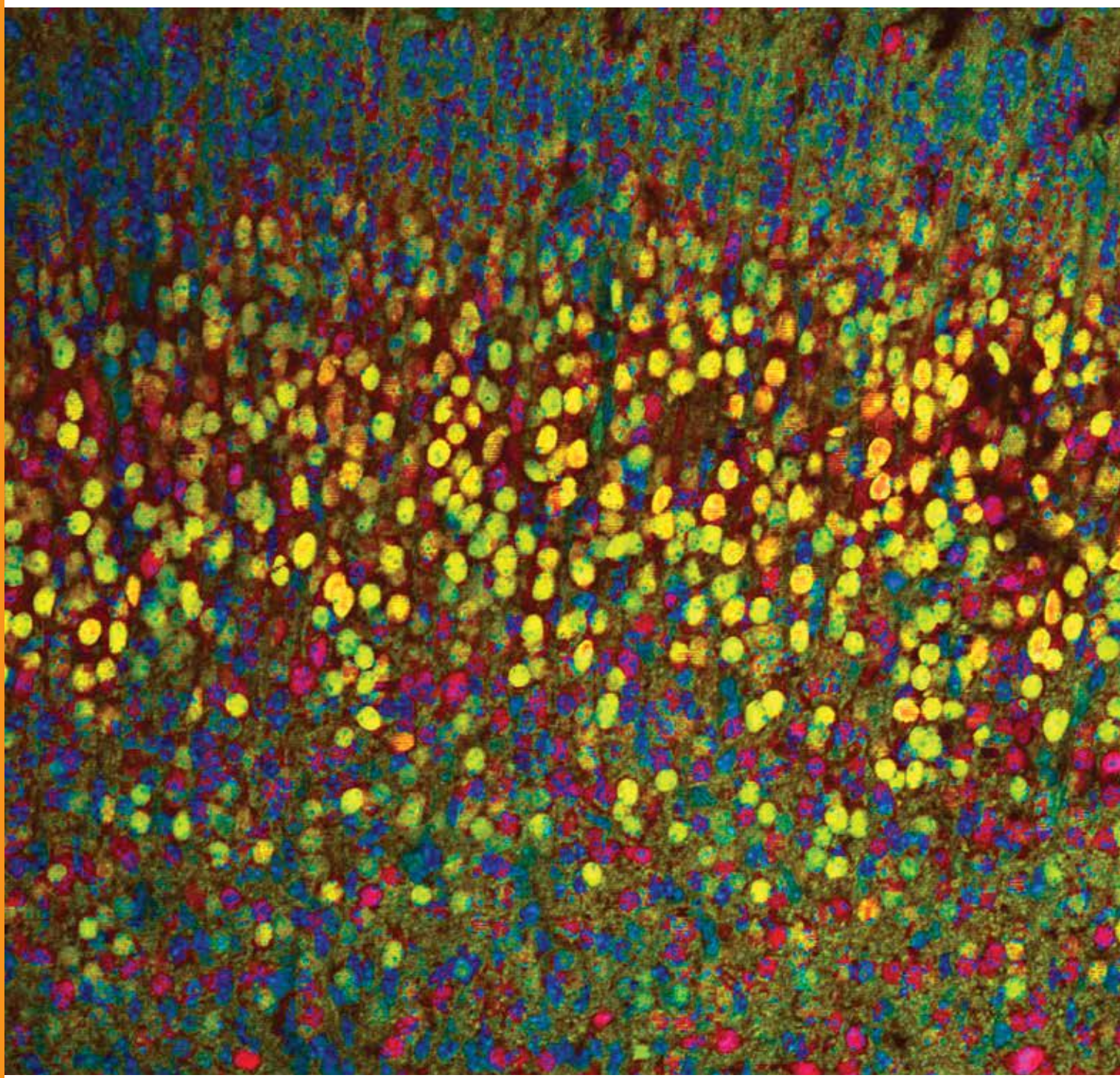
Neuroscience 2016

San Diego | November 12–16

Monday



Scientific Session Listings 273–470

Society for Neuroscience

Information at a Glance

Important Phone Numbers

Annual Meeting Headquarters Office

Logistics and Programming

Logistics

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

Programming

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

Volunteer Leadership Lounge

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

General Information Booths

San Diego Convention Center

Front of Box Office A, (619) 525-6224
Lobby D, (619) 525-6225
Sails Pavilion, (619) 525-6226

Press Office

Press Room

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

Exhibit Management

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

First Aid, Hospital and Urgent Care Numbers

First Aid Station

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

Scripps Mercy Hospital

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

Sharp Rees – Stealy Downtown San Diego Urgent Care

300 Fir Street
San Diego, CA 92101
(858) 499-2600

Note: The themes have been updated for Neuroscience 2016

Key to Poster Floor by Themes

Theme

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

NOTE: Theme J Posters will be located in Hall B beginning at 1 p.m. on Saturday, November 12, and will remain posted until 5 p.m., Sunday, November 13.

Code of Conduct at SfN Events

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

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

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

Cover Image: This image of a coronal section of the dorsal telencephalon from an embryonic day 18.5 mouse shows excitatory neurons of different layers (yellow and red). Haploinsufficiency for Rbm8a, a component of the exon junction complex, causes severe microcephaly and defective neurogenesis.

Hanqian Mao, Louis-Jan Pilaz, John J. McMahon, Christelle Golzio, Danwei Wu, Lei Shi, Nicholas Katsanis, and Debra L. Silver, 2016, *The Journal of Neuroscience*, 35(18): 7003-7018.

Complete Session Listing

Monday AM

LECTURE *San Diego Convention Center*

273. Quantal Release and Its Requirements — CME

Mon. 8:30 AM - 9:40 AM — Ballroom 20

Speaker: R. EDWARDS, *Univ. of California, San Francisco.*

Quantal release by exocytosis requires the transport of classical neurotransmitters into secretory vesicles. Vesicular transport activity thus defines the membranes, as well as the cells capable of transmitter release. However, the three families of vesicular transporters differ in ionic coupling. This lecture will discuss the biophysical properties of the transporters, the properties of secretory vesicles that influence their function, and the implications for synaptic transmission, including quantal size, non-vesicular efflux, synaptic vesicle pools and transmitter co-release.

SYMPOSIUM *San Diego Convention Center*

274. Microtubule and Tau-Based Therapy for Alzheimer's Disease and Other Brain Disorders — CME

Mon. 8:30 AM - 11:00 AM — 6A

Chair: I. GOZES
Co-Chair: E. MANDELKOW

The microtubule subunit, tubulin, is a major brain protein. Microtubule associated proteins like tau are key regulatory elements of neuronal and glial health. Microtubule dysfunction leads to blockade of axonal transport, glial impairment, and synaptic dysfunction/loss, which are hallmarks of brain diseases. This symposium will focus on microtubules in different cell types for a better understanding of brain function in health and disease, and toward improved diagnostics and therapeutics.

8:30 **274.01** Introduction.

8:35 **274.02** ● Common microtubule associated genes regulating autism, schizophrenia and Alzheimer's disease: Toward new diagnostics and therapies. I. GOZES. *Sackler Sch. of Medicine, Tel Aviv Univ.*

9:10 **274.03** Mechanisms of microtubule loss during Alzheimer's disease. P. W. BAAS. *Drexel Univ. Col. of Med.*

9:45 **274.04** Inclusion body formation in oligodendrocytes: New horizons for microtubule based-therapies in multiple system atrophy. C. RICHTER-LANDSBERG. *Univ. Oldenburg.*

10:20 **274.05** Microtubule-associated protein τ: Drug design and frontotemporal dementias. E. M. MANDELKOW. *German Ctr. for Neurodegenerative Diseases(DZNE).*

10:55 **274.06** Closing Remarks.

SYMPOSIUM *San Diego Convention Center*

275. Current Topics in Chronic Pain: From Molecules to Medicine — CME

Mon. 8:30 AM - 11:00 AM — 6B

Chair: C. L. STUCKY
Co-Chair: X. DONG

Chronic pain is a persistent, debilitating condition stemming from a variety of etiologies and diseases. Over 1.5 billion people worldwide suffer from chronic pain that is only partially alleviated by current therapies and treatments. Recent studies have elucidated novel molecular and cellular players that drive chronic pain in animal models and human conditions. This symposium will review these advances and discuss their implications for the diagnosis and treatment of chronic pain patients.

8:30 **275.01** Introduction.

8:35 **275.02** The contribution of Mrgpr GPCRs to persistent pain. X. DONG. *Johns Hopkins Univ. Sch. of Med.*

9:10 **275.03** Dissecting chronic pain mechanisms in animal models of disease. C. L. STUCKY. *Med. Col. of Wisconsin.*

9:45 **275.04** ● Nav1.7: Closing in on personalized pharmacotherapy for pain. S. G. WAXMAN. *Yale Univ. Sch. of Med. and VA Connecticut.*

10:20 **275.05** ● Exploring pain pathophysiology in patients. C. L. SOMMER. *Univ. of Wuerzburg.*

10:55 **275.06** Closing Remarks.

SYMPOSIUM *San Diego Convention Center*

276. Fronto-Subthalamic Circuits for Control of Action and Cognition — CME

Mon. 8:30 AM - 11:00 AM — 6F

Chair: A. R. ARON

This session will report new findings about the cognitive functions and computational properties of the circuit linking frontal cortex and subthalamic nucleus (STN) of the basal ganglia. Diverse and novel technical approaches in humans are taken to record cortical and STN electrophysiology at the same time, to record single-unit human STN activity, to use 7T fMRI, and to stimulate STN optogenetically in mice. The role of the circuit is highlighted for stopping and pausing behavior and cognition.

8:30 **276.01** Introduction.

8:35 **276.02** Electrophysiological correlates of dynamic decision thresholds in humans. P. BROWN. *Univ. of Oxford.*

9:10 **276.03** Dorsomedial frontal cortex and subthalamic nucleus during decision-making with multiple alternatives. B. U. FORSTMANN. *Univ. of Amsterdam.*

9:45 **276.04** A subthalamic-nucleus-mediated interrupt has broad motor and non-motor effects. A. ARON. *UCSD.*

10:20 **276.05** Single unit activity in human subthalamic nucleus during decision conflict, adaptation, and memory. K. A. ZAGHLOUL. *NIH.*

Mon. AM

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:55 **276.06** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

277. Human Brain Development and Maturation: Animal Brain Mapping, Human Brain Imaging, and Computer Simulation — CME

Mon. 8:30 AM - 11:00 AM — 28A

Chair: K. ISHIZUKA
Co-Chair: T. SHIMOGORI

The fundamental goal of neuroscience is to understand the human brain. With this goal in mind, comprehensive data collection and analysis have begun in each scientific area and in countries around the world. However, these datasets need to be connected to one another beyond the methodological principles to reach the final goal. This session will discuss a proposal for a symposium in which investigators from representative nation-level projects can meet and discuss how to work together for the future of neuroscience.

8:30 **277.01** Introduction.

8:35 **277.02** Conserved molecular mechanism of early life experience dependent circuit development: Mouse to marmoset. T. SHIMOGORI. *RIKEN.*

8:55 **277.03** Transcriptomic features of primate brain development. J. MILLER. *Allen Inst. for Brain Sci.*

9:15 **277.04** Autism-like behaviors and germline transmission of transgenic monkeys overexpressing MeCP2. Z. QIU. *Shanghai Institutions for Biol. Sci.*

9:35 **277.05** Molecular signature to brain structure and function in neurodevelopmental disorders. K. ISHIZUKA. *Johns Hopkins Univ.*

9:55 **277.06** The UNC early brain development study: New insights into human postnatal brain development. J. H. GILMORE. *Univ. of North Carolina Sch. of Med.*

10:15 **277.07** Bridging the gap - from genes to cognition. S. GRILLNER. *Karolinska Inst.*

10:35 **277.08** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

278. Neurogenetic Insights Into Speech and Language From Birds and Bats — CME

Mon. 8:30 AM - 11:00 AM — 6E

Chair: S. C. VERNES
Co-Chair: M. M. YARTSEV

Language and speech are core human traits. Comprehension of their neurological and genetic basis is rapidly advancing by studying relevant traits, such as vocal learning and acoustic communication in mammalian and non-mammalian models. This session will highlight these advances, with emphasis on emerging studies in songbirds and bats. The session will consider benefits of integrating findings across species to understand the neurogenetic mechanisms of vocal learning to ultimately shed light on human spoken language.

8:30 **278.01** Introduction.

8:35 **278.02** Dopaminergic error signals in birdsong support a general model of trial and error learning. J. H. GOLDBERG. *Cornell Univ.*

8:55 **278.03** MicroRNA miR-9 regulates vocal learning and performance in zebra finches. X. LI. *Louisiana State Univ. Hlth. Sci. Ctr.*

9:15 **278.04** Vocal production learning in bats - a perspective from behavioral ecology. M. KNÖRNSCHILD. *Freie Univ. Berlin & Smithsonian Tropical Res. Inst.*

9:35 **278.05** Studying the neurobiology of vocal communication and learning in bats. M. M. YARTSEV. *Univ. of California, Berkeley.*

9:55 **278.06** The genetic basis of vocal learning: What can we learn from bat genomes. S. VERNES. *Max Planck Inst. for Psycholinguistics.*

10:15 **278.07** Parallels between bird's song and human speech at the genetic and epigenetic level. M. WIRTHLIN. *Carnegie Mellon Univ.*

10:35 **278.08** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

279. Mesoscale Imaging of Cortical Function and Dysfunction in Mice — CME

Mon. 8:30 AM - 11:00 AM — 29D

Chair: J. WATERS

The skulls of mice are relatively transparent, permitting relatively non-invasive optical access to the neocortex. This minisymposium presents six recent studies that have leveraged optical access and activity-dependent indicators and opsins to probe the function and dysfunction of the neocortex at the "mesoscale" recording and modulating the activities of cortical areas in mice performing behavioral tasks.

8:30 **279.01** Introduction.

8:35 **279.02** Mesoscale imaging of cortical visual areas and visually-guided behaviors. J. WATERS. *Allen Inst. For Brain Sci.*

8:55 **279.03** Mesoscale flow of cortical activity during vision, behavior and epilepsy. M. CARANDINI. *Univ. Col. London.*

9:15 **279.04** Widefield calcium imaging across neocortex during whisker-based tactile discrimination. F. HELMCHEN. *Univ. of Zurich, Brain Res. Inst.*

9:35 **279.05** The role of cortex in skilled motor actions. A. HANTMAN. *Howard Hughes Med. Inst.*

9:55 **279.06** ● Optical mapping of functional connectivity from mouse to man. J. P. CULVER. *Washington Univ. in St Louis.*

10:15 **279.07** Functional and structural connectivity of the default mode network in wild type and Alzheimer's mice. J.D. WHITESELL. *Allen Inst. for Brain Sci.*

10:35 **279.08** Closing Remarks.

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LECTURE *San Diego Convention Center*

280. DAVID KOPF LECTURE ON NEUROETHICS - Reforming Forensic Science: Some Insights From Research on Vision and Memory

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

Speaker: T. D. ALBRIGHT, *Salk Inst. For Biol. Studies.*

Support contributed by: David Kopf Instruments

In its 2009 report, *Strengthening Forensic Science in the United States: A Path Forward*, the National Academy of Sciences identified a number of significant weaknesses in forensic science, which have contributed to wrongful convictions and have threatened public confidence in our criminal justice system. These problems have prompted broad calls for reform of the processes by which forensic evidence is acquired, analyzed, and interpreted. Several types of forensic analyses involve evaluation of complex visual patterns or memories of visual experiences. Advances in understanding of brain systems for visual sensation, perception, and memory can help shape forensic reform by illuminating the relevant sensory and cognitive processes, their limitations, and factors that can improve human performance in a forensic context.

LECTURE *San Diego Convention Center*

281. Understanding Mammalian Microcircuits: Let Inspiration Guide the Way — CME

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

Speaker: J. L. FELDMAN, *UCLA.*

More than 25 years since our discovery of the pre-Bötzinger Complex, the core of the circuit for breathing, the underlying mechanisms governing its dynamics remain elusive and are much more complex than we first thought. This lecture will address how novel emergent mechanisms, but not pacemakers, inhibition, or bursting, are likely to be critical and describe the roles the pre-BötC plays in regulation of body function, other movements, and emotion. The neural circuit controlling breathing is inimitably tractable and may inspire general strategies for elucidating other neural microcircuits.

NANOSYMPOSIUM

282. Modeling Neuropsychiatric Disease

Theme A: Development

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

8:00 **282.01** Modeling Zika virus exposure with human iPSC-derived neural cells. Z. WEN*; H. TANG; C. HAMMACK; S. C. OGDEN; X. QIAN; Y. LI; B. YAO; M. XU; Y. CHENG; E. M. LEE; J. SHIN; F. ZHANG; W. HUANG; J. TCW; K. M. CHRISTIAN; R. A. DIDIER; K. BRENNAND; W. ZHENG; P. JIN; H. SONG; G. MING. *Emory Univ. Sch. of Med., Emory Univ. Sch. of Med., Emory Univ. Sch. of Med., Florida State Univ., Johns Hopkins Univ. Sch. of Med., Emory Univ. Sch. of Med., NIH, Icahn Sch. of Med. at Mount Sinai, Johns Hopkins Univ. Sch. of Med., Florida State Univ., Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med.*

8:15 **282.02** Differentiation of human neural progenitors to glutamate-responsive cells in fragile X syndrome, a variant of autism. M. L. CASTRÉN*; V. S. ACHUTA. *Univ. of Helsinki, Med. Fac.*

8:30 **282.03** Modeling drug response in autism using pluripotent stem cells. C. MARCHETTO*; Y. KIM; R. SANTOS; A. D. MENDES; S. LINKER; F. GAGE. *Salk Inst.*

8:45 **282.04** Modeling network regulators of genetic predisposition to schizophrenia using stem cells. K. BRENNAND*; B. HARTLEY; S. ZHU; A. TOPOL; J. ENGLISH; M. HAUBERG; N. TRAN; C. RITTENHOUSE; A. SIMONE; D. RUDERFER; H. SHAH; G. CAGNEY; J. RAPOPORT; F. GAGE; P. SKLAR; M. MATTHEISEN; D. COTTER; G. FANG. *Icahn Sch. of Med. at Mount Sinai, Royal Col. of Surgeons in Ireland, Aarhus Univ., Salk Inst. for Biol. Studies, Conway Inst., Natl. Inst. of Mental Hlth.*

9:00 **282.05** Idiopathic autism patient-derived neural stem cells display defects in neurite outgrowth, cell migration, and cellular signaling pathways. S. PREM*; M. WILLIAMS; C. MCDERMOTT; X. ZHOU; P. YEUNG; C. LU; Z. PANG; L. BRZUSTOWICZ; P. MATTESON; J. MILLONIG; E. DICICCO-BLOOM. *Rutgers Robert Wood Johnson Med. Sch., Rutgers Grad. Sch. of Biomed. Sci., Queens College, City Univ. of New York, Rutgers Robert Wood Johnson Med. Sch., Rutgers Univ.*

9:15 **282.06** ● MicroRNA dysregulation in an induced pluripotent stem cell model of bipolar disorder. M. BAME*; M. MCINNIS; S. O'SHEA. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

9:30 **282.07** ● A novel human iPSC-based model of Alzheimer's disease generated by knock-in of early-onset AD mutations displays disease-relevant, zygosity-dependent phenotypes. D. PAQUET*; D. KWART; A. CHEN; A. SPROUL; S. JACOB; S. TEO; K. M. OLSEN; A. GREGG; S. NOGGLE; M. TESSIER-LAVIGNE. *The Rockefeller Univ., Columbia Univ., The New York Stem Cell Fndn. Res. Inst.*

9:45 **282.08** Modeling for genetic risk for schizophrenia in iPSCs and mice reveals synaptic release deficits. N. KIM*; Z. WEN; J. LIU; K. YOON; Y. ZHOU; Y. LIN; Z. GUO; X. WANG; H. YU; K. M. CHRISTIAN; K. HSU; W. LI; X. LU; H. SONG; G. MING. *Johns Hopkins Univ., Johns Hopkins Univ. Sch. of Med., Univ. of Texas Hlth. Sci. Ctr. at San Antonio, Shanghai Jiao Tong Univ., Natl. Cheng Kung Univ.*

10:00 **282.09** Investigation of GRIN2B dosage in developing neurons. G. MAUSSION*; S. TORRES-PLATAS; C. VASUTA; H. PENG; C. BOUDREAU-PINSONNEAULT; A. DIALLO; J. THÉROUX; C. GIGEK; L. CRAPPER; G. TURECKI; E. CHEN; K. ADAMS; N. MECHAWAR; T. WONG; C. ERNST. *Douglas Mental Hlth. Univ. Inst.*

10:15 **282.10** Studying serotonergic neurotransmission using human pluripotent stem cell derived neurons *in vitro*. K. C. VADODARIA*; S. DAVE; C. FREDLENDER; L. FUNG; X. LI; F. GAGE. *Salk Inst. For Biol. Sci.*

10:30 **282.11** Human FTD iPSC-derived neurons provide novel insights into imbalance of iron homeostasis and neurodegeneration. Y. ZHANG*; B. SCHMID; N. K. NIKOLAISEN; M. A. RASMUSSEN; B. I. ALDANA; K. CALLOE; T. C. STUMMANN; H. M. LARSEN; T. T. NIELSEN; J. HUANG; L. YE; F. XU; L. BOLUND; L. K. BAK; H. S. WAAGEPETERSEN; Y. LUO; J. E. NIELSEN; B. HOLST; C. CLAUSEN; P. HYTTEL; K. K. FREUDE. *Univ. of Copenhagen, Bioneer A/S, H. Lundbeck A/S, Danish Dementia Res. Centre, Rigshospitalet, Univ. of Copenhagen, BGI Res., Aarhus Univ.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:45 **282.12** Differential gene expression patterns and synaptic functions for each genetic class of Angelman syndrome patient-derived neurons. M. ISHIKAWA*; H. OKUNO; S. TANAKA; Y. NAKATAKE; H. KOMANO; W. AKAMATSU; M. KO; K. KOSAKI; S. SAITOH; H. OKANO. *Dept. Physiol., Keio Univ. Sch. Med., Dept. Syst. Med., Cent. Genet. Regenerat. Med., Juntendo Univ., Sch. Med., Cent. Med. Genet., Keio Univ., Sch. Med., Dept. Pediat. and Neonatol., Nagoya City Univ., Grad. Sch. Med. Sci.*

11:00 **282.13** Altered doses of psychiatric risk factor CYFIP1 lead to dysregulated protein and behavioral abnormalities in models of psychiatric disorders. K. YOON*; F. R. RINGELING; Y. ZHOU; H. N. NGUYEN; S. J. TEMME; N. KIM; Y. LIN; B. XIAO; K. HSU; S. CANZAR; W. LI; P. WORLEY; K. M. CHRISTIAN; H. SONG; G. MING. *Johns Hopkins Univ., Johns Hopkins Univ., Shanghai Jiao Tong Univ., Natl. Cheng Kung Univ., Sichuan Univ., Toyota Technological Inst., Shanghai Jiao Tong Univ., Johns Hopkins Univ.*

11:15 **282.14** ● The controlled formation of human vascularized neural assemblies using synthetic hydrogel technologies and the application of the assembled neural tissues in human neurodevelopmental disease modelling. B. T. DALY*; A. DIAS; C. SOREF; W. MURPHY. *Human Models For Analysis of Pathways Ctr., Univ. of Wisconsin - Madison, Human Models for Analysis of Pathways Ctr.*

NANOSYMPOSIUM

283. Epilepsy: Mechanisms

Theme B: Neural Excitability, Synapses, and Glia

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

8:00 **283.01** Translational profiling of the dentate mature granule cells after pilocarpine-induced status epilepticus. K. CHO*; S. YUN; S. NAM; A. EISCH; J. HSIEH. *The Catholic Univ. of Korea, UTSW, The Catholic Univ. of Korea.*

8:15 **283.02** Dentate parvalbumin expressing chandelier cells show early reduction in excitability in experimental epilepsy. A. PRODDUTUR*; J. GUEVARRA; V. SANTHAKUMAR. *Rutgers New Jersey Med. Sch.*

8:30 **283.03** Testing for correlation between dentate gyrus anatomic pathology and frequency of spontaneous seizures in a mouse model of temporal lobe epilepsy. P. BUCKMASTER*; E. ABRAMS. *Stanford Univ., Stanford Univ.*

8:45 **283.04** Hippocampal corticotropin-releasing hormone neurons potently modulate hippocampal function, excitability, and seizure susceptibility. A. HOOPER*; J. MAGUIRE. *Tufts Univ., Tufts Univ. Sch. of Med.*

9:00 **283.05** Systemic delivery of antagomir-134 produces anti-epileptogenic effects. C. R. RESCHKE*; V. R. VANGOOR; M. ROSSO; G. P. BRENNAN; L. F. A. SILVA; A. SANZ-RODRIGUES; A. BATOOL; E. JIMENEZ-MATEOS; M. CAMPBELL; J. PASTERKAMP; D. C. HENSHALL. *Royal Col. of Surgeons in Ireland, UMC Utrecht, Trinity Col. Dublin.*

9:15 **283.06** Can a spider venom fix Dravet Syndrome? K. L. RICHARDS*; C. J. MILLIGAN*; V. HERZIG; R. J. RICHARDSON; M. GRUNNET; C. A. REID; G. F. KING*; S. PETROU*. *Florey Inst. of Neurosci. and Mental Hlth., Univ. of Queensland, Neurosci. Drug Discovery, The Univ. of Melbourne, The Univ. of Melbourne.*

9:30 **283.07** *In vivo* drug discovery of novel therapeutics for Dravet Syndrome using zebrafish. A. GRIFFIN*; K. HAMLING; M. DINDAY; S. BARABAN. *UCSF.*

9:45 **283.08** The role of $K_v\beta2$ in modulating in virto seizure activity in mice treated with the ketogenic diet. R. PARENT*; G. FISHER; H. BURNS; A. SMARSH; G. MURPHY. *Univ. of Michigan.*

10:00 **283.09** ● Electrophysiology-based HTS for positive allosteric modulators of N-Methyl-D-Aspartate receptors. N. B. FEDOROV; Y. A. KURYSHEV; J. FISHER; A. WRIGHT; C. WU; L. C. ARMSTRONG; C. MATHES*; M. ACKLEY. *Chantest, A Charles River Co., Sage Therapeut.*

NANOSYMPOSIUM

284. Brain Wellness and Aging: From Phenotypes to Mechanisms

Theme C: Neurodegenerative Disorders and Injury

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

8:00 **284.01** The oldest-old with preserved cognition and the full range of Alzheimer pathology. A. REZVANIAN; D. T. OHM; L. KUKREJA; T. D. GEFEN; S. WEINTRAUB; E. ROGALSKI; R. KIM; C. AGUIRRE; M. CORRADA; M. MESULAM*; C. KAWAS; C. GEULA. *Cognitive Neurol. and Alzheimer's Dis. Ctr., Univ. of California at Irvine, Sch. of Med.*

8:15 **284.02** Collateral information connectivity in brain maximizes around 7th decade in man to cognitively compensate for neurodegenerative changes during advanced ageing. P. K. ROY*. *Natl. Brain Res. Ctr.*

8:30 **284.03** Positive effect of aerobic exercise on the cortisol awakening response in healthy older adults: Results from the Brain in Motion Study. L. L. DROGOS*; K. L. WYNNE-EDWARDS; R. ZHOU; S. HALL; C. DUNCAN; M. J. POULIN. *Univ. of Calgary, Univ. of Calgary, Univ. of Calgary, Univ. of Calgary, Univ. of Calgary, Univ. of Calgary, Univ. of Calgary.*

8:45 **284.04** Physical activity modifies corticospinal excitability of the lower extremity in young and old adults. A. E. SMITH*; H. HASSANLOUEI; C. W. SUNDBERG; A. KUPLIC; S. K. HUNTER. *Univ. of South Australia, Marquette Univ.*

9:00 **284.05** The X-chromosome confers resilience against Alzheimer's disease toxicity. E. MINONES-MOYANO; L. BROESTL; A. ARNOLD; C. WHITE; D. BENNETT; P. DE JAGER; D. WANG; D. B. DUBAL*. *Univ. of California San Francisco, UCLA, Brigham and Women's Hospital, Harvard Med. School, and Broad Inst., Rush Univ.*

9:15 **284.06** ● Young human plasma as therapy for aging-associated cognitive disorders. S. MINAMI*; S. REGE; H. HACKBART; S. P. BRAITHWAITE. *Alkahest, Inc.*

9:30 **284.07** ● Identifying early mechanisms of Alzheimer's disease synaptic pathology for novel therapeutic strategies. G. E. STUTZMANN*; S. CHAKROBORTY; S. E. RILEY; A. LITTLEFIELD; C. A. BRIGGS; W. FROST; J. BUOLAMWINI. *Rosalind Franklin Univ. /Chicago Med. Sch., Rosalind Franklin Univ. /Chicago Med. Sch., Rosalind Franklin Univ. / College of Pharm., Rosalind Franklin Univ. /Chicago Med. Sch.*

9:45 **284.08** Aged rodents are behaviorally and neurophysiologically sensitive to combinations of inflammatory and anticholinergic manipulations related to delirium. E. Y. KIMCHI*; B. F. COUGHLIN; S. S. CASH. *Massachusetts Gen. Hosp., Massachusetts Gen. Hosp.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
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10:00 **284.09** Age-dependent increase in membrane lipid deregulation observed in brain regions vulnerable to age-related pathology. S. CAUGHLIN*; K. YEUNG; D. F. CECHETTO; S. N. WHITEHEAD. *The Univ. of Western Ontario, The Univ. of Western Ontario.*

10:15 **284.10** Store-operated calcium channel complex in postsynaptic spines as a new therapeutic target for Alzheimer's disease treatment. I. BEZPROZVANNY*; H. ZHANG; S. SUN; E. PCHITSKAYA; E. POPUGAEVA. *UT Southwestern Med. Ctr., St Petersburg State Polytechnical Univ.*

10:30 **284.11** Pin1 regulates dendritic spines in Aβ42 treated neurons. J. S. MALTER*; N. STALLINGS; M. O'NEAL; J. HU; I. BEZPROZVANNY. *UT Southwestern, UT Southwestern.*

10:45 **284.12** Role of Calcium in mediating MPP^+ toxicity in SN and VTA dopaminergic neurons. O. LIEBERMAN*; S. CHOI; E. KANTER; D. SULZER; E. MOSHAROV. *Columbia Univ.*

11:00 **284.13** Genetic impairment of the store-operated Ca^{2+} signaling triggers autophagic dysfunction in iPSC-derived neurons from PARK14/PLA2g6ex2^{KO} and Orai1^{KO} mouse models. A. YEN*; G. MOSTOSLAVSKY; V. BOLOTINA. *Boston Univ. Sch. of Med., Boston Univ. Sch. of Med.*

11:15 **284.14** Causal relationship between store-operated Ca^{2+} signaling, autophagy, UPR and viability of DA neurons, and its role in Parkinson's disease. V. M. BOLOTINA*; A. YEN; Q. ZHOU. *Boston Univ. Sch. of Med.*

NANOSYMPOSIUM

285. Development of Novel Therapeutics for Alzheimer's Disease: *In Vitro* Studies

Theme C: Neurodegenerative Disorders and Injury

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

8:00 **285.01** Functional brain activation patterns in cognitively normal older adults are differentially associated with Alzheimer pathology and white matter hyperintensities. B. T. GOLD*; C. BROWN; J. HAKUN; Y. JIANG; C. SMITH. *Univ. of Kentucky Chandler Med. Ctr.*

8:15 **285.02** Environmental enrichment changes hippocampal network activity and modifies its sensitivity to amyloid-β *in vitro*. A. GONZALEZ ISLA*; F. VAZQUEZ-CUEVAS; F. PENA-ORTEGA. *Univ. Nacional Autónoma De México, Univ. Nacional Autónoma de Mexico.*

8:30 **285.03** A study of brain glutathione levels in anterior and posterior cingulate in mild cognitive impairment and Alzheimer's disease. S. SAHARAN; S. MORE; S. A. KHAN; M. TRIPATHI; P. K. MANDAL*. *Natl. Brain Res. Ctr., AIIMS, Radiology, Johns Hopkins Univ.*

8:45 **285.04** ● Lack of neuronal uptake of τ antibodies impairs their efficacy in preventing τ pathology and related toxicity. E. E. CONGDON*; D. UJLA; D. SHAMIR; H. B. R. SAIT; E. M. SIGURDSSON. *New York Univ. Sch. of Med., New York Univ. Sch. of Med.*

9:00 **285.05** Kamikihito regulates axonal growth via cytosolic aspartate aminotransferase activation. R. KOBAYASHI*; H. WATARI; Y. SHIMADA; C. TOHDA. *Inst. of Natural Med., Univ. of Toyama, Dept. of Japanese Oriental Medicine, Grad. Sch. of Med. and Pharmaceut. Sciences, Univ. of Toyama.*

9:15 **285.06** Controlling post translational modifications to modulate τ aggregation: A toolbox approach. S. GUPTA*; G. K. VISWANATHAN; K. RALHAN. *Indian Inst. of Technol. Gandhinagar.*

9:30 **285.07** Tissue-specific ABCA1 agonist in Alzheimer's. M. BEN AISSA*; M. LADU; G. R. J. THATCHER. *Col. of Pharmacy, UIC, Univ. of Illinois at Chicago.*

9:45 **285.08** ● A small-molecule peptide inhibitor of Caspase-6 prevents neuronal degeneration in human primary neurons and reverses Caspase-6-dependent cognitive impairment in mice. P. PAKAVATHKUMAR*; A. NOËL; J. AHLFORS; A. C. LEBLANC. *Jewish Gen. Hosp., McGill Univ., New World Labs. Inc.*

NANOSYMPOSIUM

286. Structural Changes, Connectivity, and Deep Brain Stimulation Treatment in Parkinson's Disease

Theme C: Neurodegenerative Disorders and Injury

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

8:00 **286.01** Structural changes in the Substantia Nigra in Parkinson's disease. M. C. KEUKEN*; B. R. ISAACS; R. BALESAR; A. ALKEMADE; B. U. FORSTMANN. *UvA.*

8:15 **286.02** White matter structural changes in Parkinson's disease. A. RAGOTHAMAN*; E. L. DENNIS; M. DAIANU; J. GALVIS; Y. JIN; G. PRASAD; P. M. THOMPSON. *USC.*

8:30 **286.03** ▲ An exploratory whole-brain cohort study of structural connectivity of Parkinson disease progression. A. KAMALIAN*; F. RAHMANI; M. DOLATSHAHI; A. ANJOMSHOA; N. HOSSEINI; M. AARABI. *TEHRAN UNIVERSITY, Student Scientific Res. Ctr., Tehran Univ. of Med. Sci., Basir Eye Hlth. Res. Ctr.*

8:45 **286.04** Whole plasma associates with brain structural changes in early Parkinson disease: A DTI study. F. RAHMANI*; A. KAMALIAN; N. HOSSEINI; M. DOLATSHAHI; A. ANJOMSHOJA; M. AARABI. *Tehran Univ. of Med. Sci., Students' Scientific Res. Ctr.*

9:00 **286.05** A quantification of normative grey-matter structural variability, covariance, and heritability in the human cerebellum. C. J. STEELE*; S. PATEL; G. DEVENYI; J. KNIGHT; B. MISIC; M. CHAKRAVARTY. *Cerebral Imaging Centre, Douglas Mental Hlth. Uni, Max Planck Inst. for Human Cognitive and Brain Sciences, Campbell Family Mental Hlth. Res. Institute, Ctr. for Addiction and Mental Hlth., Univ. of Toronto, McGill Univ., McGill Univ.*

9:15 **286.06** Dopamine d2 receptors modulation of the striatal circuitry. K. BRAMI-CHERRIER*; G. KHARKWAL; J. E. LIZARDI-ORTIZ; A. B. NELSON; M. RAMOS; D. A. DEL BARRIO; D. SULZER; A. C. KREITZER; E. BORRELLI. *UCI, Columbia Univ., The Gladstone Inst., Univ. of California, San Francisco.*

9:30 **286.07** Intraoperative real-time ecog spectrogram for movement induced spectral change in patients with Parkinson's disease (pd). N. TIAN*; S. MIOCINOVIC; C. CORREA; A. MILLER; R. MOAZZEZI; C. DE HEMPTINNE; P. A. STARR; K. GOLDBERG. *Univ. of California, Berkeley, Univ. of California, San Francisco.*

9:45 **286.08** DBS of the STN creates impulse control disorders and fails to restore Parkinsonian apathy and action selection deficits. C. ANDERSON*. *Univ. of Utah.*

10:00 **286.09** Dopamine release in the nonhuman primate caudate and putamen depends upon site of stimulation in the subthalamic nucleus. P. H. MIN*; E. K. ROSS; H. JO; S. CHO; M. L. SETTELL; J. JEONG; P. S. DUFFY; S. CHANG; K. E. BENNET; C. D. BLAHA; K. H. LEE. *Mayo Clin.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:15 **286.10** Battery longevity of Medtronic Activa PC neurostimulator: Nonlinear regression of clinical battery decay curves and supplemental end of service thresholds. E. L. HARGREAVES*; R. P. PATEL; S. WONG; R. J. DIPAOLA; S. F. DANISH. *Robert Wood Johnson Med. School- Rutgers Univer, Robert Wood Johnson Med. School- Rutgers Univer, Robert Wood Johnson Med. School- Rutgers Univer.*

NANOSYMPOSIUM

287. Transplants and Other Treatments of Parkinson's Disease

Theme C: Neurodegenerative Disorders and Injury

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

8:00 **287.01** ● Transplantation of neural stem cells for Parkinson's disease, an update of the first-in-human clinical study. I. GARITAONANDIA; R. GONZALEZ; M. POUSTOVOITOV; T. ABRAMIHINA; A. NOSKOV; T. CHRISTIANSEN-WEBER; G. SHERMAN; A. SEMECHKIN; L. LAURENT; J. ELSWORTH; E. SNYDER; D. REDMOND; R. A. KERN*. *Intl. Stem Cell Corp, Univ. of California San Diego, Yale Univ. Sch. of Med., Sanford-Burnham-Prebys Med. Discovery Inst.*

8:15 **287.02** Transplants of human fetal dopamine neurons into putamen of Parkinson's patients survive for at least 27 years without immunosuppression. C. R. FREED*; R. E. BREEZE; B. A. SYMMES; S. FAHN; D. EIDELBERG; W. ZHOU. *Univ. of Colorado, Univ. of Colorado, Columbia University/Weill Cornell Med. Ctr., Feinstein Inst. for Med. Res.*

