughes Med. Institute, Harvard Med. Sch.*

1:00 BB71 **253.13** Wireless, subdermally implantable neuromodulation tools for chronic recording and stimulation in freely moving subjects. A. K. BURTON; J. AUSRA; T. STUART; P. GUTRUF*. *Univ. of Arizona.*

2:00 BB72 **253.14** ▲ A shape-memory and spiral light-emitting device for precise multisite stimulation of nerve bundles. H. ZHENG*; Z. ZHANG; S. JIANG; B. YAN; X. SHI; Y. XIE; X. HUANG; Z. YU; H. LIU; S. WENG; A. V. NURMIKKO; Y. ZHANG; H. PENG; W. XU; J. ZHANG. *State Key Lab. of Med. Neurobiology, Inst. of Brain Science, MOE Frontier Ctr. for Brain Science, Dept. of Hand Surgery, Natl. Clin. Res. Ctr. for Aging and Medicine, Huashan Hospital; Fudan Univ., State Key Lab. of Mol. Engin. of Polymers, Dept. of Macromolecular Science, and Lab. of Advanced Materials; Fudan Univ., Sch. of Engineering, Brown Univ., Brown Univ.*

3:00 BB73 **253.15** Ultrafast and spatially precise evoked and quantified protective pain behaviour. A. SCHORSCHER-PETCU; L. E. BROWNE*. *Univ. Col. London.*

4:00 BB74 **253.16** Noninvasive optogenetics using MRI guided focused ultrasound delivery of radioluminescent nanoparticles. M. C. RICH*; E. ZHANG; M. K. BURDETTE; A. DICKEY; K. E. CANNON; S. H. FOULGER; M. S. BOLDING. *Univ. of Alabama Birmingham, Clemson Univ., Clemson Univ.*

1:00 BB75 **253.17** Neural recording and stimulation technologies for *in vivo* electrophysiology. J. C. MORIZIO*; A. DESHMUKH; V. GO. *Triangle Biosystems Intl., Triangle Biosystems Intl.*

2:00 BB76 **253.18** Adaptive brain machine interface with somatosensory feedback potential component technology developments. F. YOSHIDA*; M. HIRATA. *Saga Univ., Osaka Univ. Clin. Neuroeng.*

3:00 BB77 **253.19** The role of sparse neural subsets in driving choice behavior: An optical microstimulation study. R. PANCHOLI*; S. P. PERON. *New York Univ.*

4:00 BB78 **253.20** High throughput *in vivo* synaptic connectivity mapping with volumetric two-photon optogenetics and Ca^{2+} imaging in zebrafish. D. TANESE; A. ABDELFATTAH; L. LAVIS; E. SCHREITER; V. EMILIANI; M. KOYAMA*. *Inst. de la Vision, HHMI Janelia Res. Campus.*

POSTER

254. Novel Approaches in Neuromodulation I

Theme I – Techniques

Sun. 1:00 PM – *McCormick Place, Hall A*

1:00 BB79 **254.01** Advancing translational chemogenetics with positron emission tomography. M. A. BOEHM*; H. JEDEMA; J. BONAVENTURA; J. GOMEZ; E. STEIN; M. MICHAELIDES; C. BRADBERRY. *Natl. Inst. on Drug Abuse, Brown Univ.*

2:00 BB80 **254.02** Signalings signature of DREADDs: Are they completely biased receptors? É. BESSERER-OFFROY*; J. LONGPRÉ; T. E. HÉBERT; P. SARRET. *McGill Univ., Univ. de Sherbrooke, Inst. de Pharmacologie de Sherbrooke.*

3:00 BB81 **254.03** Decoding the functional role of the ventral tegmental area-olfactory tubercle dopamine circuit via integration of electrochemical and chemogenetic techniques. R. BHIMANI*; C. E. BASS; J. PARK. *Univ. at Buffalo, Univ. at Buffalo SUNY.*

4:00 BB82 **254.04** The effect of chronic systemic administration of the DREADD agonists clozapine-N-oxide (CNO) and Compound 21 (C21) on mouse behavior. F. H. TRAN*; K. J. ANH; S. YUN; A. J. EISCH. *Children's Hosp. of Philadelphia, Univ. of Pennsylvania.*

1:00 BB83 **254.05** Peripheral nerve injury decreases spontaneous and evoked neural activity in the somatosensory cortex. V. KRISHNAN*; G. PELLED. *Michigan State Univ., Michigan State Univ., Michigan State Univ.*

2:00 BB84 **254.06** Non-invasive, magnetogenetics stimulation of rat primary visual cortex. A. FARNUM*; G. PELLED. *Michigan State Univ., Michigan State Univ., Michigan State Univ.*

3:00 BB85 **254.07** Putative role of the cannabinoid receptor and G protein in electromagnetic perceptive gene (EPG) mediated calcium activation evoked by magnetic field in mammalian cells. S. XU*; Z. M. KRANZ; X. ZHANG; S. MITRA; G. PELLED; A. A. GILAD. *Michigan State Univ., Michigan State Univ., Michigan State Univ., Michigan State Univ.*

4:00 CC1 **254.08** ▲ Behavioral response to magnetic fields in glass catfish has implications on neuromodulation technology. R. HUNT*; G. SALDANA DE JIMENEZ; A. GILAD; G. PELLED. *Michigan State Univ., Michigan State Univ., Michigan State Univ.*

1:00 CC2 **254.09** Developing hardware platforms for magnetogenetics in cells and systems. R. ASHBAUGH*; A. EFREMOV; L. UDPA; A. GILAD; G. PELLED. *Michigan State Univ., Michigan State Univ., Michigan State Univ., Michigan State Univ.*

2:00 CC3 **254.10** Electromagnetic perceptive gene (EPG) expression in the hippocampus reduces seizure activity in a kainic acid rat model of acute epilepsy. A. METTO; R. ASHBAUGH; G. PELLED. *Michigan State Univ., Michigan State Univ., Michigan State Univ., Michigan State Univ.*

3:00 CC4 **254.11** Non-invasive neuromodulation using tms and magnetogenetics alleviate pain associated with peripheral nerve injury in rats. C. CYWIAK*; A. METTO; M. ZHONG; G. PELLED. *Michigan State Univ., Michigan State Univ., Michigan State Univ.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 CC5 **254.12** A novel model-informed TMS protocol to mimic the circuit effects of endogenous beta activity. D. D. SLIVA*; R. JAYARAM; J. OSTROWSKI; I. PENG; S. R. JONES. *Brown Univ., Brown Univ.*

1:00 CC6 **254.13** Motor cortex excitability is not reliably modulated by transcranial static magnetic field stimulation. T. KAMMER*; B. ALEX; S. LORENZ. *Dept. of Psychiatry, Univ. of Ulm.*

2:00 CC7 **254.14** Dynamic modulation of excitation and inhibition equilibrium by high frequency repetitive transcranial magnetic stimulation in the early visual cortex. S. N. LIN*; Y. LIEN; C. LIN; L. CHANG. *Natl. Yang Ming Univ.*

3:00 CC8 **254.15** The effect of high-frequency rTMS on inhibitory neural circuit interactions in the motor cortex. N. M. DRUMMOND*; W. HOEFSLOOT; C. GUNRAJ; R. CHEN. *Krembil Res. Institute, Univ. Hlth. Network, Toronto Western Hosp., Radboud Univ. Nijmegen Med. Ctr.*

4:00 CC9 **254.16** Modulation of decision-making behavior by deep brain focused ultrasound stimulation in nonhuman primates. F. A. MUNOZ*; A. MEANEY; K. LIU; A. GROSS; A. POULIOPOULOS; E. KONOFAGOU; V. P. FERRERA. *Columbia Univ., Columbia Univ., Columbia Univ., Columbia Univ.*

1:00 CC10 **254.17** Ovine model assessment of sonication parameters on transcranial focused ultrasound-mediated neuromodulation. K. YOON; W. LEE; J. LEE; L. XU; S. YOO*. *Harvard Med. Sch., Harvard Med. Sch.*

2:00 CC11 **254.18** Focused ultrasound transiently increases membrane conductance in isolated crayfish axon. J. LIN*; F. YU; W. S. MÜLLER; G. EHNHOLM; Y. OKADA. *Boston Univ., Boston Children's Hosp. and Harvard Med. Sch., Aalto Univ.*

3:00 CC12 **254.19** Noninvasive spinal cord stimulation by low-intensity ultrasound. E. KIM; J. KUM; H. KIM*. *Korea Inst. of Sci. and Technol., Univ. of Sci. and Technology, KIST Sch.*

4:00 CC13 **254.20** Ultrasound suppression of seizures in 4-aminopyridine model of epilepsy. B. ELAHIAN*; C. SMITH; P. O'BRIEN; R. ARAVALLI; D. DARROW; E. EBBINI; T. NETOFF. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota.*

• Indicated a real or perceived conflict of interest, see page 139 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

Conflict of Interest Statements

The following presenters, signified by a dot (•) in the program, indicated a real or perceived conflict of interest. Presenters listed without a dot in the program had no financial relationships to disclose.

PRESENTATION NUMBER	STATEMENT
097	**C.E. Pedraza:** A. Employment/Salary (full or part-time); Sanofi MS Research.
097.02	**C.E. Pedraza:** A. Employment/Salary (full or part-time); Sanofi MS Research.
105.09	**E.R. Bongarzone:** F. Consulting Fees (e.g., advisory boards); Consultant for Lysosomal Therapeutics Inc. (Boston, MS), Consultant for Bio-Scape (San Francisco, CA).
105.12	**S.P. Braithwaite:** A. Employment/Salary (full or part-time); Alkahest. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Alkahest. **B. Szoke:** A. Employment/Salary (full or part-time); Alkahest. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Alkahest. **S. Lohr:** A. Employment/Salary (full or part-time); Alkahest. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Alkahest. **J. Hannestad:** A. Employment/Salary (full or part-time); Alkahest. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Alkahest. **S. Minami:** A. Employment/Salary (full or part-time); Alkahest. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Alkahest. **V. Kheifets:** A. Employment/Salary (full or part-time); Alkahest. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Alkahest.
106.05	**C.E. Leyns:** A. Employment/Salary (full or part-time); Merck. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); WO 2016126993 A1. **H. Jiang:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); WO 2016126993 A1. **D.M. Holtzman:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); WO 2016126993 A1. F. Consulting Fees (e.g., advisory boards); AbbVie, Proclara, Denali, Genentech, Eli Lilly. Other; C2N Diagnostics.
106.10	**L.G. Coleman:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; EMD Serono. **F.T. Crews:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; EMD Serono.
106.11	**M. Sebastian-Valverde:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; P50 AT008661-01 from the NCCIH and the ODS. **G.M. Pasinetti:** A. Employment/Salary (full or part-time); James J Peters VA Medical Center. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; P50 AT008661-01 from the NCCIH and the ODS.
106.12	**C.J. Wheeler:** A. Employment/Salary (full or part-time); Chief Scientific Officer, T-Neuro Pharma, Inc.. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Research program support, T-Neuro Pharma, Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stock ownership, T-Neuro Pharma, Inc., Patent authorship, assigned to Cedars-Sinai Med Ctr. **P.P. De Deyn:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Contracted Research collaborator, T-Neuro Pharma, Inc. **K.A. Trujillo:** A. Employment/Salary (full or part-time); Chief Executive Officer, T-Neuro Pharma, Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stock ownership, T-Neuro Pharma, Inc..
110.02	**H. Yamada:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Council for Addiction Behavior Studies, This is for examining gambling behavior.
111.01	**J.D. Townsend:** A. Employment/Salary (full or part-time); Advanced MRI Technologies. **A. Beckett:** A. Employment/Salary (full or part-time); Advanced MRI Technologies. **D. Feinberg:** A. Employment/Salary (full or part-time); Advanced MRI Technologies. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Advanced MRI Technologies.
112.02	**M. Didriksen:** A. Employment/Salary (full or part-time); Lundbeck. **A.J. Schwarz:** A. Employment/Salary (full or part-time); Takeda.
112.06	**N. Jahanshad:** Other; NJ is MPI of a research related grant from Biogen, Inc for work unrelated to the contents of this manuscript. **P. Thompson:** Other; PT is MPI of a research related grant from Biogen, Inc for work unrelated to the contents of this manuscript..
114.06	**K.D. Micheva:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aratome LLC.
116.16	**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. **V.S. Sohal:** F. Consulting Fees (e.g., advisory boards); Emphatic Therapeutics.
117.08	**S.F. Lempka:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Presidio Medical, Inc.. F. Consulting Fees (e.g., advisory boards); Presidio Medical, Inc..
118.01	**S.F. Traynelis:** A. Employment/Salary (full or part-time); Emory University. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; consultant for Janssen Pharmaceuticals Inc., is PI on a research grants from Janssen and from Allergan, member of the SAB for Sage Therapeutics, is co-founder of NeurOp Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); receives royalties for software, and is a co-inventors on Emory-owned Intellectual Property that includes allosteric modulators of NMDA receptor function..

PRESENTATION NUMBER	STATEMENT
118.02	**S.F. Traynelis:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Is PI on a research grants from Janssen and from Allergan to Emory University School of Medicine.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); is co-founder of NeurOp Inc, receives royalties for software, and is a co-inventors on Emory-owned Intellectual Property that includes allosteric modulators of NMDA receptor function.. F. Consulting Fees (e.g., advisory boards); is a consultant for Janssen Pharmaceuticals Inc., is a member of the SAB for Sage Therapeutics..
118.03	**S.F. Traynelis:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Is PI on a research grants from Janssen and from Allergan to Emory University School of Medicine.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); is co-founder of NeurOp Inc, receives royalties for software, and is a co-inventors on Emory-owned Intellectual Property that includes allosteric modulators of NMDA receptor function.. F. Consulting Fees (e.g., advisory boards); is a consultant for Janssen Pharmaceuticals Inc., is a member of the SAB for Sage Therapeutics..
118.04	**S.F. Traynelis:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Is PI on a research grants from Janssen and from Allergan to Emory University School of Medicine.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); is co-founder of NeurOp Inc, receives royalties for software, and is a co-inventors on Emory-owned Intellectual Property that includes allosteric modulators of NMDA receptor function.. F. Consulting Fees (e.g., advisory boards); is a consultant for Janssen Pharmaceuticals Inc., is a member of the SAB for Sage Therapeutics..
118.05	**S.F. Traynelis:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; PI on a research grants from Janssen and from Allergan to Emory University School of Medicine,. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); is co-founder of NeurOp Inc, receives royalties for software, and is a co-inventors on Emory-owned Intellectual Property that includes allosteric modulators of NMDA receptor function.. F. Consulting Fees (e.g., advisory boards); is a consultant for Janssen Pharmaceuticals Inc., is a member of the SAB for Sage Therapeutics.
118.06	**S.F. Traynelis:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Is PI on a research grants from Janssen and from Allergan to Emory University School of Medicine.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); is co-founder of NeurOp Inc, receives royalties for software, and is a co-inventors on Emory-owned Intellectual Property that includes allosteric modulators of NMDA receptor function.. F. Consulting Fees (e.g., advisory boards); is a consultant for Janssen Pharmaceuticals Inc., is a member of the SAB for Sage Therapeutics..
118.08	**A. Marklew:** A. Employment/Salary (full or part-time); Charles River. **J. Kammonen:** A. Employment/Salary (full or part-time); Charles River. **E. Richardson:** A. Employment/Salary (full or part-time); Charles River. **V. Lazari:** A. Employment/Salary (full or part-time); Charles River Labs. **J. Mann:** A. Employment/Salary (full or part-time); Charles River.
118.15	**M.E. Schmidt:** A. Employment/Salary (full or part-time); Aptinyx Inc. **S.U. Sahu:** A. Employment/Salary (full or part-time); Northwestern University. **R.A. Kroes:** A. Employment/Salary (full or part-time); Aptinyx Inc.. Other; Northwestern University. **M. Blaagjerg:** A. Employment/Salary (full or part-time); Odense University Hospital. **T. Bhattacharya:** A. Employment/Salary (full or part-time); Aptinyx Inc. **J.R. Moskal:** A. Employment/Salary (full or part-time); Aptinyx Inc..
119.13	**A. Willuweit:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Priavoid GmbH. **D. Willbold:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Priavoid GmbH.
119.14	**S.D. Meriney:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); patent holder.
120.19	**K. Baker:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Thermo, Illumina.
121.11	**A. Staudt:** A. Employment/Salary (full or part-time); Saarland University.
123.05	**V. Navarro:** F. Consulting Fees (e.g., advisory boards); UCB, EISAI, Liva Nova.
123.17	**G.A. Worrell:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Financial interest related to technologies licensed to Cadence Neuroscience Inc., Financial interest related to technologies licensed to NeuroOne Inc..
123.26	**C.R. Butson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); IntellectMedical. F. Consulting Fees (e.g., advisory boards); NeuroPace, IntellectMedical, Advanced Bionics, Abbott, Boston Scientific, Functional Neuromodulation.
123.28	**G. Ruffini:** A. Employment/Salary (full or part-time); Neuroelectrics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neuroelectrics.
124.02	**K. Ogawa:** A. Employment/Salary (full or part-time); SHIONOGI & CO., LTD. **D. Nakatsuka:** A. Employment/Salary (full or part-time); SHIONOGI & CO., LTD. **T. Izumi:** A. Employment/Salary (full or part-time); SHIONOGI & CO., LTD. **T. Tsukamoto:** A. Employment/Salary (full or part-time); SHIONOGI & CO., LTD. **M. Oyama:** A. Employment/Salary (full or part-time); SHIONOGI & CO., LTD. **K. Niidome:** A. Employment/Salary (full or part-time); SHIONOGI & CO., LTD. **H. Yamakawa:** A. Employment/Salary (full or part-time); SHIONOGI & CO., LTD. **H. Ito:** A. Employment/Salary (full or part-time); SHIONOGI & CO., LTD..
125.04	**C. Green:** A. Employment/Salary (full or part-time); MPI for Metabolism Research, Cologne, Germany. **A. Sydow:** A. Employment/Salary (full or part-time); German Ctr. For Neurodegenerative Dis. (DZNE). **S. Vogel:** A. Employment/Salary (full or part-time); MPI for Metabolism Research, Cologne, Germany. **M. Anglada-Huguet:** A. Employment/Salary (full or part-time); German Ctr. For Neurodegenerative Dis. (DZNE). **D. Wiedermann:** A. Employment/Salary (full or part-time); MPI for Metabolism Research, Cologne, Germany. **M. Hoehn:** A. Employment/Salary (full or part-time); MPI for Metabolism Research, in vivo NMR Lab, Dept. Radiology, Leiden Univ. Med. Center, Leiden, The Netherlands. **E. Mandelkow:** A. Employment/Salary (full or part-time); German Ctr. For

PRESENTATION NUMBER	STATEMENT
	Neurodegenerative Dis. (DZNE), Center of Advanced European Studies and Research (CAESAR), Bonn, Germany. **E. Mandelkow:** A. Employment/Salary (full or part-time); German Ctr. For Neurodegenerative Dis. (DZNE), Center of Advanced European Studies and Research (CAESAR), Bonn, Germany.
125.10	**T.M. Nir:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Biogen, Inc. **N. Jahanshad:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Biogen, Inc. **P.M. Thompson:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Biogen, Inc.
126.19	**C.J. Westmark:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Angelini Pharma.
127.02	**K.M. Craven:** A. Employment/Salary (full or part-time); Was a full time employee at GMU as a Graduate Teaching Assistant during this project. **N.T. Coschigano:** A. Employment/Salary (full or part-time); Full time employee at GMU as a Graduate Teaching Assistant. **J.M. Flinn:** A. Employment/Salary (full or part-time); Full time employee at GMU as faculty member.
127.19	**T. Ochiai:** A. Employment/Salary (full or part-time); Kaken Pharmaceutical Co., LTD..
128.02	**J. Sanchez-Mut:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); J.V.S.-M holds a patent for the use of PM20D1 methylation and haplotype as biomarkers for Alzheimer's disease (European Patent No. 16180434.9). **J. Graff:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); J.G. holds a patent for the use of PM20D1 methylation and haplotype as biomarkers for Alzheimer's disease (European Patent No. 16180434.9)..
129.02	**C. Kayatekin:** A. Employment/Salary (full or part-time); Sanofi. **K. Jackson:** A. Employment/Salary (full or part-time); Sanofi. **J. Clarke:** A. Employment/Salary (full or part-time); Sanofi. **C. Viel:** A. Employment/Salary (full or part-time); Sanofi. **A.M. Richards:** A. Employment/Salary (full or part-time); Sanofi. **L.S. Shihabuddin:** A. Employment/Salary (full or part-time); Sanofi. **S.P. Sardi:** A. Employment/Salary (full or part-time); Sanofi.
129.03	**J. Clarke:** A. Employment/Salary (full or part-time); Sanofi. **C. Kayatekin:** A. Employment/Salary (full or part-time); Sanofi. **C. Viel:** A. Employment/Salary (full or part-time); Sanofi. **L. Shihabuddin:** A. Employment/Salary (full or part-time); Sanofi. **P. Sardi:** A. Employment/Salary (full or part-time); Sanofi.
130.17	**H. Borland:** A. Employment/Salary (full or part-time); H. Lundbeck A/S. **M. Ambjørn:** A. Employment/Salary (full or part-time); H. Lundbeck A/S. **N. Damsgaard:** A. Employment/Salary (full or part-time); H. Lundbeck A/S. **J. Pedersen:** A. Employment/Salary (full or part-time); H. Lundbeck A/S. **K. Fog:** A. Employment/Salary (full or part-time); H. Lundbeck A/S.
130.28	**J.R. Mazzulli:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Lysosomal Therapeutics, Inc, Lysosomal Therapeutics, Inc.
131.15	**S. Ramboz:** A. Employment/Salary (full or part-time); PsychoGenics. **A. Pennington:** A. Employment/Salary (full or part-time); PsychoGenics. **K. Cox:** A. Employment/Salary (full or part-time); PsychoGenics. **M. Hall:** A. Employment/Salary (full or part-time); PsychoGenics. **W. Arias:** A. Employment/Salary (full or part-time); PsychoGenics. **K. Kayser:** A. Employment/Salary (full or part-time); PsychoGenics. **J. Guterl:** A. Employment/Salary (full or part-time); PsychoGenics. **M. Bansal:** A. Employment/Salary (full or part-time); PsychoGenics. **D. Havas:** A. Employment/Salary (full or part-time); PsychoGenics. **K. Cirillo:** A. Employment/Salary (full or part-time); PsychoGenics.
132.08	**D.D. Thomas:** A. Employment/Salary (full or part-time); Photonic Pharma LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Photonic Pharma LLC.
132.12	**M.P. Parmar:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); M.P. is the owner of Parmar Cells AB and co-inventor of the US patent application 15/093,927 owned by Biolamina AB, and EP17181588 owned by Miltenyi Biotec.
132.13	**M. Parmar:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); M.P. is the owner of Parmar Cells AB and co-inventor of the US patent application 15/093,927 owned by Biolamina AB, and EP17181588 owned by Miltenyi Biotec.
133.10	**M. Scaglione:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent pending for the use of SRCP1 and derivatives as therapies.
134.17	**L.F. Araújo:** A. Employment/Salary (full or part-time); Sao Paulo Federal University.
134.21	**A.K. Ghosh:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Experimentica Ltd, K&P Scientific LLC, eyeNOS Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); eyeNOS Inc.. F. Consulting Fees (e.g., advisory boards); K&P Scientific LLC. **J.J. Hakkarainen:** A. Employment/Salary (full or part-time); Experimentica Ltd.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Experimentica Ltd. **S. Kaja:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Experimentica Ltd, K&P Scientific LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Experimentica Ltd, K&P Scientific LLC.
134.26	**K.X. Duong-Polk:** A. Employment/Salary (full or part-time); Samumed, LLC. **B. Guner:** A. Employment/Salary (full or part-time); Samumed, LLC. **S. Habroun:** A. Employment/Salary (full or part-time); Samumed, LLC. **S. Anderson:** A. Employment/Salary (full or part-time); Samumed, LLC. **C. Lai:** A. Employment/Salary (full or part-time); Samumed, LLC. **B. Melchior:** A. Employment/Salary (full or part-time); Samumed, LLC.
135.23	**J. Parcq:** A. Employment/Salary (full or part-time); Op2Lysis SAS. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Op2Lysis SAS.
135.24	**S.H. Scott:** Other; Co-Founder and CSO of BKIN Technologies.
135.27	**S.H. Scott:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); GSK Chair in Neuroscience. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BKIN Technologies Ltd..
135.28	**S. Cho:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 present study was