8:30 **287.03** ● Extensive graft derived dopaminergic innervation in degenerating Parkinsonian brain 24 years after transplantation. W. LI*; E. ENGLUND; H. WIDNER; B. MATTSSON; D. VAN WESTEN; J. LÄTT; S. REHNCRONA; P. BRUNDIN; A. BJÖRKLUND; O. LINDVALL; J. LI. *Wallenberg Neurosci. Ctr., Div. of Oncology and Pathology, Lund Univ. Hosp., Div. of Neurology, Lund Univ. Hosp., Neurobio. Unit, Wallenberg Neurosci. Centre, Lund Univ., Ctr. for Med. Imaging and Physiology, Lund Univ. Hosp., ivision of Neurosurgery, Lund Univ. Hosp., Ctr. for Neurodegenerative Science, Van Andel Res. Inst., Neurobio. Unit, Wallenberg Neurosci. Center, Lund Univ., Lund Stem Cell Center, Lund Univ. Hospital, Lund, Sweden.*

8:45 **287.04** Robust dopamine graft survival and normalized dopaminergic innervation does not obligate clinical recovery in a patient with Parkinson's disease. J. H. KORDOWER*; C. G. GOETZ; Y. CHU; G. M. HALLIDAY; D. J. MARMION; D. A. NICHOLSON; T. MUSIAL; A. J. STOESSL; V. SOSSI; T. B. FREEMAN; C. W. OLANOW. *Rush Univ. Med. Ctr., The Van Andel Inst., Univ. South Wales, Univ. of British Columbia, Univ. of South Florida, Mt. Sinai Sch. of Med.*

9:00 **287.05** Combining deep brain stimulation surgery with autologous peripheral nerve graft to the nucleus basalis of Meynert to treat non-motor symptoms in Parkinson's disease. J. E. QUINTERO; J. T. SLEVIN; A. J. ANDERSON-MOONEY; J. A. GURWELL; W. KIMMERER; G. A. GERHARDT*; C. G. VAN HORNE. *Univ. of Kentucky Dept. of Anat. and Neurobio., Univ. of Kentucky, Univ. of Kentucky, Univ. of Kentucky.*

9:15 **287.06** Sargramostim improves regulatory T cell and motor functions in a Phase 1 randomized clinical trial for Parkinson's disease. H. E. GENDELMAN; Y. ZHANG; P. SANTAMARIA; K. E. OLSON; C. R. SCHUTT; D. BHATTI; B. L. DYAVAR SHETTY; Y. LU; K. A. ESTES; E. HEINRICHS-GRAHAM; L. LARSON; J. L. MEZA; M. FOLLETT; E. FORSBERG; G. SIUZDAK; T. W. WILSON; C. PETERSON; R. MOSLEY*. *Univ. of Nebraska Med. Ctr., Nebraska Med., Univ. of Nebraska Med. Ctr., Univ. of Nebraska Med. Ctr., Univ. of Nebraska Med. Ctr., Scripps Res. Inst., Scripps Res. Inst., Univ. of Nebraska Med. Ctr.*

9:30 **287.07** Parkinson's, oxidative stress and osteopathic manipulation. N. MIKHAIL; S. M. ZAKHARY; G. TORRES; A. LEDER; J. DONOGHUE; J. D. MANCINI; S. YAO; J. R. LEHESTE*. *NYIT Col. of Osteo. Med., NYIT Col. of Osteo. Med.*

9:45 **287.08** ● A central role for LRRK2 in idiopathic Parkinson's disease. R. DI MAIO*; E. K. HOFFMAN; E. ROCHA; J. MCCOY; E. A. BURTON; T. G. HASTINGS; J. T. GREENAMYRE. *Univ. of Pittsburgh.*

10:00 **287.09** ● Interrogative Biology identifies p53-inducible gene 3 (PIG3) as a potential contributor to LRRK2-mediated neuronal cell death in Parkinson's disease. J. CHAUFTY; S. PHAT; J. RANJAN; K. HA; S. KIM; S. AKELLA; R. DEGAONKAR; C. BARLOW; K. THAPA*; M. KIEBISH; S. GESTA; B. SCHUELE; V. K. VISHNUDAS; N. R. NARAIN; R. SARANGARAJAN; P. NARAIN; J. LANGSTON. *Berg, LLC, Parkinson's Inst.*

10:15 **287.10** Combination of curcumin and ellagic acid mitigates rotenone induced oxidative and mitochondrial deficits in Parkinson's disease (PD) in mice. A. JUVEKAR*; D. KHATRI. *Inst. of Chem. Technol., Inst. of Chem. Technol.*

10:30 **287.11** Dance and Parkinson's disease: A community-based dance program improves performance in functional daily activities in people with Parkinson's disease. A. FOROUD*; A. P. FLYNN. *The Univ. of Lethbridge, The Univ. of Calgary.*

10:45 **287.12** A method to describe relative 3D motion between the rear and front body segments of rodents: Application om neurodegenerative diseases. T. KARAKOSTAS*; L. MIDDAUGH; A. GRANHOLM. *Rehabil. Inst. of Chicago, Med. Univ. of South Carolina.*

NANOSYMPOSIUM

288. Neural Coding in the Somatosensory System

Theme D: Sensory Systems

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

8:00 **288.01** The dynamics of neural signals about contact pressure - implications for bionic hands. S. J. BENSMAIA*; T. CALLIER; H. P. SAAL; B. DELHAYE. *Univ. of Chicago.*

8:15 **288.02** Activity hotspots evoked from peripheral nerves are asymmetrically organised across the dorsal column nuclei surface. A. J. LOUTIT*; T. MADDESS; J. R. POTAS. *The Australian Natl. Univ.*

8:30 **288.03** Peripheral nerves evoke reproducible signals with machine learnable features in the dorsal column nuclei. J. R. POTAS*; A. J. LOUTIT; S. J. REDMOND; G. STUART; J. W. MORLEY; T. MADDESS. *The Australian Natl. Univ., Univ. of New South Wales, Univ. of Western Sydney.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:45 **288.04** Perceptual and neural effects of cuneate nucleus microstimulation in primates. T. H. LUCAS; S. Y. SRITHARAN; I. M. PLANELL-MENDEZ; A. G. RICHARDSON*. *Univ. of Pennsylvania.*

9:00 **288.05** Restoring somatic sensation with thalamic microstimulation. Z. H. KISS*; L. H. KIM. *Univ. of Calgary.*

9:15 **288.06** Intracortical microstimulation in human somatosensory cortex. R. A. GAUNT*; S. N. FLESHER; J. L. COLLINGER; S. T. FOLDES; J. E. DOWNEY; E. C. TYLER-KABARA; S. J. BENSMAIA; A. B. SCHWARTZ; M. L. BONINGER. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Chicago, Univ. of Pittsburgh.*

9:30 **288.07** ● Direct cortical stimulation for sensory feedback. J. G. OJEMANN*; J. OLSON; J. CRONIN; K. WEAVER; K. COLLINS; A. GUTERSTAM; H. EHRSSON; D. CALDWELL; L. JOHNSON; L. SORENSEN. *Univ. of Washington, Univ. of Washington, Karolinska Institutet.*

9:45 **288.08** Towards artificial proprioception for brain-machine interfaces. J. E. O'DOHERTY*; P. N. SABES. *Univ. of California San Francisco.*

10:00 **288.09** Microstimulation of residual nerve fibers with Utah Slanted Electrode Arrays can restore biologically realistic cutaneous and proprioceptive percepts after hand amputation. G. A. CLARK*; D. M. PAGE; D. T. KLUGER; S. M. WENDLEKEN; T. S. DAVIS; C. DUNCAN; D. T. HUTCHINSON. *Univ. of Utah.*

10:15 **288.10** On the use of intraneural transversal thin-film electrodes to develop bidirectional bionic limbs. S. MICERA*. *Ecole Polytechnique Federale De Lausanne, Scuola Superiore Sant'Anna.*

10:30 **288.11** Evolution of human-in-the-loop neuroprosthesis - toward an artificial hand. D. J. TYLER*; E. GRACZYK; M. SCHIEFER; I. CUBEROVIC; K. MALONE; M. KEITH; J. ANDERSON. *Case Western Reserve Univ., Cleveland Dept. of Veterans Affairs Med. Ctr., Cleveland Dept. of Veteran's Affairs, Univ. Hosp., MetroHealth Med. Ctr.*

10:45 **288.12** Engineering an optimal afferent interface based on the brain's representation of limb state. L. E. MILLER*; R. CHOWDHURY; T. TOMLINSON; C. VERSTEEG. *Northwestern Univ., Northwestern Univ.*

NANOSYMPOSIUM

289. Voluntary Movements: Oral Motor and Speech

Theme E: Motor Systems

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

8:00 **289.01** Sensorimotor adaptation to real-time formant shifts is influenced by the direction and magnitude of shift. H. KOTHARE*; V. RAMANARAYANAN; B. PARRELL; J. F. HOUDE; S. S. NAGARAJAN. *Univ. of California, San Francisco, Educational Testing Service R&D, Univ. of Delaware.*

8:15 **289.02** Speech production without vocal tract sensory feedback. M. THOMPSON*; J. HOUDE; S. NAGARAJAN. *UCSF, Univ. of California, San Francisco.*

8:30 **289.03** Investigating the role of auditory feedback in the production of speech and non speech vocal behaviours. Z. K. AGNEW*; H. KOTHARE; S. NAGARAJAN; J. F. HOUDE. *UCSF Med. Sch., UCSF, UCSF.*

8:45 **289.04** A supralaryngeal neuromuscular apparatus for sonar beam-forming in echolocating bats. S. TRENT*; M. SMOTHERMAN. *Texas A&M Univ., Texas A&M Inst. for Neurosci.*

9:00 **289.05** Individuals with cerebellar degeneration correct for within-category variation of vowels even in the absence of auditory feedback. B. PARRELL*; Z. AGNEW; J. HOUDE; S. NAGARAJAN; R. IVRY. *Univ. of Delaware, Univ. of California, San Francisco, Univ. of California, Berkeley.*

9:15 **289.06** Neural correlates of language phenotypes in Autism Spectrum Disorder. J. A. SEGAWA*; J. A. TOURVILLE; Q. T. H. NGUYEN; F. I. KARAHANOGLU; P. WIGHTON; A. VAN DER KOUWE; M. D. TISDALL; R. A. FOWLER; J. SMALL; D. S. MANOACH; F. H. GUENTHER. *Boston Univ., Massachusetts Gen. Hosp., Salem State Univ.*

9:30 **289.07** ● Neural population dynamics in the primary motor, primary somatosensory, and cortical masticatory areas of the orofacial cortex during bite force generation at varying gapes. C. F. ROSS*; F. ARCE-MCSHANE; N. HATSOPOULOS; B. SESSLE; Y. LANKA. *Univ. of Chicago, Univ. of Toronto.*

9:45 **289.08** Intracortical microstimulation of primary orofacial motor cortex and its effect on jaw and tongue muscle recruitment. Y. V. RAM*; C. F. ROSS; N. HATSOPOULOS. *Univ. of Chicago.*

NANOSYMPOSIUM

290. Microbiome Gut Brain Axis

Theme G: Motivation and Emotion

Mon. 8:00 AM – *San Diego Convention Center*, 4

8:00 **290.01** Changes in behavior and gut microbiome induced by chronic treatment with the dopamine agonist quinpirole. H. SZECHTMAN*; T. JUNG; P. JUNG; L. RAVEENDRAN; Y. FARBOD; A. DVORKIN-GHEVA; B. SAKIC; M. SURETTE. *McMaster Univ.*

8:15 **290.02** ● Mice colonized with GAD microbiota display anxiety and depressive-like behaviour and changes in brain BDNF expression. E. PEREZ GUZMAN*; R. ANGLIN; G. DE PALMA; R. POTTS; J. LU; M. AMER; M. BAILEY; S. M. COLLINS; M. SURETTE; P. BERCIK. *McMaster Univ., Farncombe Family Digestive Hlth. Inst., McMaster Univ., Ctr. for Microbial Pathogenesis.*

8:30 **290.03** ● Prenatal stress alters intrauterine environment and contributes to adult female microbiome and behavioral changes. T. L. GUR; L. A. SHAY; A. VADODKAR; S. L. FISHER; M. T. BAILEY*. *The Ohio State Univ., The Ohio State Univ., The Res. Inst. at Nationwide Children's Hosp.*

8:45 **290.04** Gut-brain signalling modulates behavioural deficits in chronic stress independent of the microbiota. A. BHARWANI*; F. M. MIAN; M. G. SURETTE; J. BIENENSTOCK; P. FORSYTHE. *McMaster Univ., McMaster Univ., McMaster Brain-Body Inst., McMaster Univ., Farncombe Family Digestive Hlth. Res. Inst.*

9:00 **290.05** Neonatal colonization of the gastrointestinal tract with Bifidobacterium species alters CNS expression of synaptic plasticity-related genes. B. LUK*; M. ENGEVIK; J. VERSALOVIC. *Baylor Col. of Med., Texas Children's Hosp.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:15 **290.06** ● Regulation of microRNAs in the prefrontal cortex by the microbiota: Implications for brain and behaviour. A. E. HOBAN*; R. STILLING; F. SHANAHAN; T. G. DINAN; J. F. CRYAN; G. CLARKE. *Alimentary Pharmabiotic Ctr., APC Microbiome Inst., APC Microbiome Inst., APC Microbiome Inst.*

9:30 **290.07** ● The influence of microbiota on brain structure. J. A. FOSTER*; S. L. THOMPSON; J. ELLEGOOD; J. LERCH. *McMaster Univ., The Hosp. for Sick Children.*

NANOSYMPOSIUM

291. Marmoset Neurobiology

Theme H: Cognition

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

8:00 **291.01** ● MRI-based structural and functional mapping of marmoset brains. H. OKANO*; J. HATA; T. KANEKO. *Keio Univ. Sch. of Med., RIKEN Brain Sci. Inst.*

8:15 **291.02** Axonal projection map of areas around the superior temporal sulcus in the common marmoset. H. ABE*; T. TANI; H. MASHIKO; N. KITAMURA; K. SAKAI; H. MIZUKAMI; A. WATAKABE; T. YAMAMORI; N. ICHINOHE. *RIKEN Brain Sci. Inst., Natl. Ctr. for Neurol. and Psychiatry, Jichi Med. Univ.*

8:30 **291.03** Mapping connectivity of marmoset prefrontal cortex by serial two-photon tomography. A. WATAKABE*; J. WANG; M. TAKAJI; H. MIZUKAMI; A. WOODWARD; T. KAWASE; H. SKIBBE; Y. YAMAGUCHI; S. ISHII; T. YAMAMORI. *RIKEN, Jichi Med. Univ., Kyoto Univ.*

8:45 **291.04** A high-throughput neurohistological pipeline for whole-brain mesoscale circuit mapping for Marmoset. P. P. MITRA*; Y. S. TAKAHASHI; K. WEBER; M. K. LIN; K. HOSSAIN; B. HUO; A. S. TOLPYGO; D. D. FERRANTE; J. HATA; J. CHAN; H. MIZUKAMI; A. WATAKABE; T. YAMAMORI; N. KISHI; A. IRIKI; M. G. P. ROSA; E. SASAKI; H. OKANO. *Cold Spring Harbor Lab., RIKEN, Cold Spring Harbor Lab., Cold Spring Harbor Lab., Monash Univ., Jichi Med. Univ.*

9:00 **291.05** The marmoset brain architecture project: Sharing data on primate corticocortical connectivity through an open access web platform. M. G. ROSA*; P. MAJKA; J. M. CHAN; S. BAI; D. FERRANTE; P. P. MITRA. *Monash Univ., Australian Res. Council, Ctr. of Excellence for Integrative Brain Function, Monash Univ., Nencki Inst. of Exptl. Biol., Cold Spring Harbor Lab.*

9:15 **291.06** Two-photon calcium imaging using genetically-encoded calcium indicator in awake marmoset. O. SADAKANE*; M. UEDA; A. WATAKABE; H. MIZUKAMI; T. YAMAMORI. *RIKEN Brain Sci. Inst., Tokyo Med. and Dent. Univ., Jichi Med. Univ.*

9:30 **291.07** Subthreshold response properties of the primary auditory cortex in awake marmosets studied by intracellular recordings. L. GAO*; X. WANG. *Johns Hopkins Univ.*

9:45 **291.08** Pitch perception in marmosets. X. SONG*; M. S. OSMANSKI; Y. GUO; X. WANG. *Johns Hopkins Univ. Dept. of Biomed. Engin., Johns Hopkins Univ., Johns Hopkins Univ.*

10:00 **291.09** The role of frontal cortex in marmoset conversations. C. T. MILLER*. *UCSD.*

10:15 **291.10** ● Sustained motivation and its brain mechanisms in object manipulation by marmosets. Y. YAMAZAKI*; S. WATANABE; K. HIKISHIMA; E. SASAKI; C. J. PRICE; R. LEMON; H. OKANO; A. IRIKI. *Keio Univ., RIKEN Brain Sci. Inst., Keio Univ., Keio Univ., Central Inst. for Exptl. Animals, Univ. Col. London, UCL Inst. of Neurol., RIKEN Brain Sci. Inst.*

NANOSYMPOSIUM

292. Computational Models of Decision Making and Confidence

Theme H: Cognition

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

8:00 **292.01** ● Multitasking capability versus efficiency of representation in neural network architectures. S. MUSSLICK*; K. ÖZCIMDER; B. DEY; M. A. PATWARY; P. KRIEGER; T. L. WILLKE; J. D. COHEN. *Princeton Univ., Princeton Univ., Intel Corp., Princeton Univ.*

8:15 **292.02** Optimal policy for multi-alternative decision-making. S. TAJIMA*; J. DRUGOWITSCH; A. POUGET. *Univ. of Geneva, Harvard Med. Sch.*

8:30 **292.03** Human noise blindness and decision suboptimality. S. HERCE CASTAÑÓN*; D. BANG; J. DING; C. SUMMERFIELD. *Univ. of Oxford.*

8:45 **292.04** Fast encoding of current and past value computations in human Orbitofrontal Cortex. I. SAEZ*; J. LIN; E. CHANG; J. PARVIZI; G. SCHALK; R. T. KNIGHT; M. HSU. *Univ. of California Berkeley, Univ. of California Irvine, Univ. of California San Francisco, Stanford Univ., Wadsworth Ctr.*

9:00 **292.05** Computational and neural underpinnings of individual differences in human confidence. J. NAVAJAS*; C. HINDOCHA; P. E. LATHAM; B. BAHRAMI. *Univ. Col. London.*

9:15 **292.06** Intracranial electrocorticography supports dissociable representations for perceptual decisions and confidence judgments. M. A. PETERS*; T. THESEN; Y. D. KO; B. MANISCALCO; C. CARLSON; M. DAVIDSON; W. DOYLE; R. KUZNIECKY; O. DEVINSKY; E. HALGREN; H. LAU. *UCLA, New York Univ., Columbia Univ., NIH/NINDS, UCSD, UCLA.*

9:30 **292.07** The P300 in sequential perceptual decision making: From subjective evidence to confidence. J. HERDING*; S. LUDWIG; B. SPITZER; F. BLANKENBURG. *Freie Univ. Berlin, Universtity of Oxford.*

POSTER

293. Microglia Development and Function

Theme A: Development

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

8:00 A1 **293.01** Withdrawn.

9:00 A2 **293.02** A comparison of microglial distribution in embryonic primate and rodent using multiple immunofluorescence histochemistry. N. BARGER*; C. WEIDENTHALER; S. C. NOCTOR. *Univ. of California, Davis - MIND Inst., Univ. of California, Davis.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 A3 **293.03** Infiltrating monocytes promote brain inflammation, contribute to breakdown of the blood-brain barrier, and exacerbate neuronal damage after status epilepticus. N. H. VARVEL*; J. NEHER; A. BOSCH; W. WANG; R. RANSOHOFF; R. MILLER; R. DINGLEDINE. *Emory Univ., Hertie Inst. for Clin. Brain Res., Biogen, Northwestern Univ.*

11:00 A4 **293.04** Satellite microglia show spontaneous activity that is uncorrelated with activity of the attached neuron. E. WOGRAM*; S. WENDT; M. MATYASH; T. PIVNEVA; A. DRAGUHN; H. KETTENMANN. *Univ. of Heidelberg, Max-Delbrück-Center for Mol. Med., Bogomoletz Inst. of Physiol.*

8:00 A5 **293.05** Functional investigation of microglia involvement in the maturation of synapses during postnatal development of the somatosensory neocortex. C. M. MOSSER*. *INSERM U1128.*

9:00 A6 **293.06** *In utero* development of microglia: Instrinsic programs and impact of microbiota. M. S. THION*; D. LOW; J. CHEN; P. SQUARZONI; P. GRISEL; A. A. AMOYO; M. POIDINGER; S. PETTERSSON; S. GAREL; F. GINHOUX. *IBENS, INSERM U1024, CNRS UMR 8197, Singapore Immunol. Network, Agency for Science, Technol. and Res., Natl. Cancer Ctr., Lee Kong Chian Sch. of Med. and Sch. of Biol. Sciences, Nanyang Technological Univ., Dept. of Microbiology, Tumor and Cell Biology, Karolinska Inst.*

10:00 A7 **293.07** Sex differences in microglial and fast-spiking interneuron maturation in mice and in human disease. R. HANAMSAGAR*; M. ALTER; C. BLOCK; H. SULLIVAN; J. BOLTON; S. BILBO. *Duke Univ. Med. Ctr., Univ. of Pennsylvania, Duke Univ., Univ. of California, Irvine.*

11:00 A8 **293.08** Microglia and astroglia phenotype in a neuron specific - A_{2A} receptor overexpression model with age-like alterations. J. E. COELHO*; I. MARQUES-MORGADO; M. BADER; D. BLUM; L. V. LOPES. *Inst. De Medicina Mol., Max-Delbrück-Center for Mol. Med., Inserm URM-S1172, Univ. de Lille.*

8:00 A9 **293.09** The role of microglia and their CX3CR1 signaling in olfactory bulb neurogenesis. R. RESHEF*; E. KUDRAYAVISTKAYA; H. SHANI; N. RIMMERMAN; A. MIZRAHI; R. YIRMIYA. *Dept. of Psychology, The Hebrew Univ., Dept. of Neurobiology, The Hebrew Univ.*

9:00 A10 **293.10** Sex differences in microglia number and activation in the developing rat brain. A. TURANO*; J. LAWRENCE; J. SCHWARZ. *Univ. of Delaware.*

10:00 A11 **293.11** The distinct effects of prenatal stress on microglia morphologies in adult and embryonic brain and mediation by interleukin 6. S. B. GUMUSOGLU*; R. S. FINE; S. J. MURRAY; M. E. DAILEY; H. E. STEVENS. *Univ. of Iowa, Yale Univ., Univ. of Iowa, Univ. of Iowa Carver Col. of Med.*

11:00 A12 **293.12** Use of multiple sub-threshold glutamate stimuli to monitor brain cell calcium dynamics in cultures with decreasing microgial and astrocyte content. K. C. ST MARTHE*; C. N. POOLE; M. GRAGSTON; N. NGUYEN; T. PIEHLER; L. PIEHLER; M. A. DECOSTER. *Louisiana Tech. Univ., Univ. of Tennessee, US Army Res. Lab.*

8:00 A13 **293.13** Role of the complement receptor C3aR in excitotoxicity-induced neuropathology. H. LIAN*; X. LI. *Zhejiang Univ. Sch. of Med., Zhejiang Univ. Sch. of Med.*

POSTER

294. Environmental Influences on Adult Neurogenesis

Theme A: Development

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

8:00 B1 **294.01** ● Role of anti-oxidant supplementation on developing cerebellum of rats exposed to sodium arsenite ($NaAsO_2$). P. DHAR*; P. KUMAR; P. KAUSHAL. *All India Inst. of Med. Sci., All India Inst. of Med. Sci.*

9:00 B2 **294.02** Running enhances structural maturity of young adult-born dentate granule cells in mouse hippocampus. S. T. LUBEJKO*; N. SAH; C. VIVAR; H. VAN PRAAG. *Natl. Inst. On Aging, Ctr. for Res. and Advanced Studies of the Natl. Polytechnic Inst.*

10:00 B3 **294.03** Developmental influence of stress and fluoxetine on the oxytocinergic system in the california mouse (Peromyscus californicus). J. CRUZ*; S. PETERSON; E. A. BECKER. *St. Joseph's Univ.*

11:00 B4 **294.04** Early postnatal lipopolysaccharide exposure leads to enhanced neurogenesis and impaired communicative functions in rats. Y. PANG*; X. DAI; A. ROLLER; K. CARTER; I. PAUL; A. BHATT; R. LIN; L. FAN. *Univ. of Mississippi Dept. of Med., Univ. of Mississippi Med. Ctr.*

8:00 B5 **294.05** Regional distribution and cellular colocalization of KCC2 in ferret neocortex. F. T. DJANKPA*; M. CHATTERJEE; S. L. JULIANO. *Uniformed Services Univ. of the Hlth. Scienc, USUHS, Uniformed Services Univ. of the Hlth. Scienc.*

9:00 B6 **294.06** Role of metabolic and nutritional status in programming cognition by early-life stress: Potential for peripheral interventions using fatty acids. K. YAM*; E. NANINCK; L. SCHIPPER; S. LA FLEUR; A. GREFHORST; A. OOSTING; E. VAN DER BEEK; P. LUCASSEN; A. KOROSI. *Swammerdam Inst. For Life Sci., Nutricia Res. – Danone Nutricia Early Life Nutr., Dept. of Endrocrinol. and Metabolism, Academic Med. Ctr., Dept. of Intrnl. Medicine, Erasmus Univ. Med. Ctr.*

10:00 B7 **294.07** ▲ Maternal melatonin deprivation during pregnancy and lactation impairs spatial reference and working memory in adult rats. L. C. TEIXEIRA*; A. V. MACHADO-NILS; F. G. AMARAL; G. F. XAVIER; J. CIPOLLA NETO. *Univ. of Sao Paulo, Univ. of Sao Paulo.*

11:00 B8 **294.08** Hippocampal neuronal loss and impaired neurogenesis following repeated closed-head concussive impacts. D. A. PETERSON*; S. G. CHIREN; E. REISENBIGLER; N. JAMNIA; N. KAPECKI; G. DEJOSEPH; J. H. URBAN; R. A. MARR; G. E. STUTZMANN; D. A. KOZLOWSKI. *Rosalind Franklin Univ. Med. Sci., Rosalind Franklin Univ. Med. Sci., Rosalind Franklin Univ. Med. Sci., Rosalind Franklin Univ. Med. Sci., DePaul Univ.*

8:00 B9 **294.09** Early-age running enhances activity of adult-born dentate granule neurons following learning. O. SHEVTSOVA; Y. TAN; C. M. MERKLEY; G. WINOCUR; M. WOJTOWICZ*. *Univ. Toronto, Baycrest Inst.*

9:00 B10 **294.10** Adult neurogenesis in the dentate gyrus is regulated by α7 nAChR activation. S. L. OTTO*; J. L. YAKEL. *Natl. Inst. of Envrn. Hlth. Sci.*

10:00 B11 **294.11** Reversible developmental stasis in response to nutrient availability in Xenopus laevis CNS. C. K. THOMPSON*; C. R. MCKEOWN; H. T. CLINE. *The Scripps Res. Inst.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 B12 **294.12** Loss of the sulfate transporter Slc13a4 alters behavior and neurogenesis in adult mice. Z. ZHANG*; M. PIPER; P. DAWSON; D. SIMMONS. *SBMS, the Univ. of Queensland, Mater Res. Inst.*

8:00 B13 **294.13** Neurons born during reactive neurogenesis activate to Morris water maze similarly between binge alcohol exposed and control rats. C. R. GEIL*; K. NIXON. *Univ. of Kentucky.*

9:00 B14 **294.14** Effect of thyroxine on neurogenesis following galactic cosmic radiation. L. R. VOSE*; O. MIRY; K. R. GOPAUL; G. SUBAH; P. K. STANTON. *New York Med. Col.*

10:00 B15 **294.15** DREADD-mediated activation of adult hippocampal progenitors: Effects on neurogenesis and behavior. M. MAHESHWARI*; S. SHAH; S. PATI; A. RAWAT; J. CHELLIAH; V. A. VAIDYA. *Tata Inst. of Fundamental Res., Jawaharlal Nehru centre for Advanced Scientific Res.*

11:00 B16 **294.16** Oxytocin stimulates hippocampal neurogenesis via oxytocin receptor expressed in CA3 pyramidal neurons in adult mice. Y. LIN*; C. CHEN; K. HSU. *Inst. of Basic Med., Dept. of pharmacology.*

8:00 B17 **294.17** Adult neurogenesis in a crustacean brain: Serotonin levels influence the integration of adoptively transferred immune cells into a neurogenic niche. J. L. BENTON; B. S. BELTZ*. *Wellesley Col.*

9:00 B18 **294.18** Transient inhibition of neural stem cell proliferation during early life decreases adult dentate gyrus neurogenesis. M. YOUSSEF*; G. KIRSHENBAUM; V. KRISH; T. BRINER; E. D. LEONARDO; A. DRANOVSKY. *Columbia Univ. Med. Ctr.*

10:00 B19 **294.19** Effect of voluntary exercise on adult hippocampal neurogenesis in maternally separated rats. V. A. RUSSELL*; N. HARDCASTLE; L. MARAIS; D. LANG. *Univ. Cape Town, Univ. Cape Town.*

11:00 B20 **294.20** Retinoic acid regulates neural stem & progenitor cell proliferation in the adult hippocampus. S. MISHRA*; J. SIEGENTHALER. *Univ. of Colorado ,Anschutz Med. Campus.*

8:00 B21 **294.21** Prenatal diabetes affects the postnatal hippocampal neurogenesis, learning and memory: Role of neurotrophic factors. N. A. AL-BAHOUH*; M. S. RAO. *Kuwait Univ.*

9:00 B22 **294.22** Emergence of doublecortin positive cells from astrocytes in the substantia nigra in response to transplantation of cells derived from pluripotent stem cells. D. M. ARZATE; M. GUERRA-CRESPO; L. COVARRUBIAS*. *Inst. de Biotecnologia, UNAM, Inst. de Fisiología Celular.*

10:00 B23 **294.23** Age-related changes on hippocampal neurogenesis and mnemonic discrimination of similar objects and locations. S. ABDEL MALEK; S. SHARMA; R. DE; Y. E. WEN; A. N. S. CHOWDHURY; E. SATVAT*. *Univ. of Waterloo.*

POSTER

295. Synapse Maturation and Remodeling

Theme A: Development

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

8:00 B24 **295.01** Ankyrin-G interacts with X-linked intellectual disability-associated deubiquitinase Usp9X to regulate spine maintenance. S. YOON*; K. MYCZEK; P. PENZES. *Northwestern Univ.*

9:00 B25 **295.02** CNTNAP2 paracrine signaling by ectodomain shedding. M. D. MARTIN-DE-SAAVEDRA*; O. VAREA; R. GAO; B. P. SPIELMAN; K. J. KOPEIKINA; K. MYCZEK; E. A. HALL; J. N. SAVAS; P. PENZES. *Northwestern Univ., Northwestern Univ.*

10:00 B26 **295.03** Regulation of cortical gabaergic interneuron function by the mental disorder susceptibility molecule cntnap2. R. GAO*; A. MELENDEZ; S. YOON; M. D. SAAVEDRA; M. FORREST; P. PENZES. *Northwestern Univ. Dept. of Physiol.*

11:00 C1 **295.04** A synaptic role of FKBP5, a genetic risk factor for stress-related psychiatric disorders. K. MYCZEK*; I. OZSAN; H. YAMAZAKI; M. MARTIN-DE-SAAVEDRA; P. PENZES. *Northwestern Univ., Gunma Univ.*

8:00 C2 **295.05** Kalirin proteins display differential localization in dendritic spines and regulate spine morphology and trafficking of NR2B-containing glutamate receptors. T. A. RUSSELL; K. R. SMITH; K. J. KOPEIKINA; P. PENZES*. *Nothwestern Univ. Feinberg Sch. Med.*

9:00 C3 **295.06** Role of 190 kDa Ankyrin-G palmitoylation in spine and dendrite maintenance. N. H. PIGUEL*; K. R. SMITH; P. PENZES. *Northwestern Univ., Univ. of Bristol.*

10:00 C4 **295.07** The epilepsy and intellectual disability-related gene tbc1d24 encodes a novel synaptic protein that regulates dendritic spine morphogenesis in neuron. L. LIN; Q. LYU; E. FEI; N. Y. IP; K. LAI*. *The Univ. of Hong Kong, Hong Kong Univ. of Sci. and Technol.*

11:00 C5 **295.08** A potential role of NMDA receptor-dependent expression of Striatin-4 in dendritic spine maturation. L. LO*; L. LIN; Q. LYU; K. LAI. *The Univ. of Hong Kong.*

8:00 C6 **295.09** Role of IQSEC3 in inhibitory synapse formation. H. KANG; D. PARK; S. JEON; J. KO; J. UM*. *Yonsei Univ. Col. of Med., Yonsei Univ. Col. of Med., Yonsei Univ.*

9:00 C7 **295.10** Spines require normal DISC1 function during development of their parent dendritic branch. A. M. DE HAAN*; N. R. HARDINGHAM; K. FOX. *Cardiff Univ.*

10:00 C8 **295.11** Dissecting the components of excitatory synapse maturation on hippocampal inhibitory interneurons. G. AKGUL*; K. A. PELKEY; C. J. MCBAIN. *Natl. Inst. of Hlth., Natl. Inst. of Hlth.*

11:00 C9 **295.12** The pseudokinase CaMKv is required for the activity dependent maintenance of dendritic spines. Z. LIANG*; Y. ZHAN; Y. SHEN; C. C. WONG; J. YATES; F. PLATTNER; K. LAI; N. Y. IP. *Hong Kong Univ. of Sci. and Technol., Hong Kong Univ. of Sci. and Technol., Hong Kong Univ. of Sci. and Technol., The Scripps Res. Inst., Univ. of Texas Southwestern Med. Ctr.*

8:00 C10 **295.13** Knockout of RICH2, a SHANK3 interacting protein, leads to enlarged dendritic spines via RAC1 dependent Actin remodeling and causes neophobia in mice. T. SAROWAR*; S. GRABRUCKER; T. BOECKERS; A. GRABRUCKER. *Inst. of Anat. & Cell Biol., WG Mol. Analysis of Synaptopathies, Neurol. Department., Neurocenter of Ulm Univ., Inst. for Anat. and Cell Biology, Ulm Univ.*

9:00 C11 **295.14** Axonal input to nearby Purkinje cells in early postnatal mouse cerebellum analyzed with serial section electron microscopy. A. M. WILSON*; R. SCHALEK; A. SUISSA-PELEG; T. JONES; S. KNOWLES-BARLEY; J. LICHTMAN. *Harvard Univ., Google.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 C12 **295.15** Serial section super-resolution (STORM) imaging of the perineuronal net and synaptic maturation during critical period development. Y. SIGAL*; L. BOGART; H. BAE; X. ZHUANG; T. K. HENSCH. *Harvard Univ., Howard Hughes Med. Inst., Boston Chirdrens Hosp.*

11:00 C13 **295.16** Cooperative action of neuroligins and BDNF mediates presynaptic maturation. A. PETKOVA*; N. GÖDECKE; M. KORTE; T. DRESBACH. *Univ. Med. Ctr. Goettingen, Tech. Univ. Braunschweig.*

8:00 C14 **295.17** Synapse tagging by C1q. J. W. HAMMOND*; H. A. GELBARD. *Univ. of Rochester.*

9:00 C15 **295.18** An inducing role for the pre-synaptic cadherin/catenin/p140Cap complex in functional synapse formation in the neocortex. M. LI; W. MIAO; S. HE; X. YU*. *Inst. of Neurosci.*

8:00 DP01 **295.19** (Dynamic Poster) Caught in the act: Live imaging of microglia-synapse interactions by lightsheet microscopy. L. WEINHARD*; G. DI BARTOLOMEI; U. NENISKYTE; G. BOLASCO; A. VADISIUTE; P. MACHADO; Y. SCHWAB; C. GROSS. *EMBL, EMBL.*

POSTER

296. Molecular and Cellular Mechanisms in Fragile X Syndrome

Theme A: Development

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

8:00 C16 **296.01** β arrestin 2 couples $mGlu_5$ to fmrp-regulated protein synthesis and is a novel target for the treatment of fragile x syndrome. R. K. SENTER*; L. J. STOPPEL; B. D. AUERBACH; A. R. PREZA; R. J. LEFKOWITZ; M. F. BEAR. *MIT, The State Univ. of New York at Buffalo, Duke Univ. Med. Ctr.*

9:00 C17 **296.02** Neuromodulation of synaptic transmission by group I mGluRs in MNTB neurons in a mouse model of fragile X syndrome. Y. LU*. *Northeast Ohio Med. Univ.*

10:00 C18 **296.03** Maturation of fast-spiking neurons in the cortex is delayed in Fragile X mice. T. NOMURA*; A. CONTRACTOR. *Northwestern Univ., Northwestern Univ.*

11:00 C19 **296.04** Activation of $5\text{-}HT_7$ receptors for serotonin rescues hippocampal synaptic plasticity in a mouse model of Fragile X Syndrome through a cyclic AMP-mediated mechanism involving Cyclin-dependent Kinase 5 and protein synthesis. L. CIRANNA*; L. COSTA; L. M. SARDONE; M. SPATUZZA; C. M. BONACCORSO; S. D'ANTONI; M. LEOPOLDO; E. LACIVITA; M. V. CATANIA. *Univ. of Catania, Univ. of Messina, Natl. Res. Council (CNR), IRCCS Oasi Maria Santissima, Univ. of Bari.*

8:00 C20 **296.05** Reduced lateral inhibition impairs olfactory computations and behaviors in a *Drosophila* model of Fragile X Syndrome. L. M. FRANCO MÉNDEZ*; Z. OKRAY; B. A. HASSAN; E. YAKSI. *KU Leuven, KU Leuven, Hôpital Pitié-Salpétrière, NTNU.*

9:00 C21 **296.06** PQBP1 mutations promote FMRP degradation. X. ZHANG*; Y. SHEN; X. LIU; Z. ZHANG. *Inst. of Lifescience, Inst. of life sciences.*

10:00 C22 **296.07** Synaptic translation of neuroligins 1, 2 and 3 is regulated by FMRP. M. DZIEMBOWSKA*; J. PODSIADŁOWSKA; K. JĄCZYŃSKA; J. MIŁEK; B. KUŹNIEWSKA. *Univ. of Warsaw.*

11:00 C23 **296.08** Astrocyte purinergic signaling significantly altered in fragile x syndrome model. A. L. SCOTT*; A. CHEN; L. DOERING. *McMaster Univ.*

8:00 C24 **296.09** Fragile X circuits show differential developmental delays of spontaneous and evoked network activity but normal homeostatic plasticity. H. MOTANIS*; D. BUONOMANO. *UCLA.*

9:00 C25 **296.10** Testing the mGluR5 theory of FXS in the laboratory rat. S. VEERARAGAVAN; L. YUVA; R. PAYLOR; R. C. SAMACO*. *Baylor Col. of Medicine/Jan and Dan Duncan Neurolog. Res. Inst.*

10:00 C26 **296.11** Prefrontal cortex dysfunction in Fragile X Syndrome: Single-unit responses of excitatory and inhibitory neurons correlated with behavior. J. J. SIEGEL*; R. A. CHITWOOD; W. TAYLOR; J. M. DING; R. GRAY; D. JOHNSTON. *Univ. of Texas at Austin.*

11:00 C27 **296.12** Inhibitory function in the piriform cortex of the Fragile X Syndrome mouse model. A. WIDMER*; J. LARSON. *Univ. of Illinois at Chicago Dept. of Psychiatry.*

8:00 C28 **296.13** Calcium-binding protein regulation in a *Drosophila* model of fragile x syndrome. C. R. TESSIER*; C. G. SWINFORD. *Indiana Univ. Sch. of Medicine-South Bend, Univ. of Notre Dame.*

9:00 C29 **296.14** Fragile X-associated tremor/ataxia syndrome: Linking calcium dysregulation and DNA damage responses. G. A. ROBIN*; J. R. LÓPEZ; S. HULSIZER; P. J. HAGERMAN; I. N. PESSAH. *UC Davis, UC Davis, Med. Investigations of Neurodevelopmental Disorders (M.I.N.D) Inst.*

10:00 C30 **296.15** The actin depolymerizing factor cofilin is critical to spine abnormalities and autism relevant behaviors in a mouse model of fragile x syndrome. A. PYRONNEAU*; M. PORCH; R. ZUKIN. *Albert Einstein Col. of Med.*

11:00 C31 **296.16** Enhancement of NMDA receptor signalling for the treatment of fragile x syndrome. S. BARNES*; S. G. N. GRANT; N. KOMIYAMA; E. K. OSTERWEIL. *Univ. of Edinburgh, Univ. of Edinburgh, Univ. of Edinburgh.*

8:00 C32 **296.17** Cell type specific analysis of mRNA translation in fragile X syndrome. S. R. THOMSON*; S. S. SEO; O. DANDO; S. A. BARNES; P. C. KIND; M. F. BEAR; E. K. OSTERWEIL. *Univ. of Edinburgh, MIT.*

9:00 C33 **296.18** Altered surface expression of δ subunit-containing $GABA_A$ receptors in a mouse model of Fragile X syndrome. N. ZHANG; A. K. LINDEMEYER; Z. PENG; Y. CETINA; C. S. HUANG; R. W. OLSEN; C. R. HOUSER*. *David Geffen Sch. of Med. at UCLA, David Geffen Sch. of Med. at UCLA.*

10:00 C34 **296.19** Insulin signaling misregulation underlies circadian and cognitive deficits in a *Drosophila* Fragile X Model. S. M. MCBRIDE*; R. E. MONYAK; D. EMERSON; B. SCHOENFELD; X. ZHENG; D. CHAMBERS; C. ROSENFELT; P. HINCHEY; C. CHOI; T. MCDONALD; F. BOLDUC; A. SEHGAL; T. A. JONGENS. *Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Alberta, Albert Einstein Col. of Med., Drexel Univ. Col. of Med., Univ. of Pennsylvania.*

11:00 D1 **296.20** Maturation of adult-born dentate granule cells in fragile x mice. C. REMMERS*; A. CONTRACTOR. *Northwestern Univ. Feinberg Sch. of Med., Northwestern Univ. Weinberg Col. of Arts and Sci.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 D2 **296.21** Modulation of mitochondrial efficiency and its potential application in the treatment of fragile x syndrome. P. LICZNERSKI*; P. MIRANDA; H. PARK; M. BROWN; L. K. KACZMAREK; R. J. LEVY; E. A. JONAS. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Columbia Univ.*

POSTER

297. Rare Genetic Developmental Disorders

Theme A: Development

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

8:00 D3 **297.01** Disrupted synaptic transmission and protein homeostasis in an Angelman Syndrome (AS) mouse model. G. LI*; M. ANDERSON; M. PIECHOWICZ; L. ZHANG; X. MA; J. WU; S. QIU. *Arizona State Univ., Univ. of Arizona Col. of Medicine-Phoenix, Barrow Neurolog. Institute, St. Joseph's Hosp. and Med. Ctr.*

9:00 D4 **297.02** Microcephaly, intellectual disability, mid-hindbrain malformation a novel phenotype. E. RAVINDRAN*; H. HU; N. KRAEMER; O. NINNEMANN; L. MUSANTE; E. BOLTSHAUSER; D. SCHINDLER; A. HÜBNER; H. ROPERS; C. HUBNER; A. KAINDL. *Charité - Universitätsmedizin Berlin, Guangzhou Women and Children's Med. Center, Max Planck Inst. for Mol. Genet., Dept. of Pediatric Neurology, Univ. Children's Hosp. of Zurich, Dept. of Human Genetics, Univ. of Würzburg, Pediatrics, Univ. Hospital, Tech. Univ.*

10:00 D5 **297.03** Anatomical underpinnings of decreased white matter volume in angelman syndrome model mice. M. C. JUDSON*; C. L. THAXTON; A. C. BURETTE; A. L. PRIBISKO; A. M. RUMPLE; B. PANIAGUA; R. J. WEINBERG; B. D. PHILPOT. *UNC-Chapel Hill.*

11:00 D6 **297.04** ●▲Altered EEG spectral power in the NS-Pten knock-out model of cortical dysplasia with epilepsy. S. AVILA*; A. REGNIER-GOLANOV; Y. A. DABAGHIAN; L. NGUYEN; A. BREWSTER; N. SUNNEN; A. E. ANDERSON. *Rice Univ., Baylor Col. of Med., Rice Univ., Baylor Col. of Med., Baylor Col. of Med.*

8:00 D7 **297.05** Rare genetic variations in MEPE are associated with Otosclerosis and a Craniofacial bone disorder with facial paresis and mixed hearing loss. I. SCHRAUWEN*; L. TOMAS-ROCA; U. ALTUNOGLU; M. WESDORP; H. VALGAEREN; M. SOMMEN; M. RAHMOUNI; E. VAN BEUSEKOM; M. HUENTELMAN; E. OFFECIERS; I. DHOOGHE; R. ROBERT VINCENT; A. HUBER; C. GILISSEN; E. DE LEENHEER; C. CREMERS; B. VERBIST; A. DE BROUWER; G. PADBERG; R. PENNINGS; H. KAYSERILI; H. KREMER; G. VAN CAMP; H. VAN BOKHOVEN. *Translational Genomics Res. Inst., Univ. of Antwerp, Radboud university medical center, Istanbul Univ., St-Augustinus Hosp. Antwerp, Ghent Univ. Hosp., Causse Ear Clin., Univ. Hosp. Zurich.*

9:00 D8 **297.06** A gain-of-function mutation in the human GRIK2 gene causes neurodevelopmental and intellectual deficits. Y. F. GUZMAN*; K. RAMSEY; J. R. STOLZ; V. NARAYANAN; G. T. SWANSON. *Northwestern Univ., Translational Genomics Res. Inst.*

10:00 D9 **297.07** Interaction between Gabrb3 haploinsufficiency and prenatal LPS exposure exacerbates placental and fetal brain vulnerability in mice. H. MOON*; P. A. CARPENTIER; V. SARAVANAPANDIAN; U. HADITSCH; J. SU; M. L. CHIN; K. MUENCH; A. R. MOORE; A. BORMANN; N. NIMA; G. SUBRAMANYAM; M. RIVERA; T. D. PALMER. *Stanford Univ., Cal State Univ. Fullerton, San Jose State Univ.*

11:00 D10 **297.08** Mutations in DCC cause agenesis of the corpus callosum and mirror movements in humans. T. J. EDWARDS*; A. P. L. MARSH; C. GALEA; K. POPE; A. PAOLINO; I. GOBIUS; J. BUNT; G. MCGILLIVRAY; R. J. LEVENTER; S. MANDELSTAM; E. H. SHERR; P. J. LOCKHART; L. J. RICHARDS. *Queensland Brain Inst., The Univ. of Queensland, Sch. of Med., Bruce Lefroy Ctr. for Genet. Hlth. Research, Murdoch Childrens Res. Institute, Royal Children's Hosp., Univ. of Melbourne, Royal Children's Hosp., Medicinal Chem. and Drug Delivery, Disposition and Dynamics (D4), Monash Inst. of Pharmaceut. Sciences, Monash Univ., Victorian Clin. Genet. Services, Murdoch Childrens Res. Inst., Brain Res. Institute, Florey Neurosci. Inst., Univ. of Melbourne, Royal Children's Hosp., Univ. of California, San Francisco.*

8:00 D11 **297.09** Everolimus restores mTOR signaling disrupted by a novel TSC2 mutation and improves neuropsychiatric symptoms in a tuberous sclerosis patient. J. YANG*; S. HWANG; K. LEE; J. LEE; J. LEE; Y. LEE; B. KAANG; C. LIM. *Seoul Natl. Univ., Kyungpook Natl. Univ. Hosp., Kyungpook Natl. Univ. Grad. Sch. of Med., Kyung Hee Univ., Hannam Univ., Chung-Ang Univ.*

9:00 D12 **297.10** Neural correlates of impaired visuospatial cognition in children with Williams syndrome. T. NASH; J. CARRASCO; J. P. MIKHAIEL; O. RAVINDRANATH; L. YANKOWITZ; R. PRABAKARAN; M. SOTTILE; K. ROE; P. KOHN; J. S. KIPPENHAN; D. EISENBERG; M. D. GREGORY; C. B. MERVIS; K. F. BERMAN*. *Natl. Inst. of Mental Hlth., Univ. of Louisville.*

POSTER

298. Limbic System Development

Theme A: Development

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

8:00 D13 **298.01** ▲Prenatal paracetamol exposure decreases anxiety-related behaviors and disrupts memory in mice. T. M. MILEWSKI*; R. A. ANTONAWICH; D. WOOD; P. T. ORR. *Univ. of Scranton, Univ. of Scranton.*

9:00 D14 **298.02** Prospective associations between maternal interleukin-6 concentrations during pregnancy and newborn amygdala volume and connectivity. C. BUSS*; A. M. GRAHAM; J. RASMUSSEN; M. D. RUDOLPH; C. H. HEIM; J. H. GILMORE; M. A. STYNER; S. ENTRINGER; P. D. WADHWA; D. A. FAIR. *Charité Univ. Med. Berlin, Univ. of California Irvine, Oregon Hlth. and Sci. Univ., Penn State Univ., Univ. of North Carolina.*

10:00 D15 **298.03** Prevention of an infection-induced maternal adenosine surge during gestation prevents the development of schizophrenia symptoms in mice. D. M. OSBORNE*; U. SANDAU; A. JONES; N. ETESAMI; M. YAHYA; D. BOISON. *Legacy Hlth. Res., Legacy Res. Inst.*

11:00 D16 **298.04** Roles of thalamocortical interactions in mouse prefrontal cortex development. Y. NAKAGAWA*; A. PROUE, 55455; T. NICHOLS-MEADE; M. BENNYWORTH. *Univ. of Minnesota Dept. of Neurosci., Univ. of Minnesota.*

8:00 D17 **298.05** ▲ Prenatal paracetamol exposure disrupts motor behavior in mice. D. BIGLEY*, JR; T. M. MILEWSKI; P. T. ORR. *Univ. of Scranton, Univ. of Scranton.*

9:00 D18 **298.06** Ontogeny of Glutamatergic, GABAergic and Dopaminergic neurons of the embryonic mesencephalic nuclei A9 and A10. D. A. RAMÍREZ DE LEÓN*. *Univ. Autónoma De San Luis Potosí.*

10:00 D19 **298.07** Organization of hippocampal mossy fiber pathway in the mouse. G. XIONG*; H. METHENY; K. FOLWEILER; A. S. COHEN. *Children's Hosp Philadelphia, Children's Hosp Philadelphia, Perelman Sch. of Medicine, Univ. of Pennslyvania.*

11:00 D20 **298.08** Exosome-delivered miRNA-146a ameliorates peripheral neuropathy in diabetic mice. B. FAN*; X. LIU; M. CHOPP; A. SZALAD; L. WANG; W. PAN; Z. ZHANG. *Henry Ford Hosp., Oakland Univ., Med. Imaging Inst. of North Sichuan Med. Univ.*

POSTER

299. Adolescent Development: Animal Models I

Theme A: Development

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

8:00 D21 **299.01** Myelination of prefrontal axons is accompanied by increased speed and integrity of cortical neurotransmission in rats. A. SILVA-GOTAY*; S. MCDOUGALL; W. M. VARGAS; G. LI; H. N. RICHARDSON. *Univ. of Massachusetts Amherst, Univ. of Massachusetts Amherst, New York Med. Col., Univ. of Massachusetts Amherst, Univ. of Massachusetts Amherst.*

9:00 D22 **299.02** Longitudinal assessment of neuronal 3D genomes in mouse prefrontal cortex. A. C. MITCHELL*; B. JAVIDFAR; L. K. BICKS; R. NEVE; K. GARBETT, PhD; S. S. LANDER; K. MIRNICS; H. MORISHITA; M. WOOD; Y. JIANG; I. GAISLER-SOLOMON; S. AKBARIAN. *Icahn Sch. of Med. at Mount Sinai, MIT, Vanderbilt Univ., Univ. of Haifa, Univ. of California, Irvine.*

10:00 D23 **299.03** Maternal care modulates the febrile response to lipopolysaccharide through differences in glucocorticoid receptor sensitivity in the rat. T. ZHANG*; H. NGUYEN; X. WEN; J. DIORIO; M. J. MEANEY; C. PARENT. *McGill Univ., McGill Univ., Singapore Inst. for Clin. Sci.*

11:00 D24 **299.04** Adolescent social stress results in sex-specific transcriptional reprogramming throughout the reward circuitry in adult mice. D. M. WALKER*; I. PURUSHOTHAMAN; M. E. CAHILL; C. K. LARDNER; S. MACHLOVI; E. S. CALIPARI; H. M. CATES; R. C. BAGOT; C. J. PEÑA; G. E. HODES; M. A. DOYLE; E. RIBEIRO; S. J. RUSSO; P. J. KENNEDY; E. J. NESTLER. *Icahn Sch. of Med. At Mount Sinai, The Univ. of California Los Angeles.*

8:00 D25 **299.05** Storm, stress, and nicotine: Interaction of stress and nicotine during adolescence on adult learning and stress response systems. E. HOLLIDAY*; C. OLIVER; R. COLE; D. BANGASSER; T. GOULD. *Univ. of Texas Med. Br., Temple Univ.*

9:00 D26 **299.06** MAGL inhibition decreases aggression after post-weaning social isolation in male and female rats. L. DAWUD; E. LOETZ; J. FONTENOT; D. TAUBER; I. BRALLIER; S. T. BLAND*. *Univ. of Colorado, Denver, Univ. of Colorado, Denver.*

10:00 D27 **299.07** The impact of BDNF Val66Met single nucleotide polymorphism on rodent social interaction across development. A. LI*; D. JING; R. YANG; F. LEE. *Weill Cornell Med. Col., Weill Cornell Med. Col.*

11:00 D28 **299.08** ▲ Periodic enrichment affects the outcome of two social preference tasks in adolescent female rats. H. JOHNSON*; H. C. SKINNER; S. L. SANTIAGO; R. GUCWA; M. N. PAVELKA; K. L. PATTERSON; M. C. ZRULL. *Appalachian State Univ.*

8:00 D29 **299.09** Animal models of severe traumatic brain injury and its clinical significanc. S. LU*; Q. YING; X. XU; Y. TANG; Y. JIAO; Q. WANG; X. WANG; X. ZHANG; N. LU. *411th Navy Hosp, No.411 Naval Hosp., No.411 Naval Hosp., Naval Med. Res. Inst., No.411 Naval Hosp., Shanghai Res. Inst. of Sinopec.*

9:00 D30 **299.10** Social interaction during critical developmental periods affects development of the prefrontal cortex. W. E. MEDENDORP*; A. PAL; E. PETERSEN; U. HOCHGESCHWENDER; K. JENROW. *Central Michigan Univ., Central Michigan Univ., Central Michigan Univ.*

10:00 D31 **299.11** ▲ Enrichment affects exploration of a field containing familiarly and newly located objects by adolescent rats. E. A. ARTZ*; H. L. JOHNSON; H. C. SKINNER; S. J. SNOUSE; R. C. PIERCE-MESSICK; T. J. ARNOLD; D. E. COBB; M. C. ZRULL. *Appalachian State Univ.*

11:00 D32 **299.12** Attentional control assessment in LgDel adolescent mice through a modified five choice serial reaction time task. M. CIAMPOLI*; M. MEREU; F. PAPALEO. *Inst. Italiano Di Tecnologia, Univ. degli Studi di Padova.*

8:00 D33 **299.13** Adolescent binge ethanol exposure alters cholinergic cell populations, but not functional acetylcholine release. G. M. FERNANDEZ*; J. E. SANDERS; L. M. SAVAGE. *Binghamton Univ.*

9:00 D34 **299.14** Deprivation of social play behavior results in decreased inhibition in adult prefrontal cortex and associated behavioral changes in rats. A. OMRANI; M. SPOELDER; R. VAN DORLAND; C. CORNELIS; L. J. VANDERSCHUREN*; C. J. WIERENGA. *Univ. Med. Ctr. Utrecht, Utrecht University, Fac. of Vet. Med., Utrecht University, Fac. of Sci.*

10:00 E1 **299.15** Neonatal vincristine administration evokes delayed mechanical pain hypersensitivity in the developing rat. K. A. SCHAPPACHER*; M. L. BACCEI. *Univ. of Cincinnati Dept. of Anesthesiol.*

11:00 E2 **299.16** ▲ Effects of estrogen on brain structural maturation during adolescence: Prefrontal, amygdala and temporal cortex in female macaques. F. LOMBARDI*; J. R. GODFREY; B. R. HOWELL; M. STYNER; M. E. WILSON; M. M. SANCHEZ. *Yerkes Natl. Primate Res. Ctr., Emory Univ., Univ. of North Carolina.*

8:00 E3 **299.17** Amygdala growth from youth to adulthood in the macaque monkey. C. M. SCHUMANN*; J. A. SCOTT; A. LEE; E. FLETCHER; M. D. BAUMAN; D. G. AMARAL. *UC Davis MIND Inst., UC Davis, UC Davis.*

9:00 E4 **299.18** Physical activity during adolescence and neural reserve: A study of the brain levels of brain derived neurotrophic factor (BDNF), adrenocorticotropic hormone (ACTH) and corticosterone. A. D. DOMINGUEZ CARVALHO*; A. B. VICTORINO; A. A. DE ALMEIDA; J. S. HENRIQUE; F. R. CABRAL; L. B. TORRES; R. M. ARIDA; S. GOMES DA SILVA. *Federal Univ. of Sao Paulo, Federal Univ. of Sao Paulo, Hosp. Israelita Albert Einstein.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

300. Postsynaptic Organization and Structure I

Theme B: Neural Excitability, Synapses, and Glia

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

8:00 E5 **300.01** GABAergic/non-GABAergic synaptic inputs to striatal medium spiny neurons. Y. KUBOTA*; Y. KAWAGUCHI. *Natl. Inst. Physiol Sci. (NIPS), Grad Univ. Advanced Studies (SOKENDAI).*

9:00 E6 **300.02** Contacts between the ER and other membranes in neurons: An inter-organelle connectome. Y. WU*; S. XU; H. KENNETH; H. HESS; P. DE CAMILLI. *Yale University, Med. Sch., Howard Hughes Med. Inst.*

10:00 E7 **300.03** Imaging of polarized light signal changes associated with neuronal activity in mouse hippocampus. M. KOIKE-TANI*; S. MEHTA; T. TOMINAGA; R. OLDENBOURG; T. TANI. *MBL, Tokushima Bunri Univ.*

11:00 E8 **300.04** Calsyntenin-3 mediates synapse development via neurexin/cbln complexes. J. KO*; H. KANG; J. KO; T. MORI; K. MATSUDA; S. JEON; M. YUZAKI; K. TABUCHI; J. UM. *Yonsei Univ., Yonsei Univ. Sch. of Med., Shinshu Univ. Sch. of Med., Keio Univ.*

8:00 E9 **300.05** Shank modulates postsynaptic Wnt signaling to regulate synaptic development. K. P. HARRIS*; Y. AKBERGENOVA; R. W. CHO; M. S. BAAS-THOMAS; J. T. LITTLETON. *MIT.*

9:00 E10 **300.06** Developmental regulation of NMDA receptor subunits expression by drebrin. N. KOGANEZAWA*; T. SHIRAO. *Gunma Univ. Grad. Sch. of Med.*

10:00 E11 **300.07** Quantitative analysis of synapse organization at nanoscale by cryo-electron tomography. A. MARTINEZ-SANCHEZ; Z. KOCHOVSKI; U. LAUGKS; W. BAUMEISTER; V. LUCIC*. *Max Planck Inst. of Biochem.*

11:00 E12 **300.08** The role of cortactin in AMPAR trafficking. G. PARKINSON*; S. E. L. CHAMBERLAIN; M. TURVEY; N. JAAFARI; J. G. HANLEY. *Univ. of Bristol, Univ. of Bristol.*

8:00 E13 **300.09** Identification and characterization of proteins at the synaptic cleft. A. BURCH; J. TAO-CHENG; A. DOSEMECI*. *NIH, NINDS, NIH.*

9:00 E14 **300.10** Gephyrin splice variant dependent γ aminobutyric type a receptor clustering. Y. MERKLER*; G. SCHWARZ. *Univ. of Cologne, CECAD Cologne Excellence in Aging Res., Ctr. for Mol. Med. Cologne.*

10:00 E15 **300.11** An automatic pipeline to optimize subcellular models of transynaptic signaling at inhibitory synapses. M. MIGLIORE*; C. A. LUPASCU; A. MORABITO; E. MERENDA; S. MARINELLI; C. MARCHETTI; R. MIGLIORE; E. CHERUBINI. *Natl. Res. Council, Natl. Res. Council, European Brain Res. Inst.*

11:00 E16 **300.12** ▲ Consequences of mGluR5-dependent regulation of the spinophilin/sapap3 interaction. C. W. MORRIS*; M. C. EDLER; A. J. BAUCUM, II. *Indiana Univ. Purdue Univ. at Indianapolis, Indiana Univ. Purdue Univ. at Indianapolis, Stark Neurosciences Res. Inst.*

8:00 E17 **300.13** Unraveling the inhibitory synapse proteome *in vivo*. A. UEZU*; D. J. KANAK; T. W. A. BRADSHAW; C. M. CATAVERO; A. C. BURETTE; R. J. WEINBERG; S. H. SODERLING. *Duke Univ., Univ. of North Carolina.*

9:00 E18 **300.14** Screening and functional analysis of neuroligin 1 interacting proteins. R. DANG*; A. LIU; W. XIE; Z. ZHOU; Z. JIA. *Inst. of Life Sciences, Southeast Univ., Dept. of Physiology, Fac. of Medicine, Univ. of Toronto.*

10:00 E19 **300.15** Ketamine-induced antidepressant effects and psychosis: A role for postsynaptic supercomplexes revealed using mouse genetic models and synaptome mapping. S. LEMPRIERE*; J. NITHIANANTHARAJAH; F. ZHU; Z. QIU; N. H. KOMIYAMA; S. G. N. GRANT. *Univ. of Edinburgh, The Florey Inst. of Neurosci. and Mental Hlth., Univ. Col. London.*

11:00 E20 **300.16** Mechanisms underlying spinophilin-dependent regulation of the association of PP1 with the NMDA receptor. A. BEIRAGHI SALEK*; J. MCBRIDE; M. C. EDLER; A. J. BAUCUM, II. *Indiana University-Purdue Univ. Indianapolis, Northwestern Univ., Stark Neurosciences Res. Inst.*

POSTER

301. Modulation: Pharmacology

Theme B: Neural Excitability, Synapses, and Glia

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

8:00 E21 **301.01** Chemogenetic control of hilar mossy cell excitability regulates emotional behaviors. K. WANG*; C. LIEN. *Natl. Yang-Ming Univ., Natl. Yang-Ming Univ., Natl. Yang-Ming Univ.*

9:00 E22 **301.02** Acute and chronic noradrenergic effects on cortical excitability in healthy humans. M. KUO*; H. KUO; W. PAULUS; G. BATSIKADZE; A. JAMIR; M. A. NITSCHE. *Leibniz Res. Ctr. For Working Envrn. An, Georg-August-University Göttingen, Univ. Med. Hosp. Bergmannsheil Bochum.*

10:00 E23 **301.03** Neurosteroid induction of NMDA and AMPA receptor trafficking. V. KUMARESAN*; K. SUGUNAN; R. M. BADOLATO; R. SINGH; J. LUEBKE; J. M. ADAMS; D. H. FARB. *Boston Univ. Sch. of Med., Boston Univ. Sch. of Med.*

11:00 E24 **301.04** Chronic toluene exposure alters medial prefrontal cortex synaptic transmission of adolescent rats. M. I. TORRES-FLORES*; S. L. CRUZ; E. J. GALVÁN. *CINVESTAV.*

8:00 E25 **301.05** Effect of Carbenoxolone on gap junction in the hippocampus of rats with epileptiform activity induced by 4-aminopyridine. C. VENTURA*; R. BELTRÁN-RAMÍREZ; S. D. CONTRERAS-DELATORRE; G. ZARATE-RODRÍGUEZ; B. VILLANUEVA-AVALOS; N. S. MUÑOZ-FILIPPETTI. *Ctr. De Enseñanza Técnica Industrial, Univ. de Guadalajara, Ctr. de Enseñanza Técnica Industrial.*

9:00 E26 **301.06** Restraint stress differentially alters β1- and β2-Adrenergic Receptor modulation of glutamatergic transmission in the Ventral Bed Nucleus of the Stria Terminalis. Y. SILBERMAN*. *Penn State Col. of Med.*

10:00 E27 **301.07** Peptidergic modulation of spontaneous and evoked synaptic activity in ca1 pyramidal cells of rat hippocampal slices. V. G. SKREBITSKY*; R. KONDRATENKO; I. POVAROV; S. KOLBAEV. *Res. Ctr. of Neurology., Res. Ctr. of Neurol.*

11:00 E28 **301.08** L-proline, a metabolite linked to neuropsychiatric disorders and associated with the 22q11.2 deletion syndrome, specifically disrupts GABA-ergic transmission in the mPFC. G. W. CRABTREE*; J. A. GOGOS. *Columbia Univ. Med. Ctr., Columbia Univ. Med. Ctr.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 E29 **301.09** Electrophysiological signatures of modulation of GABA-A α5 receptor activity by S 44819 in human cortex. G. DARMANI*; C. ZIPSER; G. M. BÖHMER; F. MÜLLER-MAHLHAUS; P. BELARDINELLI; M. SCHWAB; K. DESCHET; U. ZIEMANN. *Hertie Inst. For Clin. Brain Res., Univ. Hosp. Tübingen, Univ. of Tübingen, and Dr. Margarete Fischer-Bosch Inst. of Clin. Pharmacol., Inst. de Recherches Internationales Servier.*

9:00 E30 **301.10** Effects of olanzapine and haloperidol on mtorc1 signaling, dendritic outgrowth, and synaptic proteins in rat primary hippocampal neuron under toxic conditions. M. SEO; H. CHO; C. LEE; Y. KIM; J. LEE; S. PARK*. *Inje Univ., Inje Univ., Inje Univ., Univ. of Toronto.*

10:00 E31 **301.11** ● Electrophysiological characterization of S 47445, a novel positive allosteric modulator of AMPA type glutamate receptors. L. DANOBER*; T. SCHAER; K. KAMBARAT; F. MARGER; S. BRETIN; D. BERTRAND. *Inst. De Recherches Servier, PIT-NPS, HiQScreen Sarl, Inst. de Recherches Internationales Servier.*

11:00 E32 **301.12** Effects of the antipsychotic drug loxapine on synaptic transmission in the superficial lamina of the dorsal horn. K. EVELY*; S. HAJ-DAHMANE; A. BHATTACHARJEE. *Univ. At Buffalo - Downtown Campus, Univ. at Buffalo, Univ. at Buffalo, Univ. at Buffalo.*

8:00 E33 **301.13** Dystrophins in the cerebellum: A first look at the role of Dp71 role in Purkinje neurons and Bergmann glia. R. HELLERINGER*; O. JOLY; M. BELMAADI-CHERKAOUI; H. DANIEL; C. VAILLEND; M. GALANTE. *Paris-South Univ.*

9:00 E34 **301.14** Synergistic effects on calcium entry and transmitter release of a potassium channel blocker and a calcium channel gating modifier at the NMJ. R. LAGHAEI; M. WU; A. PUGLIONESI; T. TARR; M. DITTRICH; S. D. MERINEY*. *Carnegie Mellon Univ., Univ. Pittsburgh, Univ. Pittsburgh.*

10:00 E35 **301.15** Trans-synaptic zinc mobilization improves social interaction in two mouse models of autism through NMDAR activation. H. LEE*, V; E. LEE; T. HUANG, 305-701; C. CHUNG; W. SHIN; K. KIM; J. KOH; Y. HSUEH; E. KIM. *Inst. of Basic Sci. (IBS), Inst. of Basic Sci. (IBS), Inst. of Mol. Biol., Korea Asan Inst. for Life Sci.*

11:00 E36 **301.16** Functional endpoint assays to assess neurotoxicity with human iPSC-derived neurons. S. DELAURA; E. M. JONES*; K. KIM; C. KANNEMEIER; R. LEWIS; K. MANGAN; B. SWANSON; C. CARLSON. *Cell. Dynamics Intl., Gist Consulting.*

8:00 E37 **301.17** Pre- and postsynaptic dopamine receptors differentially modulate the subicular inputs to layer V pyramidal neurons in medial and lateral entorhinal cortex. H. KIM*; J. KWAG. *Korea Univ.*

9:00 E38 **301.18** Corticosterone and neuromodulators display similar rapid effects on inhibitory cortical networks. C. A. WOTTON*; E. F. QUON; L. K. BEKAR. *Univ. of Saskatchewan.*

10:00 F1 **301.19** α_2-Adrenergic receptor and isoflurane modulation of presynaptic Ca^{2+} influx and exocytosis in hippocampal neurons. Z. ZHOU*; M. HARA; H. C. HEMMINGS, Jr. *Weill Cornell Med. Col., Kurume Univ. Sch. of Med., Weill Cornell Med. Col.*

POSTER

302. Network Interactions and Signal Propagation

Theme B: Neural Excitability, Synapses, and Glia

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

8:00 F2 **302.01** Modulation of entorhinal cortical input to hippocampal granule cells through activation of local inhibitory network in the dentate gyrus. Y. MIRCHEVA*; M. R. PERALTA, III; K. TOTH. *Ctr. De Recherche De L'Institut Universitaire En.*

9:00 F3 **302.02** Adenosine provides fine-tuned and highly localised negative-feedback control of spatiotemporal activity in the neocortex. M. J. WALL*; A. NEWTON; M. G. THOMAS; M. J. E. RICHARDSON. *Univ. of Warwick, Univ. of Warwick.*

10:00 F4 **302.03** Effect of electrode morphology on the frequency spectrum of local field potentials in the rat ventral tegmental area. C. DELAIRESSE; G. BECKER; A. PLENEVAUX; V. M. SEUTIN*; S. KOULCHITSKY. *Univ. of Liege, Univ. Liege.*

11:00 F5 **302.04** ● Probing the ventral fronto-temporal pathway in the language dominant hemisphere - an intraoperative cortico-cortical evoked potential study. T. NAKAE*; R. MATSUMOTO; T. KUNIEDA; Y. ARAKAWA; T. KOBAYASHI; T. INADA; Y. TAKAHASHI; S. NISHIDA; K. KOBAYASHI; A. SHIMOTAKE; M. MATSUHASHI; R. INANO; Y. YAMAO; T. KIKUCHI; K. YOSHIDA; A. IKEDA; S. MIYAMOTO. *Kyoto Univ. Hosp., Kyoto Univ. Hosp., Ehime Univ. Hosp., Kyoto Univ. Hosp., Kyoto Univ., Kouseikai Takeda Hosp.*

8:00 F6 **302.05** The capacity of active memory. E. P. FRADY*; G. ISELY; F. T. SOMMER; P. KANERVA. *UC Berkeley, Redwood Ctr. for Theoretical Neurosci.*

9:00 F7 **302.06** Sleep in clock mutant mice, $clock^{\Delta 5\text{-}6}$, responds to light changes and sleep deprivation very differently. B. QIN*; A. AKLADIOUS; P. FENG. *Case Western Reserve University/Va Med., Louis Stokes Cleveland DVA Med. Ctr., Louis Stokes Cleveland DVA Med. Ctr., Case Western Reserve Univ.*

10:00 F8 **302.07** Network's critical state and its relation to the inverted-U profile of dopamine related working memory performance. G. HU; X. HUANG; T. JIANG; S. YU*. *Inst. of Automation, Chinese Acad. of Sci.*

11:00 F9 **302.08** Enhanced signal propagation and nonnormality in a large scale circuit model of the primate cortex. M. JOGLEKAR*; J. MEJIAS; G. R. YANG; X. WANG. *New York Univ. Ctr. for Neural Sci., NYU Shanghai.*

8:00 F10 **302.09** Pacap modulates amygdalar-bnst interactions in control of anxiety. Y. LI; R. ANDERO; K. J. RESSLER; V. Y. BOLSHAKOV*. *McLean Hosp- Harvard Med. Sch.*

9:00 F11 **302.10** Hippocampal modulation of sensory integration in entorhinal cortex. M. ELMALEH*; R. ZEMLA; M. DUFOUR; A. HAIRSTON; S. SUNDAR; J. BASU. *NYU Langone Med. Ctr., NYU Langone Med. Ctr.*

10:00 F12 **302.11** ▲ Using multielectrode arrays to investigate the spontaneous firing patterns and functional connectivity in large neural assemblies. T. FENG*; N. X. KODAMA; R. FERNANDEZ GALAN. *Case Western Reserve Univ.*

11:00 F13 **302.12** ▲ Spherical harmonics reveal standing EEG waves and long-range neural synchronization in the sleeping brain. S. S. SIVAKUMAR*; A. G. NAMATH; R. FERNANDEZ GALAN. *Case Western Reserve Univ.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 F14 **302.13** Propagation of spike timing and firing rate across multiple layers in networks of cultured neurons. J. BARRAL*; A. REYES; X. WANG. *New York Univ.*

9:00 F15 **302.14** Network plasticity facilitating the neural excitation propagation between the perirhinal and entorhinal cortices as revealed by voltage-sensitive dye imaging. R. KAJIWARA*; Y. WAKAYAMA; Y. TOMINAGA; T. TOMINAGA. *Meiji Univ. / Dept. of Electro. & Bioinfo., TokushimaBunri Univ. / Dept. of Neurophysiol.*

10:00 F16 **302.15** Propagation of neural activity induced by single-pulse electrical stimulation during various sleep stages. K. USAMI*; A. KORZENIEWSKA; R. MATSUMOTO; T. KUNIEDA; N. MIKUNI; K. KOBAYASHI; T. KIKUCHI; K. YOSHIDA; S. MIYAMOTO; R. TAKAHASHI; A. IKEDA; N. E. CRONE. *Johns Hopkins Univ., Kyoto Univ., Kyoto Univ., Sapporo Med. Univ. Sch. of Med., Kyoto Univ.*

11:00 F17 **302.16** Hippocampal-Perirhinal oscillatory coupling “switched on and off” by light. J. DINE*; A. GENEWSKY; F. HLADKY; C. T. WOTJAK; J. M. DEUSSING; W. ZIEGLGÄNSBERGER; A. CHEN; M. EDER. *Max Planck Inst. of Psychiatry.*

8:00 F18 **302.17** Patch clamp recordings of cellular and synaptic properties in adult mouse thoracic paravertebral ganglia. M. L. MCKINNON*; S. HOCHMAN. *Emory Univ.*

9:00 F19 **302.18** Anatomy of mouse thoracic sympathetic chain ganglia and electrophysiological assessment of their multisegmental preganglionic input. M. HALDER*; M. CHOI; C. MACDOWELL; M. MCKINNON; M. SAWCHUK; S. HOCHMAN. *Emory Univ., Emory Univ.*

10:00 F20 **302.19** Suppressed GABAergic signaling in the zona incerta causes neuropathic pain in a thoracic hemisection spinal cord injury rat model. B. OH*; H. MOON; Y. LEE; C. CHO; Y. PARK. *Chungbuk Natl. Univ. Hosp., Chungbuk national university, epartment of Radiology, Daejoen St. Mary’s Hospital, The Catholic Univ. Of Korea, Dept. of Neurosurgery, St. Vincent’s Hospital, The Catholic university of Korea, Chungbuk Natl. Univ. Hosp.*

11:00 F21 **302.20** Exact analysis of spike-timing and higher-order interactions of neurons at the threshold regime suggests network architecture underlying sparse population activity. S. RASHID SHOMALI*; M. NILI AHMADABADI; S. RASULI; H. SHIMAZAKI. *Inst. For Res. In Fundamental Sci., Univ. of Tehran, Univ. of Guilan, RIKEN Brain Sci. Inst.*

8:00 F22 **302.21** 5ht3a+ interneurons inhibit pv+ interneurons to enhance signal fidelity in hippocampal area ca1. B. SUUTARI*; S. M. COHEN; A. SALAH; R. W. TSIEN. *NYU Neurosci. Inst.*

9:00 F23 **302.22** Propagation patterns in spontaneous activity are state and frequency-dependent. A. MITRA*; P. W. WRIGHT; A. Z. SNYDER; G. A. BAXTER; A. Q. BAUER; J. P. CULVER; M. E. RAICHLE. *Washington Univ. Sch. of Med.*

10:00 F24 **302.23** Closed-loop modulation of hippocampal γ reveals a role of recurrent excitation in setting the oscillatory frequency. E. NICHOLSON*; D. KUZMIN; M. LEITE; T. AKAM; D. M. KULLMANN. *UCL, Inst. of Neuology, UCL, Champalimaud Neurosci. Programme.*

11:00 F25 **302.24** Gain control across cortical layers can be mediated by balanced oscillatory coupling. E. PETERSON*; B. VOYTEK. *U.C. San Diego.*

8:00 F26 **302.25** Directional propagation of ketamine-induced high-frequency oscillations between the striatum, hippocampus, and motor cortex. M. B. SCHMIT*; T. YE; M. J. BARTLETT; T. FALK; S. L. COWEN. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

POSTER

303. Oscillations and Synchrony: Unit Studies

Theme B: Neural Excitability, Synapses, and Glia

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

8:00 F27 **303.01** Intracellular dynamics during self-generated θ oscillations in the whole hippocampal preparation. F. FURMANOV*; S. WILLIAMS; J. A. WHITE. *Boston Univ., Univ. of Utah, Douglas Mental Hlth. Univ. Institute, McGill Univ.*