PRESENTATION NUMBER	STATEMENT
	supported by NIH grant NS094896.. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); RxMP Therapeutics provided the testing material for the study.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); The University of Miami has partial ownership in RxMP Therapeutics. The University of Miami is a co-inventor of 2 US patents related to red cell microparticles. **A.K. Rehni:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 present study was supported by NIH grant NS094896. **H. Navarro Quero:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 present study was supported by NIH grant NS094896. **Y.S. Ahn:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Dr. Ahn received grant support from RxMP Therapeutics.. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); RxMP Therapeutics provided the testing material for the study.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Dr. Ahn and the University of Miami have partial ownership in RxMP Therapeutics. Dr. Ahn is a co-inventor of 2 US patents related to red cell microparticles. **M.A. Perez-Pinzon:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; This study was supported by NIH grant NS094896. **W. Jy:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; This study was supported by NIH grant NS094896. Dr. Jy received grant support from RxMP Therapeutics.. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); RxMP Therapeutics provided the testing material for the study.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Dr. Jy and the University of Miami have partial ownership in RxMP Therapeutics. Dr. Jy is a co-inventor of 2 US patents related to red cell microparticles. **K.R. Dave:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 present study was supported by NIH grant NS094896.. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); RxMP Therapeutics provided the testing material for the study.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); The University of Miami has partial ownership in RxMP Therapeutics. The University of Miami is a co-inventor of 2 US patents related to red cell microparticles..
138.13	**R.H. Gifford:** F. Consulting Fees (e.g., advisory boards); Audiology Advisory Board for Advanced Bionics and Cochlear Americas and clinical advisory board for Frequency Therapeutics.
139.01	**T. Harada:** A. Employment/Salary (full or part-time); TOYOTA CENTRAL R&D LABS., INC. **T. Sugawara:** A. Employment/Salary (full or part-time); TOYOTA CENTRAL R&D LABS., INC. **S. Laureys:** F. Consulting Fees (e.g., advisory boards); TOYOTA CENTRAL R&D LABS., INC. **H. Sakai:** A. Employment/Salary (full or part-time); TOYOTA CENTRAL R&D LABS., INC..
139.14	**T.E. Hullar:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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/NIDCD grant award R01 DC017425. F. Consulting Fees (e.g., advisory boards); MedEl Corporation, Advance Bionics Corporation.
141.14	**J.A. Rogers:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neurolux.
143.04	**L. Cassard:** A. Employment/Salary (full or part-time); Howard Hughes Medical Institute. B. Contracted Research/ Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; NIH Training Program for Computational Neuroscience. **E.P. Simoncelli:** A. Employment/Salary (full or part-time); Howard Hughes Medical Institute.
145.13	**D.M. Lovinger:** F. Consulting Fees (e.g., advisory boards); Alcohol Editorial Board, Elsevier Inc..
146.26	**S. Choudhury:** A. Employment/Salary (full or part-time); Institute of Neurosciences Kolkata, India. **A. Roy:** A. Employment/Salary (full or part-time); Institute of Neurosciences Kolkata, India. **B. Mondal:** A. Employment/ Salary (full or part-time); Institute of Neurosciences Kolkata, India. **R. Singh:** A. Employment/Salary (full or part-time); Institute of Neurosciences Kolkata, India. **S. Haldar:** A. Employment/Salary (full or part-time); Institute of Neurosciences Kolkata, India. **K. Chatterjee:** A. Employment/Salary (full or part-time); Institute of Neurosciences Kolkata, India. **M.R. Baker:** A. Employment/ Salary (full or part-time); Institute of Neuroscience, The Medical School, Newcastle University, Framlington Place, Newcastle upon Tyne, NE2 4HH, United Kingdom, Department of Neurology, Royal Victoria Infirmary, Queen Victoria Rd, Newcastle upon Tyne, NE1 4LP, United Kingdom, Department of Clinical Neurophysiology, Royal Victoria Infirmary, Queen Victoria Rd, Newcastle upon Tyne, NE1 4LP, United Kingdom. **H. Kumar:** A. Employment/ Salary (full or part-time); Institute of Neurosciences Kolkata, India. **S.N. Baker:** A. Employment/Salary (full or part-time); Institute of Neuroscience, The Medical School, Newcastle University, Framlington Place, Newcastle upon Tyne, NE2 4HH, United Kingdom.
149.02	**T. Zimmermann:** A. Employment/Salary (full or part-time); Boehringer Ingelheim Pharma Gmbh & Co. KG. **J. Hecksher-Sørensen:** A. Employment/Salary (full or part-time); Gubra. **A. Oldenburger:** A. Employment/Salary (full or part-time); Boehringer Ingelheim Pharma Gmbh & Co. KG. **T. Baader-Pagler:** A. Employment/Salary (full or part-time); Boehringer Ingelheim Pharma Gmbh & Co. KG. **A. Nygaard Madsen:** A. Employment/Salary (full or part-time); Gubra. **U. Roostalu:** A. Employment/Salary (full or part-time); Gubra. **L.C. Biehl Rudkjær:** A. Employment/Salary (full or part-time); Gubra. **R. Augustin:** A. Employment/ Salary (full or part-time); Boehringer Ingelheim Pharma Gmbh & Co. KG.
150.06	**J. Sala-Bayo:** A. Employment/Salary (full or part-time); Boehringer Ingelheim. **T.W. Robbins:** F. Consulting Fees (e.g., advisory boards); Cambridge Cognition, Lundbeck, Mundipharma, Unilever. Other; Springer Verlag, Elsevier.
151.17	**M. Farinelli-Scharly:** A. Employment/Salary (full or part-time); E-phys Science. **S. Hugues:** A. Employment/Salary (full or part-time); E-Phys Science.
152.09	**J. Marco-Pallares:** A. Employment/Salary (full or part-time); University of Barcelona.
153.15	**S. Marceglia:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Newronika srl, spin-off company. **F. Mameli:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent

PRESENTATION NUMBER	STATEMENT
	holder, excluding diversified mutual funds); Newronika srl, spin-off company. **M. Vergari:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Newronika srl, spin-off company. **S. Mrakic-Sposta:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Newronika srl, spin-off company. **S. Barbieri:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Newronika srl, spin-off company. **A. Priori:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Newronika srl, spin-off company. **R. Ferrucci:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Newronika srl, spin-off company.
154.06	**F. Frohlich:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pulvinar Neuro LLC.
154.20	**R.J. Carey:** A. Employment/Salary (full or part-time); VA Medical Center.
156.02	**L.E. Baker:** A. Employment/Salary (full or part-time); Western Michigan University. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; National Institute on Drug Abuse. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); NIDA Drug Control Supply.
156.11	**J.T. Madden:** A. Employment/Salary (full or part-time); Graduate Researcher, University of New Mexico. **C.M. Magcalas:** A. Employment/Salary (full or part-time); Graduate Researcher, University of New Mexico. **N.S. Pentkowski:** A. Employment/Salary (full or part-time); UNM Assistant Professor, Principal Investigator. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; M100907 purchased from ACADIA Pharmaceuticals, METH purchased from Sigma Aldrich.
159.09	**S. Qiu:** A. Employment/Salary (full or part-time); Brandeis university.
160.12	**M. Henckens:** A. Employment/Salary (full or part-time); junior PI. **B. Roozendaal:** A. Employment/Salary (full or part-time); Professor.
172.05	**A. Moudgil:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent filed on SRT technology. **M.N. Wilkinson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent filed on SRT technology. **R.D. Mitra:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent filed on SRT technology.
172.09	**Y. Gao:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent pending. **S.H. Soderling:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent pending.
172.10	**E. Ciabatti:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); attend application WO2018203049A1. **M. Tripodi:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); attend application WO2018203049A1.
172.17	**I.R. Wickersham:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Monosynaptix, LLC.
172.24	**Z. Liu:** A. Employment/Salary (full or part-time); Horizon Discovery. **G. Zhao:** A. Employment/Salary (full or part-time); Horizon Discovery. **A. Brown:** A. Employment/Salary (full or part-time); Horizon Discovery. **K. Forbes:** A. Employment/Salary (full or part-time); Horizon Discovery.
174.01	**V. Kharazia:** A. Employment/Salary (full or part-time); Neuralink Corp.
174.22	**S.J. Tappan:** A. Employment/Salary (full or part-time); MBF Bioscience. **W.D. Pack:** A. Employment/Salary (full or part-time); MBF Bioscience. **D.S. Denu:** A. Employment/Salary (full or part-time); MBF Bioscience. **B.W. Haydock:** A. Employment/Salary (full or part-time); MBF Bioscience. **C. Thomas:** A. Employment/Salary (full or part-time); MBF Bioscience. **M. Gulenko:** A. Employment/Salary (full or part-time); MBF Bioscience. **B.S. Eastwood:** A. Employment/Salary (full or part-time); MBF Bioscience. **N.D. Liese:** A. Employment/Salary (full or part-time); MBF Bioscience. **P.J. Angstman:** A. Employment/Salary (full or part-time); MBF Bioscience. **J.R. Glaser:** A. Employment/Salary (full or part-time); MBF Bioscience.
174.28	**L. Silvestri:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent pending technology. **M. Muellenbroich:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent pending technology. **L. Sacconi:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent pending technology. **F. Pavone:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent pending technology.
175.07	**M.P. Bradley:** A. Employment/Salary (full or part-time); Charles River Laboratories. **J.W. Veenstra:** A. Employment/Salary (full or part-time); Charles River Laboratories. **S.L. Adrian:** A. Employment/Salary (full or part-time); Charles River Laboratories. **M.D. Johnson:** A. Employment/Salary (full or part-time); Charles River Laboratories. **B.W. Gunter:** A. Employment/Salary (full or part-time); Charles River Laboratories.
175.11	**E.N. Brown:** A. Employment/Salary (full or part-time); MGH and MIT. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; NIH: R01 GM104948 and P01GM118269, Department of Anesthesia, Critical Care and Pain Medicine, MGH, Picower Institute for Learning and Memory, MIT. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); MGH has licensed intellectual property for EEG monitoring co-developed by Dr. Brown to Masimo. Dr. Brown hold interests in PASCALL, a start-up company.
175.12	**E. Garea Rodríguez:** A. Employment/Salary (full or part-time); Charles River Laboratories Germany GmbH. **J. König:** A. Employment/Salary (full or part-time); Charles River Laboratories Germany GmbH. **J. Baudewig:** A. Employment/Salary (full or part-time); German Primate Center. **C. Schlumbohm:** A. Employment/Salary (full or part-time); Charles River Laboratories Germany GmbH. **L. Spronck:** A. Employment/Salary (full or part-time); uniQure biopharma BV. **B. Blits:** A. Employment/Salary (full or part-time); uniQure biopharma BV. **M. Evers:** A. Employment/Salary (full or part-time); uniQure biopharma BV. **M. de Haan:** A. Employment/Salary (full or part-time); uniQure biopharma BV. **S. Boretius:** A. Employment/Salary (full or part-time); German Primate Center. **M.M. Van Gaalen:** A. Employment/Salary (full or part-time); Charles River