9:00 F28 **303.02** Specialized contributions of individual GABAergic medial septal neurons to hippocampal network activity. G. UNAL*; M. G. CRUMP; T. J. VINEY; T. ELTES; T. KLAUSBERGER; P. SOMOGYI. *Univ. of Oxford, Inst. of Exptl. Med. of the Hungarian Acad. of Sci.*

10:00 F29 **303.03** Cell-type specific participation in sharp-wave dynamics in the CA3 region of the hippocampus. N. P. SPRUSTON*; D. L. HUNT. *HHMI Janelia Res. Campus, HHMI Janelia research campus.*

11:00 F30 **303.04** Spiking correlates and temporal variability of oscillatory frequency modulation. R. GAO*; E. J. PETERSON; B. VOYTEK. *Univ. of California San Diego Dept. of Cognitive Sci., Univ. of California San Diego Dept. of Cognitive Sci., UCSD Inst. for Neural Computation, UCSD.*

8:00 F31 **303.05** Bdnf val66met polymorphism impairs network oscillations in the hippocampus. Y. HUANG*. *Tongji Univ.*

9:00 F32 **303.06** Volitional control of β-band oscillations by brain machine interface affects sensorimotor behavior of primates. O. PELES*; U. WERNER-REISS; H. BERGMAN; Z. ISRAEL; E. VAADIA. *Hebrew Univ., Hebrew Univ., Hadassah Univ. Hosp.*

10:00 F33 **303.07** Extracting neural networks formed by consistent between-cell spike timing from unit recordings. R. VAN DER MEIJ*; E. MARIS; B. VOYTEK. *Univ. of California San Diego, Radboud Univ.*

11:00 F34 **303.08** Fast-spiking neurons organize large-scale coherent oscillations and are the main generators of local field potentials in human and monkey cortex. A. DESTEXHE*; M. LE VAN QUYEN; N. DEHGHANI; E. HALGREN; S. CASH; N. HATSOPOULOS; B. TELENCZUK. *CNRS, ICM, Wyss Inst., UCSD, Harvard Med. Sch., Univ. of Chicago.*

8:00 DP02 **303.09** (Dynamic Poster) Fast Oscillatory activity in the hippocampus can back-propagate electrotonically to the dentate gyrus. F. ORTIZ*; R. GUTIÉRREZ. *CINVESTAV, UNAM.*

9:00 F35 **303.10** Identified cellular correlates of neocortical ripple and high γ oscillations during spindles of natural sleep. G. TAMAS*; V. SZEMENYEI; S. BORDÉ; R. G. AVERKIN. *Univ. of Szeged.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract’s submitting author

10:00 F36 **303.11** Intrinsic and extrinsic sources of GABAergic inhibition in the dentate gyrus. G. G. SZABO*; C. VARGA; I. SOLTESZ. *Stanford Univ., Szentágothai Res. Center, MTA-PTE-NAP A-Entorhinal Microcircuits, Univ. of Pécs.*

11:00 F37 **303.12** Changes in network dynamics and prefrontal spiking activity in a mouse genetic model of schizophrenia: Implications for connectivity. J. L. ZICK*; K. SCHULTZ; T. I. NETOFF; M. V. CHAFEE. *Univ. of Minnesota Dept. of Neurosci., Univ. of Minnesota, VA Med. Ctr., Univ. of Minnesota.*

8:00 F38 **303.13** Association of ketamine, dopamine D4 receptor activation, and locomotion with γ range activity in the prefrontal cortex and mediodorsal thalamus. K. E. FURTH*; A. J. MCCOY; J. R. WALTERS; A. BUONANNO; C. DELAVILLE. *NINDS, NIH, Boston Univ., NICHD, NIH.*

POSTER

304. Neuro-Oncology: Signaling and Therapeutics

Theme B: Neural Excitability, Synapses, and Glia

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

8:00 F39 **304.01** Mutual influence of ROS, pH_i and chloride current in cell cycle progression of glioblastoma cancer stem cells. I. VERDUCI; M. PERETTI; F. M. RACITI; R. WURTH; F. BARBIERI; T. FLORIO; M. MAZZANTI*. *Univ. di Milano, Univ. di Genova, Univ. di Milano.*

9:00 F40 **304.02** Inhibition of glioma progression by a novel compound of anthraquinone. K. CHEN*; S. KANG; Y. CHIANG; J. WU; H. HUANG. *Taipei Med. Univ., Taipei Med. Univ., Taipei Med. Univ., Taipei Med. Univ.*

10:00 F41 **304.03** Inhibition of sonic hedgehog signaling suppresses glioma stem-like cells through inducing autophagic cell death. P. GEAN*; H. HUNG. *Natl. Cheng-Kung Univ., Natl. Cheng-Kung Univ.*

11:00 F42 **304.04** Sevoflurane may increase glioma cell invasion via CD44. Z. ZUO*; R. LAI; W. SHAN. *Unvi of VA.*

8:00 F43 **304.05** Downregulation of TLX induces TET3 expression and inhibits glioblastoma stem cell self-renewal and tumorigenesis. Q. CUI*; S. YANG; P. YE; E. TIAN; G. SUN; J. ZHOU; G. SUN; X. LIU; C. CHEN; K. MURAI; L. YANG; X. WU; M. D'APUZZO; C. BROWN; B. BADIE; L. PENG; A. D. RIGGS; J. J. ROSSI; Y. SHI. *Beckman Res. Inst. City of Hope, Beckman Res. Inst. City of Hope, Beckman Res. Inst. City of Hope, Beckman Res. Inst. City of Hope, Aix-Marseille Universite´, Beckman Res. Inst. City of Hope, Beckman Res. Inst. City of Hope, Beckman Res. Inst. City of Hope, Beckman Res. Inst. City of Hope, Beckman Res. Inst. City of Hope.*

9:00 F44 **304.06** ● *In vitro* antiglioma action of indomethacin is mediated via AMPK/mTOR signaling pathway. A. PANTOVIC*; A. PANTOVIC. *Military Med. Acad., Military Med. Acad. and Inst. for microbiology and immunology Sch. of Med. Univ. of Belgrade.*

10:00 F45 **304.07** The impact of ionotropic glutamate receptors on glioblastoma stem-like cells upon ionizing radiation. H. LUTZ; H. A. BRAUN*; B. LAUBE. *TU Darmstadt, Univ. Marburg.*

11:00 F46 **304.08** Heterogeneous glioblastoma cell responses to TNF depend on molecular subtype. M. E. BARISH*; A. MIZES; B. BREWSTER; N. BAGHDADCHI; C. E. BROWN. *Beckman Res. Inst. City of Hope, Beckman Res. Inst. City of Hope.*

8:00 F47 **304.09** ● Antineoplastic activity of cannabidiol combined with DNA-damaging agents in glioma cells. L. DENG*; L. NG; T. OZAWA; E. C. HOLLAND; N. STELLA. *Univ. of Washington, Univ. of Washington, Fred Hutchinson Cancer Res. Ctr.*

9:00 F48 **304.10** Synthesis and characterization of a novel copper-containing nano-biocomposite for potential drug delivery and imaging in brain. M. A. DECOSTER*; D. MILAM; A. KARAN; M. DELAHOUSSAYE. *Louisiana Tech. Univ., Louisiana Tech. Univ.*

10:00 F49 **304.11** Microglial properties of glioblastoma as potential therapeutic targets. G. D. MANOCHA*; J. A. KULAS; T. N. SEYFRIED; C. K. COMBS. *Univ. of North Dakota, Boston Col.*

11:00 F50 **304.12** CEP5003, a novel compound targeting glioblastoma cancer stemcells. C. SHARMA; M. JANI; N. AMEZCUA; M. SHARMA; P. NARAYANAN; M. NAVEL; D. STANTON; S. SHARMA; D. FOSTER; J. COLLINS; S. SHARMA; J. JANI; J. SHARMA*. *Celprogen, ROSS Med. Sch. in Domanica, VA Greater Los Angeles Hlth. Care Syst. and JCCC, UCLA, Biopico Systems.*

8:00 F51 **304.13** Brain structural changes after treatment of cerebellar tumors in children. J. TANEDO; D. SACCHETTO; F. YEPES; J. COLOIGNER; M. DESCOTEAUX; M. D. NELSON, Jr; N. LEPORE; M. BARON NELSON*. *Children's Hosp. Los Angeles, USC, Univ. of Sherbrooke, USC.*

9:00 F52 **304.14** The impact of surgical stress, immune stimulation, and native immune cells on brain metasatasis. A. BENBENISHTY*; L. SHAASHUA; A. GLASNER; S. BEN-ELIYAHU; P. BLINDER. *Tel Aviv Univ., The Hebrew Univ. Hadassah.*

10:00 F53 **304.15** Examination of FOXJ1 as a modulator of proliferation in glioblastoma. E. M. PARONETT*; E. P. MCCORMACK; T. M. MAYNARD; J. H. SHERMAN. *George Washington Univ., George Washington Univ.*

11:00 G1 **304.16** HIV-associated brain Lymphoma activates NAMPT/SIRT3/PGC-1α signaling. T. K. MAKAR; S. RAY*; D. D. PATEL; P. R. GUDA; J. L. BRYANT. *Univ. of Maryland Baltimore, VA Med. Ctr., Inst. of Human Virology.*

8:00 G2 **304.17** Implication of mRNA binding protein HuR in PD-L1 up regulation in brain tumor. N. FILIPPOVA*; X. YANG; L. B. NABORS. *Univ. of Alabama At Birmingham.*

POSTER

305. Neuro-Oncology: Tumor Characterization and Modeling

Theme B: Neural Excitability, Synapses, and Glia

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

8:00 G3 **305.01** ● Modelling human glioma using 3D bioprinting. C. C. NAUS*; K. HARADA; W. SIN; D. SONG; N. KITA. *Univ. of British Columbia, Cyfuse Biomed. K.K.*

9:00 G4 **305.02** 3D visualisation of Collagen IV vasculature in human GBM tissue blocks: Morphometric parameters relate to tumor severity and suggest mechanisms of angiogenesis. G. P. CRIBARO; E. SAAVEDRA-LÓPEZ; P. V. CASANOVA; C. BARCIA*. *Univ. Autonoma De Barcelona.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 G5 **305.03** ▲ Use of *in vivo* imaging for stem cell therapy in a model of glioblastoma in rodents. K. IDYLE; K. COPELY; A. STEWART; L. HUFFMAN; L. KNIGHT; M. JEAKLE; L. SIEGEL; A. ANTCLIFF; D. DUES; K. FINK; M. LU; U. HOCHGESCHWENDER; G. DUNBAR; J. ROSSIGNOL*. *Field Neurosciences Inst. Lab., Central Michigan Univ., Dept. of Psychology at Central Michigan Univ., Central Michigan Univ., Central Michigan Univ., Univ. of California, Field Neurosciences Inst.*

11:00 G6 **305.04** Lipid droplet accumulation in glioblastoma multiforme. B. TAIB*; R. AHIMA. *Perelman Sch. of Med. at the Univ. of Pennsylvania.*

8:00 G7 **305.05** ▲ Differential gene expression profiles of adherent and neurosphere-like GL261 cells. J. L. V. MONTEIRO DE BARROS; R. L. DANIELS*. *Col. of Idaho.*

9:00 G8 **305.06** longitudinal functional alterations of peritumoral neurons in a murine glioma model. E. TANTILLO*; C. CERRI; F. OLIMPICO; S. FRANCESCHI; E. VANNINI; P. ARETINI; M. MENICAGLI; C. MAZZANTI; M. CALEO. *Scuola Normale Superiore, Italian Natl. Res. Council CNR, Pisa Sci. Foundation-ONLUS.*

10:00 G9 **305.07** The effects of glioma growth on resting state networks. I. E. ORUKARI*; A. Q. BAUER; G. A. BAXTER; J. B. RUBIN; J. P. CULVER. *Washington Univ. In St Louis.*

11:00 G10 **305.08** Brain tumours near the posterior cingulate cortex have a larger effect on overall cerebral connectivity. S. GHUMMAN*; D. FORTIN; M. NOEL-LAMY; S. CUNNANE; K. WHITTINGSTALL. *Univ. of Sherbrooke, Univ. of Sherbrooke, Univ. of Sherbrooke, Univ. of Sherbrooke.*

8:00 G11 **305.09** Mechanisms of diffuse intrinsic pontine glioma invasion of the subventricular zone. E. Y. QIN*; D. COOPER; S. NAGARAJA; A. MACKAY; C. JONES; M. MONJE. *Stanford Univ. Sch. of Med., The Inst. of Cancer Res.*

9:00 G12 **305.10** Obesity as a potential attribute for vincristine induced peripheral neuropathy. F. BOYLE; K. FORAN; T. J. SAJDYK*; E. SMITH; R. HO; E. WELLS; J. RENBARGER. *Indiana Univ. Sch. of Med., Indiana Univ. Sch. Med., Univ. of Michigan, Vanderbilt Univ., Children's Children Res. Inst.*

10:00 G13 **305.11** Potential biomarkers for early detection of neuropathy in pediatric ALL patients. S. E. ROSS*; E. SMITH; R. HO; E. WELLS; T. SAJDYK; J. THEN; L. LI; J. RENBARGER. *Indiana Univ. Sch. of Med., Univ. of Michigan, Vanderbilt Univ., Children's Natl. Med. Ctr.*

11:00 G14 **305.12** Brain-mimetic hydrogels to study development of glioblastoma resistance to EGFR inhibition. W. XIAO*; R. ZHANG; S. SUN; A. EHSNAIPOUR; C. WALTHERS; J. LIANG; L. TA; D. NATHANSON; S. SEIDLITS. *UCLA, Univ. of California Los Angeles, Univ. of California Los Angeles, UCLA.*

8:00 G15 **305.13** Increased phosphorylation of the mitochondrial fission protein DRP1 in p75 neurotrophin receptor ($p75^{NTR}$)-induced glioma. Y. AHN*; N. SALEM; B. AHN; S. M. ROBBINS; D. SENGER; J. M. RHO. *Alberta Children'S Hosp. Res. Inst., Univ. of Calgary, Univ. of Calgary.*

9:00 G16 **305.14** ● PAD expression and citrullination profiles in malignant glioma. E. A. SUSWAM; J. JYOTI; G. Y. GILLESPIE; C. P. LANGFORD; U. MANNE; A. P. NICHOLAS*. *Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham, Univ. of Alabama at Birmingham.*

10:00 G17 **305.15** The potential impact of pro-inflammatory B cells and γ δ T cells on the progression of glioblastoma multiforme (GBM) in a syngeneic mouse model of GBM. S. MUKHERJEE*; C. PEDDABOINA; L. DAO; S. HENDERSON; J. KAIN; D. LITTLE; M. NEWELL ROGERS. *Texas A & M, Texas A and M Hlth. Sci. Ctr., Baylor Scott and White, Baylor Col. of Med.*

11:00 G18 **305.16** Cellular origin influences glioma pathogenesis and treatment. D. IRVIN*; R. MCNEILL; M. VITUCCI; R. BASH; R. SCHMID; C. MILLER. *Univ. of North Carolina, Univ. of North Carolina, Univ. of North Carolina, Univ. of North Carolina.*

POSTER

306. Brain Energetics in Health and Disease

Theme C: Neurodegenerative Disorders and Injury

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

8:00 G19 **306.01** Acute insulin treatment of hippocampal neurons highlights new mechanisms of action. S. MAIMAITI; H. N. FRAZIER; K. L. ANDERSON*; L. D. BREWER; N. M. PORTER; O. THIBAULT. *Univ. of Kentucky.*

9:00 G20 **306.02** Signaling and expression of a truncated, constitutively active human insulin receptor in neurons and astrocytes. H. N. FRAZIER*; S. MAIMAITI; K. L. ANDERSON; K. HAMPTON; L. D. BREWER; S. D. KRANER; C. M. NORRIS; R. J. CRAVEN; N. M. PORTER; O. THIBAULT. *Univ. of Kentucky, Univ. of Kentucky.*

10:00 G21 **306.03** Insulin phosphosignaling in the hippocampus of young and aged animals. K. K. HAMPTON; H. FRAZIER; K. ANDERSON; O. THIBAULT; R. CRAVEN*. *Univ. of Kentucky.*

11:00 G22 **306.04** Altered mitochondrial function and succinate-dependent H_2O_2 production in the cortex of type 1 diabetic rodents. S. ROY CHOWDHURY*; J. DJORDJEVIC; E. THOMSON; D. SMITH; B. C. ALBENSI; P. FERNYHOUGH. *St. Boniface Hosp. Res. Ctr.*

8:00 G23 **306.05** Respiratory parameters of rat brain, liver and heart mitochondria during the aging process. H. BARAN*; K. STANIEK; M. BERTIGNOL-SPÖRR; M. ATTAM; B. KEPPLINGER. *Karl Landsteiner Res. Inst. Mauer, Univ. of Vet. Med. Vienna, Univ. of Vet. Med. Vienna.*

9:00 G24 **306.06** Metabolic syndrome impairs spatial memory & dendritic morphology of rat hippocampal neurons. A. D. DIAZ*; P. AGUILAR-ALONSO; A. MORENO-RODRIGUEZ; U. PEÑA-ROSAS; G. LÓPEZ-LÓPEZ; E. BRAMBILA; R. A. VAZQUEZ-ROQUE; J. GUEVARA; G. FLORES; S. TREVIÑO. *Facultad De Ciencias Quimicas, BUAP, Inst. de Fisiologia, BUAP, Facultad de Medicina-UNAM.*

10:00 G25 **306.07** Metabolic fuel switch from glucose to ketones regulatesSIRT3 in the brain. K. MAROSI*; S. KIM; M. P. MATTSON; R. CUTLER; S. CAMANDOLA. *NIH.*

11:00 G26 **306.08** Nutrition and healthy brain functioning across the lifespan. J. HEATH MATHISON*; L. M. JAMES; A. LEUTHOLD; A. GEORGOPOULOS; A. GEORGOPOULOS; H. HOOVER. *Univ. of Minnesota, Minneapolis VA Med. Ctr.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 G27 **306.09** ● Hippocampal damage in the offspring exposed to perinatal high sucrose diet. I. ZARCO DE CORONADO*; S. MOSSO-MENDOZA; M. A. HERRERA. *UNAM, UNAM, UNAM.*

9:00 G28 **306.10** Oxidative stress underlies amyloid-β toxicity and mitochondrial dysfunction in Alzheimer's disease. L. ADLER*; W. REGENOLD; S. DODDI. *Univ. of Maryland Sch. of Med.*

10:00 G29 **306.11** Neuroprotective effect of blackberry juice in rats under a hypercaloric diet. B. PÉREZ GRIJALVA*; R. MORA ESCOBEDO; R. GUZMAN GERONIMO; A. DIAZ; S. TREVIÑO; C. PEREZ CRUZ. *CINVESTAV Unidad Zacatenco, Escuela Nacional de Ciencias Biologicas, universidad Veracruzana, BENEMERITA UNIVERSIDAD AUTONOMA DE PUEBLA.*

11:00 G30 **306.12** Weakened neurotrophic support and aberrant levels of neurometabolites in the brain underlie reduced lifespan of WNIN/Ob obese rats. J. K. SINHA*; S. GHOSH; V. TIWARI; A. B. PATEL; M. RAGHUNATH. *Natl. Inst. of Nutr. (NIN), Ctr. for Cell. and Mol. Biol.*

8:00 G31 **306.13** Mitochondrial complex-1 assembly into supercomplexes determines mitochondrial reactive oxygen species production in neurons and astrocytes. J. P. BOLANOS*; I. LOPEZ-FABUEL; J. LE DOUCE; G. BONVENTO; A. M. JAMES; M. P. MURPHY; A. ALMEIDA. *UNIVERSITY OF SALAMANCA, Mol. Imaging Ctr. (MIRCen), Med. Res. Council Mitochondrial Biol. Unit, Inst. of Biomed. Res. of Salamanca.*

9:00 G32 **306.14** Aerobic glycolysis in the frontal cortex correlates with memory performance in wild-type but not APP/PS1 mice: Implications for metabolic intervention in Alzheimer's disease. R. A. HARRIS; S. L. MACAULEY; D. M. HOLTZMAN; R. BARTHA; R. C. CUMMING*. *Univ. of Western Ontario, Washington Univ. Sch. of Med., Univ. of Western Ontario, Univ. of Western Ontario.*

10:00 G33 **306.15** Functional food restores SIRT1 levels and reverses dendritic spine loss in medial prefrontal cortex of obese rats. L. PÉREZ JIMÉNEZ*; T. BEGUM S; A. RAMIREZ-MIRAFUENTES; M. SANCHÉZ-TAPIA; N. TORRES-TORRES; C. PEREZ-CRUZ. *CINVESTAV, Natl. Inst. of Med. Sci. and Nutr. Salvador Zubiran.*

11:00 G34 **306.16** Neural effects of high-fat diet are exacerbated by aging and improved by testosterone in male brown Norway rats. C. J. PIKE*; V. MOSER; A. CHRISTENSEN. *USC, USC, USC.*

8:00 G35 **306.17** The relationship between metabolic impairment and proteasome activity the nervous system of *Drosophila*. T. SCHMIDT-GLENEWINKEL*; M. JANSEN; S. BENNETT; A. KLEIN; A. RASHID; J. NETHERCOTT. *Hunter Col. of CUNY.*

9:00 G36 **306.18** A vascular niche for highly active neurons. T. MIYAWAKI*; S. YAMAGUCHI; Y. IKEGAYA. *The Univ. of Tokyo, Gifu Univ.*

10:00 G37 **306.19** Effects of recurrent hypoglycemia on growth hormone releasing hormone (GHRH) neurons. M. BAYNE*; A. ALVARSSON; S. A. STANLEY. *Icahn Sch. of Med. at Mount Sinai.*

11:00 G38 **306.20** Dynamics of lactate and glucose in the extracellular compartment of the motor cortex during running: Impact of intraperitoneal glucose, fructose, and insulin. C. MESSIER*; A. BELAND; P. SHUKLA; J. LARCHER. *Univ. of Ottawa, Univ. of Ottawa.*

8:00 G39 **306.21** PTG is a central regulator of glycogen synthesis in astrocytes. I. ALLAMAN*; E. RUCHTI; P. J. ROACH; A. A. DEPAOLI-ROACH; P. J. MAGISTRETTI. *EPFL/Brain Mind Inst., Ctr. de Neurosciences Psychiatriques (CHUV), Indiana Univ. Sch. of Med., King Abdullah Univ. of Sci. and Technol. (KAUST).*

9:00 G40 **306.22** Dorsal raphe nucleus: A locus for energy homeostasis. B. FIELD*; A. NECTOW; Y. LIANG; J. FRIEDMAN. *Rockefeller Univ.*

10:00 G41 **306.23** Estradiol in the medial amygdala prevents ovariectomized induced metabolic responses in female rats. C. ESTRADA*; V. GHISAYS; E. T. NGUYEN; J. CALDWELL; J. STREICHER; M. B. SOLOMON. *Univ. of Cincinnati, Univ. of Cincinnati, Univ. of Cincinnati.*

11:00 G42 **306.24** Genetically dissecting a hypothalamic neural circuit controlling glucose homeostasis. C. S. LOW*; X. YI; C. BARTOLOME; J. XU; P. WANG; D. KONG. *Tufts Univ.*

8:00 G43 **306.25** Physiological characterization of the hypoxia tolerant heart and brain of the naked mole rat. D. T. APPLEATE*; J. LARSON; T. PARK. *Univ. of Illinois at Chicago Dept. of Neurosurg., Univ. of Illinois at Chicago.*

9:00 G44 **306.26** ● Alternate fuels for the brain: Impact of intraperitoneal glucose, fructose, galactose, lactate, pyruvate, β-hydroxybutyrate and insulin on glucose and lactate levels in the brains' antechamber. A. BELAND*; J. COURTEMANCHE; J. LARCHER; T. YUAN; C. MESSIER. *Univ. of Ottawa, Univ. of Ottawa.*

10:00 G45 **306.27** Low glucose utilization and high lactate production in the Alzheimer's disease brain. R. J. MULLINS*; D. REITER; D. KAPOGIANNIS. *Natl. Inst. On Aging, Natl. Inst. on Aging.*

11:00 G46 **306.28** Imaging cytosolic metabolites and pH in mouse astrocytes. J. W. DEITMER*; J. SCHMÄLZLE; T. WEBER; I. RUMINOT; S. M. THEPARAMBIL. *Univ. Kaiserslautern, CECs.*

8:00 G47 **306.29** Cell specific expression of α amylase 1 and 2A in hippocampus of non demented elders and patients with Alzheimers's disease. E. K. BYMAN*; N. H. SCHULZ; N. BRAIN BANK; M. WENNSTRÖM. *Lund Univ., Netherlands Inst. for Neurosci.*

9:00 G48 **306.30** Role of DMH/DHA LepRb-expressing neurons in temperature-dependent neuronal circuits. M. FRANCOIS*; S. YU; E. QUALLS-CREEKMORE; C. HUESING; C. MORRISON; H. BERTHOUD; H. MUNZBERG. *Pennington Biomed. Res. Ctr.*

POSTER

307. Alzheimer's Disease: *In Vitro* and *In Vivo* Therapeutics

Theme C: Neurodegenerative Disorders and Injury

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

8:00 G49 **307.01** Allopregnanolone promotes neural stem cell differentiation to neurons and oligodendrocyte precursor cells. S. CHEN*; J. YAO; K. WONG; R. D. BRINTON. *USC, Univ. of Arizona.*

9:00 G50 **307.02** Allopregnanolone activates LXR and PXR gene expression and signaling pathways regulating neuroinflammation, apoptosis, Aβ trafficking, and cholesterol clearance: Implications for Alzheimer's disease. R. W. IRWIN*; H. M. SWANSON; R. D. BRINTON. *USC, Univ. of Arizona, Univ. of Arizona.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 H1 **307.03** Human iPSC-based biomarker strategy to identify neuro-regenerative responders to allopregnanolone: Proof of concept. C. M. SOLINSKY*; V. HENNES; J. A. PARK; H. C. CHUI; M. BLURTON-JONES; J. K. ICHIDA; R. D. BRINTON. *USC, USC, Univ. of California Irvine, USC, Univ. of Arizona.*

11:00 H2 **307.04** Increased number of neural stem cells in the hippocampus correlates with maintenance of cognitive integrity in non-demented individuals with Alzheimer's disease neuropathology. D. BRILEY*; O. ZOLOCHEVSKA; R. WOLTJER; M. MICCI; G. TAGLIALATELA. *Univ. of Texas Med. Br. at Galveston, Oregon Hlth. and Sci. Univ.*

8:00 H3 **307.05** D-Serine mediates adult neurogenesis in mice. R. ROYCHAUDHURI*; S. H. SNYDER. *Johns Hopkins Sch. of Med.*

9:00 H4 **307.06** ProNGF/p75/sortilin: Potential targets to recover neurogenesis in Alzheimer's disease. C. FLEITAS PÉREZ*; C. RAMPON; R. CURIÀ; E. BERNAUS; J. EGEA; C. ESPINET. *Irblleida. Univ. of Lleida, Ctr. de Recherches sur la Cognition Animale. Univ. Paul Sabatier.*

10:00 H5 **307.07** Neural stem cell transplantation increases the neurogenesis in double transgenic mouse model of Alzheimer's disease. B. M. LONGO*; S. A. ROMARIZ; D. S. PAIVA. *UNIFESP, UNIFESP.*

11:00 H6 **307.08** The epigenetic regulation of h3k9me3 promotes neuronal survival and functions. L. TONG*; S. SNIGDHA; C. W. COTMAN. *UC Irvine, UC Irvine.*

8:00 H7 **307.09** ● Discovery of novel,neuroprotective small molecules for the treatment of ER stress related to Alzheimer's disease. K. KRAJNAK*; F. WANG; R. DAHL. *Purdue Univ. Calumet, Neurodon.*

9:00 H8 **307.10** A genetically immortalized human stem cell line: A promising new tool for Alzheimer's disease therapy. N. PUANGMALAI*; W. THANGNIPON; A. SOMANI; C. BALLARD; M. BROADSTOCK. *Mol. Biosci., King's Col. London, Wolfson Ctr. for Age-Related Dis.*

POSTER

308. Neuropsychological, Biochemical and Imaging Biomarkers of Alzheimer's Disease and Other Neurodegenerative Diseases

Theme C: Neurodegenerative Disorders and Injury

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

8:00 H9 **308.01** ● Higher resting motor threshold associated with better cognitive function in patients with mild Alzheimer's disease. P. J. FRIED*; A. JANNATI; P. DAVILA PEREZ; V. M. CHEN; D. Z. PRESS; A. PASCUAL-LEONE. *Beth Israel Deaconess Med. Ctr.*

9:00 H10 **308.02** Blood-based biomarkers for staging of Alzheimer's disease. C. N. WINSTON*; E. J. GOETZL; J. C. AKERS; B. S. CARTER; E. M. ROCKENSTEIN; D. R. GALASKO; E. MASLIAH; R. A. RISSMAN. *UC San Diego, Univ. of California, San Francisco, UC San Diego, UC San Diego.*

10:00 H11 **308.03** Semantic and episodic memory impairments for faces in frontotemporal dementia and Alzheimer's disease. J. A. COLLINS*; B. C. DICKERSON. *Massachusetts Gen. Hosp., Dept. of Neurol., Harvard Med. Sch.*

11:00 H12 **308.04** Progression of τ oligomer pathology in cholinergic nucleus basalis neurons in mild cognitive impairment and Alzheimer's disease. C. T. TIERNAN*; E. J. MUFSON; N. M. KANAAN; S. E. COUNTS. *Michigan State Univ., Barrow Neurolog. Inst., Michigan State Univ., Mercy Hlth. St. Mary's, Michigan State Univ.*

8:00 H13 **308.05** ▲ Volumetric assessment of brain areas involved in executive function deficit in Alzheimer's disease. F. JUNG*; S. KAZEMIFAR; R. BARTHA; R. N. RAJAKUMAR. *Western Univ., Western Univ.*

9:00 H14 **308.06** Genome-wide expression and methylation profiling in Medial Temporal Gyrus reveals dysregulated genes with specific methylation associated with Alzheimer's disease. I. S. PIRAS*; Y. KONG; W. J. DANIEL; J. KRATE; E. DELVAUX; J. NOLZ; D. MASTROENI; M. SWAPNA; A. BLATTER; A. M. PERSICO; W. JEPSEN; K. D. SIEGMUNG; T. D. BEACH; P. W. LAIRD; M. J. HUENTELMAN; P. D. COLEMAN. *TGEN - Neurogenomic Div., USC, Univ. of Arizona Col. of Med., Arizona State University-Banner Neurodegenerative Dis. Res. Ctr., Univ. of California, Univ. of California, Univ. Campus Bio-Medico, Banner Sun Hlth. Res. Inst., Van Andel Inst.*

10:00 H15 **308.07** Predicting Alzheimer's disease risk with a deep neural network model. K. NING*; B. CHEN; F. SUN; Z. HOBEL; A. Alzheimer's disease GENETIC CONSORTIUM; A. W. TOGA. *USC, Caltech, Alzheimer's Dis. Genet. Consortium.*

11:00 H16 **308.08** The preclinical pathology of Alzheimer's disease and its modulation by ApoE. O. PLETNIKOVA; G. L. RUDOW; Y. KAGEYAMA; K. LACLAIR; D. R. FOWLER; L. J. MARTIN; J. C. TRONCOSO*. *Johns Hopkins Univ., Neuropathology, Office of the Chief Med. Examiner.*

8:00 H17 **308.09** ▲ Neuropsychological assessment of semantic memory in Alzheimer's and primary progressive aphasia patients. J. FERRER*; V. PATIÑO-TORREALVA. *UAEM, Ctr. de Investigación Transdisciplinar en Psicología.*

9:00 H18 **308.10** Human brain isoprenoids and Alzheimer's disease. S. PELLEIEUX*; Y. S. TSANTRIZOS; L. LAMARRE-THÉROUX; D. DEA; J. POIRIER. *Douglas Mental Hlth. Res. Inst., McGill Univ., Douglas Mental Hlth. Univ. Institute, McGill, Psychiatry and medecine, McGill Univ. and Douglas Mental Hlth. Univ. Inst.*

10:00 H19 **308.11** EEG oscillations during word processing predict MCI conversion to Alzheimer's disease. A. MAZAHERI*; K. SEGAERT; J. YANG; Y. NIU; J. OLICHNEY; K. SHAPIRO; H. BOWMAN. *Univ. of Birmingham, Ctr. for Mind and Brain, Univ. of California, Davis, MIND Institute, UC Davis, Ctr. for Mind and Brain, Univ. of California, Davis.*

11:00 H20 **308.12** ▲ Integrity of the basal forebrain cholinergic space and its relation to the hippocampus in Alzheimer's disease. J. L. REEP*; B. A. ARDEKANI; C. E. MYERS; L. ZABORSZKY. *Rutgers, The State Univ. of New Jersey-Newark, Nathan S. Kline Inst. for Psychiatric Res., VA New Jersey Hlth. Care Syst., Rutgers, The State Univ. of New Jersey-Newark.*

8:00 H21 **308.13** Nia genetics of Alzheimer's disease data storage site (niagads): 2016 update. L. QU*; A. PARTCH; P. GANGADHARAN; O. VALLADARES; M. CHILDRESS; R. CWEIBEL; J. MALAMON; H. LIN; Y. ZHAO; E. GREENFEST-ALLEN; C. J. STOECKERT JR.; A. NAJ; G. SCHELLENBERG; L. WANG. *Univ. of Pennsylvania, Univ. of Pennsylvania.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 H22 **308.14** Gender differences in Alzheimer's disease: Brain atrophy, gender differences in Alzheimer's disease: Brain atrophy, histopathology burden and cognition. G. E. SERRANO; J. FILON; L. SUE; T. G. BEACH*. *Banner Sun Hlth. Res. Inst.*

10:00 H23 **308.15** Identifying genetic modifiers of Alzheimer's disease-relevant phenotypes. K. D. ONOS*; K. J. KEEZER; C. J. ACKLIN; H. M. JACKSON; S. J. SUKOFF RIZZO; M. SASNER; G. W. CARTER; E. J. CHESLER; B. T. LAMB; G. R. HOWELL. *The Jackson Lab., Tufts Univ., Univ. of Maine, Indiana Univ. Sch. of Med.*

11:00 H24 **308.16** ● Evaluation of cGMP concentrations in CSF as biomarker for PDE2A inhition in the dog brain. H. BORGHYS*; P. BUIJNSTERS; D. DHUYVETTER; M. SOMERS; R. VREEKEN. *Janssen Res. & Develop.*

8:00 H25 **308.17** Eeg markers of leukoaraiosis in older adults. N. B. LAM*; A. RAJAN; N. SCHWAB; R. LIU; M. DING. *Univ. of Florida.*

POSTER

309. Oscillatory Activity in Parkinson's Disease

Theme C: Neurodegenerative Disorders and Injury

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

8:00 H26 **309.01** Frontal β oscillations time-locked to corrective sub-movements in Parkinson's disease: Modulation by L-dopa. A. HAJIHOSSEINI*; C. GONZALEZ; M. OISHI; M. J. MCKEOWN. *Univ. of British Columbia, Univ. of New Mexico.*

9:00 I1 **309.02** Movement related subthalamic ß oscillatory neurons in patients with Parkinson's disease. P. ZHUANG*; R. CHEN; M. HALLETT; Q. CUI; Y. ZHANG; J. LI; Y. LI. *Xuanwu Hosp, Capital Med. Uni, Krembil Res. Institute, Univ. of Toronto, NINDS,NIH.*

10:00 I2 **309.03** Globus Pallidus internus low β phase-amplitude coupling correlates with motor impairment in Parkinson's disease. M. MALEKMOHAMMADI*; N. AUYONG; N. POURATIAN. *Univ. of California Los Angeles, UCLA.*

11:00 I3 **309.04** ● Neural and motor responses to temporally non-regular deep brain stimulation in Parkinson's disease. B. D. SWAN*; D. BROCKER; C. OZA; D. TURNER; W. GRILL. *Duke Univ., Duke Univ. Med. Ctr.*

8:00 I4 **309.05** High resolution electrocorticography in prefrontal cortex in Parkinson's disease patients. C. DE HEMPTINNE*; W. CHEN; A. MILLER; C. RACINE; P. STARR. *Univ. of California San Francisco, UCSF.*

9:00 I5 **309.06** Sensorimotor β coherence with high-resolution electrocorticography in Parkinson's disease patients. W. CHEN*; C. DE HEMPTINNE; N. ROWLAND; P. A. STARR. *Univ. of California San Francisco, Univ. of Toronto.*

10:00 I6 **309.07** ●▲Resetting and saving of β oscillatory changes during motor practice in healthy subjects and in Parkinson's disease. J. LIN; P. PANDAY; A. B. NELSON; M. S. VENANZI; C. MOISELLO; A. DI ROCCO; M. F. GHILARDI*. *CUNY, Univ. of Milan, NYU Langone Med. Sch.*

11:00 I7 **309.08** Rapid prediction of movement states from ongoing neural activity in Parkinson's disease. M. AHN*; S. LEE; J. A. GUERIN; D. J. SEGAR; T. V. SANKHLA; W. F. ASAAD. *Brown Univ., Brown Univ., Brown Univ., Rhode Island Hosp., Rhode Island Hosp.*

8:00 I8 **309.09** ● Differential effect of bicycling and walking on subthalamic high-frequency oscillations in Parkinson's disease. L. STORZER*; M. BUTZ; J. HIRSCHMANN; O. ABBASI; M. GRATKOWSKI; D. SAUPE; J. VESPER; A. SCHNITZLER; S. S. DALAL. *Heinrich Heine Univ. Duesseldorf, Radboud Univ., Ruhr-University Bochum, Univ. of Konstanz, Univ. Hosp. Duesseldorf, Univ. Hosp. Duesseldorf, Aarhus Univ., Univ. of Konstanz.*

9:00 I9 **309.10** Effects of STN deep brain stimulation on voice motor control in Parkinson's disease. R. BEHROOZMAND*; P. HERATH; K. JOHARI; R. KELLEY; E. KAPNOULA; K. BRYANT; N. NARAYANAN; J. GREENLEE. *Univ. of South Carolina, Univ. of South Carolina, Univ. of Iowa.*

10:00 I10 **309.11** Parkinson's disease outcomes of implanting deep brain stimulation leads to the globus pallidus internus while undergoing surgery under general anesthesia. N. S. TIMONEY; J. E. QUINTERO*; J. H. SMITH; F. N. MCCARRON; G. A. GERHARDT; C. G. VAN HORNE. *Univ. of Kentucky, Univ. Kentucky, Univ. of Kentucky, Univ. of Kentucky.*

11:00 I11 **309.12** ● Feasibility of 1.5T fMRI BOLD activation patterns for guiding deep brain stimulation targeting and parameter selection demonstrated in a large-animal model. T. A. JERDE; N. REINKING; M. KELLY; T. BILLSTROM; L. LENTZ; R. S. RAIKE*. *New York Unveristy, Medtronic Inc.*