PRESENTATION NUMBER	STATEMENT
	Laboratories Germany GmbH. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); uniQure biopharma BV.
177	**D.M. Walsh:** Other; Biogen Employee.
177.03	**L. Mucke:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; I am a PI on a research project that is supported by a corporate sponsored research agreement between the Gladstone Institutes and Cure Network Dolby Acceleration Partners, LLC.. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); I have received speaker fees or travel support from Biogen and Johnson & Johnson.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); I am a co-inventor on patents filed by the Gladstone Institutes. F. Consulting Fees (e.g., advisory boards); I serve on the Scientific Advisory Board of Dolby Family Ventures..
177.04	**K. Duff:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); BoD Ceracuity LLC . Patent holder ; inventor.
180.02	**J.D. Schmahmann:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Site PI for Biohaven Pharma study of troriluzole in spinocerebellar ataxia. F. Consulting Fees (e.g., advisory boards); Consultant on cerebellar ataxia for Bayer, Biogen, Biohaven, Cadent, Pfizer.
181	**H. Zhong:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Johnson & Johnson.
181.02	**G. Yellen:** F. Consulting Fees (e.g., advisory boards); Thorlabs Imaging Research Group.
185.03	**L. Zhou:** Other; Contract-based consultant for Neurona Theraputics. **A. Kriegstein:** F. Consulting Fees (e.g., advisory boards); Neurona Theraputics.
187.05	**P. Negraes:** A. Employment/Salary (full or part-time); StemoniX. **N. Sodhi:** A. Employment/Salary (full or part-time); stemonix. **S. Romero:** A. Employment/Salary (full or part-time); Stemonix. **F. Zanella:** A. Employment/Salary (full or part-time); Stemonix. **C. Carromeu:** A. Employment/ Salary (full or part-time); StemoniX.
188.04	**A. Fatemi:** F. Consulting Fees (e.g., advisory boards); Calico. Other; Bluebird Bio, Stealth Biotherapeutics.
188.08	**K. Kodella:** A. Employment/Salary (full or part-time); Emulate Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Emulate Inc. **C. Hinojosa:** A. Employment/Salary (full or part-time); Emulate Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Emulate nc. **G.A. Hamilton:** A. Employment/Salary (full or part-time); Emulate Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Emulate Inc. **K. Karalis:** A. Employment/Salary (full or part-time); Emulate Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Emulate Inc. **I. Pediaditakis:** A. Employment/Salary (full or part-time); Emulate Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Emulate Inc..
188.10	**B. Chih:** A. Employment/Salary (full or part-time); Genentech. **R.A. Bassil:** A. Employment/Salary (full or part-time); Genentech. **K. Shields:** A. Employment/ Salary (full or part-time); Genentech. **S. Ng Palace:** A. Employment/Salary (full or part-time); Genentech.
188.11	**T.P. Misko:** A. Employment/Salary (full or part-time); All authors, Abbvie Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Abbvie Inc. **Y. Fang:** A. Employment/Salary (full or part-time); All authors. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Abbvie Inc. **M. Saltarelli:** A. Employment/Salary (full or part-time); All authors, Abbvie Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Abbvie Inc. **M. Schulz:** A. Employment/Salary (full or part-time); All authors, Abbvie Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Abbvie Inc. **J. Schmidt:** A. Employment/Salary (full or part-time); All authors, Abbvie Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Abbvie Inc. **J. Savaryn:** A. Employment/Salary (full or part-time); All authors, Abbvie Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Abbvie Inc. **K. Awwad:** A. Employment/Salary (full or part-time); All authors, Abbvie Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Abbvie Inc. **J. Mollon:** A. Employment/Salary (full or part-time); All authors, Abbvie Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Abbvie Inc. **M. Droescher:** A. Employment/Salary (full or part-time); All authors, Abbvie Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Abbvie Inc. **J. Bernhard:** A. Employment/Salary (full or part-time); All authors, Abbvie Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Abbvie Inc. **H.V. Kalluri:** A. Employment/Salary (full or part-time); All authors, Abbvie Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Abbvie Inc. **M. Rosebraugh:** A. Employment/Salary (full or part-time); All authors, Abbvie Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Abbvie Inc. **X. Qi:** A. Employment/Salary (full or part-time); All authors, Abbvie Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Abbvie Inc. **C. Locke:** A. Employment/Salary (full or part-time); All authors, Abbvie Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Abbvie Inc. **I. Dreher:** A. Employment/Salary (full or part-time); All authors, Abbvie Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Abbvie Inc. **A. Ziemann:** A. Employment/Salary (full or part-time); All authors, Abbvie Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Abbvie Inc.
189.06	**L.G. Coleman:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; EMD Serono. **F. Crews:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; EMD Serono.

PRESENTATION NUMBER	STATEMENT
190.02	**J. Jones:** A. Employment/Salary (full or part-time); The University of Pennsylvania. **W. Foster:** A. Employment/Salary (full or part-time); The University of Pennsylvania. **J. Burdge:** A. Employment/Salary (full or part-time); The University of Pennsylvania.
190.04	**K. Brennan:** F. Consulting Fees (e.g., advisory boards); Allergan, Eli Lilly.
193.13	**M. Abdellahi:** A. Employment/Salary (full or part-time); Full time PhD student. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Funded by the European Commission, working under the supervision of PI of NAPS group: Prof. Penelope A. Lewis. **A. Koopman:** A. Employment/Salary (full or part-time); Full time PhD student. **L. Santamaria:** A. Employment/Salary (full or part-time); Post-doc. **M.S. Treder:** A. Employment/Salary (full or part-time); Lecturer in Data Science and Analytics. **P. Lewis:** A. Employment/Salary (full or part-time); principal investigator.
198.10	**S. Batool:** A. Employment/Salary (full or part-time); University of Calgary.
199.03	**I. Gozes:** A. Employment/Salary (full or part-time); Coronis Neurosciences.
199.06	**I. Gozes:** A. Employment/Salary (full or part-time); Coronis Neurosciences.
200.15	**S.M. Catalano:** A. Employment/Salary (full or part-time); Cognition Therapeutics, Inc. **K. Mozzoni:** A. Employment/Salary (full or part-time); Cognition Therapeutics, Inc. **C. Rehak:** A. Employment/Salary (full or part-time); Cognition Therapeutics, Inc. **L. Waybright:** A. Employment/Salary (full or part-time); Cognition Therapeutics, Inc. **K. Sadlek:** A. Employment/Salary (full or part-time); Cognition Therapeutics, Inc. **H. Safferstein:** A. Employment/Salary (full or part-time); Cognition Therapeutics, Inc. **E. Watto:** A. Employment/Salary (full or part-time); Cognition Therapeutics, Inc. **N. Izzo:** A. Employment/Salary (full or part-time); Cognition Therapeutics, Inc. **M. Grundman:** F. Consulting Fees (e.g., advisory boards); Cognition Therapeutics, Inc. **S. Dekosky:** F. Consulting Fees (e.g., advisory boards); Cognition Therapeutics, Inc. **L. Schneider:** F. Consulting Fees (e.g., advisory boards); Cognition Therapeutics, Inc..
200.16	**K.T. Sadlek:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **N.J. Izzo:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **C. Rehak:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **R. Yurko:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **L. Waybright:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **E. Watto:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **N. Knezovich:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **K. Mozzoni:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **H. Safferstein:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **S.M. Catalano:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc..
200.21	**N.J. Izzo:** A. Employment/Salary (full or part-time); Cognition Therapeutics, Inc. **C. Rehak:** A. Employment/Salary (full or part-time); Cognition Therapeutics, Inc. **K.M. Mozzoni:** A. Employment/Salary (full or part-time); Cognition Therapeutics, Inc. **G. Look:** A. Employment/Salary (full or part-time); Cognition Therapeutics, Inc. **G. Rishton:** A. Employment/Salary (full or part-time); Cognition Therapeutics, Inc. **L. Schneider:** F. Consulting Fees (e.g., advisory boards); Cognition Therapeutics, Inc. **S. Dekosky:** F. Consulting Fees (e.g., advisory boards); Cognition Therapeutics, Inc. **M. Grundman:** F. Consulting Fees (e.g., advisory boards); Cognition Therapeutics, Inc. **C. Houser:** A. Employment/Salary (full or part-time); Cognition Therapeutics, Inc. **S.M. Catalano:** A. Employment/Salary (full or part-time); Cognition Therapeutics, Inc..
201.05	**J. Wellbourne-Wood:** A. Employment/Salary (full or part-time); F. Hoffmann-La Roche Ltd. **J.I. Wamsteeker Cusulin:** A. Employment/Salary (full or part-time); F. Hoffmann-La Roche Ltd. **B.J. Hall:** A. Employment/Salary (full or part-time); F. Hoffmann-La Roche Ltd.
201.10	**J.M. Miwa:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Ophidion.
203.01	**T.P. Sutula:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); T.P.S hold intellectual property related to 2DG.
203.04	**C. Vermeiren:** A. Employment/Salary (full or part-time); UCB Pharma.
203.15	**R. Shi:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neurovigor.
203.17	**O. Steward:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); OS is a co-founder and holds economic interests in the company “Axonis”, which holds a license on patents relating to PTEN deletion and axon regeneration..
205.23	**M. Kotter:** A. Employment/Salary (full or part-time); Elpis Biomed.
206.17	**M.M. Poon:** A. Employment/Salary (full or part-time); Pipeline Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics. **K.I. Lorrain:** A. Employment/Salary (full or part-time); Pipeline Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics. **A. Lorenzana:** A. Employment/Salary (full or part-time); Pipeline Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics. **K.J. Stebbins:** A. Employment/Salary (full or part-time); Pipeline Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics. **A. Broadhead:** A. Employment/Salary (full or part-time); Pipeline Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics. **T. Schrader:** A. Employment/Salary (full or part-time); Pipeline Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics. **Y. Xiong:** A. Employment/Salary (full or part-time); Pipeline Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics. **J. Baccei:** A. Employment/Salary (full or part-time); Pipeline Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics. **A.J. Green:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics. **J.R. Chan:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics. **D.S. Lorrain:** A. Employment/Salary (full or part-time); Pipeline Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics.
206.18	**K.J.S. Stebbins:** A. Employment/Salary (full or part-time); Pipeline Therapeutics, Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics, Inc. **M.M. Poon:** A. Employment/