8:00 I12 **309.13** A novel approach for measuring light-evoked neurotransmitter release. A. K. KONRADSSON-GEUKEN*; T. VIERECKEL; G. SERRA; A. WALLÉN-MACKENZIE. *Uppsala Univ.*

9:00 J1 **309.14** Optogenetic stimulation parameter settings and candidate electrophysiological features for maximizing behavioral response. T. H. SANDERS*. *Emory Univ. Dept. of Biol.*

10:00 J2 **309.15** Development and implementation of a large animal model for investigation of neurochemical activity during behavior. J. TREVATHAN*; A. D. BATTON; E. N. NICOLAI; K. H. LEE; J. L. LUJAN. *Mayo Clin.*

11:00 J3 **309.16** Optogenetics stimulation of entopeduncular input affects thalamic signaling and behavior in α-synuclein-induced hemiparkinson rat model. H. MOON*; Y. PARK; B. OH; C. CHUL BUM; Y. LEE. *Med. Neuroscience, Col. of Med., Chungbuk Natl. Univ. Hosp., Neurosurgery, St. Vincent's Hosp., Radiology St. Mary's Hosp.*

POSTER

310. Parkinson's Disease: Cell and Circuit Mechanisms

Theme C: Neurodegenerative Disorders and Injury

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

8:00 J4 **310.01** Evaluating mitochondrial biogenesis in a cell model of Parkinson disease via mitochondrial DNA replication in neuron cell bodies, axons, and dendrites. V. S. VAN LAAR*; L. H. SANDERS; B. ARNOLD; E. H. HOWLETT; J. T. GREENAMYRE; S. B. BERMAN. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

9:00 J5 **310.02** Investigating molecular mechanisms regulating mitochondrial quality control. K. BUSH*; A. M. BUCKLEY; K. R. BARBER; M. WOODSON; M. B. SHERMAN; Y. WAIRKAR. *Univ. of Texas Med. Br., UTMB.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 J6 **310.03** Altered lysosomal stress markers in idiopathic Parkinson's disease and following pharmacological-induced lysosomal dysfunction via glucocerebrosidase inhibition. E. B. MOLONEY; S. LEVY; J. A. KORECKA; O. ISACSON; P. HALLETT*. *Harvard Med. Sch. / McLean Hos.*

11:00 J7 **310.04** Prolyl Oligopeptidase (PREP), a novel modulator of PI3K class III regulated autophagy pathway. R. SVARCBAHS*; J. JAKOLA; T. MYÖHÄNEN. *Univ. of Helsinki.*

8:00 J8 **310.05** Blockade of SK channels with the scorpion venom peptide scyllatoxin protects midbrain dopamine neurons from degeneration. P. P. MICHEL*; S. HAMADAT; D. SERVENT; G. MOURIER; E. C. HIRSCH. *Brain and Spinal Cord Inst. (ICM), CEA, iBiTecS, Service d'Ingénierie Moléculaire des Protéines.*

9:00 J9 **310.06** Receptor-mediated endocytosis 8 is a new component of the protein homeostasis network in mammalian cells. A. M. CLEMENT*; A. BESEMER; J. MAUS; K. NALBACH; C. FREESE; C. VON HILCHEN; A. KERN; C. BEHL. *Univ. Med. Ctr. Mainz.*

10:00 J10 **310.07** The involvement of ASC in Parkinson's disease: Beyond an adaptor protein. E. ALBORNOZ BALMACEDA*; R. GORDON; A. B. ROBERTSON; K. SCHRODER; M. A. COOPER; T. M. WOODRUFF. *Univ. of Queensland, The Univ. of Queensland.*

11:00 J11 **310.08** ● PKD1 activation positively regulates PGC-1α transcriptional activity and protects against dopaminergic neurodegeneration. M. AY; A. ASAITHAMBI; D. HARISCHANDRA; A. KANTHASAMY; H. JIN; V. ANANTHARAM; A. G. KANTHASAMY*. *IOWA STATE UNIVERSITY, Iowa State Univ.*

8:00 J12 **310.09** LRRK2-G2019S alters developing synapse structure and function in dorsal striatum. B. A. MATIKAINEN-ANKNEY*; N. KEZUNOVIC; G. W. HUNTLEY; D. L. BENSON. *Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. At Mount Sinai.*

9:00 J13 **310.10** Implication of 8-oxodG-mediated Transcriptional Mutagenesis in sporadic Parkinson's disease. S. BASU*; S. GUHATHAKURTA; G. GOLDBLATT; S. TATULIAN; S. DAS; E. BOK; G. JE; A. C. CRISTOVAO; Y. KIM. *Univ. of Central Florida, Univ. of Beira Interior.*

10:00 J14 **310.11** Alteration of cholinergic neuron activity in the l-dopa induced dyskinesia mouse model. S. CHOI*; T. C. MA; T. CHEUNG; Y. DING; D. SULZER; E. MOSHAROV; U. J. KANG. *Columbia Univ.*

11:00 J15 **310.12** Munc18-1 controls a-synuclein self-replicating aggregation in early infantile epileptic encephalopathy. Y. CHAI*; E. SIERECKI; V. M. TOMATIS; R. S. GORMAL; N. ARIOTTI; N. GILES; D. XIA; R. PARTON; B. M. COLLINS; Y. GAMBIN; F. A. MEUNIER. *The Univ. of Queensland, Clem Jones Ctr. for Ageing Dementia Research, Queensland Brain Institute,The Univ. of Queensland, Inst. for Mol. Bioscience, The Univ. of Queensland, Single Molecule Sci. Centre, EMBL Australia, The Univ. of New South Wales.*

8:00 J16 **310.13** Characterization of α-synuclein-enriched periglomerular cells in the olfactory bulb. K. TAGUCHI*; Y. WATANABE; A. TSUJIMURA; M. TANAKA. *Kyoto Prefectural Univ. of Med., Kyoto Prefectural Univ. of Med.*

9:00 J17 **310.14** Transmission of α-synucleinopathy from olfactory structures deep into the temporal lobe. D. MASON*; N. NOURAEI; J. HAN; D. PANT; K. MINER; K. LUK; J. STOLZ; R. LEAK. *Duquesne Univ., Duquesne Univ., Univ. of Pennsylvania, Duquesne Univ.*

10:00 J18 **310.15** Alterations of oscillatory activity in the striatal-cortical circuit following repeated sub-anesthetic ketamine administration in 6-OHDA-lesioned rats. T. YE*; M. J. BARTLETT; M. B. SCHMIT; S. J. SHERMAN; T. FALK; S. L. COWEN. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

11:00 K1 **310.16** Initiation and propagation of action potentials in the hyperdirect pathway during subthalamic deep brain stimulation. R. W. ANDERSON*; B. HOWELL; K. GUNALAN; C. C. MCINTYRE. *Case Western Reserve Univ.*

8:00 K2 **310.17** ● The relevant nuclei of Parkinson's disease were elucidated by the quantitative activation-induced manganese-enhanced MRI in MPTP mouse model. S. KIKUTA; Y. NAKAMURA; Y. YAMAMURA; Y. YANAGAWA; N. HOMMA; H. TAMURA; J. KASAHARA; M. OSANAI*. *Tohoku Univ. Grad Sch. Med., JSPS Res. Fellow, Grad Sch. Fac Pharmaceut. Sciences, Tokushima Univ., Gunma Univ. Grad Sch. Med., Grad Sch. Biomed. Engineering, Tohoku Univ.*

9:00 K3 **310.18** ● Systems-level neurophysiological state characteristics for drug evaluation in an animal model of levodopa-induced dyskinesia. P. HALJE*; M. TAMTE; U. RICHTER; I. BRYS; P. PETERSSON. *Lund Univ.*

10:00 K4 **310.19** A computational model for the progression of Parkinson's disease in the basal ganglia. M. CAIOLA*; M. HOLMES. *Rensselaer Polytechnic Inst.*

11:00 K5 **310.20** Development of an *in vivo* model of basal ganglia pathway isolation for study of information transmission. K. M. LAMBERT*; J. A. WHITE; A. D. DORVAL. *Univ. of Utah, Boston Univ.*

8:00 K6 **310.21** Neural basis for bradykinesia/akinesia in Parkinson's disease: Causality of β frequency oscillations. C. BEHREND*; D. T. BROCKER; W. M. GRILL. *Duke Univ., Duke Univ. Sch. of Med., Duke Univ. Med. Ctr.*

9:00 K7 **310.22** ▲ Evaluation of cardiovascular risk factors in a rat model of Parkinson's disease. A. A. HAIDAR*; L. F. OLIVEIRA; L. D. RODRIGUES; M. B. NEJM; P. P. GHAZALE; H. B. FERRAZ; C. SCORZA; E. CAVALHEIRO; L. R. BRITTO; F. SCORZA. *Sao Paulo Federal Univ., Goiás Federal Univ., Sao Paulo Univ.*

10:00 K8 **310.23** Experimental reduction of nigrostriatal dopamine similar to aging in substantia nigra, but not striatum, reduces open-field locomotor activity. M. F. SALVATORE*; T. MCINNIS; B. S. PRUETT; C. OWENS. *Univ. of North Texas Hlth. Sci. Ctr., Brown Univ., LSU Hlth. Sci. Ctr.*

11:00 K9 **310.24** Functional connectivity in the cortico-basal ganglia-thalamic circuit in rodent and primate models of Parkinson's disease. P. PETERSSON*; U. RICHTER; M. TAMTE; I. BRYS. *Lund Univ.*

8:00 K10 **310.25** ▲ White matter and functional connectivity changes in MPTP nonhuman primates (Cercopithecus aethiops) model using fMRI and DTI. G. RAMÍREZ GARCÍA*; C. CASTILLO-HERNÁNDEZ; J. FERNÁNDEZ RUÍZ; A. LÓPEZ ORNELAS; I. ESCOBEDO AVILA; A. CAMPOS ROMO. *Univ. Nacional Autónoma de México, Consejo Nacional de Ciencia y Tecnología, Inst. de Neuroetología, Lab. de Neuropsicología, Dept. de Fisiología, Facultad de Medicina, Univ. Nacional Autónoma de México, Inst. de Fisiología Celular, Univ. Nacional Autónoma de México, Univ. Nacional Autónoma de México.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 K11 **310.26** ▲ Limbic system and olfactory dysfunction in drug naive patients with Parkinson's disease : A connectometry study. N. HOSSEINI*; B. POURMENNATI; F. RAHMANI; A. KAMALIAN; A. ANJOMSHOA; M. DOLATSHAHI; M. AARABI. *Student's Scientific Res. Ctr., Tehran Univ. of Med. Sci., Basir Eye Hlth. Res. Ctr.*

10:00 K12 **310.27** ● Physical activity and resting state fMRI in Parkinson's disease patients with mild cognitive impairment. B. JARRAHI; G. PETZINGER*; L. HAWTHORNE; M. GOMEZ; A. PETKUS; B. FISHER; V. FILOTEO; S. MCEWEN. *UCLA, USC, USC, USC, UCSD.*

11:00 K13 **310.28** Does impaired reaction time cause rest tremor in Parkinson's disease? V. V. SHAH*; T. HOMAYOUNI; S. GOYAL; H. PALANTHANDALAM-MADAPUSI. *Indian Inst. of Technol. Gandhinagar, Univ. of California, Merced, Univ. of California Merced.*

8:00 K14 **310.29** Multivariate pattern analysis of fMRI data reveals the discrete neural signature of target-specific deep brain stimulation in the pigs. S. CHO*; P. TESTINI; M. SETTELL; H. JO; H. MIN; K. H. LEE. *Mayo Clin.*

POSTER

311. Movement Disorders

Theme C: Neurodegenerative Disorders and Injury

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

8:00 K15 **311.01** Region-specific transcriptomics of SCA1 mouse models highlight biological pathways underlying tissue vulnerability. T. DRIESSEN*; J. LIM. *Yale Univ.*

9:00 K16 **311.02** Generation of a marmoset model of spinocerebellar ataxia type 3 via AAV9 vector-mediated gene transfer. A. KONNO*; Y. MATSUZAKI; H. HIRAI. *Gunma Univ.*

10:00 K17 **311.03** Analysis of glucose metabolism during the pathogenesis of Spinocerebellar Ataxia Type 1. J. DIAZ*; A. PEREZ; M. GALLEGO; Y. WAN; T. INOUE; A. CHAI; M. MALETIC-SAVATIC; H. ORR; M. GABER; Z. LIU; R. SAMACO; J. BOTAS. *Baylor Col. of Med., King's Col. London, Univ. of Minnesota.*

11:00 L1 **311.04** Pathogenic polyglutamine expansion length correlates with polarity of the flanking sequences. M. KIM; I. BEZPROZVANNY. *UT southwestern Med. Ctr.*

8:00 L2 **311.05** Upregulation of glial GLT1 glutamate transporter corrects Purkinje cell dysfunction and cerebellum-dependent motor incoordination in a mouse model of myotonic dystrophy. M. GOMES-PEREIRA*; D. M. DINCA; G. SICOT; S. O. BRAZ; A. LEROY; F. MEDJA; A. HUGUET; A. NICOLE; N. GUERIBA; C. CHHUON; C. PRIGOGINE; C. GUERRERA; G. CHERON; L. SERVAIS; G. GOURDON. *Imagine Inst., Université Libre de Bruxelles, Paris Descartes Univ., I-Motion Inst.*

9:00 L3 **311.06** Deficient nuclear export of polyglutamine-expanded androgen receptor contributes to toxicity in a cell model of spinal and bulbar muscular atrophy. F. ARNOLD*; D. MERRY. *Thomas Jefferson Univ.*

10:00 L4 **311.07** TFEB and Hikeshi influence the degradation of the disease-causative proteins in cellular models of neurodegenerative diseases. H. ADACHI*; Z. HUANG; K. OKADA; K. OHNARI; T. HASHIMOTO; T. TOYOTA; Y. IWANAKA; R. KATSUMATA; G. SOBUE. *Univ. of Occup. and Envrn. Hlth., Nagoya Univ. Grad. Sch. of Med.*

11:00 L5 **311.08** ● Generation of transgenic marmoset line with polyglutamine disease and behavioral phenotyping. K. OWARI; N. NOGAMI; T. NAKATANI; M. KOIZUMI; H. ISHIBASHI; Y. NAGAI; I. TOMIOKA; K. SEKI*. *Natl.inst. Neurosci., Tokyo Med. Univ., Osaka Univ. Grad. Sch. of Med., Shinshu Univ.*

8:00 L6 **311.09** Expression of the novel polyglutamine protein FAM171B in the developing and adult mouse brain. A. K. SUDASINGHE; D. S. SHARLIN; G. M. GOELLNER*. *Minnesota State Univ- Mankato.*

9:00 L7 **311.10** Protein interaction networks in the pathogenicity of spinal and bulbar muscular atrophy. A. PLUCIENNIK*; T. BERGER; S. FINKBEINER; D. MERRY. *Thomas Jefferson Univ., Gladstone Inst. of Neurolog. Dis. and the Univ. of California.*

10:00 L8 **311.11** Behavioral characterization of Zip14 knockout mice; a potential model of manganism. C. G. JANUS*; S. JENKITKASEMWONG; H. KHAN; B. GIASSON; M. KNUTSON. *Univ. of Florida, Univ. of Florida, Univ. of Florida.*

11:00 L9 **311.12** Cas9 lipid nanoparticles as an efficient delivery tool for primary neural cultures. E. RAMSAY*; J. SINGH; G. THARMARAJAH; R. DESOUZA; E. OUELLET; A. THOMAS; S. GARG; T. LEAVER; A. WILD; A. WHITE; C. HANSEN; J. TAYLOR. *Precision Nanosystems Inc., Univ. of British Columbia.*

8:00 L10 **311.13** Micro-RNA351 alleviates denervation-induced skeletal muscle astrophy by targeting tumor necrosis factor receptor-associated factor 6. F. DING*; M. SHEN; J. QIU; Q. CHENG; Q. HE. *Nantong University, China.*

9:00 L11 **311.14** Prominent phase-amplitude cross-frequency coupling between α and γ oscillations underlies motor-tic encoding in cerebro-basal ganglia-cerebellar networks. T. NINOMIYA*; Y. NAGAI; T. SUHARA; T. MINAMIMOTO; M. TAKADA; M. MATSUMOTO; M. ISODA; K. W. MCCAIRN. *Primate Res. Institute, Kyoto Univ., Natl. Inst. of Radiological Sci., Univ. of Tsukuba, Kansai Med. Univ.*

10:00 L12 **311.15** Combined malonic and methylmalonic aciduria (CMAMMA) presenting as myelopathy in eighth decade. D. NARENDRA*; N. ATASSI; K. LINDGREN; F. EICHLER. *MGH, NINDS Intramural Program.*

11:00 L13 **311.16** Dexmedetomidine decreased the spinal motoneurons death in roots avulsion injury of the brachial plexus via AC-cAMP-PKA pathway. X. XU*; G. YU; X. CHEN; X. CHEN; J. LI; M. CAO; Y. TANG; L. LIU; R. AN; Z. QIU; L. ZHOU. *Zhongshan Sch. of Medicine, Sun Yat-Sen Universi, the first affiliate hospital of Sun Yat-sen Univ., Sun Yat-sen memorial hospital of Sun Yat-sen Univ., Sun Yat-sen memorial hospital of Sun Yat-sen Univ., Zhongshan Sch. of Medicine, Sun Yat-sen University, Zhongshan Sch. of Medicine, Sun Yat-sen Univ., Guangdong Province Key Lab. of Brain Function and Dis.*

8:00 L14 **311.17** ● Altered resting-state functional connectivity in patients with essential tremor. A. E. MORRIS*; S. A. NORRIS; A. Z. SNYDER; J. M. KOLLER; J. W. MINK; J. S. PERLMUTTER. *Univ. of Rochester Med. Ctr., Washington Univ. in St. Louis, Washington Univ. in St. Louis.*

9:00 M1 **311.18** Lack of ABCD1 primes microglia for phagocytosis and axonal degeneration. Y. GONG*; N. SASIDHARAN; P. MUSOLINO; J. EL KHOURY; F. EICHLER. *Massachusetts Gen. Hosp. Ctr. For Comparat, Massachusettes Gen. hospital, Massachusetts Gen. hospital, Massachusetts Gen. hispital.*

Mon. AM

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 M2 **311.19** Extraction of motor spatial patterns in children with movement disorders via joint decomposition of brain and muscle activity. A. BARACHANT*; J. B. CARMEL; K. M. FRIEL; A. M. GORDON; D. GUPTA. *Burke Med. Res. Inst., Weill cornell medical college, Cornell Univ., Blythedale Children's Hosp., Teachers College, Columbia Univ.*

11:00 M3 **311.20** Closing the loop in essential tremor treatment: An adaptive approach to deep brain stimulation. E. OPRI*; J. SHUTE; R. MOLINA; K. FOOTE; M. OKUN; A. GUNDUZ. *Univ. of Florida, Univ. of Florida, Univ. of Florida, Univ. of Florida.*

8:00 M4 **311.21** Functional correlates of the therapeutic and adverse effects evoked by thalamic stimulation for essential tremor. H. JO*; W. S. GIBSON; P. TESTINI; S. CHO; K. R. GORNY; J. P. FELMLEE; K. M. WELKER; B. T. KLASSEN; H. MIN; K. H. LEE. *Mayo Clin., Mayo Clin., Mayo Clin.*

9:00 M5 **311.22** Evaluation of a wearable tremor modulation device for patients with essential tremor based on electrical peripheral nerve stimulation. J. KIM*; C. K. PARNELL; T. WICHMANN; S. P. DEWEERTH. *Georgia Inst. of Technol., Georgia Inst. of Technol., Emory Univ.*

10:00 M6 **311.23** Modeling Progressive Supranuclear Palsy by viral-mediated τ seeding in the cholinergic neurons of the pedunculopontine. D. A. MACLAREN*; M. E. GRIFFIN; S. D. CLARK. *Univ. At Buffalo, State Univ. of New York, Univ. at Buffalo, State Univ. of New York, Univ. at Buffalo, SUNY.*

11:00 M7 **311.24** Ligand for cell adhesion molecule PTPRD: Illudalic acid derivatives inhibit recombinant PTPRD phosphatase and are tolerated *in vivo*. G. R. UHL*; P. PAIK; M. MARTINEZ; A. SULIMA; K. RICE. *NMVAHCS, BRINM and NIH/NIDA, NIDA-IRP NIH, NMVAHCS/BRINM, NIDA-IRP, NIH, NIDA-IRP NIH.*

8:00 M8 **311.25** The role of ABCD1 in dorsal root ganglia in adrenomyeloneuropathy. F. EICHLER*; R. KOK; Y. GONG; N. SASIDHARAN. *Massachusetts Gen. Hosptial | Harvard Med. Sch.*

9:00 M9 **311.26** Harmaline-induced tremor in large animals. J. LEE*; I. KIM; L. CHENG; S. CHANG. *Mayo Clin., The affiliated hospital of Gingdao Univ.*

10:00 M10 **311.27** Psychoactive compounds induce distinctive fine motor deficits and gait disturbance in mice. T. HEIKKINEN*; T. BRAGGE; T. TURKIA; A. NURMI; R. HODGSON. *Charles River Discovery.*

11:00 M11 **311.28** Identifying cannabis strains for treatment of epilepsy. G. M. LEWITUS*; P. BERMAN; K. FUTORAN; D. MEIRI. *Technion, Technion, Technion.*

8:00 M12 **311.29** Neural connectivity and cortical activation in chronic tic disorders. K. TUNG*; M. MIYAKOSHI; S. MAKEIG; S. CHANG; J. PIACENTINI; S. LOO. *UCLA Semel Inst., SCCN UCSD, UCLA Semel Inst.*

POSTER

312. ALS

Theme C: Neurodegenerative Disorders and Injury

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

8:00 M13 **312.01** Detailed genetic analysis of healthy and diseased CSMN reveals molecular determinants of vulnerability and progressive degeneration. L. LABOISSONNIERE*; B. GENC; J. TRIMARCHI; P. OZDINLER. *Iowa State Univ., Northwestern Univ.*

9:00 M14 **312.02** Altered ceramide generation in Charcot Marie Tooth 2f. N. SCHWARTZ*; C. E. SENKAL; L. M. OBEID. *Stony Brook Univ., Northport VA Med. Ctr.*

10:00 M15 **312.03** ● ALS and artificial intelligence: IBM watson suggests additional RNA binding proteins linked to ALS. R. P. BOWSER*; E. ARGENTINIS; R. SATTLER; M. COLLINS; A. BOEHRINGER; I. LORENZINI; P. FERRANTE; A. LACOSTE; S. SPANGLER; N. BAKKAR. *Barrow Neurolog. Inst., IBM Watson Hlth., IBM Res. - Almaden.*

11:00 M16 **312.04** Abnormalities of the neuregulin and ErbB4 receptor pathway in Amyotrophic Lateral Sclerosis. M. HERRANDO-GRABULOSA*; B. GARCIA-LAREU; R. MANCUSO; A. MARTINEZ-MURIANA; G. MODOL-CABALLERO; A. BOSCH; X. NAVARRO. *Univ. Autonoma De Barcelona, Ctr. de Investigación Biomédica en Red sobre Enfermedades Neurodegenerativas (CIBERNED), Ctr. of Animal Biotech. and Gene Therapy, Univ. Autonoma de Barcelona, Ctr. for Biol. Sciences, Univ. of Southampton.*

8:00 M17 **312.05** MAPK signaling mediates neurodegeneration in Spinal muscular atrophy. S. AHMAD*; N. GENABAI; X. JIANG; K. BHATIA; L. GANGWANI. *Texas Tech. Univ. Hlth. Sci. Ctr.*

9:00 M18 **312.06** A novel Optineurin truncation mutation identified in an adult onset consanguineous Palestinian family with amyotrophic lateral sclerosis. M. DE MAJO*; M. GOTKINE; C. WONG; S. TOPP; R. MICHAELSON-COHEN; S. EPSZTEJN-LITMAN; R. EIGESS; A. NISHIMURA; B. SMITH; C. SHAW. *King's Col. London Inst. of Psychiatry, Psy, Hebrew Univeristy-Hadassah Med. Ctr., Med. Genet. Inst. Shaare Zedek Med. Ctr., Med. Genet. Institute, Shaare Zedek Med. Ctr.*

10:00 N1 **312.07** Disease specific changes in sirtuin 3 levels in a mouse model of amyotrophic lateral sclerosis and Huntington's disease. E. BARTH; H. BAYER; J. HANSELMANN; P. WEYDT; K. LINDENBERG; A. WITTING*. *Ulm Univ., Univ. Ulm.*

11:00 N2 **312.08** Apical dendrite degeneration of Betz cells, a new cellular pathology in ALS. P. OZDINLER*; B. GENC; J. H. JARA; P. PAYTEL; R. ROOS; M. MESULAM; C. GEULA; E. BIGIO. *Northwestern Univ. Feinberg Sch. of Med., Northwestern Univ., Univ. of Chicago Med. Ctr.*

8:00 N3 **312.09** SMN functions as a chaperone for the assembly of mRNP transport complexes. P. G. DONLIN-ASP*; C. FALLINI; M. E. MERRITT; H. C. PHAN; G. J. BASSELL; W. ROSSOLL. *Emory Univ. Sch. of Med., Emory Univ. Sch. of Med., Emory Univ. Sch. of Med., Emory Univ. Sch. of Med., Emory Univ. Sch. of Med.*

9:00 N4 **312.10** Adenovirus-induced TDP-43 and FUS aggregates in cultured neuronal and glial cells demonstrated by time-lapse imaging. K. WATABE*; T. ISHII; H. MISAWA. *Kyorin Univ. Fac. of Hlth. Sci., Keio Univ. Fac. of Pharm.*

10:00 N5 **312.11** Methylmercury exposure alters fluo-4 fluorescence in spinal cord slices of mice expressing the human Cu^{2+}/Zn^{2+} superoxide dismutase 1 (hSOD1) gene mutation. J. M. BAILEY*; Y. YUAN; W. ATCHISON. *Michigan State Univ.*

11:00 N6 **312.12** Long-term systemic adipose-derived stem cell-conditioned medium therapy in a mouse model of amyotrophic lateral sclerosis. C. L. WALKER*; F. M. KENNEDY; C. M. E. FRY; A. K. IYER; Y. DU; K. MARCH; K. J. JONES. *Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., Indiana Univ. Sch. of Med., Roudebush VA Med. Ctr.*

8:00 N7 **312.13** The functional role of AMPK activation in amyotrophic lateral sclerosis. Y. CHERN*; Y. LIU; C. LEE; H. PEI. *Inst. Biomed Sci.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 N8 **312.14** Bioenergetic characterization of human iPSC-derived ALS astrocytes. C. KONRAD; K. MCAVOY; D. TROTTI; A. ALMAD; N. MARAGAKIS; J. PHAM; J. ROTHSTEIN; R. SATTLER; G. MANFREDI; H. KAWAMATA*. *Weill Cornell Med., Thomas Jefferson Univ., Johns Hopkins Univ., Johns Hopkins Univ., Barrow Neurolog. Inst.*

10:00 N9 **312.15** Hud regulation of sod1 and fus mrnas in sporadic ALS. M. DELL'ORCO; A. S. GARDINER; C. CEREDA; N. PERRONE-BIZZOZERO*. *Univ. of New Mexico HSC, "C. Mondino" Natl. Inst. of Neurol. Foundation, IRCCS.*

11:00 N10 **312.16** Arginine-rich DPRs perturb nucleocytoplasmic transport and RNA metabolism in the pathogenesis of C9orf72 ALS and FTLD. S. BOEYNAEMS; E. BOGAERT; P. VAN DAMME; W. ROBBERECHT; L. M. VAN DEN BOSCH*. *Lab. of Neurobiology, Vesalius Res. Center, VIB, Leuven, Belgium.*

8:00 N11 **312.17** Analysis and comparison of WT and mSOD1^{G93A} immune-mediated neuroprotection mechanisms in immunodeficient mice after facial nerve axotomy. D. O. SETTER*; E. M. RUNGE; N. A. MESNARD-HOAGLIN; M. M. HAULCOMB; R. J. BATKA; N. D. SCHARTZ; V. M. SANDERS; K. J. JONES. *Indiana Univ. Sch. of Med., Richard L. Roudebush VAMC, Loyola Univ. Med. Ctr., Edward Hines, Jr. VA Hosp., The Ohio State Univ. Col. of Med.*

9:00 N12 **312.18** Pathology and functional implications of the C9orf72 repeat expansion in ALS/FTD iPS astrocytes. J. T. PHAM*; J. C. GRIMA; L. HAYES; X. TANG; W. ZHOU; S. VIDENSKY; T. GENDRON; J. D. ROTHSTEIN. *The Johns Hopkins Sch. of Med., The Johns Hopkins Sch. of Med., Mayo Clin., Brain Sci. Inst.*

10:00 N13 **312.19** Elucidation of ALS mouse (sod1^{g93a}) locomotor transformation relative to a wt cohort: A lifetime, longitudinal, speed-controlled analysis. R. J. BATKA*; M. M. HAULCOMB; S. L. DICKINSON; V. M. SANDERS; K. J. JONES. *Indiana Univ. Sch. of Med., Richard L Roudebush VAMC, Indiana Univ. Sch. of Publ. Hlth., The Ohio State Univ. Col. of Med.*

11:00 N14 **312.20** ● Early and androgen-dependent loss of neuromuscular transmission in two SBMA mouse models. Y. XU*; M. KATSUNO; H. ADACHI; G. SOBUE; M. BREEDLOVE; C. L. JORDAN. *Michigan State Univ., Nagoya Univ. Grad. Sch. of Med., Univ. of Occup. and Envrn. Hlth. Sch. of Med.*

POSTER

313. Neuromuscular Disease

Theme C: Neurodegenerative Disorders and Injury

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

8:00 N15 **313.01** Novel principle component analysis (PCA) to assess gait in chronically exercised vs unexercised mice shows both exacerbation and amelioration of the underlying phenotype the MDX mouse model for Duchenne's muscular dystrophy (DMD). P. J. SWEENEY*; T. BRAGGE; A. NURMI; T. HEIKKINEN; T. AHTONIEMI; J. PUOLIVÄLI; D. J. WELLS. *Charles River Dicovery Services, Royal Vet. Col.*

9:00 N16 **313.02** High field (11.7) MRI reflects cyclic changes in muscle damage in chronically exercised vs unexercised MDX model of Duchenne's muscular dystrophy and can be confirmed by novel fine motor kinematic analysis *in vivo*. P. J. SWEENEY; A. SHATILLO; A. NURMI; A. HARTIKAINEN; T. D. WOLINSKY*; K. LEHTIMÄKI; T. AHTONIEMI; O. KONTKANEN; M. V. KOPANITSA; J. PUOLIVÄLI; D. J. WELLS. *Charles River Discovery Services, Discovery from Charles River, Royal Vet. Col.*

10:00 N17 **313.03** Genetic rescue of spinal muscular atrophy by zinc finger protein ZPR1. X. N. JIANG; S. AHMAD; L. D. GANGWANI*. *Texas Tech. Univ. Hlth. Sci. Ctr.*

11:00 N18 **313.04** Acetylcholine receptor fragmentation is correlated with the extent of muscle fiber damage in a mouse model of muscular dystrophy. R. MASSOPUST*; W. J. THOMPSON. *Texas A&M Univ.*

8:00 O1 **313.05** Postsynaptic participation in synapse elimination at the developing neuromuscular junction. I. W. SMITH*; W. J. THOMPSON. *Inst. For Neurosci., Texas A&M Univ.*

9:00 O2 **313.06** Interaction of age and myostatin in neuromuscular function. D. TAVOIAN; W. D. ARNOLD; S. DE LACALLE*. *Ohio Univ., Ohio State Univ., Heritage Col. of Osteo. Med.*

10:00 O3 **313.07** Mechanically patterned extracellular matrix improves neuromuscular junction formation *in vitro*. C. L. WEAVER*; A. VU; L. FIJANY; G. YEO; A. ENGLER. *Univ. of California San Diego.*

11:00 O4 **313.08** Assessment of TrkB receptor expression and function at the neuromuscular junction and sciatic nerve retrograde transport complexes in mice missing muscle-synthesized BDNF. L. A. VANOSDOL; R. L. DANGREMOND; A. M. VANDERPLOW; B. WILMOT; A. L. JUDKINS; E. N. OTTEM*. *Northern Michigan Univ., Northern Michigan Univ.*

8:00 O5 **313.09** Increased BDNF expression in muscle slows disease in a mouse model of spinal bulbar muscular atrophy. K. HALIEVSKI*; M. KATSUNO; H. ADACHI; G. SOBUE; S. M. BREEDLOVE; C. L. JORDAN. *Michigan State Univ., Nagoya Univ. Grad. Sch. of Med., Univ. of Occup. and Envrn. Hlth.*

9:00 O6 **313.10** Vital imaging of aging neuromuscular junctions. R. HASTINGS*; W. J. THOMPSON. *Texas A&M Univ.*

10:00 O7 **313.11** Neuromuscular acetylcholine receptor dynamics in dystrophic mice. S. HADDIX*; W. J. THOMPSON. *Texas A&M Univ., Texas A&M Univ.*

11:00 O8 **313.12** Androgen receptor p160 co-activators in spinal and bulbar muscular atrophy. J. ZENCHAK*; J. JOHANSEN. *Central Michigan Univ., Central Michigan Univ.*

8:00 O9 **313.13** Deletion of pre-B-cell colony-enhancing factor in neurons results in motor dysfunction and paralysis of adult mice. X. WANG*; Q. ZHANG; R. BAO; N. ZHANG; S. DING. *Univ. of Missouri Columbia Dalton Cardiovasc. Res. Ctr., Dalton Cardiovasc. Res. Ctr.*

9:00 O10 **313.14** Activation of Schwann cells in a rat model of "Critical Illness Myopathy". Y. LEE*; L. LARSSON; W. J. THOMPSON. *Texas A&M Univ., Karolinksa Institutet.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 O11 **313.15** Reduced corpus callosum and somatosensory pathway function in a CCUG mouse model of myotonic dystrophy type 2: An autofluorescence optical imaging and electrophysiological study. G. CHEN*; R. E. CARTER; J. D. CLEARY; J. M. MARGOLIS; Y. KANG; C. M. CHAMBERLAIN; L. P. W. RANUM; T. J. EBNER. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Florida, Univ. of Minnesota.*

11:00 O12 **313.16** Zebrafish models to validate mutations in CAPN1 causing hereditary spastic paraplegia. A. LISSOUBA*; M. LIAO; P. DRAPEAU. *CRCHUM, Univ. de Montreal, Univ. de Montreal.*

8:00 O13 **313.17** ● Improved motor performance in spastic cerebral palsy children after repetitive transcranial magnetic stimulation. D. BHATIA*; B. L. RAJAK; M. GUPTA; S. PAUL; A. MUKHERJEE; T. K. SINHA. *North - Eastern Hill Univ., UDAAN-for the differently abled, Lajpat Nagar.*

9:00 O14 **313.18** Establishment of TDP-43 cryptic exon as a new ante-mortem functional biomarker for Inclusion Body Myositis. K. E. BRAUNSTEIN*; J. P. LING; T. E. LLOYD; P. C. WONG. *Johns Hopkins Sch. of Med., Johns Hopkins Sch. of Med.*

8:00 DP03 **313.19** (Dynamic Poster) High-throughput automated time-lapse imaging of neuron degeneration within a live animal using robotic microscopy. J. LINSLEY*; S. FINKBEINER. *Gladstone Inst., Univ. of California, San Francisco.*

11:00 O15 **313.20** Clinical investigation of manihot esculenta's cyanogenic glycosides induced neurological conditions,treatments and the effect of Netfussion innovated device on reducing chemical tuber food poisoning in Nigeria and third world countries. A. EKWERIKE*; C. A. DIKEUKWU; K. MUFORO; H. IGBONAGWAM; V. C. OSUOHA; R. OKEA. *Sci. Med. Res. Institute., Inst.Of Neurosci. and BiomedicalResearch, American Acad. Of Primary Care Res., Calvary Life Care Hosp. / Tropical Pharmedic Clin. Res. Center, Blessings Of The Lord's Hosp., Calvary Life Care Hosp. / Tropical Pharmedic Clin. Res. Center, Owerri, Imo, Nigeria., Blessings Of The Lord's Hospital, Dept.Of Human Kinetics & Hlth. Education,Ebonyi State,University.*

8:00 O16 **313.21** Aggregation of the disease-causing mutants of cysteine string protein-α via Fe-S cluster binding. N. NASERI*; B. ERGEL; Q. HUANG; R. HUANG; G. A. PETSKO; M. SHARMA. *Weill Cornell Med. Col., Cornell Univ.*

9:00 O17 **313.22** Screening of dysferlinopathies by whole blood flow cytometry. L. SANCHEZ-CHAPUL*; M. DEL ANGEL MUÑOZ; L. RUANO-CALDERÒN; A. B. LUNA-ANGULO; R. M; J. MAGAÑA; O. HERNÀNDEZ-HERNÀNDEZ; R. E. ESCOBAR-CEDILLO; A. LÒPEZ-MACAY; S. VARGAS. *Inst. Nacional De Rehabilitacion, Inst. Nacional de Rehabilitacion, Secretarìa de Salud del Estado de Durango, Inst. Politecnico Nacional, Inst. Nacional de Rehabilitacion, Inst. Nacional de Rehabilitacion, Inst. Nacional de Neurologìa y Neurocirugìa.*

10:00 O18 **313.23** Translational profiling of motor neurons in two mouse models of Charcot-Marie-Tooth disease Type 2D. E. L. SPAULDING*; R. W. BURGESS. *The Jackson Lab., Grad. Sch. of Biomed. Sci. and Engineering, Univ. of Maine.*

11:00 P1 **313.24** Progranulin overexpression attenuates TDP-43^{A315T} mediated neurodegeneration. S. BEEL; S. HERDEWYN; L. VAN DEN BOSCH; W. ROBBERECHT; P. VAN DAMME*. *Vesalius Res. Center, VIB, Neurol. Department, UZ Leuven.*

8:00 P2 **313.25** Decrease of rate dependent depression of H-reflex in newborns with muscle hypertonia after antenatal hypoxia-ischemia in rabbit cerebral palsy model. A. DROBYSHEVSKY*; K. QUINLAN. *Northshore Univ. Hlth. Syst. Res. Inst., Northwestern Univ.*

9:00 P3 **313.26** Serotonin sensitivity of spinal motor neurons from hypoxia-ischemia rabbit model of cerebral palsy. K. A. QUINLAN*; A. DROBYSHEVSKY. *Northwestern Univ. Feinberg Sch. of Med., Northshore Univ. Hlth. Syst.*

POSTER

314. Oxidative Stress and Cell Death

Theme C: Neurodegenerative Disorders and Injury

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

8:00 P4 **314.01** Inositol polyphosphate multikinase is a regulator of transsulfuration pathway. R. TYAGI*; S. H. SNYDER; B. D. PAUL. *Johns Hopkins Univ. Sch. of Med.*