PRESENTATION NUMBER	STATEMENT
	Salary (full or part-time); Pipeline Therapeutics, Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics, Inc. **A. Broadhead:** A. Employment/Salary (full or part-time); Pipeline Therapeutics, Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics, Inc. **G.C. Edu:** A. Employment/Salary (full or part-time); Pipeline Therapeutics, Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics, Inc. **A. Lorenzana:** A. Employment/Salary (full or part-time); Pipeline Therapeutics, Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics, Inc. **K.I. Lorrain:** A. Employment/Salary (full or part-time); Pipeline Therapeutics, Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics, Inc. **T. Schrader:** A. Employment/Salary (full or part-time); Pipeline Therapeutics, Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics, Inc. **Y. Xiong:** A. Employment/Salary (full or part-time); Pipeline Therapeutics, Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics, Inc. **J. Baccei:** A. Employment/Salary (full or part-time); Pipeline Therapeutics, Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics, Inc. **C. Baccei:** A. Employment/Salary (full or part-time); Pipeline Therapeutics, Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics, Inc. **A. Green:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics, Inc. **J.R. Chan:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics, Inc. **D.S. Lorrain:** A. Employment/Salary (full or part-time); Pipeline Therapeutics, Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics, Inc..
206.19	**G.C. Edu:** A. Employment/Salary (full or part-time); Pipeline Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics. **K.J. Stebbins:** A. Employment/Salary (full or part-time); Pipeline Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics. **A.R. Broadhead:** A. Employment/Salary (full or part-time); PIpeline Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics. **M.M. Poon:** A. Employment/Salary (full or part-time); Pipeline Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics. **A.O. Lorenzana:** A. Employment/Salary (full or part-time); Pipeline Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics. **T.O. Schrader:** A. Employment/Salary (full or part-time); Pipeline Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics. **Y. Xiong:** A. Employment/Salary (full or part-time); Pipeline Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics. **J. Baccei:** A. Employment/Salary (full or part-time); Pipeline Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics. **A.J. Green:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics. F. Consulting Fees (e.g., advisory boards); Pipeline Therapeutics. **J.R. Chan:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics. F. Consulting Fees (e.g., advisory boards); Pipeline Therapeutics. **D.S. Lorrain:** A. Employment/Salary (full or part-time); Pipeline Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pipeline Therapeutics.
206.21	**E. Defensor:** A. Employment/Salary (full or part-time); Vium. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Vium. **M. Lim:** A. Employment/Salary (full or part-time); Vium. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Vium. **L. Schaevitz:** A. Employment/Salary (full or part-time); Vium. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Vium.
207.20	**J.K. Wong:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Minnetronix Neuro. **L. Zitella Verbick:** A. Employment/Salary (full or part-time); Minnetronix Neuro. **N. Nazarian:** A. Employment/Salary (full or part-time); Minnetronix Neuro. **A. McCabe:** A. Employment/Salary (full or part-time); Minnetronix Neuro.
207.21	**M. Dwyer:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Novartis and Celgene. F. Consulting Fees (e.g., advisory boards); Claret Medical and EMD Serrono. **F. Schweser:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); SynchroPet. F. Consulting Fees (e.g., advisory boards); Toshiba Canada Medical Systems ltd, Goodwin Procter LLP. **R. Zivadinov:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Genzyme-Sanofi, Novartis, Celgene, Claret Medical, Intekrin-Corherus, Oritembis and Quintiles/IMS. F. Consulting Fees (e.g., advisory boards); EMD Serono, Genzyme-Sanofi, Claret Medical, Celgene and Novartis.
208.04	**W. Jeong:** A. Employment/Salary (full or part-time); Color Seven Co., Ltd. **N. Kim:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Color Seven Co., Ltd. **K. Park:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Color Seven Co., Ltd. **J. Lee:** A. Employment/Salary (full or part-time); Color Seven Co., Ltd.
208.10	**G. Petersen:** A. Employment/Salary (full or part-time); Applied Food Sciences. **C. Fields:** A. Employment/Salary (full or part-time); Applied Food Sciences.
210.02	**K. Sato:** A. Employment/Salary (full or part-time); junior research assistant in RIKEN (part-time). **H. Sasaguri:** A. Employment/Salary (full or part-time); full. **T. Ohshima:** A. Employment/Salary (full or part-time); full. **T. Saido:** A. Employment/Salary (full or part-time); full.
210.03	**J.B. Hales:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Acadia Pharmaceuticals. **R. Blaser:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants).

PRESENTATION NUMBER	STATEMENT
	If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Acadia Pharmaceuticals.
211.11	**C. Lai:** A. Employment/Salary (full or part-time); full-time. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); stock options. **K. Duong-Polk:** A. Employment/Salary (full or part-time); full-time. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); stock options. **B. Güner:** A. Employment/Salary (full or part-time); full-time. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); stock options. **S. Habroun:** A. Employment/Salary (full or part-time); full-time. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); stock options. **S.D. Anderson:** A. Employment/Salary (full or part-time); full-time. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); stock options. **B. Melchior:** A. Employment/Salary (full or part-time); full-time. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); stock options.
212.09	**S.M. Massa:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); PharmatrophiX. **F.M. Longo:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); PharmatrophiX.
212.12	**M. Windisch:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Founder Neurokine Therapeutics. **J. Pelletier:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neurokine Therapeutics. **D.M. Watterson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Founding Member of Neurokine Therapeutics. **O. Arancio:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Founder of Neurokine Therapeutics.
212.15	**R. Badange:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **N. Muddana:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **R. Palacharla:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **R. Medapati:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **R. Subramanian:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **J.B. Thentu:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **V. Benade:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **J. Tadiparthi:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **N. Ganuga:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **R. Nirogi:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd..
212.18	**C.R. Harrington:** A. Employment/Salary (full or part-time); TauRx Therapeutics Ltd, Singapore. **C.M. Wischik:** A. Employment/Salary (full or part-time); TauRx Therapeutics Ltd, Singapore.
212.19	**T. Urquhart:** A. Employment/Salary (full or part-time); Biogen. **B. Amaral:** A. Employment/Salary (full or part-time); Biogen, Inc. **M. Calhoun:** A. Employment/Salary (full or part-time); Biogen. **O. Golonzhka:** A. Employment/Salary (full or part-time); Biogen. **S. He:** A. Employment/Salary (full or part-time); Biogen. **D. Rabah:** A. Employment/Salary (full or part-time); Biogen. **S. Koirala:** A. Employment/Salary (full or part-time); Biogen.
212.20	**J.D. Beck:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroSolis ownership interest. **J. Ockuly:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroSolis ownership interest. **S. Hanson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroSolis ownership interest. **M. Hendrickson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroSolis ownership interest.
212.21	**P. Verwaerde:** A. Employment/Salary (full or part-time); Alzprotect. **C. Estrella:** A. Employment/Salary (full or part-time); Alzprotect. **S. Burlet:** A. Employment/Salary (full or part-time); Alzprotect. **N. Callizot:** A. Employment/Salary (full or part-time); Alzprotect.
214.14	**A.K. Rehni:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; AHA grant 18POST34070061. **K.R. Dave:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 grant NS073779.
215.06	**Y. Lim:** A. Employment/Salary (full or part-time); ProThera Biologics, CEO.
215.27	**T. Ishrat:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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.
215.30	**L.A. Sposato:** F. Consulting Fees (e.g., advisory boards); β Innovation and Bayer. Other; Boehringer Ingelheim and Pfizer.
216.01	**K. Kitajo:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); RIKEN Center for Brain Science, CBS-TOYOTA Collaboration Center.
216.05	**G.F. Wittenberg:** F. Consulting Fees (e.g., advisory boards); On advisory board of Battelle Memorial Foundation. **P.M. Thompson:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; PT is partially supported by Biogen for work unrelated to this research.
216.18	**E. Bongarzone:** F. Consulting Fees (e.g., advisory boards); Lysosomal Therapeutics Inc. (Bostom, MS), Bio-Scape (San Francisco, CA).
217.18	**O. Steward:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Dr.Steward is a co-founder and holds economic interests in the company “Axonis”, which holds a license on patents relating to PTEN deletion and axon regeneration..
217.19	**O. Steward:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); OS is a co-founder and holds economic interests in the company “Axonis”, which holds a license on patents relating to PTEN deletion and axon regeneration..
218.06	**C. Chang:** A. Employment/Salary (full or part-time); Institute of Biomedical Sciences, Academia Sinica, Taipei, 115, Taiwan.
218.07	**A.R. Obergrussberger:** A. Employment/Salary (full or part-time); Nanion Technologies GmbH. **E. Dragicevic:** A. Employment/Salary (full or part-time); Nanion Technologies GmbH. **N. Becker:** A. Employment/Salary (full or part-time); Nanion Technologies GmbH. **M. Rapedius:** A. Employment/Salary (full or part-time); Nanion Technologies

PRESENTATION NUMBER	STATEMENT
	GmbH. **T.A. Goetze:** A. Employment/Salary (full or part-time); Nanion Technologies GmbH. **M.G. Rotordam:** A. Employment/Salary (full or part-time); Nanion Technologies GmbH. **N. Brinkwirth:** A. Employment/Salary (full or part-time); Nanion Technologies GmbH. **I. Rinke-Weiß:** A. Employment/Salary (full or part-time); Nanion Technologies GmbH. **S. Stoelzle-Feix:** A. Employment/Salary (full or part-time); Nanion Technologies GmbH. **C. Haarmann:** A. Employment/Salary (full or part-time); Nanion Technologies GmbH. **S. Friis:** A. Employment/Salary (full or part-time); Nanion Technologies GmbH. **T. Strassmaier:** A. Employment/Salary (full or part-time); Nanion Technologies Inc. **R. Haedo:** A. Employment/Salary (full or part-time); Nanion Technologies Inc. **M. George:** A. Employment/Salary (full or part-time); Nanion Technologies GmbH. **A. Brüggemann:** A. Employment/Salary (full or part-time); Nanion Technologies GmbH. **N. Fertig:** A. Employment/Salary (full or part-time); Nanion Technologies GmbH.
218.25	**S.G. Lehto:** A. Employment/Salary (full or part-time); Amgen Inc. **S. Kang:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Amgen Inc..
220.12	**P. Neubauer:** A. Employment/Salary (full or part-time); Acoustic Medsystems. **E. Williams:** A. Employment/Salary (full or part-time); Acoustic Medsystems. **C. Burdette:** A. Employment/Salary (full or part-time); Acoustic Medsystems. **G. Ghoshal:** A. Employment/Salary (full or part-time); Acoustic Medsystems. **J.G. Pilitsis:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 2RO1CA166379-06, 1R43NS107076-01A1, Medtronic, Boston Scientific, Abbott, Nervo, Jazz Pharmaceuticals, GE Global Research. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Acoustic Medsystems. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aim Medical Robotics, Karuna. F. Consulting Fees (e.g., advisory boards); Aim Medical Robotics, Karuna.
220.15	**R. Khanna:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Regulonix Holding Inc..
220.21	**L.J. Curley:** A. Employment/Salary (full or part-time); AxoSim Inc. **M.J. Moore:** A. Employment/Salary (full or part-time); AxoSim Inc.
220.23	**M.I. Nemenov:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); LasMed.
226.02	**J.C. Cléry:** A. Employment/Salary (full or part-time); BrainsCAN postdoctoral fellowship (CFRER). B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Canadian Institutes of Health Research (FRN 148365).
228.02	**M. Kodama:** A. Employment/Salary (full or part-time); NTT Network Innovation Laboratories. **D. Nozaki:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; MTG Co., Ltd..
228.04	**A. Kobayashi:** A. Employment/Salary (full or part-time); NTT Communication Science Laboratories. **T. Kimura:** A. Employment/Salary (full or part-time); NTT Communication Science Laboratories.
232.12	**T.J. Gardner:** A. Employment/Salary (full or part-time); Neuralink.
234.27	**B.A. Chase:** A. Employment/Salary (full or part-time); University of Nebraska at Omaha.
235.03	**M.E. Kneavel:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 Collegiate Athletic Association - U. S. Department of Defense Mind Matters Challenge.
236.02	**M.M. Rasenick:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pax Neuroscience.
236.03	**M.M. Rasenick:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Lundbeck. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pax Neuroscience.
236.04	**J.M. Schappi:** A. Employment/Salary (full or part-time); University of Illinois at Chicago; Pax Neuroscience. **M. Ben Aissa:** A. Employment/Salary (full or part-time); University of Illinois at Chicago. **J.R. Hickock:** A. Employment/Salary (full or part-time); University of Illinois at Chicago. **M.M. Rasenick:** A. Employment/Salary (full or part-time); University of Illinois at Chicago; USVA. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Pax Neuroscience.
236.12	**H. Yamagata:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Pfizer, Eisai, MSD.
238.04	**O. Sesenoglu-Laird:** A. Employment/Salary (full or part-time); Copernicus Therapeutics, Inc. **L. Padegimas:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Copernicus Therapeutics, Inc. **M.J. Cooper:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Copernicus Therapeutics, Inc..
241.10	**D.A. Morilak:** A. Employment/Salary (full or part-time); South Texas Veterans Health Care System.
243.20	**A.I. Geller:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Alkermes.
246.24	**D.L. Barbour:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ownership interest in Bonauria.
247.14	**A. Oyama:** D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); JVC KENWOOD Corporation. **S. Takeda:** D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); JVC KENWOOD Corporation.
247.22	**Q.S. Li:** A. Employment/Salary (full or part-time); Janssen R&D LLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Johnson & Johnson.
247.24	**E.J. Lenze:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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, Lundbeck.
247.25	**A.M. Fagan:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution.; Biogen, Centene, Fujirebio, Roche Diagnostics. F. Consulting Fees (e.g., advisory boards); Roche Diagnostics, Genentech, AbbVie, Araclon/Grifols, Diadem, DiamiR.
247.26	**M. Buschkuehl:** A. Employment/Salary (full or part-time); MIND Research Institute. **S.M. Jaeggi:** Other; MIND Research Institute.

PRESENTATION NUMBER	STATEMENT
247.27	**A. Aschenbrenner:** F. Consulting Fees (e.g., advisory boards); Biogen and Lundbeck. **T. Benzinger:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Avid Radiopharmaceuticals/ Eli Lilly. Other; Clinical trials: Lilly, Biogen, Jaansen, Roche.
249.20	**C.I. Hooker:** A. Employment/Salary (full or part-time); Rush University Medical Center. **K.M. Haut:** A. Employment/ Salary (full or part-time); Rush University Medical Center. **D. Dodell-Feder:** A. Employment/Salary (full or part-time); University of Rochester. **M. Nahum:** A. Employment/Salary (full or part-time); The Hebrew University of Jerusalem.
251.19	**T. Macrina:** A. Employment/Salary (full or part-time); Zetta AI. **H. Seung:** A. Employment/Salary (full or part-time); Zetta AI, Samsung.

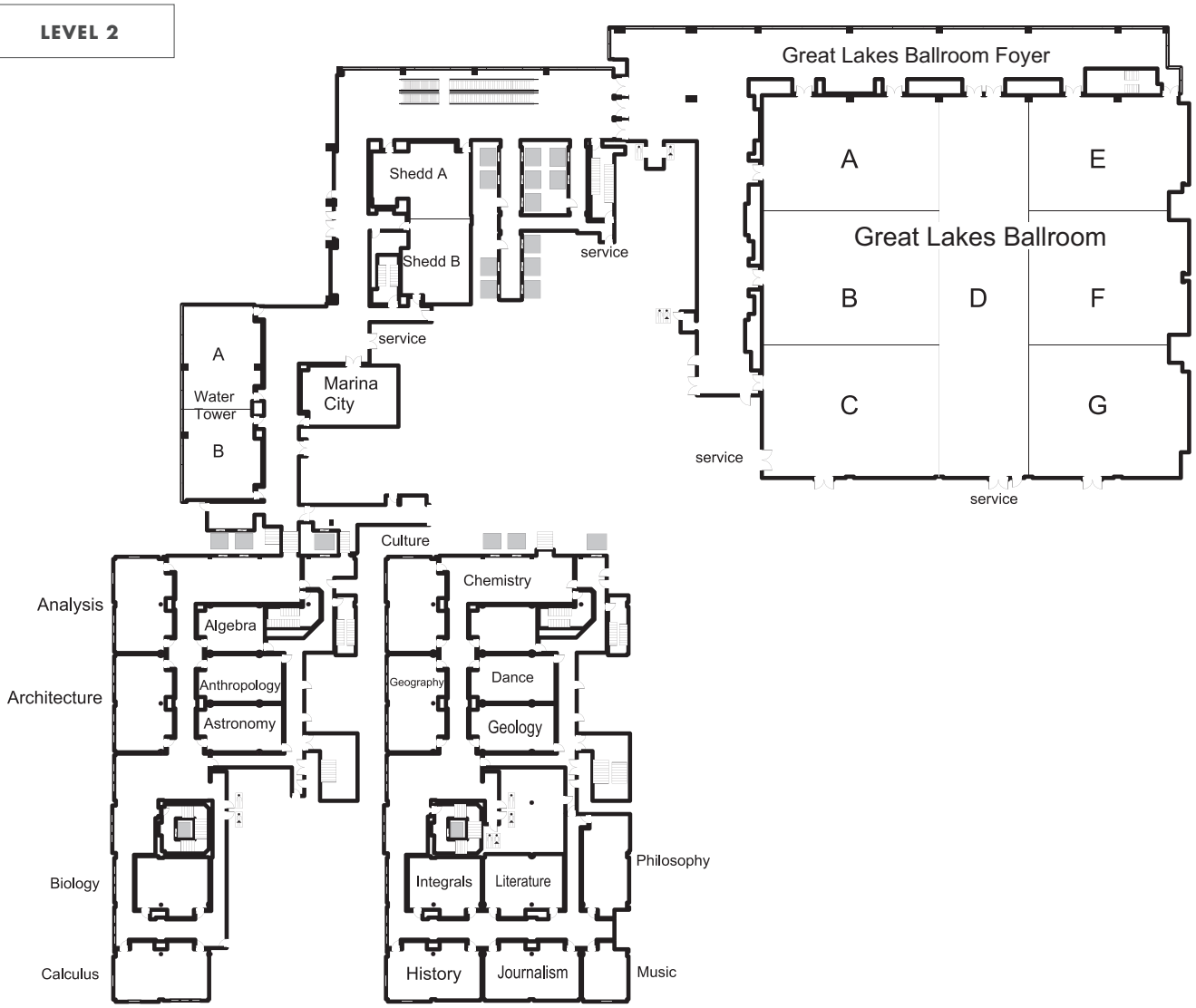
Hotel Floor Plans

MARRIOTT MARQUIS CHICAGO

2121 S. PRAIRIE AVENUE

CHICAGO, ILLINOIS 60616

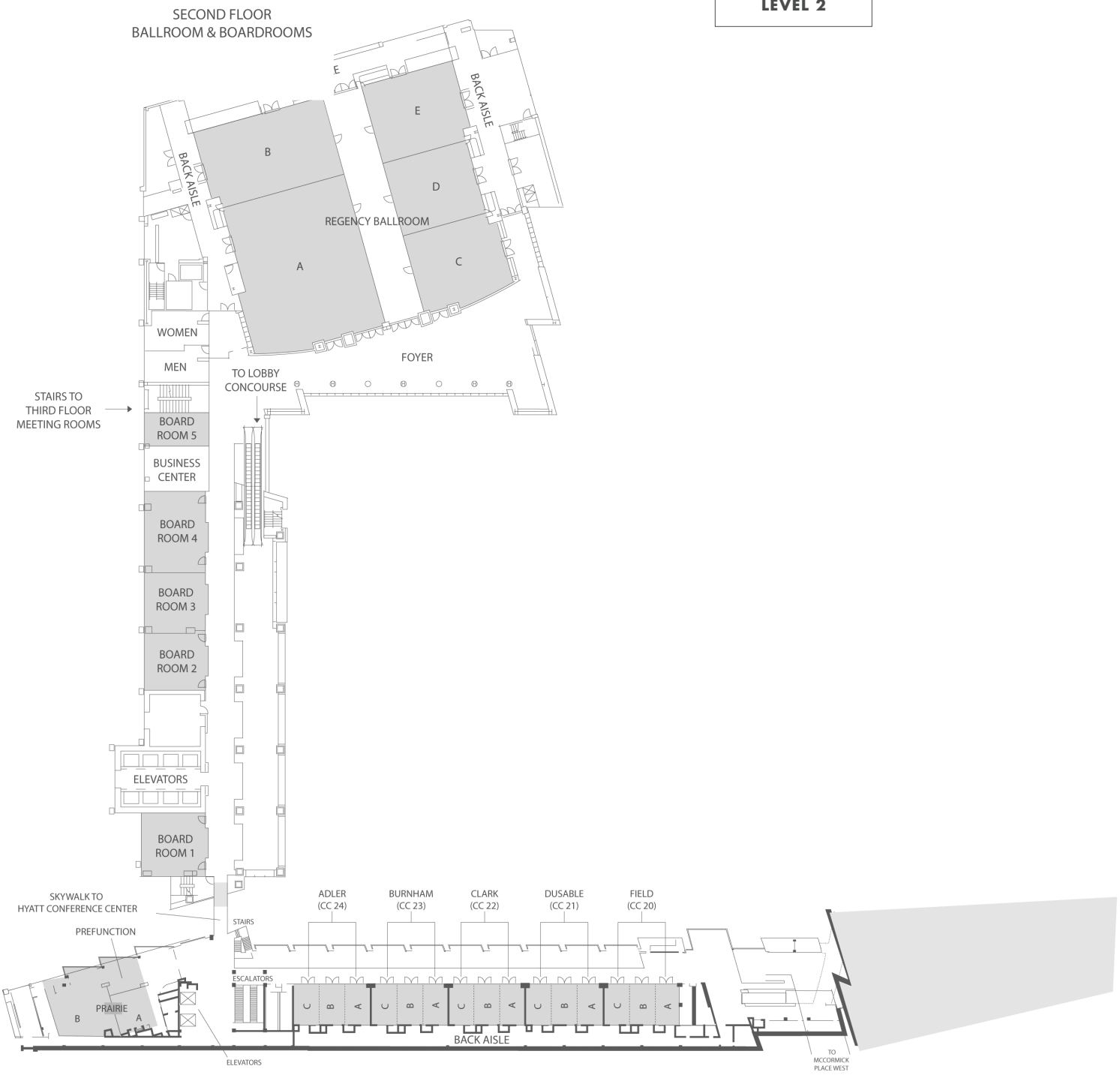
LEVEL 2



Hotel Floor Plans

HYATT REGENCY McCORMICK PLACE