9:00 P5 **314.02** Investigating the function of TLDc proteins in the oxidative stress response and neurodegeneration. P. L. OLIVER*; M. J. FINELLI; K. X. LIU; Y. WU; K. E. DAVIES. *Univ. of Oxford.*

10:00 P6 **314.03** N-Acetyl-L-Cysteine attenuates Porphyromonas gingivalis-induced inflammatory response and cell death in murine brain endothelial cells. V. CHAROENSAENSUK*; K. OU; L. YANG. *Taipei Med. Univ., Taipei Med. Univ., Taipei Med. Univ., China Med. Univ.*

11:00 P7 **314.04** Sevoflurane-induced changes in gene expression in developing monkey brain. F. LIU*; T. A. PATTERSON; M. G. PAULE; W. SLIKKER, Jr.; C. WANG. *Natl. Ctr. For Toxicological Research/FDA.*

8:00 P8 **314.05** Participation of MAPK signaling pathway in a model of neuronal degeneration in rat striatal. R. A. SANTANA MARTINEZ*; D. BARRERA OVIEDO; P. D. MALDONADO JIMÉNEZ. *Natl. Inst. of Neurol. and Neurosurg., Facultad de Medicina.*

9:00 P9 **314.06** NADPH oxidase-2 and inflammasomes after traumatic brain injury. M. W. MA*; J. WANG; K. M. DHANDAPANI; D. W. BRANN. *Med. Col. of Georgia - Augusta Univ., Charlie Norwood VA Med. Ctr., Med. Col. of Georgia - Augusta Univ.*

10:00 P10 **314.07** Effect of diferuloylmethane on egg-laying behaviour in hydrogen peroxide-exposed *Caenorhabditis elegans*. M. MENDOZA-MAGAÑA; M. MALDONADO-RUBIO; M. GALLEGOS-SAUCEDO; S. NERY-FLORES; A. CASTILLO-ROMERO; M. RAMIREZ-HERRERA; G. CAMARGO; L. HERNANDEZ*. *CUCS-Universidad de Guadalajara.*

11:00 P11 **314.08** Crispr/Cas9 knockout demonstrates a key role for Bid as a molecular link between paradigms of ferroptosis and mitochondrial death pathways in neuronal cells. A. JELINEK*; S. NEITEMEIER; L. HOFFMANN; G. GANJAM; C. CULMSEE. *Philipps-University of Marburg.*

8:00 P12 **314.09** The pro-survival pathway of ς-1 receptor-zinc finger protein 179 guards against hydrogen peroxide-induced cellular damage. T. SU*; P. LEE; S. YEH; T. HSIEH; S. CHOU; J. HUNG; W. CHANG; Y. LEE; J. CHUANG. *Natl. Inst. On Drug Abuse, Natl. Hlth. Res. Inst., Taipei Med. Univ., Taipei Med. Univ., Natl. Cheng Kung Univ., Taipei Med. Univ., Taipei Med. Univ.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 Q1 **314.10** Evaluation of the Nrf2 activation in a no canonical pathway. Participation of DPP3 protein. C. A. SILVA*; P. D. MALDONADO. *Natl. Inst. of Neurol. and Neurosurg., Inst. Nacional de Neurología y Neurocirugía.*

10:00 Q2 **314.11** Manganese induced toxicity can be attenuated by VIP in NE 4C cell line. T. DAGCI*; G. ARMAGAN; S. BORA; A. ERDOGAN. *Ege Univ. Sch. of Med. Physiol. Dept., Ege Univ., Ege Univ.*

11:00 Q3 **314.12** Genetic loss of CYLD exerts neuroprotective effects against RIP-1 mediated necroptosis *in vitro* and after experimental traumatic brain injury. N. A. TERPOLILLI*; G. K. GANJAM; S. DIEMERT; I. EISENBACH; L. HOFFMANN; C. REUTHER; N. PLESNILA; C. CULMSEE. *Univ. of Munich, Dept. of Neurosurg., Univ. of Munich, Philipps-Universitaet.*

8:00 Q4 **314.13** ▲ Effect of copper on the activity of kynurenine pathway enzymes in rat cortex slices. D. RAMÍREZ ORTEGA*; I. I. LUNA PRIETO; D. F. GONZALEZ ESQUIVEL; B. PINEDA; C. RIOS; V. PEREZ DE LA CRUZ. *Inst. Nacional De Neurología y Neurocirugía Manuel Velasco, Inst. Nacional De Neurología y Neurocirugía Manuel Velasco, Inst. Nacional De Neurología y Neurocirugía Manuel Velasco.*

9:00 Q5 **314.14** Pro-inflammatory and oxidative stress mechanisms elicited by Aβ in astrocytic/glial cells: Their impact for the integrity of the neurovascular unit. A. A. ROSTAGNO*; S. COCKLIN; J. GHISO. *New York Univ. Sch. of Med.*

10:00 Q6 **314.15** ▲ Anti-oxidant effects of Curcumin following spinal cord injury in rats. Y. A. ABDULLAH; S. A. EL SAYED; S. W. AZIZ; A. A. ABDELLATIF*. *American Univ. in Cairo.*

11:00 Q7 **314.16** An expanded palette of redox-sensitive fluorescent proteins with enhanced sensitivity and brightness. B. CAMPBELL*; C. LIU; G. PETSKO. *Weill Cornell Med. Col.*

8:00 Q8 **314.17** ▲ Effect of pyrophosphate thiamine on the nerve conduction speed in patients with diabetic polyneuropathy. I. IBARRA VALDOVINOS*; R. G. RESENDIZ GUTIERREZ; B. UGALDE VILLANUEVA; J. C. SOLIS SAINZ; P. GARCIA SOLIS; M. RAMOS GOMEZ; L. S. GALLARDO VIDAL; H. L. HERNANDEZ-MONTIEL. *Univ. Autonoma De Queretaro, Univ. Autonoma De Queretaro, Inst. Mexicano del Seguro Social.*

9:00 Q9 **314.18** ▲ Effect of an endogenous interferon inducer and a promoter of energetic metabolism on the viability of a islets of langerhans hepatic portal graft in a murine model of type 1 diabetes mellitus: A new approach to neurodegeneration? B. UGALDE VILLANUEVA*; I. IBARRA VALDOVINOS; R. G. RESÉNDIZ GUTIÉRREZ; E. A. LÓPEZ ARVIZU; M. D. ABURTO FERNÁNDEZ; M. RAMOS GÓMEZ; H. L. HERNÁNDEZ MONTIEL. *Univ. Autónoma De Querétaro, Univ. Autónoma De Querétaro, Univ. Autónoma De Querétaro.*

10:00 Q10 **314.19** ▲ Inflammation and oxidative stress risk factors for neurodegenerative diseases in a population of patients with metabolic syndrome from Queretaro, Mexico. R. G. RESENDIZ GUTIERREZ*; B. UGALDE VILLANUEVA; I. IBARRA VALDOVINOS; P. GARCÍA SOLÍS; M. RAMOS GÓMEZ; L. S. GALLARDO VIDAL; H. L. HERNÁNDEZ MONTIEL. *Univ. Autonoma De Queretaro, Univ. Autónoma De Querétaro, Univ. Autónoma De Querétaro, Inst. Mexicano del Seguro Social, Univ. Autonoma De Querétaro.*

11:00 Q11 **314.20** ▲ Quinolinic acid toxicity involves mitochondrial dysfunction as an independent manner of NMDA receptor activation in astrocytes primary cultures. J. G. REYES OCAMPO*; A. SALAZAR-RAMIRO; D. GONZÁLEZ-ESQUIVEL; B. PINEDA; C. RIOS; V. PÉREZ-DE LA CRUZ. *Inst. Nacional de Neurología y Neurocirugía, Inst. Nacional de Neurología y Neurocirugía, Inst. Nacional de Neurología y Neurocirugía.*

8:00 Q12 **314.21** Regulation of mitochondrial oxidative stress and protein aggregation in dopaminergic neuron degeneration in Parkinson's disease. H. SHI*; K. PARK; N. MILLER; J. R. MAZZULLI; Y. MA. *Northwestern Univ. Feinberg Sch. of Med., Northwestern Univ. Feinberg Sch. of Med.*

9:00 Q13 **314.22** Neuron releases α-synuclein during hypoxia causes neuroinflammation and exacerbate neurodegeneration through Mac1/NOX2 pathway. V. JAIN*; S. B. SINGH. *Defence Inst. of Physiol. and Allied Sci., Defence Inst. of Physiol. and Allied Sci.*

10:00 Q14 **314.23** Inhibition of palmitic acid-induced cell death by blocking apoptosis, necroptosis and inducing autophagy. M. L. MONTERO*; J. LIU; M. DE LEON. *Loma Linda Univ., Loma Linda Univ., Loma Linda Univ.*

11:00 R1 **314.24** ▲ Multiple sources contribute to extracellular H_2O_2 dynamics in the striatum. S. PANDA*; L. R. WILSON; A. C. SCHMIDT; L. A. SOMBERS. *North Carolina State Univ.*

8:00 R2 **314.25** Structure and function analysis of epidermal fatty acid binding protein in nerve growth factor-differentiated PC12 cells. A. DURAN*; J. LIU; M. DELEON. *Loma Linda Univ., Loma Linda Univ.*

9:00 R3 **314.26** Anti-inflammatory actions of heme oxygenase mediated by binding and down- regulating nitric oxide synthase. S. CHOWDHURY*; S. SNYDER. *Johns Hopkins Med. Inst., JHMI.*

POSTER

315. Neuroprotective Mechanisms: Alzheimer's Disease and Multiple Sclerosis

Theme C: Neurodegenerative Disorders and Injury

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

8:00 R4 **315.01** Sleep deprivation aggravates brain pathology in Alzheimer's disease. Enhanced neuroprotection with co-administration of nanowired 5-HT6 receptor antagonist SB-399885 and cerebrolysin. A. SHARMA*; D. F. MURESANU; J. V. LAFUENTE; A. NOZARI; A. OZKIZILCIK; R. TIAN; R. PATNAIK; H. MOESSLER; H. S. SHARMA. *Uppsala Univ., Univ. of Med. & Pharm., Univ. of Basque Countries, Massachusetts Gen. Hospital, Harvard Med. Sch., Univ. of Arkansas, Univ. of Arkansas, Indian Inst. of Technology, Banaras Hindu Univ., Ever Neuro Pharma, Uppsala Univ. Hosp.*

9:00 R5 **315.02** Nanowired cerebrolysin potentiates neuroprotective effects of histamine H3 receptor inverse agonist and antagonist with partial H4 agonist in Alzheimer's disease. R. PATNAIK*; A. SHARMA; D. F. MURESANU; S. D. SKAPER; R. J. CASTELLANI; A. NOZARI; A. OZKIZILCIK; R. TIAN; J. V. LAFUENTE; H. MOESSLER; H. S. SHARMA. *Indian Inst. of Technology,Banaras Hindu Univ., Uppsala Univ. Hosp., Univ. of Med. & Pharm., Univ. of Padova, Univ. of Maryland Hosp., Massachusetts Gen. Hospital, Harvard Med. Sch., Univ. of Arkansas, Univ. of Arkansas, Univ. of Basque Country, Ever Neuro Pharma.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 R6 **315.03** Impact of cellular stress produced by acidic pH and growth factor withdrawal on neuronal differentiation of human hippocampal neural precursor cells (hHippNPCs): Implications in neurodegenerative diseases. M. CARDENAS-AGUAYO*; L. GOMEZ-VIRGILIO; G. LOPEZ-TOLEDO; U. GARCIA. *UNAM, Sch. of Medicine, Natl. Autonomous Univ. of Mexico, Ctr. for Res. and Advanced Studies of the Natl. Polytechnic Inst. (CINVESTAV-IPN), Ctr. for Res. and Advanced Studies of the Natl. Polytechnic Inst. (CINVESTAV-IPN).*

11:00 R7 **315.04** Prion protein suppresses seizure-induced c-fos expression, a marker for neural activity in zebrafish. R. KANYO*; P. L. A. LEIGHTON; W. T. ALLISON. *Univ. of Alberta.*

8:00 R8 **315.05** Neuroprotection against Alzheimer's disease-related amyloid-β toxicity: Σ-1 receptor modulation of VDAC-1 channels. C. FERNÁNDEZ ECHEVARRÍA*; T. MEDIAVILLA; D. MARCELLINO. *Umeå Univ.*

9:00 R9 **315.06** Neuroprotection by a N-terminal fragment and hexapeptide core sequence of β amyloid. N. ALFULAIJ*. *Univ. of Hawai'i at Manoa Dept. of Biol.*

10:00 R10 **315.07** Extensive axonal damage is observed in $Gas6^{-/-}Axl^{-/-}$ double-knockout (DKO) mice following exposure to cuprizone. B. SHAFIT-ZAGARDO*; A. RAY; R. C. GRUBER; J. WILLIAMSON; J. DUBOIS. *Albert Einstein Col. Med., Albert Einstein Col. Med.*

11:00 R11 **315.08** *In vivo* tracking confirms dendritic cell exosomes enter the brain and may travel along CSF pathways. A. D. PUSIC*; D. DUKALA; R. P. KRAIG. *Univ. of Chicago.*

8:00 R12 **315.09** Delayed treatment of 7, 8-Dihydroxyflavone protects axonal injury and demyelination in an animal model of Multiple Sclerosis. T. K. MAKAR; V. NIMMAGADDA; P. R. GUDA; D. TRISLER*; C. T. BEVER, Jr. *Univ. Maryland Sch. Med., VA Med. Ctr., VA Multiple Sclerosis Ctr. of Excellence East.*

9:00 R13 **315.10** Neuronal hemoglobin expression and its relevance to multiple sclerosis neuropathology. K. ALKHAYER*; N. K. SINGHAL; J. MCDONOUGH. *Kent State Univ.*

10:00 R14 **315.11** Estriol preserves axonal integrity and cortical volume in experimental autoimmune encephalomyelitis. C. E. MEYER*; H. JOHNSONBAUGH; S. LEPORE; N. ITO; R. VOSKUHL; A. MACKENZIE-GRAHAM. *UCLA, UCLA.*

11:00 R15 **315.12** ● Sensitivity of mri measures to axonal and/or myelin repair in the presence of inflammation: A quantitative assessment of *in vivo* mtr, dti, and post-mortem immunohistochemistry in a rodent model of spontaneous remyelination. B. A. HOOKER*; R. RAJAGOVINDAN; M. J. VOORBACH; C. H. SCHROEDER; J. D. BEAVER. *AbbVie.*

8:00 R16 **315.13** Delayed treatment of experimental autoimmune encephalomyelitis with glibenclamide promotes M2 polarization of macrophages and reduces neuroinflammation. T. K. MAKAR*; V. GERZANICH; V. NIMMAGADDA; P. R. GUDA; A. B. MORRIS; D. TRISLER; C. T. BEVER, Jr; M. SIMARD. *Univ. of Maryland Baltimore, VA Med. Ctr., VA Multiple Sclerosis Ctr. of Excellence East, Univ. of Maryland Sch. of Med.*

POSTER

316. Neuroprotective Mechanisms: Brain or Spinal Cord Injury

Theme C: Neurodegenerative Disorders and Injury

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

8:00 R17 **316.01** Concussive head injury at simulated high altitude exacerbates blood-brain barrier breakdown, edema formation and cellular injury. Neuroprotection by nanowired delivery of cerebrolysin with mesenchymal stem cells. H. S. SHARMA*; D. F. MURESANU; J. V. LAFUENTE; A. OZKIZILCIK; Z. R. TIAN; A. NOZARI; R. PATNAIK; H. MOESSLER; A. SHARMA. *Uppsala Univ., Univ. of Med. & Pharm., Univ. of Basque Country, Univ. of Arkansas Fayetteville, Univ. of Arkansas Fayetteville, Massachusetts Gen. Hosp., Indian Inst. of Technology, Banaras Hindu Univ., Ever Neuro Pharma, Uppsala Univ. Hosp.*

9:00 S1 **316.02** ▲ Nicotine exacerbates closed head injury induced brain pathology at hot environment. S. SHARMA*; D. F. MURESANU; J. V. LAFUENTE; A. NOZARI; Z. TIAN; R. PATNAIK; H. S. SHARMA; A. SHARMA. *Uppsala Univ., Univ. Hosp. Med. & Pharm., Univ. of Basque Countries, Massachusetts Gen. Hospital, Harvard Med. Sch., Univ. of Arkansas, Indian Inst. of Technology, Banaras Hindu Univ., Uppsala Univ. Hosp.*

10:00 S2 **316.03** Focal blast brain injury induces rapid edema formation, blood-brain barrier breakdown and intensive cellular damage. Neuroprotective effects of a multimodal drug cerebrolysin. D. F. MURESANU*; A. SHARMA; L. FENG; J. V. LAFUENTE; A. NOZARI; A. OZKIZILCIK; R. TIAN; R. PATNAIK; H. MOESSLER; H. S. SHARMA. *THE FOUNDATION OF THE SOCIETY FOR THE STUDY OF NEU, "RoNeuro" Inst. for Neurolog. Res. and Diagnostic, Uppsala Univ. Hosp., Bethune Intl. Peace Army Hosp., Univ. of Basque Country, Massachusetts Gen. Hospital, Harvard Med. Sch., Univ. of Arkansas, Univ. of Arkansas, Indian Inst. of Technology, Banaras Hindu Univ., Ever Neuro Pharma.*

11:00 S3 **316.04** Concussive head injury induced brain ischemia and oxidative stress are thwarted by nanodelivery of Chinese traditional medicine DL-3-n-butylphthalide (DL-NBP). L. FENG*; A. SHARMA; A. NOZARI; D. F. MURESANU; J. V. LAFUENTE; A. OZKIZILCIK; R. TIAN; H. S. SHARMA. *Bethune Intl. Peace Hosp., Uppsala Univ. Hosp., Massachusetts Gen. Hospital, Harvard Med. Sch., Univ. of Med. & Pharm., Univ. of Basque Country, Univ. of Arkansas, Univ. of Arkansas.*

8:00 S4 **316.05** Treatment with Nrf2 and p53 transcription factor modulators in an *in vitro* mild TBI model. W. A. RATLIFF*; J. N. CHANG; N. H. GREIG; B. A. CITRON. *Bay Pines VA Healthcare Syst., Univ. of South Florida Morsani Col. of Med., Natl. Inst. on Aging, NIH.*

9:00 S5 **316.06** Co-administration of nanowired mesenchymal stem cells with antioxidant H-290/51 ameliorates exacerbation of spinal cord pathology following trauma in hypertensive rats. A. NOZARI*; A. SHARMA; L. FENG; P. SJOQUIST; D. F. MURESANU; J. V. LAFUENTE; R. PATNAIK; A. OZKIZILCIK; R. TIAN; H. S. SHARMA. *Massachusetts Gen. Hosp., Uppsala Univ. Hosp., Bethune Intl. Peace Army Hosp., Karolinska Institute, Karolinska Univ. Hosp., Univ. of Med. & Pharm., Univ. of Basque Country, Indian Inst. of Technology, Banaras Hindu Univ., Univ. of Arkansas, Univ. of Arkansas.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 S6 **316.07** Differential changes of protein expression on heat shock proteins in a rat model of contusive spinal cord injury. K. YANG; K. LEE; Y. KIM; S. HAHM; Y. YOON; J. KIM*. *Korea Univ. Grad. Sch., Korea Univ. Grad. Sch., Korea Univ. Col. Med., Korea Univ. Col. Hlth. Sci.*

11:00 S7 **316.08** The neuroprotective role of peroxisome proliferator activated receptor-γ (PPAR-γ) after spinal cord injury in rats. Y. KIM; J. OH; J. KIM; Y. W. YOON*. *Korea Univ. Col. Med., Korea Univ. Grad. Sch., Korea Univ. Grad. Sch., Korea Univ. Col. Hlth. Sci.*

8:00 S8 **316.09** Role of miR 711 in neuronal cell death after spinal cord injury. J. WU*; B. SABIRZHANOV; B. A. STOICA; J. MATYAS; M. COLL-MIRO; L. YU; A. I. FADEN. *Univ. of Maryland, Sch. of Med.*

9:00 S9 **316.10** The kruppel like factor gene target dusp 14 regulates axon growth and regeneration. J. GALVAO*; K. IWAO; A. APARA; Y. WANG; M. ASHOURI; T. N. SHAH; D. L. MOORE; M. BLACKMORE; N. J. KUNZEVITZKY; J. L. GOLDBERG. *Stanford Univ., Kumamoto Univ., Shiley Eye Ctr., Bascom Palmer Eye Inst., Marquette Univ., Byers Eye Inst.*

10:00 S10 **316.11** Neuroprotective properties of BK channel modulators in an acute spinal cord injury model. M. JACOBSEN; J. BARDEN; K. LETT; M. KARNITSKY; J. A. BUTTIGIEG*. *Univ. of Regina.*

11:00 S11 **316.12** Omega three fatty acids and cooling mitigate altered structural properties of cortical neurons following mechanical injury. P. CINTORA*; Y. J. LEE; C. BEST-POPESCU. *Univ. of Illinois At Urbana Champaign, Univ. of Illinois At Urbana Champaign.*

8:00 S12 **316.13** ▲ Repeated topical application of Acure compound AP-173 enhances neuroprotective efficacy and early functional recovery following spinal cord trauma. A comparative study using systemic dexamethasone treatment in the rat. A. K. PANDEY*; A. SHARMA; T. LUNDSTEDT; E. SEIFERT; A. NOZARI; D. F. MURESANU; J. V. LAFUENTE; R. PATNAIK; H. S. SHARMA. *Senior Res. Fellow, IIT-BHU, Uppsala Univ. Hosp., Acure Pharma, Massachusetts Gen. Hospital, Harvard Med. Sch., Univ. of Med. & Pharm., Univ. of Basque Country, Indian Inst. of Technology, Banaras Hindu Univ.*

POSTER

317. Neuroprotective Mechanisms: Signaling and Gene Expression

Theme C: Neurodegenerative Disorders and Injury

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

8:00 S13 **317.01** Protective effect of the L-type calcium channel on the survival of rat cortical cells. T. TAKADERA*; N. OKUMURA. *Hokuriku Univ., Fukui Univ.*

9:00 S14 **317.02** Antidepressants protect mouse HT22 hippocampal cells from apoptosis through activation of the lysophosphatidic acid receptor LPA_1. M. C. OLIANAS*; S. DEDONI; P. ONALI. *Univ. of Cagliari.*

10:00 T1 **317.03** Arundic acid increases the expression and function of human excitatory amino acid transporter 1 (EAAT1) via ERK, Akt and NF-κB pathways. P. KARKI; E. Y. LEE*. *Meharry Med. Col.*

11:00 T2 **317.04** Paraoxon effects in hippocampal explants and adult rats: Synaptotoxicity and protection through an endocannabinoid enhancement avenue. S. MCEWAN; K. L. G. FARIZATTO; H. W. ROMINE; M. F. ALMEIDA; C. LONG; C. MUNDELL; A. BYRD; V. NAIDOO; V. SHUKLA; S. NIKAS; A. MAKRIYANNIS; B. A. BAHR*. *Biotech Ctr. / William C. Friday Lab., Univ. of Cape Town, Northeastern Univ.*

8:00 T3 **317.05** Androgen receptor-independent mechanisms for dihydrotestosterone protection in rodent astrocytes. N. K. KUBELKA*; N. RYBALCHENKO; M. SINGH. *Univ. of North Texas Hlth. Sci. Ctr.*

9:00 T4 **317.06** ● Knock-down of targets in the rat CNS using Antisense Oligonucleotides: Kinetics of distribution and pharmacodynamics in the CNS after an intrathecal dose. F. KAMME*; B. POWERS; C. MAZUR; D. A. WOLF; J. M. SULLIVAN; D. A. NORRIS; A. VERMA; E. SWAYZE. *Ionis Pharmaceuticals Inc, Ionis Pharmaceuticals, Biogen Inc., inviCRO LLC.*

10:00 T5 **317.07** The dysfunction of glutamate transporters on the endothelial cells induced by A2AR decreases intracranial glutamate efflux across the blood brain barrier. W. BAI*; N. YANG; X. CHEN; Y. NING; P. LI; Y. PENG; R. XIONG; Y. ZHAO; Y. ZHOU. *Res. Inst. of Surgery and Daping Hosp.*

11:00 T6 **317.08** N-docosahexaenoylethanolamine enables robust optic nerve regeneration after injury. H. KWON*; H. KIM. *NIAAA/National Instiutes of Hlth.*

8:00 T7 **317.09** ● Efficient protein-based genome editing by local delivery in the brain. B. T. STAAHL*; M. BENEKAREDDY; C. COULON-BAINIER; A. GHOSH; J. A. DOUDNA. *Univ. of California, Berkeley, F. Hoffmann-La Roche Pharma Res. and Early Develop., E-Scape Bio, Univ. of California, Berkeley, Howard Hughes Med. Inst., Innovative Genomics Initiative, Physical Biosci. Division, Lawrence Berkeley Natl. Lab., Univ. of California, Berkeley.*

9:00 T8 **317.10** Inhibition of Cdc42 signaling enhances the sensitivity of cerebellar granule neurons to intrinsic apoptosis. N. PUNESSEN*; A. NGUYEN; D. A. LINSEMAN. *Univ. of Denver.*

10:00 T9 **317.11** Identification of proteins that bind to LDL Receptor-related Protein-1 (LRP1) in Schwann cells and activate c-Jun *in vitro* and *in vivo*. A. FLÜTSCH*; A. GILDER; K. HENRY; E. MANTUANO; S. L. GONIAS; W. M. CAMPANA. *UCSD, UCSD.*

11:00 T10 **317.12** Immunohistochemistry of selected gene candidates following early life exposure of NMDA and glutamate to hippocampal neurons reveals diversity. L. K. FRIEDMAN*; A. SLOMKO. *New York Med. Col., New York Med. Col.*

8:00 T11 **317.13** The importance of expression of nur family genes on neurite outgrowth through the effect of p300 and histone modification. K. SHIMOKE*; R. YAMAZOE; Y. NISHIHATA; H. MARUOKA. *Kanasai Univ., KURABO.*

9:00 T12 **317.14** ▲ Investigation of intracellular signaling and non-coding RNA underlying microglial polarity Induced by neuronal damage. S. YACKLEY; C. MEYER; E. WHITEFORD; M. TAPPATA; A. SHIBATA*. *Creighton Univ., Creighton Univ.*

10:00 T13 **317.15** Drugs that affect dna methylation modulate neuritogenesis in sh-sy5y cells. R. A. CANTELMO*; A. C. SANTOS; N. A. G. SANTOS; S. R. L. JOCA. *Sch. of Pharmaceut. Sci. of Ribeirão Pret, Sch. of Pharmaceut. Sci. of Ribeirão Preto, Sch. of Pharmaceut. Sci. of Ribeirão Preto.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 T14 **317.16** Pathological stimuli-induced HDAC1 nuclear export is dependent on calcineurin-mediated dephosporylation. Y. ZHU*; O. G. VIDAURRE; K. P. ADULA; N. KEZUNOVIC; G. HUNTLEY; P. CASACCIA. *Icahn school of Med. at Mount Sinai.*

POSTER

318. Neuroinflammation

Theme C: Neurodegenerative Disorders and Injury

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

8:00 T15 **318.01** A time course analysis of focused ultrasound mediated glial activation and neuronal stress responses. J. SILBURT*; K. MARKHAM-COULTES; M. A. O'REILLY; K. HYNYNEN; I. AUBERT. *Univ. of Toronto, Sunnybrook Res. Inst., Sunnybrook Res. Inst., Univ. of Toronto.*

9:00 T16 **318.02** Proteomic analysis of focused ultrasound-induced blood-brain barrier permeability. M. LYNCH*; M. KAWAJA; J. SILBURT; S. HEINEN; I. AUBERT; M. O'REILLY; K. HYNYNEN. *Sunnybrook Res. Inst., Univ. of Toronto, Queen's Univ., Sunnybrook Res. Inst., Univ. of Toronto.*

10:00 T17 **318.03** Induction of osteopontin expression in 3-nitropropionic acid-induced neurotoxicity in rats: Potential involvement in striatal neuronal death. T. RIEW*; Y. SHIN; X. JIN; J. CHOI; M. LEE. *Dept. of Anatomy, Col. of Medicine, The Catholic Univ. of Korea, Catholic Neurosci. Institute, The Catholic Univ. of Korea, Dept. of Anatomy, Catholic Neurosci. Institute, Col. of Medicine, The Catholic Univ. of Korea.*

11:00 T18 **318.04** Preventing oxidative neurodegeneration after traumatic brain injury followed by secondary smoke exposure. B. A. CITRON*; W. A. RATLIFF; K. L. KEELEY; C. G. PICK; M. OKUKA; J. C. M. TSIBRIS; R. F. MERVIS; J. N. CHANG. *Bay Pines VA Healthcare Syst., Univ. of South Florida Morsani Col. of Med., Sackler Sch. of Medicine, Tel Aviv Univ., Univ. of South Florida Morsani Col. of Med., 4NeuroStructural Res. Laboratories, Inc., Univ. of South Florida Morsani Col. of Med.*

8:00 U1 **318.05** Endothelial cell responses in the hippocampus and cerebellum after irradiation to the young mouse brain. M. BOSTRÖM*; M. KALM; C. BULL; N. HELLSTRÖM ERKENSTAM; K. BLOMGREN. *Univ. of Gothenburg, Univ. of Gothenburg, Univ. of Gothenburg, Karolinska Institutet.*

8:00 DP04 **318.06** (Dynamic Poster) Imaging neurodegenerative and glial pathology at single-cell resolution using AAV mediated conditional genetics: A proof of principle in focal cerebral ischemia. M. EL-SAADI*; X. TIAN; L. RIVERS; H. SUN; X. LU. *Lsuhsc-Shreveport, Lsuhsc-Shreveport.*

10:00 U2 **318.07** The role of ER stress in Neuropathy Target Esterase-associated disorders. E. SUNDERHAUS*; D. KRETZSCHMAR. *Oregon Hlth. and Sci. Univ., Oregon Hlth. and Sci. Univ.*

11:00 U3 **318.08** Mutation of histidine 547 of human dopamine transporter increases dopamine uptake and attenuates HIV-1 Tat-induced inhibition of dopamine transport. J. ZHU*; P. QUIZON; W. SUN; Y. YUAN; N. M. MIDDE; C. ZHAN. *South Carolina Col. of Pharmacy, Univ. of South Carolina, Univ. of South Carolina, Univ. o South Carolina, Univ. of Kentucky.*

8:00 U4 **318.09** Genetic ablation of Trpm2 accelerates protein and lipid aggregation in the brain by impaired autophagic clearance. B. LEE*; J. JUNG; J. LEE; H. KIM; G. HONG; J. WEE; H. LU; U. OH. *Seoul Natl. Univ.*

9:00 U5 **318.10** Modulating the lysosomal gene network to identify new therapeutic opportunities for neurodegenerative disorders. V. BOUCHE*; A. PEREZ ESPINOSA; D. MEDINA; L. LEONE; M. SARDIELLO; A. BALLABIO; J. BOTAS. *Baylor Col. of Med. - Neurolog. Res., Telethon Inst. of Genet. and Med. (TIGEM), Inst. of Bimolecular Chemistry, Consiglio Nazionale delle Ricerche.*

10:00 U6 **318.11** Effect of nitric oxide synthase inhibitors on methamphetamine-induced hyperthermia and dopaminergic neurotoxicity in mice. A. S. DARVESH*; W. J. GELDENHUYS; M. M. HOSSAIN; P. SADANA; A. J. PRUS; S. P. BERGER; J. R. RICHARDSON. *Northeast Ohio Med. Univ. (NEOMED), West Virginia Univ., Northern Michigan Univ., Portland Veterans Affairs Med. Ctr.*

11:00 U7 **318.12** Impact of stressors on lambda-cyhalothrin induced brain cholinergic dysfunction in rats: Role of mitochondrial bioenergetics. R. K. SHUKLA*; R. GUPTA; M. H. SIDDIQUI; A. KUMAR; A. B. PANT; V. K. KHANNA. *CSIR – Indian Inst. of Toxicology Res., Integral Univ., Integral Univ.*

8:00 U8 **318.13** ● Lipidomic analyses identify mitochondrial lipids and omega-3/omega-6 phospholipid decreases in a mouse model of Gulf War Illness. U. JOSHI*. *Roskamp Inst.*

POSTER

319. Opto-Chemogenetics and Microvascular Imaging of Stroke and Injury

Theme C: Neurodegenerative Disorders and Injury

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

8:00 U9 **319.01** Probing the contractility of capillary pericytes *in vivo* with optogenetics. D. A. HARTMANN*; R. I. GRANT; A. Y. SHIH. *Med. Univ. of South Carolina.*

9:00 U10 **319.02** The cerebrovascular mural cell continuum: A structural and biochemical characterization of smooth muscle cells, pericytes and intermediary hybrids. R. I. GRANT*; D. A. HARTMANN; R. G. UNDERLY; A. N. WATSON; A. Y. SHIH. *Med. Univ. of South Carolina.*

10:00 U11 **319.03** Chemogenetic modulation of disinhibitory VIP interneuron circuits to enhance recovery from stroke. C. E. BROWN*; E. WHITE; N. LIANG; K. GERROW. *Univ. of Victoria, Univ. of Victoria.*

11:00 U12 **319.04** Whole brain activation dynamics after stroke. S. LEVY*; M. ASWENDT; B. HSUEH; G. SUN; S. ISHIZAKA; D. SMERIN; M. CHENG; K. DEISSEROTH; G. STEINBERG. *Stanford Univ., Stanford Univ.*

8:00 U13 **319.05** ● Investigating neural and molecular mechanisms of spontaneous recovery in experimental stroke. M. ITO*; M. ASWENDT; M. CHENG; S. ISHIZAKA; A. LEE; S. LEVY; D. SMERIN; E. WANG; G. K. STEINBERG. *Stanford Univ., Max Planck Inst. for Metabolism Res., Natl. Hosp. Organization Nagasaki Kawatana Med. Ctr., Stanford Univ., Univ. of San Diego.*

9:00 U14 **319.06** ● The dramatic alterations of microvascular complexity and oligovascular unit in mice with metabolic syndrome. G. XIAO*; S. NUNEZ; J. HINMAN. *UCLA.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 U15 **319.07** Vasoconstriction induced by cortical inhibition reduces cerebral blood flow and hemoglobin oxygenation. M. DESJARDINS*; K. KILIÇ; C. MATEO; P. SAISAN; C. L. G. FERRI; Q. CHENG; K. WELDY; D. KLEINFELD; A. DALE; A. DEVOR. *UCSD, UCSD, UCSD, UCSD, UCSD, UCSD, Massachusetts Gen. Hosp. / Harvard Med. Sch.*

11:00 U16 **319.08** The selective role of cortical inhibitory interneurons in functional hyperemia. K. KILIÇ*; H. UHLIROVA; P. TIAN; M. THUNEMANN; M. DESJARDINS; P. SAISAN; S. SAKADŽIĆ; T. V. NESS; C. MATÉO; Q. CHENG; K. L. WELDY; F. RAZOUX; M. VANDENBERGHE; J. A. CREMONESI; C. G. L. FERRI; K. NIZAR; V. B. SRIDHAR; T. C. STEED; M. ABASHIN; Y. FAINMAN; E. MASLIAH; S. DJUROVIC; O. A. ANDREASSEN; G. A. SILVA; D. A. BOAS; D. KLEINFELD; R. B. BUXTON; G. T. EINEVOLL; A. M. DALE; A. DEVOR. *UCSD, UCSD, Brno Univ. of Technol., Brno Univ. of Technol., John Carroll Univ., Harvard Med. Sch., Norwegian Univ. of Life Sci., UCSD, Univ. of Oslo, UCSD, UCSD, UCSD, UCSD, Oslo Univ. Hosp., Univ. of Bergen, UCSD, UCSD, Univ. of Oslo.*

8:00 U17 **319.09** Optical control of blood flow in naive animals. R. L. RUNGTA*; B. OSMANSKI; D. BOIDO; M. TANTER; S. CHARPAK. *INSERM U1128 and Univ. Paris Descartes, INSERM U979.*

9:00 U18 **319.10** Repetitive model of mild traumatic brain injury produces cortical abnormalities detectable by magnetic resonance diffusion imaging (DTI/DKI), histopathology, and behavior. K. L. RADOMSKI; F. YU*; D. SHUKLA; R. C. ARMSTRONG; C. M. MARION; R. SELWYN; B. J. DARDZINSKI. *Uniformed Services Univ., Uniformed Services Univ., Uniformed Services Univ., Univ. of Maryland Sch. of Med., Uniformed Services Univ., Univ. of New Mexico, Uniformed Services Univ.*

10:00 V1 **319.11** Neovascularization and functional recovery after intracerebral hemorrhage is conditioned by the Tp53 Arg72Pro single nucleotide polymorphism. A. ALMEIDA*; C. RODRÍGUEZ; T. SOBRINO; M. RAMOS-ARAQUE; J. CASTILLO; J. P. BOLAÑOS. *Inst. of Biomed. Res. of Salamanca, Univ. of Salamanca, Univ. Clin. Hospital-University of Santiago de Compostela.*

POSTER

320. Injury Responses after Spinal Cord Injury

Theme C: Neurodegenerative Disorders and Injury

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

8:00 V2 **320.01** Lysophosphatidic acid receptor 2 contributes to secondary damage after spinal cord injury. C. LÓPEZ SERRANO*; E. SANTOS-NOGUEIRA; I. FRANCOS-QUIJORNA; M. COLL-MIRÓ; J. CHUN; R. LOPEZ-VALES. *Univ. Autonoma De Barcelona, Mol. and Cell. Neurosci. Department, Dorris Neurosci. Center. The Scripps Res. Institute, La Jolla.*

9:00 V3 **320.02** Activity of dorsal raphe serotonergic neurons in a spinal cord injury model of depression. K. FARRELL*; M. R. DETLOFF; J. D. HOULE. *Drexel Univ. Col. of Med., Drexel Univ. Col. of Med.*

10:00 V4 **320.03** Assessment of the contribution of endogenous oligodendrocytic remyelination to locomotor recovery after spinal cord contusion injury in adult mouse. W. TETZLAFF*; S. B. MANESH; G. J. DUNCAN; B. J. HILTON; P. ASSINCK; J. LIU; S. NADERI-AZAD; P. CHAU; D. E. BERGLES; J. R. PLEMEL. *Univ. of British Columbia, Univ. of British Columbia, Johns Hopkins Univ. Sch. of Med., Univ. of Calgary.*

11:00 V5 **320.04** Dissecting trauma-reactive astrogliosis *in vivo* by cell-type specific analysis of actively translating mRNA. J. E. BURDA*; Y. AO; R. KAWAGUCHI; S. DEVERASETTY; G. COPPOLA; M. V. SOFRONIEW. *UCLA, UCLA, UCLA, UCLA, UCLA.*