2233 SOUTH DR. MARTIN LUTHER KING JR. DRIVE
CHICAGO, ILLINOIS 60616

LEVEL 2



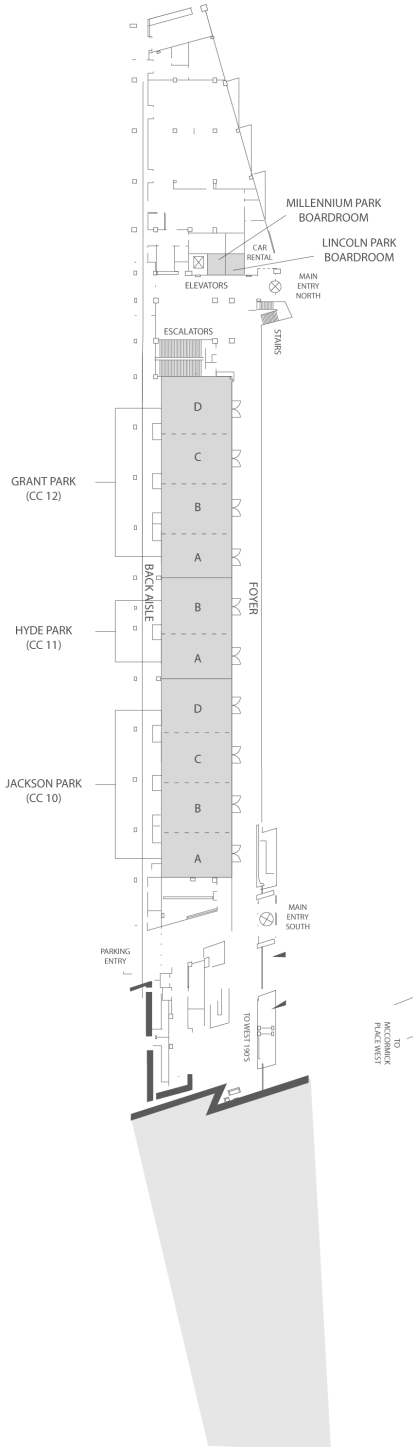
Hotel Floor Plans

HYATT REGENCY McCORMICK PLACE

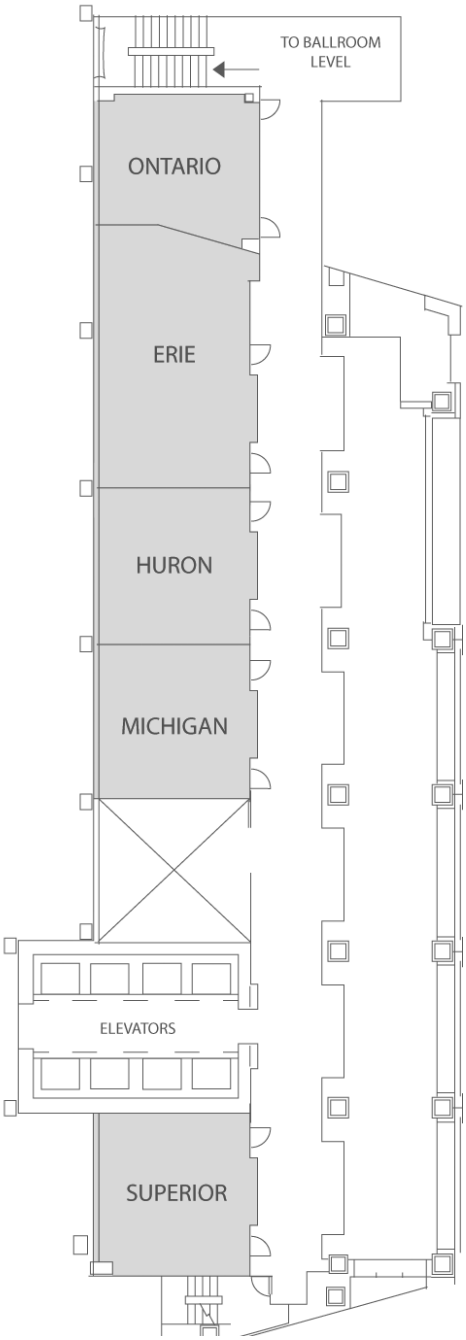
2233 SOUTH DR. MARTIN LUTHER KING JR. DRIVE

CHICAGO, ILLINOIS 60616

LEVEL 1



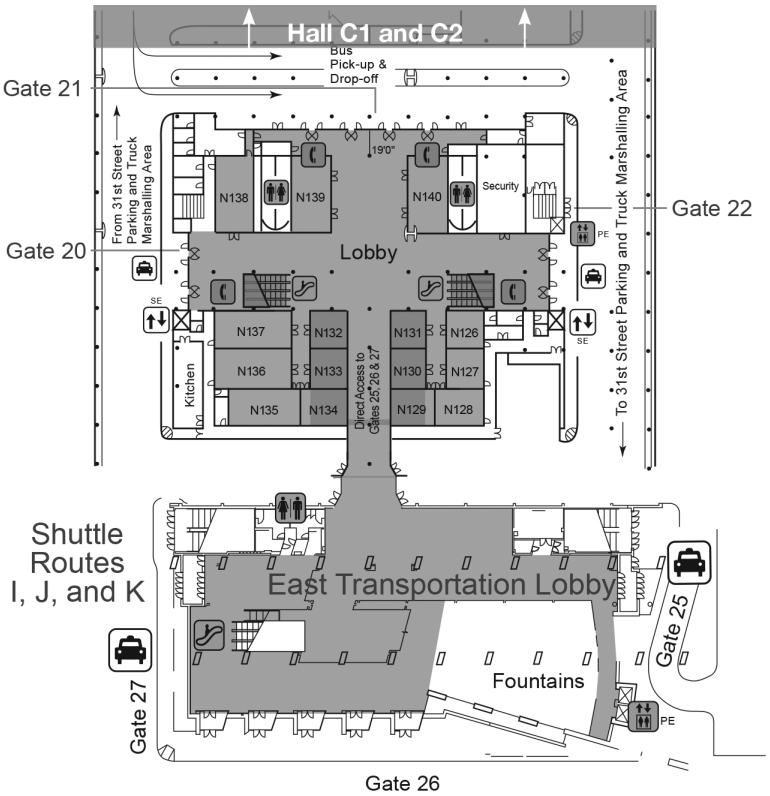
LEVEL 3



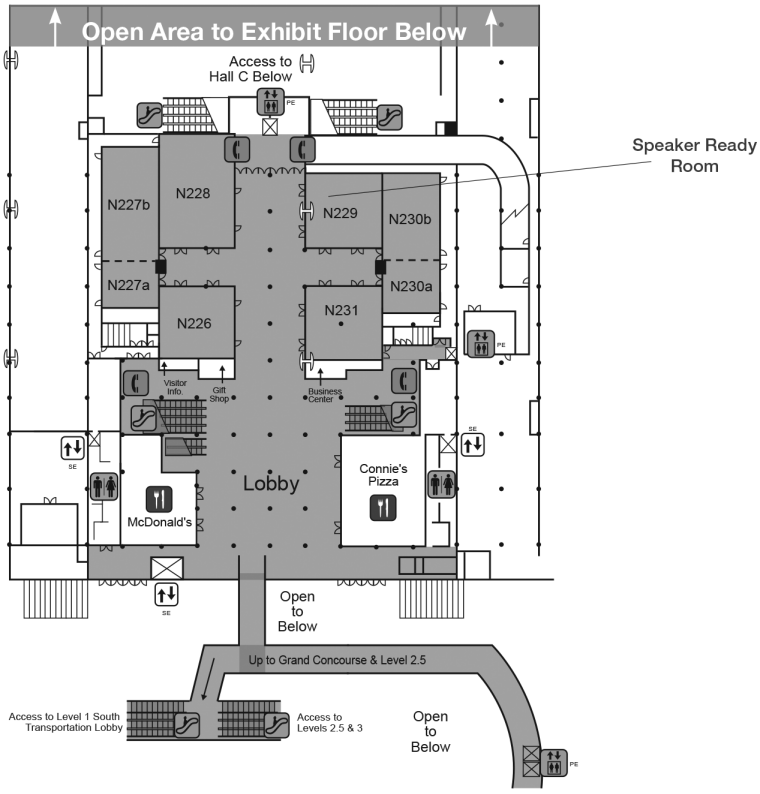
Convention Center Floor Plans

McCORMICK PLACE
2301 S. MARTIN LUTHER KING DRIVE
CHICAGO, ILLINOIS 60616

LEVEL 1 NORTH



LEVEL 2 NORTH



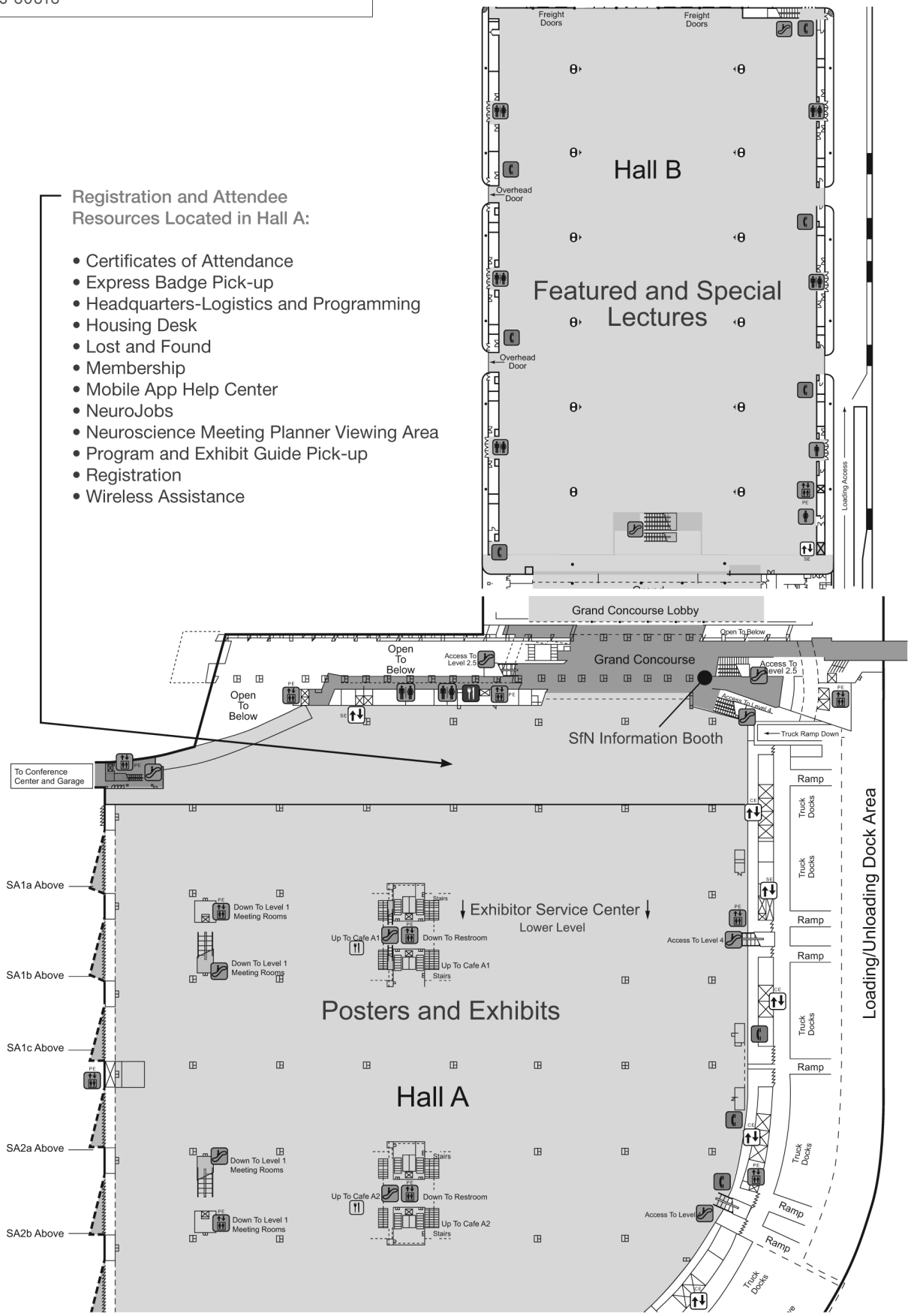
Convention Center Floor Plans

McCORMICK PLACE
2301 S. MARTIN LUTHER KING DRIVE
CHICAGO, ILLINOIS 60616

LEVEL 3 NORTH

Registration and Attendee Resources Located in Hall A:

- Certificates of Attendance
- Express Badge Pick-up
- Headquarters-Logistics and Programming
- Housing Desk
- Lost and Found
- Membership
- Mobile App Help Center
- NeuroJobs
- Neuroscience Meeting Planner Viewing Area
- Program and Exhibit Guide Pick-up
- Registration
- Wireless Assistance