8:00 V6 **320.05** The Aqp4-Trpm4 macromolecular complex mediates astrocyte migration after spinal cord contusion. J. A. STOKUM*; V. GERZANICH; J. SIMARD. *Univ. of Maryland, Baltimore, Univ. of Maryland, Baltimore.*

9:00 V7 **320.06** The effects of distinct spared nerve injury models on spinal synaptic plasticity following spinal cord injury. J. HUIE*; K. MORIOKA; C. OMONDI; J. HAEFELI; J. SACRAMENTO; A. FERGUSON. *UCSF, San Francisco Veterans Affairs Med. Ctr.*

10:00 V8 **320.07** Nano-based drug delivery systems: Targeting to corticospinal tract neurons for controlled release of therapeutics. C. MENGJIE*; R. VEETTIL; D. HYNDS; S. GHOSH; T. MCALLISTER. *TEXAS WOMAN'S UNIVERSITY, Southeast Missouri State Univ.*

11:00 V9 **320.08** Age-associated exacerbation of myelin injury is associated with decreases cholesterol synthesis. N. MICHAELS*; S. K. JENSEN; K. S. RAWJI; M. B. KEOUGH; J. R. PLEMEL; V. W. YONG. *Univ. of Calgary.*

8:00 V10 **320.09** Behavioral and histochemical evaluation of phantom limb pain model in rats. S. JERGOVA*; A. LANJEWAR; A. R. NIEDECKEN; C. MARCH; J. SAGEN. *Univ. of Miami Sch. of Med.*

9:00 V11 **320.10** Experimental cervical spinal cord injury induces an autoantibody response in the sub-acute phase of the disease. A. ULNDREAJ*; A. TZEKOU; E. E. TORLAKOVIC; M. G. FEHLINGS. *Univ. of Toronto, Univ. Hlth. Network, Dept. of Lab. Hematology, Univ. of Toronto, Inst. of Med. Science, Univ. of Toronto.*

10:00 V12 **320.11** Promoting targeted reinnervation of phrenic motor neurons and restoration of respiratory function using BDNF after spinal cord injury. B. CHARSAR*; M. URBAN; B. GHOSH; G. M. SMITH; A. C. LEPORE. *Thomas Jefferson Univ., Temple Univ.*

11:00 V13 **320.12** ● Pharmacological inhibition of CSPGs receptors LAR and PTPσ positively modulates the inflammatory response and promotes oligodendrocyte replacement following spinal cord injury. S. M. DYCK*; H. KATARIA; S. THOMAS; B. LANG; J. SILVER; S. KARIMI-ABDOLREZAEE. *Univ. of Manitoba, Case Western Reserve Univ. Sch. of Med.*

8:00 V14 **320.13** Induction of immune tolerance by short-course immunosuppresion after spinal grafting of allogeneic neural precursors in pigs with previous chronic spinal cord traumatic injury. M. MARSALA*; J. D. CIACCI; E. I. CURTIS; S. MARSALA; M. R. NAVARRO; P. CHEN; S. JUHAS; J. JUHASOVA; K. YAMADA; K. JOHE. *Univ. of California San Diego, Univ. of California San Diego, Inst. of Animal Physiol. and Genet., Columbia Univ. Med. Ctr., Neuralstem.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 V15 **320.14** Astrocytic morphology altered by glycogen synthase kinase 3β (GSK3β) and chondroitinase ABC in the optic nerve and the spinal cord. A. KALAM*; A. D. RIVERA; E. J. BRADBURY; A. DIDANGELOS; A. M. BUTT. *Univ. of Portsmouth, King's Col. London.*

10:00 V16 **320.15** The combined therapy of estradiol and tamoxifen confers neuroprotection after spinal cord injury. J. M. SANTIAGO SANTANA*; W. I. MALDONADO GEORGE; D. N. MILLÁN; L. A. RODRÍGUEZ; S. M. RIVERA; L. M. GARCÍA; J. COLÓN; A. PÉREZ; S. AYUSO; J. M. COLÓN; A. I. TORRADO; I. K. SALGADO; Y. ARROYO; J. D. MIRANDA. *Univ. of Puerto Rico At Carolina, Univ. of Puerto Rico, Rio Piedras Campus, Univ. of Puerto Rico, Carolina Campus, Univ. of Puerto Rico, Med. Sci. Campus.*

8:00 DP05 **320.16** (Dynamic Poster) Imaging neural activity in the primary somatosensory cortex using GCaMP transgenic mice. X. LIN; W. XIONG; W. WU; M. WALKER; X. JIN; X. M. XU*. *Indiana Univ.*

8:00 V17 **320.17** miR-21 correlates with progression of degenerative cervical myelopathy and is a marker of hypoxia-induced inflammation. A. M. LALIBERTE*; S. KARADIMAS; K. SATKUNENDRARAJAH; P. VIDAL; M. G. FEHLINGS. *Univ. of Toronto, Univ. Hlth. Network.*

9:00 V18 **320.18** ● Immune modifying microparticles modulate hematogenous monocytes and promote recovery after spinal cord injury. J. G. COOPER*; S. JEONG; I. IFERGAN; S. B. SHARMA; D. XU; T. MCGUIRE; J. A. KESSLER; S. D. MILLER. *Northwestern Univ., Northwestern Univ.*

10:00 W1 **320.19** Riluzole prevents functional deficits during mild distraction spinal cord injury. E. N. SHIMIZU*; K. J. JOHNSON; M. I. ROMERO-ORTEGA. *Univ. of Texas At Dallas.*

11:00 W2 **320.20** ● Neuroplasticity in the injured spinal cord following Sox9 ablation three weeks post injury. N. M. OSSOWSKI*; N. M. GEREMIA; T. HRYCIW; K. XU; A. BROWN. *Univ. of Western Ontario.*

8:00 W3 **320.21** IL-13 administration favors microglia and macrophages to adopt an M2-like phenotype after spinal cord injury. J. AMO-APARICIO*; R. LOPEZ-VALES. *Univ. Autonoma De Barcelona.*

9:00 W4 **320.22** A potent anti-spastic effect after intrathecal NK1 antisense oligonucleotide or subpial AAV9-NK1-ShRNA delivery in rats with chronic spinal transection-induced muscle spasticity. M. BRAVO HERNANDEZ*; T. YOSHIOZUMI; M. R. NAVARRO; K. KAMIZATO; T. TADOKORO; O. PLATOSHYN; S. MARSALA; J. D. CIACCI; C. MAZUR; M. MARSALA. *Univ. of California San Diego, Univ. of California San Diego, Ionis Pharmaceuticals.*

10:00 W5 **320.23** The effects of 10ms pulsed radiofrequency (PRF) treatment on behavioral measures of chronic pain and gene expression changes along the nociceptive pathway. J. M. WILLIAMS*; D. M. TILLEY; C. KELLEY; D. L. CEDENO; R. VALLEJO. *Illinois Wesleyan Univ. Dept. of Psychology, Millennium Pain Ctr.*

11:00 W6 **320.24** Treatment of postraumatic intraspinal pressure may limit secondary damage in acute rodent spinal cord injury. Z. Z. KHAING*; L. N. CATES; D. M. DEWEES; Z. BIRJANDIAN; C. P. HOFSTETTER. *Univ. of Washington.*

8:00 W7 **320.25** Potent & long-lasting suppression of muscle spasticity by spinal subpial AAV9-mediated VGAT and GAD65 gene delivery in a rat thoracic 9 transection model of chronic spasticity. T. YOSHIZUMI*; K. KAMIZATO; A. PLATOSHYN; M. R. NAVARRO; S. MARSALA; J. D. CIACCI; M. MARSALA. *UNIVERSITY OF CALIFORNIA SAN DIEGO MARASALA LAB, UNIVERSITY OF CALIFORNIA SAN DIEGO.*

9:00 W8 **320.26** Activation of RhoA is contributed to apoptosis of reticulospinal neurons in lamprey brain after spinal cord injury. K. G. ZHANG*; J. HU; W. RODEMER; M. E. SELZER. *Lewis Katz Sch. of Medicine, Temple Univ., Lewis Katz Sch. of Medicine, Temple Univ.*

10:00 W9 **320.27** Surgical decompression for degenerative cervical myelopathy induces activation of the immune system. P. VIDAL VERA*; S. K. KARADIMAS; A. ULNDREAJ; A. M. LALIBERTE; J. WANG; M. FEHLINGS. *UHN, Univ. of Toronto, UHN, UHN.*

11:00 W10 **320.28** ▲ Assessment of suspensions of the polypyrrole doped with iodine synthesized by plama (PPPy/I) and rat serum albumin (RSA) microinjected as treatment of traumatic injury of the spinal cord (TSCI). O. FABELA*; S. SÁNCHEZ-TORRES; L. ALVAREZ-MEJIA; R. MONDRAGÓN-LOZANO; G. J. CRUZ; M. -. OLAYO; J. MORALES; A. DÍAZ-RUÍZ; C. RÍOS; L. MEDINA-TORRES; H. SALGADO-CEBALLOS; R. OLAYO. *Univ. Autónoma Metropolitana, Proyecto Camina A.C., Ctr. Médico Nacional Siglo XXI, Univ. Autónoma Metropolitana, Ctr. Médico Nacional Siglo XXI, CONACyT, Inst. Nacional de Investigaciones Nucleares, Univ. Autónoma Metropolitana, Inst. Nacional de Neurología y Neurocirugía, Univ. Autónoma de Mexico.*

9:00 W11 **320.29** Neuroprotective strategy at acute phase reduces microglia activation and improves survival of motoneuron after cervical nerve root transection. M. HUANG*; C. LIN; Y. LIN; C. HONG; K. CHANG; H. CHENG. *Taipei Veterans Gen. Hosp, Taipei Med. Univ., Taipei Veterans Gen. Hosp., Natl. Chung Hsin Univ., Natl. Yang-Ming Univ., Taipei Veterans Gen. Hosp.*

8:00 W12 **320.30** *In vivo* three-photon excited fluorescence imaging of neural activity in the spinal cord of awake, locomoting mouse. Y. CHENG*; S. L. NESS; S. H. HU; J. RAIKIN; L. D. PAN; D. G. OUZOUNOV; T. WANG; X. LI; J. C. CRUZ HERNANDEZ; I. M. BASTILLE; N. NISHIMURA; J. R. FETCHO; C. XU; C. B. SCHAFFER. *Cornell Univ., Cornell Univ., Cornell Univ., Cornell Univ.*

POSTER

321. Trauma and Blast-Induced Neurochemical and Cellular Mechanisms

Theme C: Neurodegenerative Disorders and Injury

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

8:00 X1 **321.01** Single versus repeated mild blast exposure; the galanin, serotonin and noradrenalin systems. L. KAWA; U. P. ARBORELIUS; A. KAMNAKSH; T. HOKFELT; D. V. AGOSTON; M. G. RISLING*. *Karolinska institutet, Uniformed Services Univ., Karolinska Inst.*

9:00 X2 **321.02** Astrocyte reactivity following blast exposure involves aberrant histone acetylation. Z. S. BAILEY*; M. B. GRINTER; P. J. VANDEVORD. *Virginia Tech., Salem Veterans Affairs Med. Ctr.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 X3 **321.03** Network Trauma: Electrophysiological and subcellular damage after tangential 300-600g impacts *in vitro*. E. A. ROGERS; G. W. GROSS*. *Univ. North Texas.*

11:00 X4 **321.04** Conjugated linoleic acid administration in male rats induces amnesia and exacerbates recovery from functional deficits induced by a penetrating controlled cortical contusion injury. C. S. ATWOOD*; I. M. ANDERSON; Q. BONGERS; A. JANSEN; C. NIER; M. WEHBER; A. KAPOOR; T. E. ZIEGLER; K. HAYASHI; S. VADAKKADATH MEETHAL; R. I. GEDDES. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

8:00 X5 **321.05** Repetitive blast exposure in mice and combat Veterans promotes a persistent profile of behavioral and dopaminergic dysfunction. A. G. SCHINDLER*; J. S. MEABON; K. D. MEEKER; G. LI; C. W. WILKINSON; E. PESKIND; D. G. COOK; J. J. CLARK. *Univ. of Washington, Veterans Affairs Puget Sound Mental Illness Res. Educational and Clin. Ctr., Veterans Affairs Puget Sound Geriatric Res. Educ. and Clin. Ctr.*

9:00 X6 **321.06** Defective methionine metabolism in the brain after repeated blast exposures might contribute to increased oxidative stress. P. ARUN*; W. B. RITTASE; D. M. WILDER; Y. WANG; I. D. GIST; J. B. LONG. *Walter Reed Army Inst. of Res.*

10:00 X7 **321.07** A proteomics study of the temporal and spatial changes following blast induced traumatic brain injury. A. KAMNAKSH; R. BEKDASH; I. LIN; G. MUELLER; G. LING; A. SCRIMGEOUR; L. TONG; J. LONG; T. WESTMORLAND; W. TAYLOR; S. PARKS; D. V. AGOSTON*. *USUHS, USAMRA, WRAIR, ACI-AMT, ORA, USU.*

11:00 X8 **321.08** ● Durable engraftment, neuronal differentiation of human fetal neural stem cell transplants in penetrating ballistic-like brain injury accompanied by amelioration of cognitive deficits. S. GAJAVELLI*; M. S. SPURLOCK; K. N. RIVERA; A. I. AHMED; S. YOKOBORI; S. W. LEE; M. P. HEFFERAN; K. JOHE; T. G. HAZEL; F. C. TORTELLA; D. A. SHEAR; R. M. BULLOCK. *Univ. Miami, Univ. of Miami, Neuralstem Inc, Neuralstem Inc, Walter Reed Army Inst. of Res.*

8:00 X9 **321.09** Inhibition of caspase-3 protects a broad range of developing neurons andneural stem cells from chemotherapeutic-induced cell damage. A. J. ELIA*; J. HENDERSON. *Univ. Hlth. Network, Fac. of Pharmacy, Univ. of Toronto.*

9:00 X10 **321.10** ● Effects on the α 2 adrenoreceptor antagonist efaroxan on sensorimotor responses and the norepinephrine levels in the dentate gyrus after cortical damage. L. RAMOS-LANGUREN*; S. MONTES; G. GARCÍA-DÍAZ; N. CHÁVEZ-GARCÍA; C. RÍOS; R. GONZÁLEZ-PIÑA. *Univ. Autónoma Metropolitana, Xochimilco, Dept. de Neuroquímica. Inst. Nacional de Neurología y Neurocirugía, Torre de Investigación. Inst. Nacional de Rehabilitación.*

10:00 X11 **321.11** ▲ Immunohistochemical study of nrf2-antioxidant response element as indicator of oxidative stress in the rat brain following by kainic acid and petylenetetrazol treatment. A. RUIZ-DÍAZ; J. MANJARREZ; C. NAVA-RUIZ; A. DÍAZ-RUIZ; M. MENDEZ-ARMENTA*. *Natl. Inst. of Neurol. and Neurosurg., Natl. Inst. Neurol Neurosurg.*

11:00 X12 **321.12** Evaluation of acute cell death in rat organotypic hippocampal slice cultures exposed to mechanical or blast injury. A. GLAVASKI-JOKSIMOVIC*; A. S. SHAH; B. V. APERI; S. N. KURPAD; B. D. STEMPER. *Med. Col. of Wisconsin, Med. Col. of Wisconsin, Clement J. Zablocki Veterans Affairs Med. Ctr.*

8:00 X13 **321.13** Is docosahexaenoic acid neuroprotective after traumatic brain injury in rats? L. S. BELAYEV*; L. KHOUTOROVA; A. OBENAUS; N. G. BAZAN. *LSUHSC, Loma Linda Univ.*

9:00 X14 **321.14** ● Polarized aquaporin-4 (AQP4) expression in the cerebellum is disturbed by blast-induced traumatic brain injury (TBI). K. D. MEEKER*; J. ILIFF; M. SIMON; J. S. MEABON; E. R. PESKIND; D. G. COOK. *SIBCR, Univ. of Washington, Oregon Hlth. & Sci. Univ., Oregon Hlth. & Sci. Univ., VA Puget Sound Hlth. Care Syst., VA Puget Sound Hlth. Care Syst., Univ. of Washington, Univ. of Washington.*

10:00 X15 **321.15** Mitigation of neuropathology and behavioral deficits in a rat model of brain injury to occupants of vehicles targeted by land mines by an advanced shock absorbing hull design. F. TCHANTCHOU*; W. FOURNEY; U. LEISTE; A. PUCHE; G. FISKUM. *Univ. of Maryland Sch. of Med., Univ. of Maryland Col. Park, Univ. of Maryland Sch. of Med.*

11:00 X16 **321.16** Assessing glycomics and neuroproteomic changes in experimental TBI: Comparative analysis of aspirin and clopidogrel. F. H. KOBEISSY*; H. BAHMAD; N. RAMADAN; R. ZHU; Y. MECHREF. *Univ. of Florida, American Univ. of Beirut, Texas Tech. University.*

8:00 X17 **321.17** Role of glia in the pathophysiology of Gulf War Illness. D. J. DUTTA*; D. H. WOO; M. ROBNETT; W. HUFFMAN; P. LEE; K. SULLIVAN; R. KILLIANY; J. O'CALLAGHAN; R. D. FIELDS. *NIH, Natl. Institites of Hlth., Boston Univ. Sch. of Publ. Hlth., Boston Univ. Sch. of Med., Centers for Dis. Control and Prevention.*

9:00 X18 **321.18** ▲ Phenelzine induces restoration of function following a medial frontal cortex contusion in adult male rats housed in standard environments, but not in adult male rats reared in enriched environments. M. A. SEARLES*. *Saginaw Valley State Univ.*

10:00 Y1 **321.19** The role of pontine α-2 receptors in the reinstatement of the motor deficit after cortical damage. G. GARCÍA-DÍAZ; L. E. RAMOS-LANGUREN; J. LOMELÍ-GONZÁLEZ; F. AYALA-GUERRERO; N. CHÁVEZ-GARCÍA; R. GONZÁLEZ-PIÑA; S. MONTES*. *Escuela Superior de Medicina. Inst. Politécnico Nacional, Natl. Inst. Neurol. Neurosurg, Facultad de Psicología. Univ. Nacional Autónoma de México, Torre de Investigación. Inst. Nacional de Rehabilitación.*

POSTER

322. Traumatic Brain Injury: Models, Mechanisms, and Treatments

Theme C: Neurodegenerative Disorders and Injury

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

8:00 Y2 **322.01** Effects of P2 receptor blocker MRS2179 against experimental cerebral contusion injury in rat. T. KUMAGAWA*; K. SHIJO; N. MORO; M. FUKUSHIMA; T. MAEDA; A. YOSHINO. *Nihon Univ. Sch. of Med.*

9:00 Y3 **322.02** Traumatic brain injury during adolescence enhances rewarding effects of a subthreshold dose of cocaine in mice. L. CANNELLA*; S. F. MERKEL; R. RAZMPOUR; M. SEASOCK; S. M. RAWLS; S. H. RAMIREZ. *Temple Univ. Lewis Katz Sch. of Med., Temple Univ. Lewis Katz Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 Y4 **322.03** Histological evaluation of biomarkers in a longitudinal traumatic brain injury study. S. C. SCHWERIN*; E. HUTCHINSON; K. RADOMSKI; A. IMAM-FULANI; M. CHATTERJEE; C. PIERPAOLI; S. L. JULIANO. *Uniformed Services Univ., NIH.*

11:00 Y5 **322.04** A new model for un-anaesthetised repeat closed head injury produces acute neurological deficits in the juvenile rat. A. L. MECONI*; R. C. WORTMAN; B. R. CHRISTIE. *Univ. of Victoria, Univ. of Victoria.*

8:00 Y6 **322.05** The effects of mild traumatic brain injury on hippocampal neuroinflammation in female juvenile rats. M. A. CLARKSON*; B. R. CHRISTIE; P. C. NAHIRNEY; A. L. MECONI; A. COLLINS; E. TRUESDELL. *Univ. of Victoria, Univ. of Victoria.*

9:00 Y7 **322.06** Repetitive Closed-Head Impact Model of Engineered Rotational Acceleration (rCHIMERA) induced long-term cognitive impairment and persistent astrogliosis and microgliosis in mouse. H. CHEN*. *NIAAA/NIH.*

10:00 Y8 **322.07** Acute pathophysiologies associated with mild, “head on” concussion injury in the Sprague-Dawley. S. M. VITA*; K. R. CLARK; R. J. GRILL. *Univ. of Mississippi Med. Ctr.*

11:00 Y9 **322.08** Increased ethanol intake and progressive reductions in striatal cannabinoid receptor 1 protein levels following mild traumatic brain injury. B. L. SCHNEIDER; L. L. SUSICK; A. C. CONTI*. *John D. Dingell VA Med. Ctr., Wayne State Univ.*

8:00 Y10 **322.09** Pyridoxamine deficiency induces carbonyl stress and schizophrenia-like phenotypes in *Drosophila*. K. KORI*. *Tokyo Metorolitan Inst. of Med. Sci.*

9:00 Y11 **322.10** Regrowth of serotonin axons in the neocortex following a stab injury. S. E. DOUGHERTY*; Y. JIN; D. J. LINDEN. *Johns Hopkins Univ.*

10:00 Y12 **322.11** ● Diffusion Tensor Imaging detects alterations in the corpus callosum after mild TBI in the mouse. P. N. VENKATASUBRAMANIAN*; M. SMITH; D. R. SCHUBERT; J. C. PINA-CRESPO; K. MATHEWS; P. RIGBY; A. MANN; E. RUOSLAHTI; A. M. WYRWICZ; J. SPIESS. *Northshore Univ. Healthsystem, The Salk Inst., Sanford Burnham Prebys Med. Discovery Inst., L3 Applied Technologies, Inc., Cortrop Inc.*

11:00 Y13 **322.12** Impact of chronic traumatic brain injury on noradrenergic innervation to the major anxiety-related neural pathways in rats. S. TSUDA*; J. HOU; R. NELSON; G. MUSTAFA; J. WATTS; F. J. THOMPSON; P. BOSE. *Malcom Randal VA Med. Ctr., Univ. of Florida, Univ. of Florida, Univ. of Florida.*

8:00 Y14 **322.13** Graded Mild traumatic brain injury (mTBI)-induces different trajectories reaching enduring multiple comorbidities. F. J. THOMPSON*; J. HOU; R. NELSON; G. MUSTAFA; J. JOSEPH; Z. WILKIE; P. BOSE. *North Florida/South Georgia Veterans Hlth. Syst., Univ. of Florida, Univ. of Florida, Univ. of Florida.*

9:00 Y15 **322.14** Chronic cerebrovascular abnormalities in a mouse model of repetitive mild traumatic brain injury. C. E. LYNCH*; G. CRYNEN; S. FERGUSON; B. MOUZON; D. PARIS; J. OJO; P. LEARY; F. CRAWFORD; C. BACHMEIER. *The Roskamp Inst., The Open Univ., James A. Haley Veteran’s Admin. Ctr., Bay Pines VA Healthcare Syst.*

10:00 Y16 **322.15** ▲ An adapted model of mTBI in adult zebrafish. R. SPENCE*; B. DIX; A. YOUNG; V. GILL; L. STANISLAW; J. ELLIS; A. MAHERAS; B. FORTINI. *Claremont McKenna Col., Scripps Col., Pitzer Col.*

11:00 Y17 **322.16** Transcranial direct current stimulation (tDCS) improves neurological outcomes in a mice model of traumatic brain injury. O. BRAGIN*; E. NEMOTO; C. SHUTTLEWORTH; D. BRAGIN. *Univ. of New Mexico Sch. of Med., Univ. of New Mexico Sch. of Med.*

8:00 Y18 **322.17** Systemic administration of cell-free exosomes generated by human marrow mesenchymal stem cells cultured under 2D and 3D conditions improves functional recovery in rats after traumatic brain injury. Y. ZHANG; M. CHOPP; Z. G. ZHANG; M. KATAKOWSKI; H. XIN; C. QU; E. PIKULA; M. ALI; A. MAHMOOD; Y. XIONG*. *Henry Ford Hlth. Syst., Henry Ford Hlth. Syst., Oakland Univ.*

9:00 Z1 **322.18** Enduring effects of environmental enrichment on functional network reorganization after experimental TBI in rats. A. PAYDAR*; D. ROBIO; S. SRINIVAS; Y. CAI; A. E. KLINE; N. G. HARRIS. *UCLA, Dept. of Neurosurgery, BIRC, Univ. of Pittsburgh.*

10:00 Z2 **322.19** The impact of MIF binding and CD74 on the activation and expansion of pro inflammatory B cells and γ δ T cells in a fluid percussion model of traumatic brain injury. L. A. SHAPIRO*; S. K. ROGERS; D. NIZAMUTDINOV; R. BUCALA; M. K. NEWELL0ROGERS. *Texas A&M Hlth. Sci. Ctr., Yale Univ.*

11:00 Z3 **322.20** Alteration of cardiac performance after traumatic brain injury through acute signaling mechanisms. D. NIZAMUTDINOV*; J. KAIN; L. A. SHAPIRO. *Texas A&M Univ., Texas A&M HSC, Texas A&M HSC.*

8:00 Z4 **322.21** Role of oxidation of kcnb1 potassium channels in mouse model of traumatic brain injury. W. YU; R. PARAKRAMA; S. TENG; M. GOWDA; Y. SHARAD; S. THAKKER-VARIA; J. ALDER; F. SESTI*. *Rutgers, Rutgers, Rutgers.*

9:00 Z5 **322.22** Sensor-based quantitation of a closed-skull weight drop model for traumatic brain injury. J. ALLENDE LABASTIDA*; S. ALI; J. GAO; T. J. DUNN; Y. YU; D. S. DEWITT; D. S. PROUGH; P. WU. *Univ. of Texas Med. Br., Univ. of Texas Med. Br., Univ. of Texas Med. Br., Univ. of Texas Med. Br.*

10:00 Z6 **322.23** Administration of miR-155 antagomir following experimental traumatic brain injury (TBI) attenuates post-traumatic neuroinflammatory responses and improves neurological recovery. R. J. HENRY*; D. J. LOANE; B. E. SABIRZHANOV; B. A. STOICA; A. I. FADEN. *Univ. of Maryland, Baltimore, Univ. of Maryland, Baltimore.*

11:00 Z7 **322.24** Corticospinal tract pathology with impact acceleration: Modeling diffuse axonal injury in the mouse. N. ZIOGAS; J. RYU; L. XU; P. TSOULFAS; V. E. KOLIATSOS*. *Johns Hopkins Univ., The Miami Project to Cure Paralysis, Johns Hopkins Univ.*

8:00 Z8 **322.25** Chronic retinal injury in a mouse model of blast-induced trauma. N. MAMMADOVA*; D. S. SAKAGUCHI; S. GHAISAS; G. D. ZENITSKY; A. G. KANTHASAMY; J. J. GREENLEE; M. H. W. GREENLEE. *Iowa State Univ., Iowa State Univ., Natl. Animal Dis. Center, USDA, Agr. Res. Service.*

9:00 Z9 **322.26** Experimental traumatic brain injury induces changes resembling motor neuron disease that are exacerbated by pathological TDP-43. S. R. SHULTZ*; D. WRIGHT; X. TAN; T. O’BRIEN. *Univ. of Melbourne, The Univ. of Melbourne.*

10:00 Z10 **322.27** Pomegranate treatment for repetitive mild brain insults. A. M. BRISENO*; N. M. BAJWA; A. OBENAUS; R. E. HARTMAN. *Loma Linda Univ., Loma Linda Univ., Loma Linda Univ., Univ. of California Riverside.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract’s submitting author

POSTER

323. Spinal Cord Injury Models and Mechanisms

Theme C: Neurodegenerative Disorders and Injury

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

8:00 Z11 **323.01** Acute vasopressor administration after traumatic SCI: The impact on metabolism, blood flow, oxygenation, pressure and long-term behavioural recovery using a porcine model of SCI. A. GHEORGHE*; F. STREIJGER; K. SO; E. B. OKON; N. MANOUCHEHRI; K. SHORTT; D. E. GRIESDALE; M. S. SEKHON; B. K. KWON. *Univ. of British Columbia, Dept. of Anesthesiology, UBC, Dept. of Medicine, UBC, Dept. of Orthopaedics, UBC.*

9:00 Z12 **323.02** Trauma-induced alterations of cerebral excitability and cortical reorganization in a porcine model of SCI. K. SHORTT*; C. R. JUTZELER; F. STREIJGER; N. MANOUCHEHRI; K. SO; J. KRAMER; B. K. KWON. *Univ. of British Columbia, Univ. of Zurich, Univ. of British Columbia, Univ. of British Columbia.*

10:00 Z13 **323.03** Duraplasty in acute traumatic SCI: The impact on metabolism, blood flow, oxygenation and pressure using a porcine model of SCI. N. MANOUCHEHRI*; F. STREIJGER; K. SHORTT; K. SO; E. B. OKON; B. K. KWON. *UBC, Dept. of Orthopaedics, UBC.*

11:00 Z14 **323.04** New neurotrauma marker panel of astroglial heterogeneity predicts severity and outcome after recoverable swine spinal cord injury. I. B. WANNER*; J. HALFORD; S. SHEN; J. A. LOO; R. KINSLER; P. CRIPTON; B. KWON; A. MAYER. *UCLA, UCLA, U.S. Army Aeromedical Res. Lab., ICORD, Univ. of British Columbia, ICORD, Univ. of British Columbia, Lovelace Resp. Res. Inst.*

8:00 AA1 **323.05** Relationship between injury severity and miRNA expression in CSF and serum from human spinal cord injury patients. S. S. TIGCHELAAR*; F. STREIJGER; S. SINHA; S. FLIBOTTE; N. MANOUCHEHRI; K. SO; K. SHORTT; I. MALENICA; A. COURTRIGHT; J. STREET; S. PAQUETTE; M. BOYD; T. AILON; C. FISHER; M. DVORAK; J. MAC-THIONG; S. PARENT; C. BAILEY; S. CHRISTIE; K. VAN KEUREN-JENSEN; C. NISLOW; B. K. KWON. *ICORD, Fac. of Pharmaceut. Sci. - Univ. of British Columbia, Translational Genomics, Vancouver Spine Surgery Inst., Vancouver Spine Surgery Inst., Hôpital du Sacré-Coeur de Montréal, Chu Sainte-Justine - Univ. de Montréal, Schulich Med. & Dentistry, Victoria Hosp., Halifax Infirmary - Dalhousie Univ.*

9:00 AA2 **323.06** Overexpression of KLF6 in corticospinal tract neurons promotes axon growth after spinal injury. Z. WANG*; I. VENKATESH; N. KRUEGER; D. NOWAK; B. CALLIF; B. MAUNZE; M. G. BLACKMORE. *Marquette Univ.*

10:00 AA3 **323.07** Combined rehabilitation and genetic enhancement of intrinsic regenerative growth ability to improve behavioral outcomes after spinal injury. A. A. KRAMER*; Z. WANG; E. BALLE; L. K. HOLAN; N. KRUEGER; J. A. EVANS; M. G. BLACKMORE. *Marquette Univ.*

11:00 AA4 **323.08** Combined expression of pro-regenerative transcription factors and transplanted stem cells to promote corticospinal tract regeneration. N. JAYAPRAKASH*; Z. WANG; N. KRUEGER; A. KRAMER; M. BLACKMORE. *Marquette Univ.*

8:00 AA5 **323.09** Developing an immune-evading doxycycline-inducible viral vector for gene therapy in the spinal cord. F. DE WINTER*; B. HOBO; R. EGGERS; S. A. HOYNG; R. C. HOEBEN; R. J. YÁÑEZ-MUÑOZ; E. J. BRADBURY; E. M. MUIR; J. VERHAAGEN. *Netherlands Inst. for Neurosci., Leiden Univ. Med. Ctr., Leiden Univ. Med. Ctr., Univ. of London, King's Col. London, Univ. of Cambridge.*

9:00 AA6 **323.10** Gene therapy using a stealth gene switch for GDNF expression promotes long distance regeneration of motor axons following a spinal ventral root avulsion. R. EGGERS*; F. DE WINTER; S. A. HOYNG; R. C. HOEBEN; M. J. A. MALESSY; M. R. TANNEMAAT; J. VERHAAGEN. *Neth Inst. Neurosci, Leiden Univ. Med. Ctr., Leiden Univ. Med. Ctr., Leiden Univ. Med. Ctr.*

10:00 AA7 **323.11** Regulateable Chondroitinase ABC gene therapy as a treatment for spinal cord injury. E. R. BURNSIDE*; F. DE WINTER; A. DIDANGELOS; N. D. JAMES; K. BARTUS; E. M. MUIR; J. VERHAAGEN; E. J. BRADBURY. *King's Col. London, Netherlands Inst. for Neurosci., Univ. of Cambridge.*

11:00 AA8 **323.12** Rhoa knockdown by pgp/rhoa sirna nanoparticle increases axon growth after spinal cord injury. S. GWAK; C. MACKS; K. WEBB; M. LYNN; J. LEE*. *Clemson Univ., Greenville Hlth. Syst.*

8:00 AA9 **323.13** Stretching distrupts locomotor function in rats with spinal cord injury: Static stretch and hold vs dynamic range of motion patterns. A. KELLER*; K. NORD; C. HAINLINE; D. PRINCE; A. SHUM-SIU; D. S. K. MAGNUSON. *Univ. of Louisville, Univ. of Louisville, Univ. of Louisville, Univ. of Louisville.*

9:00 AA10 **323.14** Stretching disrupts locomotor function in rats with spinal cord injury: Role of nociceptive afferents. D. S. MAGNUSON*; A. KELLER; S. KRUPP; K. NORD; C. HAINLINE; D. PRINCE; A. SHUM-SIU; J. C. PETRUSKA. *Univ. of Louisville, Univ. of Louisville, Univ. of Louisville, Univ. of Louisville.*

10:00 AA11 **323.15** Grafts of multipotent neural progenitor cells in models of cervical contusive SCI: Engraftment, axonal outgrowth and functional effects. J. H. BROCK*; L. GRAHAM; S. IM; N. ARMSTRONG; M. TUSZYNSKI. *UCSD, VA, UC San Diego.*

11:00 AA12 **323.16** Human neural stem cell grafts into non-human primate spinal cord contusion or hemisection lesions. E. S. ROSENZWEIG*; J. H. BROCK; P. LU; J. L. WEBER; R. MOSEANKO; S. HAWBECKER; E. A. SALEGIO; Y. S. NOUT; L. A. HAVTON; A. R. FERGUSON; M. S. BEATTIE; J. C. BRESNAHAN; M. H. TUSZYNSKI. *Univ. of California San Diego Dept. of Neurosciences, VAMC, California Natl. Primate Res. Center, Univ. Calif. Davis, Col. of Vet. Med. and Biomed. Sciences, Colorado State Univ., David Geffen Sch. of Medicine, Univ. of California, Los Angeles, Univ. of California San Francisco.*

8:00 AA13 **323.17** Distal BDNF delivery to promote axonal regeneration through Schwann cell-seeded alginate hydrogels after spinal cord injury. S. LIU*; S. BEATRICE; R. MÜLLER; R. PUTTAGUNTA; N. WEIDNER; A. BLESCH. *Heidelberg Univ. Hosp., Tongji Hospital, Tongji Med. College, Huazhong Univ. of Sci. and Technology, Univ. of Regensburg, Stark Neurosciences Res. Inst.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 AA14 **323.18** Surface modification and cell seeding into capillary alginate hydrogels promote axonal regrowth in the acutely injured spinal cord. T. SCHACKEL*; M. GÜNTHER; S. LIU; B. SANDNER; M. MOTSCH; R. MÜLLER; R. PUTTAGUNTA; N. WEIDNER; A. BLESCH. *Spinal Cord Injury Center, Univ. Hosp. Hei, Spinal Cord Injury Center, Univ. Hosp. Heidelberg, Univ. of Regensburg, Univ. of Indianapolis, Sch. of Med.*

10:00 AA15 **323.19** Vasopressin and polyuria after acute spinal cord injury. L. R. MONTGOMERY*; C. HUBSCHER. *Univ. of Louisville.*

11:00 AA16 **323.20** Cardiovascular regulation post-epidural stimulation in cervical spinal cord injury. B. DITTERLINE*; S. WANG; S. ASLAN; S. HARKEMA. *Univ. of Louisville, Univ. of Louisville.*

8:00 AA17 **323.21** Activity-based training with spinal cord epidural stimulation promoted the recovery of lower limb motor function independent from spinal stimulation in a chronic motor complete paraplegic. E. REJC*; C. ANGELI; D. ATKINSON; S. HARKEMA. *Univ. of Louisville, Frazier Rehab Institute, Kentucky One Hlth.*

9:00 AA18 **323.22** Targeting improvements in bladder function with epidural stimulation after human spinal cord injury. C. HUBSCHER*; A. HERRITY; L. MONTGOMERY; A. WILLHITE; C. ANGELI; S. HARKEMA. *Univ. Louisville Sch. Med., Frazier Rehab Inst.*

10:00 BB1 **323.23** Lumbosacral spinal cord epidural stimulation enables step like patterns during BWST stepping in motor complete paraplegics. C. A. ANGELI*; S. HARKEMA. *Frazier Rehab Inst., Univ. of Louisville.*

11:00 BB2 **323.24** ▲ Acute pain after SCI exacerbates progressive hemorrhagic necrosis. M. K. BRUMLEY*; J. D. TURTLE; J. M. FORSBERG; J. W. GRAU. *Texas A&M Univ.*

8:00 BB3 **323.25** Spared fibers promote the development of secondary spinal injury in response to acute pain. J. A. REYNOLDS*; J. D. TURTLE; Y. HUANG; M. M. STRAIN; J. W. GRAU. *Texas A&M Univ.*

9:00 BB4 **323.26** Spinal block with lidocaine: An effective treatment for reducing secondary injury after SCI and noxious stimulation. J. TURTLE*; M. M. STRAIN; Y. HUANG; J. A. REYNOLDS; M. K. BRUMLEY; J. W. GRAU. *Texas A&M Univ.*

10:00 BB5 **323.27** CX3CR1-deficient microglia and macrophages enhance endogenous repair, axon sprouting and synaptogenesis after spinal cord injury in mice. C. M. FRERIA*; J. C. HALL; P. WEI; D. M. MCTIGUE; P. G. POPOVICH. *The Ohio State Univ.*

11:00 BB6 **323.28** Proliferating $NG2^+$ cells are required for glial and fibrotic scar formation and maintenance of tissue integrity after spinal cord injury in mice. Z. C. HESP*; R. SUZUKI; A. NISHIYAMA; D. M. MCTIGUE. *The Ohio State Univ., Univ. of Connecticut.*

8:00 BB7 **323.29** Gut dysbiosis impairs recovery after spinal cord injury. K. A. KIGERL*; L. WANG; J. C. E. HALL; X. MO; Z. YU; P. G. POPOVICH. *The Ohio State Univ., The Ohio State Univ., The Ohio State Univ.*