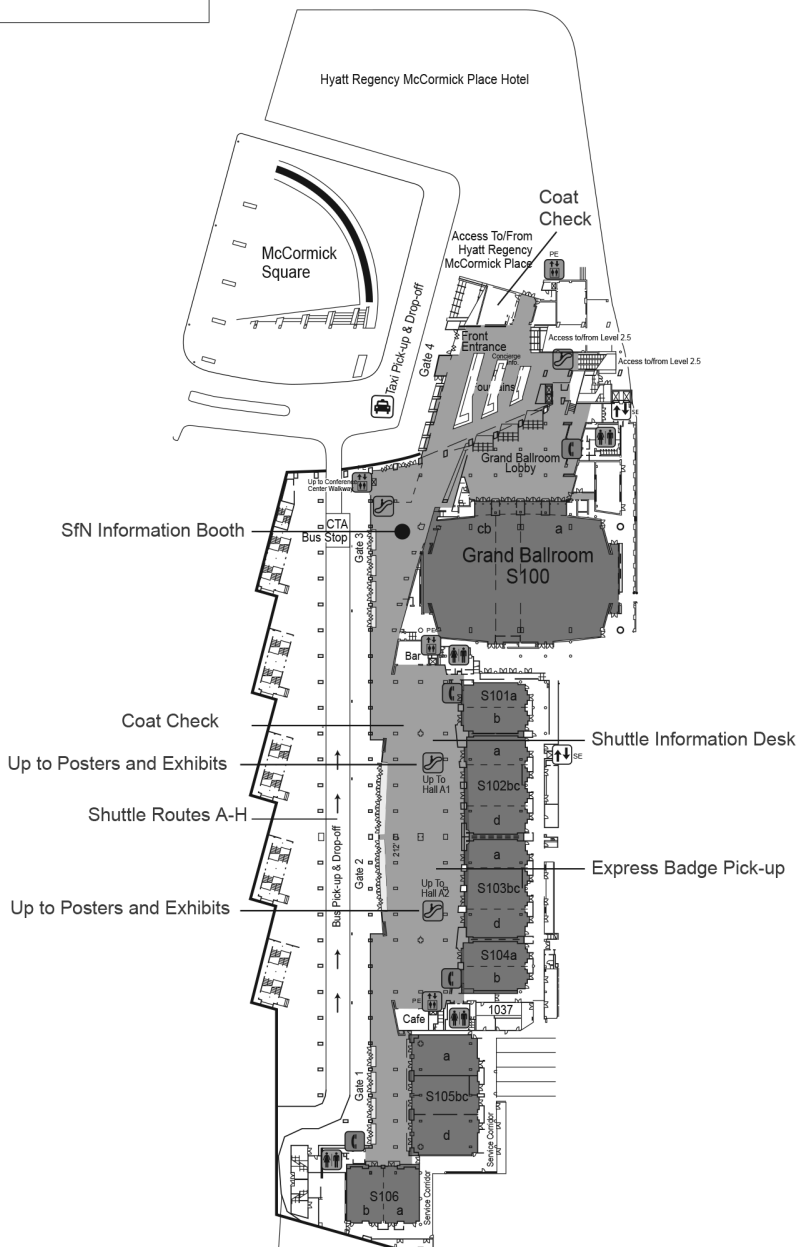


LEVEL 3 SOUTH

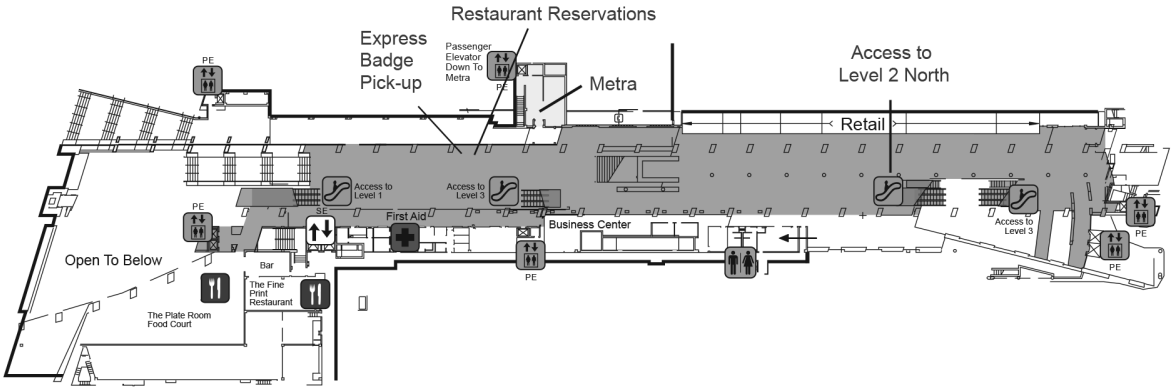
Convention Center Floor Plans

McCORMICK PLACE
2301 S. MARTIN LUTHER KING DRIVE
CHICAGO, ILLINOIS 60616

LEVEL 1 SOUTH

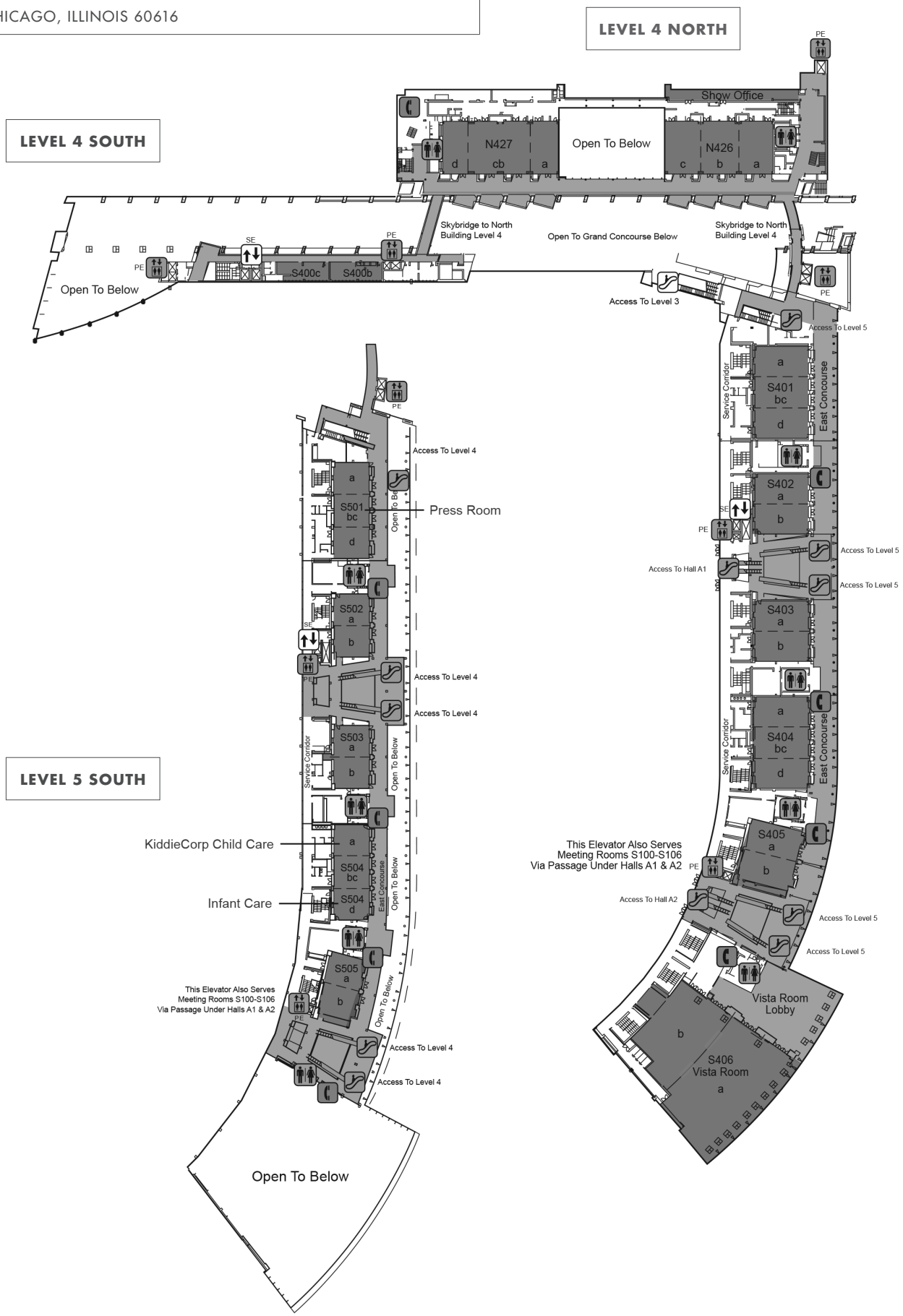


LEVEL 2.5 SOUTH



Convention Center Floor Plans

McCORMICK PLACE
2301 S. MARTIN LUTHER KING DRIVE
CHICAGO, ILLINOIS 60616



Present your science at SfN's 50th Annual Meeting

WASHINGTON, DC • OCTOBER 24–28

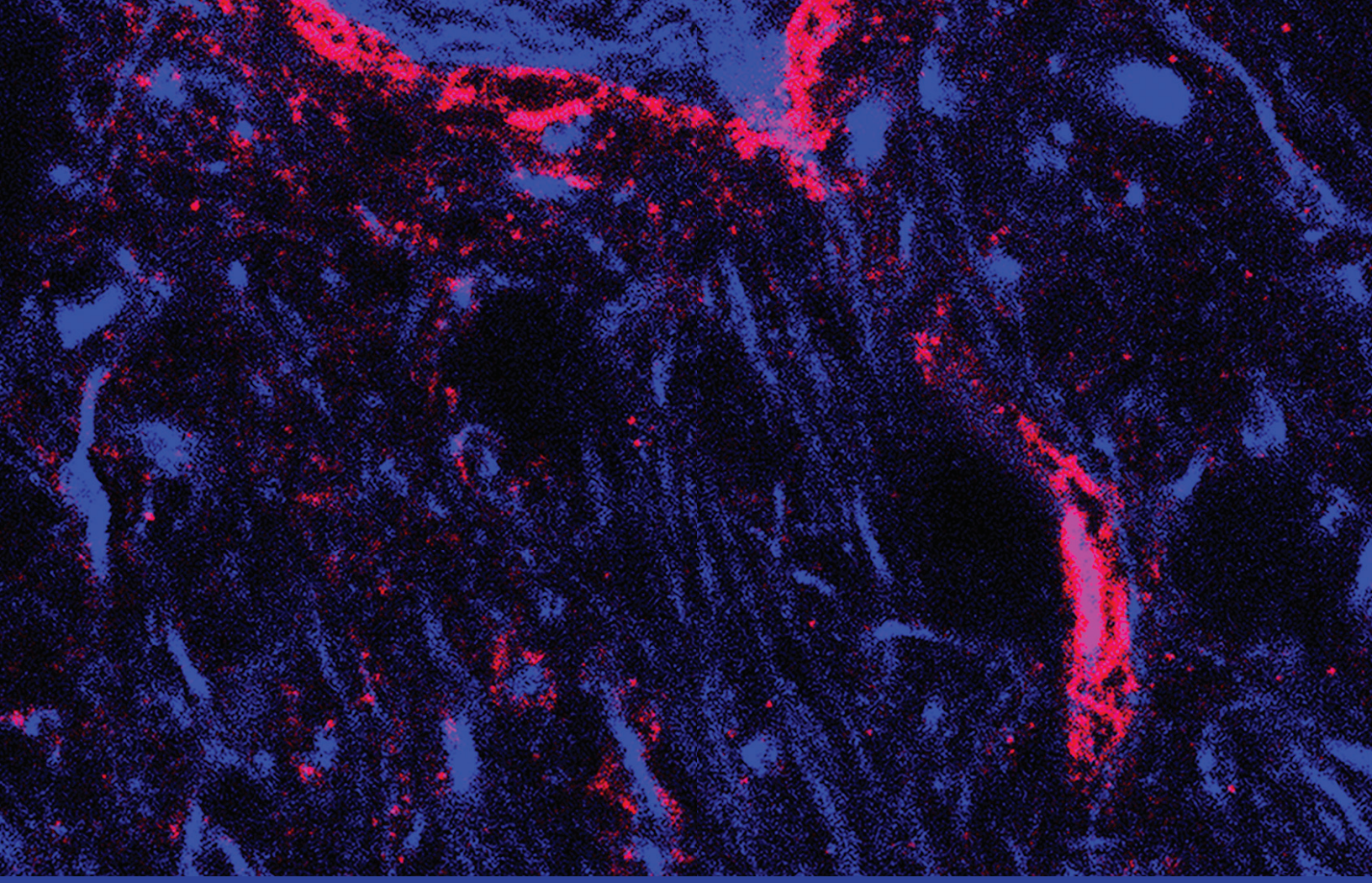
Proposal Deadlines

Symposia / Minisymposia: January 7

Abstracts: April 30

NEUROSCIENCE
2020
50TH ANNUAL MEETING

WWW.SfN.ORG/AM2020



1969–2019

SfN
SOCIETY *for* NEUROSCIENCE

50
CELEBRATING 50 YEARS

1121 14th Street NW, Suite 1010
Washington, DC 20005