9:00 BB8 **323.30** Spinal cord injury-induced pain and motor deficits in rats. T. NDAM*; J. CUI; Z. QU; M. BEKEMEIER; D. K. MILLER; A. SIMONYI; W. R. FOLK; G. Y. SUN; Z. GU. *Univ. of Missouri Sch. of Med., Univ. of Missouri Sch. of Med., Univ. of Missouri, Univ. of Missouri Sch. of Med.*

POSTER

324. Peripheral Nerve Injury

Theme C: Neurodegenerative Disorders and Injury

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

8:00 BB9 **324.01** Anti allodynic effects of medicinal herbs in a rat model of oxaliplatin induced neuropathic pain through the suppression of spinal glial activation. J. LEE*; W. KIM; H. YOON; H. BAE; S. KIM. *Kyung Hee Univ., Grad. School, Kyung Hee Univ., Kyung Hee Univ.*

9:00 BB10 **324.02** Vagus nerve stimulation paired with rehabilitation improves functional recovery following peripheral nerve injury. E. MEYERS*; R. GRANJA; R. SOLORZANO; G. BENDALE; P. GANZER; N. ROBERTSON; K. ADCOCK; M. ROMERO-ORTEGA; M. KILGARD; R. RENNAKER; S. HAYS. *Univ. of Texas At Dallas.*

10:00 BB11 **324.03** The removal of proprioceptive IA afferent synapses from motoneurons after nerve injury occurs through a mechanism dependent on chemokine receptor CCR2. T. M. ROTTERMAN*; F. J. ALVAREZ. *Emory Univ.*

11:00 BB12 **324.04** Enhancing peripheral nerve regeneration through combined tissue engineering and gene therapy. F. BUSUTTIL*; M. P. HUGHES; K. S. BHANGRA; P. J. KINGHAM; J. B. PHILLIPS; A. A. RAHIM. *Sch. of Pharmacy, Univ. Col. London, Eastman Dent. Institute, Univ. Col. London, Umeå Univ.*

8:00 BB13 **324.05** Analgesic effects of bee venom and bee venom derived phospholipase A_2 in a mouse model of oxaliplatin-induced neuropathic pain. W. KIM*; D. LI; J. LEE; H. BAE; S. KIM. *Dept. of Physiology, Kyung Hee Univ., Kyung Hee Univ.*

9:00 BB14 **324.06** MCT1 in Schwann cells expedites regeneration of injured peripheral nerves and is necessary for maintenance of aging sensory axons. M. K. JHA*; K. RUSSELL; A. SINGH; Y. LEE; J. D. ROTHSTEIN; B. M. MORRISON. *Johns Hopkins Univ.*

10:00 BB15 **324.07** Excitability changes in aged regenerating axons. M. MOLDOVAN; S. ALVAREZ; D. CINTEZA; C. KRARUP*. *Univ. of Copenhagen, Rigshospitalet, "Carol Davila" Univ. of Med. and Pharm.*

11:00 BB16 **324.08** ● Multifunctional nerve conduit for peripheral nerve regeneration. H. AHN*; M. KIM; J. KIM; J. HYUN. *Dankook Univ., Dankook Univ., Dankook Univ. Col. of Med.*

8:00 BB17 **324.09** Benefits of combinatorial therapies for improving functional recovery in a rat model of facial nerve injury. E. M. RUNGE*; T. J. ASANTE; H. R. WELCH; C. L. WALKER; A. R. BEST; J. L. MULDOON; K. J. JONES. *Indiana Univ. Sch. of Med., Richard L Roudebush VAMC, Indiana Univ. Sch. of Med.*

9:00 BB18 **324.10** Distinct expression profiles of LncRNAs between ipsilateral and contralateral in adult rats following unilateral brachial plexus root avulsion. Y. GUANGYIN*; X. XU; Y. TANG; L. LIU; X. CHEN; Z. QIU; Q. YAN; Q. ZHU; Z. WU; L. ZHOU. *Zhongshan Sch. of Medicine, Sun Yat-Sen Universi, Zhongshan Sch. of Medicine, Sun Yat-Sen Universi, Dept. of Anesthesiology, The First Affiliated Hosp. of Sun Yat-Sen Univ., Zhongshan Sch. of Medicine, Sun Yat-sen Univ., Guangdong Province Key Lab. of Brain Function and Dis.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

325. Primary Olfactory Signal Transduction

Theme D: Sensory Systems

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

8:00 CC1 **325.01** Detection of pup odors by non-canonical adult vomeronasal neurons expressing an odorant receptor gene is influenced by sex and parenting status. T. S. NAKAHARA*; P. G. RIBEIRO; P. H. M. MAGALHAES; P. H. M. NETTO; X. IBARRA-SORIA; D. W. LOGAN; F. PAPES. *Univ. of Campinas (UNICAMP), Wellcome Trust Sanger Inst.*

9:00 CC2 **325.02** Native olfactory sensory neuron imaging with swept confocally-aligned planar excitation (SCAPE) microscopy. L. XU*; W. LI; V. VOLETI; E. M. C. HILLMAN; S. J. FIRESTEIN. *Columbia Univ., Columbia Univ.*

10:00 CC3 **325.03** A mathematical model for the response of olfactory sensory neurons to odor mixtures. A. MARASCO*; A. DE PARIS; M. MIGLIORE. *Univ. of Naples Federico II, Natl. Res. Council, Yale Univ.*

11:00 CC4 **325.04** Effects of glycosylation in activity dependent cAMP mediated olfactory signaling. S. RYU*; T. SHIM; S. Y. KIM; J. GOLEBIOWSKI; C. MOON. *DGIST, Univ. of Nice Sophia Antipolis.*

8:00 CC5 **325.05** ● What makes pineapple smell like a pineapple? Here's how medicinal chemistry would slice it. N. TAHIROVA*; E. POIVET; L. XU; S. FIRESTEIN. *Columbia Univ., New York Univ.*

9:00 CC6 **325.06** Motile cilia in sensory organs: More than just generating flow? N. JURISCH-YAKSI*; I. REITEN; S. FORE; R. PELGRIMS; M. HOFFMANN; E. YAKSI. *Kavli Inst. For Systems Neuroscience, NTNU.*

10:00 CC7 **325.07** Hormonal modulation of pheromone detection enhances male courtship sucess. H. LIN*; J. W. WANG. *UCSD.*

11:00 CC8 **325.08** Inhibition of olfactory behavior in *Drosophila melanogaster* larvae through antagonism of the odorant receptor co-receptor (Orco) subunit. D. KEPCHIA; S. MOLIVER; K. CHOHAN; C. PHILLIPS; C. W. LUETJE*. *Univ. of Miami Miller Sch. of Med.*

8:00 CC9 **325.09** The locally distinctive cGMP response in an olfactory sensory neuron of *Caenorhabditis elegans*. H. SHIDARA*; K. ASHIDA; K. HOTTA; K. OKA. *Lab. of Biophysics and Neuroinformatics, Keio Univ.*

9:00 CC10 **325.10** ▲ Identifying and characterizing odor receptors in *Caenorhabditis elegans*. S. MAHER; M. HARWOOD; L. RESCH; C. DALTON; S. NATHAN; A. COX-HARRIS; R. MORTON; B. MOSQUEDA; E. JEROME; B. MEADOWS; V. THAKKER; W. MANKINS; L. ROST; H. RAGHUNATHAN; Y. HSUEH; N. L'ETOILE; J. J. YOUNG*. *Mills Col., Academia Sinica, Univ. of California San Francisco.*

10:00 CC11 **325.11** Biological sex modulates chemosensory function to bring about sex differences in *C. elegans* behavioral prioritization. D. S. PORTMAN*; K. A. FAGAN; E. WEXLER. *Univ. of Rochester.*

11:00 DD1 **325.12** Characterization of odorant receptor expression and its glycosylated form in the olfactory and non-olfactory system. T. SHIM*; S. RYU; S. KIM; G. V. RONNETT; C. MOON. *DGIST.*

8:00 DD2 **325.13** ▲ Cyclophosphamide induced loss in olfactory cell populations. N. AWADALLAH*; K. B. JOSEPH; K. PROCTOR; R. DELAY; E. DELAY. *Univ. of Vermont, Univ. of Vermont.*

POSTER

326. Auditory Processing: Subcortical

Theme D: Sensory Systems

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

8:00 DD3 **326.01** Neural coding and discrimination of high-order sound statistics in the inferior colliculus. F. KHATAMI*; M. SADEGHI; H. L. READ; I. H. STEVENSON; M. A. ESCABI. *Univ. of Connecticut.*

9:00 DD4 **326.02** Chronic Ca^{2+} imaging reveals strong suppressive effects of anaesthesia on spontaneous and sound-evoked responses in dorsal inferior colliculus. A. B. WONG*; J. G. G. BORST. *Erasmus MC.*

10:00 DD5 **326.03** Cell type specific connectivity and function in auditory midbrain. C. CHEN*; M. CHENG; T. ITO; M. ONO; S. SONG. *Tsinghua Univ., Univ. of Fukui, Kanazawa Med. Univ.*

11:00 DD6 **326.04** Nonstationary correlation statistics allow robust sound category identification. M. SADEGHI; I. H. STEVENSON; M. A. ESCABI*. *Univ. of Connecticut.*

8:00 DD7 **326.05** Learning and performance variability in a rodent model of multi-channel cochlear implant use. J. KING*; I. SHEHU; M. A. SVIRSKY; R. C. FROEMKE. *New York Univ. Sch. of Med., Hunter Col.*

9:00 DD8 **326.06** The intrinsic physiology of inhibitory brainstem neurons changes during auditory development. B. J. CARROLL*; R. BERTRAM; R. L. HYSON, 32301. *Florida State Univ., The Florida State Univ., The Florida State Univ.*

10:00 DD9 **326.07** Resistance to spike depression of a rat central axon terminal during *in vivo* high-frequency firing. M. C. SIERKSMA*; J. G. G. BORST. *Erasmus MC, Erasmus MC.*

11:00 DD10 **326.08** The role of nitric oxide in modulating neuronal activity in the ventral cochlear nucleus. A. HOCKLEY*; J. I. BERGER; P. A. SMITH; M. N. WALLACE; A. R. PALMER. *MRC IHR, Univ. of Nottingham.*

8:00 DD11 **326.09** Nitrergic Signalling in the bullfrog IC. A. W. STAFFORD*. *Univ. of Tennessee.*

9:00 DD12 **326.10** Sensory and motor activity in the superior colliculus of the actively orienting bat. M. J. WOHLGEMUTH*, III; C. F. MOSS. *Johns Hopkins Univ., Johns Hopkins Univ.*

POSTER

327. Auditory Processing: Coding and Theory

Theme D: Sensory Systems

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

8:00 DD13 **327.01** Neuronal activity packets as basic units of neuronal code. A. LUCZAK*; B. L. MCNAUGHTON; K. D. HARRIS. *Univ. of Lethbridge, Univ. Col. London.*

9:00 DD14 **327.02** Multi-channel open-loop thalamo-reticular architectures support thalamocortical wave propagation. J. W. BROWN*; D. A. LLANO. *Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign.*

10:00 DD15 **327.03** Nominally non-responisve sensory and frontal cortical cells encode task-relevant variables. M. INSANALLY*; I. CARCEA; B. ALBANNA; R. FROEMKE. *New York Univ., Fordham Univ.*

Mon. AM

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 DD16 **327.04** Top-down and bottom-up control through distinct phase-amplitude couplings in macaque auditory cortex. C. D. MÁRTON*; M. FUKUSHIMA; S. SCHULTZ; B. B. AVERBECK. *Neural Coding Lab, Imperial Col. London, NIH/NIMH, RIKEN Brain Sci. Inst.*

8:00 DD17 **327.05** ● Coding sound loudness by pulse amplitude or pulse duration in cochlear implants: Does it matter for cortical neurons? V. ADENIS*; P. STAHL; D. GNASIA; B. GOURÉVITCH; J. EDELINE. *Neuro-Psi, Neurelec / Oticon Med.*

9:00 EE1 **327.06** Distinct timescales for neural discrimination of sound envelope shape in three auditory cortical fields. A. OSMAN*; C. LEE; M. ESCABI; H. READ. *Univ. of Connecticut, Univ. of Connecticut, Univ. of Connecticut, Univ. of Connecticut.*

10:00 EE2 **327.07** Interactions of simultaneous sound representations in the primate inferior colliculus. S. M. WILLETT*; V. C. CARUSO; S. T. TOKDAR; J. M. GROH. *Duke Univ.*

11:00 EE3 **327.08** Persistent activity in auditory cortex during passive listening. J. LEE; J. E. COOKE*; X. WANG; D. BENDOR. *UCL, Johns Hopkins Univ.*

8:00 EE4 **327.09** Predominance of dormant sensory neurons and learning-induced recruitment in auditory cortex. X. CHOU*; F. LIANG; H. LI; M. ZHOU; Q. FANG; H. W. TAO; L. I. ZHANG. *Zilkha Neurogenetic Inst., USC, USC, Southern Med. Univ., USC.*

9:00 EE5 **327.10** Neurofilament heavy chain expression and neuroplasticity in rat auditory cortex after unilateral and bilateral deafness. M. PARK*; H. LEE; S. OH. *SMG-SNU Boramae Med. Ctr., Seoul Natl. University, Col. of Med.*

10:00 EE6 **327.11** Neuronal adaptation to background sound level statistics in the inferior colliculus of macaques. F. ROCCHI; R. RAMACHANDRAN*. *Vanderbilt Univ. Med. Ctr.*

11:00 EE7 **327.12** A novel method for analyzing cortical steady state responses. P. KRAUSS*; A. SCHILLING; C. METZNER; K. TZIRIDIS; H. SCHULZE. *Univ. of Erlangen-Nurnberg.*

8:00 EE8 **327.13** The impact of hearing loss on the neural representation of speech in noise in the gerbil auditory midbrain. J. A. GARCIA-LAZARO*; D. MCALPINE; R. SCHAETTE. *Ear Inst., Macquarie Univ.*

9:00 EE9 **327.14** ▲ Simultaneous estimation of receptive fields and intrinsic dynamics of auditory neurons using affine-invarient MCMC. T. D. ROBBINS; C. MELIZA*. *Univ. of Virginia, Univ. of Virginia, Univ. of Virginia.*

10:00 EE10 **327.15** Combining multi-unit recording and flavoprotein fluorescence imaging reveals field- and layer-specific sound-evoked neural responses in the rodent auditory cortex. J. NISHIKAWA*; T. HAGA; Y. TACHIBANA; Y. OHTAKA; Y. YANAGAWA; H. OSANAI; T. TATENO. *Hokkaido Univ.*

POSTER

328. Motion Processing

Theme D: Sensory Systems

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

8:00 EE11 **328.01** ▲ How grit can overcome oculomotor insufficiencies and change GPA. T. GORJI*; D. LARRANAGA; A. S. HOCHMAN; J. R. MIER; S. A. DREW. *California State University, Northridge, California State University, Northridge, California State University, Northridge, California State University, Northridge, California State Univ. Northridge.*

9:00 EE12 **328.02** Apparent motion extrapolates size, shape and brightness. C. CHUNHARAS*; V. RAMACHANDRAN. *UCSD, Chulalongkorn University, KCMH.*

10:00 EE13 **328.03** Neural representation of multiple moving stimuli with competing features in cortical area MT is drastically altered by spatial arrangement of visual stimuli. S. WIESNER*; X. HUANG. *Univ. of Wisconsin Madison.*

11:00 EE14 **328.04** The Spatial temporal filter for motion integration for smooth pursuit eye movements. T. MUKHERJEE*; C. SIMONCINI; L. C. OSBORNE. *Univ. of Chicago.*

8:00 EE15 **328.05** Human motion-responsive regions in intracerebral recordings. P. CARDELLICCHIO*; P. AVANZINI; F. CARUANA; V. PELLICCIA; G. CASACELI; G. LO RUSSO; G. RIZZOLATTI; G. A. ORBAN. *Univ. of Parma, Niguarda Hosp.*

9:00 EE16 **328.06** A 9.4T human fMRI study reveals differential laminar responses for visual motion in eye- and world-centered reference frames in area V3A. F. MOLAEI-VANEGHI*; K. SCHEFFLER; A. BARTELS. *Max-Planck Inst. for Biol. Cybernetics, Vision and Cognition Lab, Ctr. for Integrative Neuroscience, Univ. of Tübingen, Dept. of Psychology, Univ. of Tübingen.*

10:00 EE17 **328.07** ▲ Resolving the apparent motion paradox by rTMS. J. CSATLOS*; S. SHIMOJO; R. J. BUCHANAN; Z. NADASDY. *Eötvös Lóránd Univ., Wigner Res. Ctr. for Physics, Hungarian Acad. of Sciences, Budapest, Hungary, CALTECH, Seton Brain and Spine Inst. and UT Austin, Univ. of Texas at Austin Dell Med. Sch., St. David's Neurosci. and Spine Inst.*

11:00 EE18 **328.08** Selective computation of path-dependent and -independent rotations in macaque parietal cortex. Z. CHENG*; B. LIU; Y. GU. *Inst. of Neuroscience, CAS.*

8:00 FF1 **328.09** Hierarchical effects of contrast and motion coherence in human visual cortex. D. BIRMAN*; J. GARDNER. *Stanford Univ.*

9:00 FF2 **328.10** Synergistic encoding of multiple visual features in MT neurons and implications for natural vision. M. V. MACELLAIO*; B. LIU; L. C. OSBORNE. *Univ. of Chicago.*

10:00 FF3 **328.11** Neural response to object motion-in-depth independent of vergence eye movements. A. WADA*; Y. SAKANO; H. MIZUSHINA; H. ANDO. *Natl. Inst. of Info. and Communications Technol., Osaka Univ., Tokushima Univ.*

11:00 FF4 **328.12** Synchronous human motion is processed by two distinct mechanisms in the brain. N. ALP*; A. NIKOLAEV; N. KOGO; J. WAGEMANS. *KU Leuven, KU Leuven.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 FF5 **328.13** GABA and visual context processing in autism spectrum disorders. M. SCHALLMO*; A. V. FLEVARIS; A. M. KALE; R. A. BERNIER; S. O. MURRAY. *Univ. of Washington.*

9:00 FF6 **328.14** Effects of stimulus size and contrast on motion perception: Comparing psychophysics and fMRI. A. V. FLEVARIS*; M. SCHALLMO; A. KALE; S. O. MURRAY. *Univ. of Washington Dept. of Psychology.*

10:00 FF7 **328.15** Response properties of global motion sensitive neurons in the zebra finch vestibulocerebellum. A. H. GAEDE*; D. L. ALTSHULER. *Univ. of British Columbia.*

11:00 FF8 **328.16** Voluntarily tracking moving clouds Effects of spatial frequency bandwidth on human smooth pursuit. K. MANSOUR POUR*; L. PERRINET; G. MASSON; A. MONTAGNINI. *CNRS, Inst. De Neurosciences De La Timone, Inst. de Neurosciences de la Timone, UMR7289, CNRS & Aix-Marseille Univ.*

8:00 FF9 **328.17** High spatial frequency components of white noise stimuli suppress initial disparity-vergence responses in humans. B. M. SHELIGA*; C. QUAIA; E. J. FITZGIBBON; B. G. CUMMING. *Natl. Eye Inst.*

9:00 FF10 **328.18** The neural mechanisms in MST underlying Pinna- Brelstaff rotational visual illusions. J. LUO*; X. LI; K. HE; J. YIN; I. ANDOLINA; Y. GU; W. WANG. *Inst. of Neurosci.*

10:00 FF11 **328.19** Optic flow parsing in macaque monkeys. N. E. PELTIER*; D. E. ANGELAKI; G. C. DEANGELIS. *Univ. of Rochester, Baylor Col. of Med., Univ. of Rochester.*

11:00 FF12 **328.20** Training alters the causal contribution of area MT to visual motion perception. L. D. LIU*; C. C. PACK. *McGill Univ., McGill Univ.*

8:00 FF13 **328.21** Localization and functional characterization of human area prostriata using fMRI. H. YAMAMOTO*; Z. LIN; K. OKAMOTO; S. OHNO; S. KANAZAWA; J. WU. *Kyoto Univ., Okayama Univ., Dept. of Radiology, Okayama Univ. Hospital, Okayama Univ., Okayama Univ.*

9:00 FF14 **328.22** Pupillary response to objects and perceived motion. S. BEUKEMA*; B. JENNINGS; J. OLSON; F. KINGDOM. *McGill Univ., McGill Univ., McGill Univ.*

10:00 FF15 **328.23** A biologically-based computational model to deliver unambiguous motion information and overcome the X-junction illusion. P. ZAREI ESKIKAND; T. KAMENEVA; M. R. IBBOTSON*; A. BURKITT; D. GRAYDEN. *Univ. of Melbourne, Natl. Vision Res. Inst.*

11:00 FF16 **328.24** Retinal stabilization reveals limits of efference copy influence on heading tuning in the medial superior temporal area (MST). T. MANNING*; K. BRITTEN. *Univ. of California, Davis.*

8:00 FF17 **328.25** Functional analysis of visual responses with an ultra high filed MRI in awake marmorets. T. KANEKO*; J. HATA; N. KISHI; H. OKANO. *RIKEN Brain Sci. Inst., Keio Univ. Sch. of Med.*

9:00 FF18 **328.26** Neurons in macaque area MT signal depth from motion parallax by combining extra-retinal signals regarding both eye and body rotation. V. KOGAN*; D. E. ANGELAKI; G. C. DEANGELIS. *Univ. of Rochester, Baylor Col. of Med.*

10:00 GG1 **328.27** Visual processing of motion-selective information in the larval zebrafish brain. C. RIEGLER*; D. GUGGIANA-NILO; F. ENGERT. *Harvard Univ., Univ. of Vienna.*

11:00 GG2 **328.28** Ferret visual area PSS: A model system for studying functional development of higher order motion cortex. A. A. LEMPEL*; A. DANIELS; J. M. LAW; K. J. NIELSEN. *Johns Hopkins Univ., Zanvyl Krieger Mind/Brain Inst., Johns Hopkins Univ.*

8:00 GG3 **328.29** Binocular contrast summation for visual motion processing in humans. C. QUAIA*; B. M. SHELIGA; L. M. OPTICAN; B. G. CUMMING. *Natl. Eye Inst.*

9:00 GG4 **328.30** Human white-matter pathway communicating parietal and posterior-insular cortex. H. TAKEMURA*; M. UESAKI; H. ASHIDA. *Natl. Inst. of Information and Communicatio, Japan Society for the Promotion of Sci., Osaka Univ., Kyoto Univ., Ritsumeikan Univ.*

POSTER

329. Visual Motion

Theme D: Sensory Systems

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

8:00 GG5 **329.01** Integration of visual and extra-retinal self-motion during voluntary head movements in the human brain. A. SCHINDLER*; A. BARTELS. *Vision and Cognition Lab., Univ. of Tübingen, Max Planck Inst. for Biol. Cybernetics.*

9:00 GG6 **329.02** Dopamine preserves visual motion perception despite noise interference of human V5/MT. B. M. SEEMUNGAL*; N. YOUSIF; R. Z. FU; B. ABOU-EL-ELA-BOURQUIN; V. BHRUGUBANDA; S. R. SCHULTZ. *Imperial Col. London, Imperial Col. London, Imperial Col. London.*

10:00 GG7 **329.03** Frequency of visual γ oscillations in adults with ASD: A pilot study. E. OREKHOVA*; J. SCHNEIDERMAN; S. LUNDSTRÖM; B. RIAZ; S. RAJAEI; N. HADJIKHANI; O. SYSOEVA; T. STROGANOVA; C. GILLBERG. *Univ. of Gothenburg, Moscow State Univ. of Psychology and Educ., MedTech West, Sahlgrenska Acad. and Univ. of Gothenburg, Univ. of Gothenburg, Harvard Med. School, MGH/MIT/HST.*

11:00 GG8 **329.04** Selective cortical responses to relative object/background motion. M. I. SERENO*; C. OZOLINS; M. SOOD; C. GALLETTI; P. FATTORI. *Univ. of California San Diego Dept. of Cognitive Sci., Birkbeck Univ. of London, Univ. di Bologna, Univ. di Bologna.*

8:00 GG9 **329.05** (Mis-)perception of motion in depth originates from underestimation of binocular extraretinal signals. T. MURDISON*; G. LECLERCQ; P. LEFÈVRE; G. BLOHM. *Queen's Univ., Canadian Action and Perception Network (CAPNet), Assn. for Canadian Neuroinformatics and Computat. Neurosci. (CNCN), Univ. catholique de Louvain, Univ. catholique de Louvain.*

9:00 GG10 **329.06** Representation of egomotion in non-human primate. B. R. COTTEREAU*; S. RIMA; Y. TROTTER; A. T. SMITH; J. DURAND. *Ctr. de recherche Cerveau & Cognition, Royal Holloway.*

10:00 GG11 **329.07** Fewer neurons in MT are direction selective to random dot stimuli after chronic V1 lesions in adult marmoset monkeys. M. A. HAGAN*; T. CHAPLIN; K. R. HUXLIN; M. G. P. ROSA; L. L. LUI. *Monash Univ., Univ. of Rochester.*

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11:00 GG12 **329.08** The effect of a transient congenital visual deprivation on the neural systems for visual and sound motion processing. D. BOTTARI*; R. KEKUNNAYA; M. HENSE; S. SOURAV; R. BALACHANDAR; N. F. TROJE; B. RÖDER. *Univ. of Hamburg, Biol. Psychology and Neuropsychology, Univ. of Hamburg, LV Prasad Eye Inst., Queen's Univ.*

8:00 GG13 **329.09** Gain adaptation with and without rate adaptation in cortical area MT. B. LIU*; M. MACELLAIO; L. OSBORNE. *Univ. of Chicago.*

9:00 GG14 **329.10** Efficient coding of optic flow can account for MSTd visual response properties. M. BEYELER*; N. DUTT; J. L. KRICHMAR. *Univ. of California Irvine Dept. of Computer Sci., Univ. of California, Irvine, Univ. of California, Irvine.*

10:00 HH1 **329.11** Task- and time-dependence of population codes for motion in marmoset MT. E. ZAVITZ*; H. YU; M. G. P. ROSA; N. S. C. PRICE. *Monash Univ.*

11:00 HH2 **329.12** Dynamics of population codes of stimulus features in primate area MT. E. GODDARD*; S. G. SOLOMON; T. A. CARLSON. *Macquarie Univ., ARC Ctr. of Excellence in Cognition and its Disorders (CCD), Univ. of Sydney, Univ. Col. London.*

8:00 HH3 **329.13** A neural model of how direction and disparity signals interact in MT and MSTd to extract object motion during self-motion. O. W. LAYTON*; B. R. FAJEN. *Rensselaer Polytechnic Inst., Rensselaer Polytechnic Inst.*

9:00 HH4 **329.14** Causal evidence of directional signals in macaque middle temporal area pooled for heading computation based on optic flow. Y. GU*; X. YU. *Inst. of Neurosci., Inst. of Neurosci.*

10:00 HH5 **329.15** Rats can process high level motion: A behavioral study using a discrimination task. R. BELLACOSA MAROTTI*; S. E. ROSSI; D. F. ZOCCOLAN. *SISSA - Intl. Sch. For Advanced Studied.*

11:00 HH6 **329.16** MT neurons have different tuning properties at contrast threshold and above. A. PAWAR*; S. GEPSHTEIN; T. D. ALBRIGHT. *Salk Inst. VCL-A.*

8:00 HH7 **329.17** The appearance and disappearance of visual forms defined by differential motion evokes distinctive EEG responses in school-age children. R. O. GILMORE*; D. A. FOUAD, 16802; M. G. DEXHEIMER, 16802; A. R. SEISLER. *Penn State Univ.*

9:00 HH8 **329.18** Visual projection neurons link feature detection to distinct behavioral programs in *Drosophila*. M. WU*; A. NERN; W. WILLIAMSON; M. MORIMOTO; M. REISER; G. CARD; G. RUBIN. *HHMI/Janelia Res. Campus, HHMI/Janelia Res. Campus.*

10:00 HH9 **329.19** Dynamic motion-tuning of macaque MST neurons before impending saccades. J. DUIJNHOUWER*; B. KREKELBERG. *Rutgers University-Newark.*

11:00 HH10 **329.20** Freeze or flight: Vision guides choice of defence strategies in mice. G. DE FRANCESCHI; T. VIVATTANASARN; A. B. SALEEM; S. G. SOLOMON*. *Univ. Col. London.*

8:00 HH11 **329.21** Sharper, stronger, faster upper visual field representation in primate superior colliculus: Implications for afferent and efferent collicular topography. Z. M. HAFED*; C. CHEN. *Werner Reichardt Ctr. For Integrative Neurosci.*

9:00 HH12 **329.22** Visual receptive fields and cortical oscillations during saccadic suppression in area V4. T. P. ZANOS*; P. J. MINEAULT; D. GUITTON; C. C. PACK. *Feinstein Inst. For Med. Res., Montreal Neurolog. Inst.*

POSTER

330. Visual Cognition: Decision Making

Theme D: Sensory Systems

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

8:00 HH13 **330.01** Monitoring cortical state to explain variability in visual detection behavior and evoked responses in primary visual cortex. G. T. NESKE*; D. A. MCCORMICK. *Yale Univ.*

9:00 HH14 **330.02** Voltage imaging in mouse primary visual cortex reveals late correlates of perceptual decisions. D. SHIMAOKA*; N. A. STEINMETZ; K. D. HARRIS; M. CARANDINI. *Univ. Col. London.*

10:00 HH15 **330.03** The effects of uncertainty on change detection in the marmoset. M. AVERY*; J. REYNOLDS. *Salk Inst.*

11:00 HH16 **330.04** ● Dissociation of confidence from performance in the monkey. S. CHO*; P. GRIMALDI; H. LAU; M. A. BASSO. *UCLA.*

8:00 HH17 **330.05** Effects of optogenetic inactivation in macaque areas MT and MST on choice and confidence during a direction discrimination task. C. R. FETSCH*; Y. EL-SHAMAYLEH; N. N. ODEAN; G. D. HORWITZ; M. N. SHADLEN. *HHMI & Columbia Univ., Univ. of Washington.*

9:00 II1 **330.06** Monkeys use different strategies to achieve near-optimal performance on a visual motion discrimination task with unequal rewards. Y. FAN*; J. I. GOLD; L. DING. *Univ. of Pennsylvania, Univ. of Pennsylvania.*

10:00 II2 **330.07** Inactivation of the lateral prefrontal cortex increases neuronal activity in the ipsilateral area MT during memory-guided comparisons of visual motion. C. CHU; P. M. SPINELLI; T. PASTERNAK*. *Univ. of Rochester.*

11:00 II3 **330.08** Noise correlations of macaque MT neurons for bistable stimuli are task-dependent. I. KANG; B. G. CUMMING*. *Natl. Eye Institute, NIH, Natl. Eye Institute, NIH.*

8:00 II4 **330.09** Perception of object motion during self-motion: Neural computations for flexible reference frame transformations in macaque areas VIP and MSTl. R. SASAKI*; D. E. ANGELAKI; G. C. DEANGELIS. *Univ. of Rochester, Dept. of Neurosci., Baylor Col. of Med., Dept. of Brain and Cognitive Sciences, Univ. of Rochester.*

9:00 II5 **330.10** Choice-driven and stimulus-related activity is confounded in parietal neurons: Implications for choice probabilities. A. ZAIDEL*; G. C. DEANGELIS; D. E. ANGELAKI. *Bar Ilan Univ., Baylor Col. of Med., Univ. of Rochester.*

10:00 II6 **330.11** Modality-dependent evidence accumulation in multisensory decision-making. H. HOU*; Y. ZHAO; Q. K. ZHENG; Y. GU. *Inst. of Neuroscience, CAS.*

11:00 II7 **330.12** Topographical organization, local cortical connectivity, and feature encoding in frontoparietal cortices. N. Y. MASSE*; A. SARMA; J. M. HODNEFIELD; S. SWAMINATHAN; D. J. FREEDMAN. *Univ. of Chicago.*

8:00 II8 **330.13** Contributions of parietal and prefrontal cortices to categorical match vs. non-match decisions. Y. ZHOU*; S. SWAMINATHAN; D. FREEDMAN. *The Univ. of Chicago.*

9:00 II9 **330.14** Interaction between spatial and feature attention in posterior parietal cortex. G. IBOS*; D. J. FREEDMAN. *The Univ. of Chicago.*

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10:00 II10 **330.15** Looking where we want to look: Relating neuronal and behavioral correlates of image familiarity. W. J. JOHNSTON*; K. MOHAN; D. J. FREEDMAN. *Univ. of Chicago.*

11:00 II11 **330.16** Task-specific vs. generalized category encoding in parietal cortex during task switching. K. MOHAN*; O. ZHU; S. K. SWAMINATHAN; D. J. FREEDMAN. *The Univ. of Chicago.*

8:00 II12 **330.17** NMDAR antagonist ketamine affects sensitivity to irrelevant information and onset of build-up activity in the parietal cortex. Y. SUDA*; T. UKA. *Tamagawa Univ., Grad. Sch. of Medicine, Juntendo Univ.*

9:00 II13 **330.18** Choice certainty reveals equivalence of POMDP and drift-diffusion model. K. KHALVATI; R. KIANI; R. P. RAO*. *Univ. of Washington, New York Univ.*

10:00 II14 **330.19** Face discrimination under uncertainty depends on linear integration of visual features over space and time. G. OKAZAWA*; L. SHA; R. KIANI. *New York Univ.*

11:00 II15 **330.20** Evidence for a predictive coding account of bistable perception. K. SCHMACK*; V. WEILNHAMMER; H. STUKE; G. HESSELMANN; P. STERZER. *Charité Universitätsmedizin Berlin.*

8:00 II16 **330.21** Cortical dynamics of 'surprise' and 'entropy' during stochastic perceptual transition. J. LEE*; S. LEE. *Seoul Natl. Univ.*

9:00 II17 **330.22** Sparse neural coding at the limits of visual performance. B. SRIRAM*; L. LI; A. CRUZ-MARTÍN; A. GHOSH. *UCSD Div. of Biol., Boston Univ., F. Hoffmann-La Roche.*

10:00 JJ1 **330.23** Impaired use of priors in patients with Parkinson's disease is independent of dopaminergic medications. A. PERUGINI*; M. A. BASSO. *UCLA, Fuster Lab. of Cognitive Neuroscience, Departments of Psychiatry and Biobehavioral Sci. and Neurobiology, The Semel Inst. for Neurosci. and Human Behavior, The David Geffen Sch. of Medicine, UCLA.*

POSTER

331. Temporal Factors of Crossmodal Integration

Theme D: Sensory Systems

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

8:00 JJ2 **331.01** Multisensory convergence in brainstem structures: Transfer of taste and odor information between the NTS and the PbN in awake, freely licking rats. O. D. ESCANILLA*; P. M. DI LORENZO. *Binghamton Univ.*

9:00 JJ3 **331.02** Temporal ensemble coding in subsecond sensory events: An MEG study. L. CHEN*; H. XU. *Dept. of Psychology, Peking Univ., Key Lab. of Machine Perception (Ministry of Education), Peking Univ., Acad. of Psychology and Behavior, Tianjin Normal Univ.*

10:00 JJ4 **331.03** Sensorimotor delays and the vestibular control of standing balance. B. G. RASMAN*; R. M. PETERS; R. CHUA; J. T. INGLIS; J. BLOUIN. *Univ. of British Columbia, Djavad Mowafaghian Ctr. for Brain Health, Univ. of British Columbia, Intl. Collaboration on Repair Discoveries, Univ. of British Columbia, Inst. for Computing, Information and Cognitive Systems, Univ. of British Columbia.*

11:00 JJ5 **331.04** Characteristic of visual feedback delay detection in apraxia following stroke. S. MORIOKA*; S. NOBUSAKO; R. ISHIBASHI; M. OSUMI; T. ZAMA; S. SHIMADA. *Kio Univ., Murata Hosp., Meiji Univ.*

8:00 JJ6 **331.05** ▲ Attractive and repulsive multisensory interactions in time perception. L. LAI*; J. M. YAU. *Rice Univ., Baylor Col. of Med.*

9:00 JJ7 **331.06** Using a novel prepulse inhibition paradigm and electrophysiology to assess audiovisual temporal integration. K. SCOTT; A. SCHORMANS; S. SCHMID; B. L. ALLMAN*. *Univ. of Western Ontario.*

10:00 JJ8 **331.07** Investigating audiovisual temporal processing in rats using electrophysiology and novel operant conditioning-based behavioral tasks. A. L. SCHORMANS*; K. SCOTT; D. STOLZBERG; B. L. ALLMAN. *Western Univ., Western Univ.*

11:00 JJ9 **331.08** Perceived timing of a postural perturbation with and without visual feedback. R. E. MCILROY*; M. BARNETT-COWAN. *Univ. of Waterloo.*

8:00 JJ10 **331.09** Using visual-haptic synchrony to facilitate and manipulate cross-modal integration. J. HEGDE*. *Augusta Univ., Augusta Univ.*

9:00 JJ11 **331.10** The magnitude of the size-weight illusion depends on when size information is provided. I. A. KULING*; M. A. PLAISIER; E. BRENNER; J. B. J. SMEETS. *VU Univ. Amsterdam.*

10:00 JJ12 **331.11** Audiovisual simultaneity and temporal order in the young and elderly: An ERP study. A. BASHARAT*; G. BEDARD; A. WISE; M. ADAMS; W. R. STAINES; M. BARNETT-COWAN. *Univ. of Waterloo.*

11:00 JJ13 **331.12** A common parieto-frontal network for impact prediction to the face and peripersonal space encoding: An non-human primate fMRI study. J. CLÉRY*; O. GUIPPONI; S. ODOUARD; C. WARDAK; S. BEN HAMED. *Ctr. De Neurosci. Cognitive.*

8:00 JJ14 **331.13** ● Respiration modulates neuronal activity in visual cortex. S. S. MCAFEE*; Y. LIU; D. H. HECK. *Univ. of Tennessee Hlth. Sci. Ctr.*

9:00 JJ15 **331.14** β oscillations reflect supramodal information during perceptual judgment. S. HAEGENS*; J. VERGARA; L. LEMUS; R. ROMO. *Donders Inst. For Brain, Cognition & Behaviour, Columbia Univ. Med. Ctr., Univ. Nacional Autónoma de México, El Colegio Nacional.*

10:00 JJ16 **331.15** Perceived timing of active head movement with and without visual feedback. W. CHUNG*; M. BARNETT-COWAN. *Univ. of Waterloo, Univ. of Waterloo.*

11:00 JJ17 **331.16** Inference of multimodal duration information from unimodal subjective durations. K. YUASA*; Y. YOTSUMOTO. *NICT, JSPS, The Univ. of Tokyo.*

8:00 KK1 **331.17** Multisensory interactions in frequency sweep perception. L. E. CROMMETT*; D. MADALA; J. M. YAU. *Baylor Col. of Med., Rice Univ.*

9:00 KK2 **331.18** ▲ Genetic determinants of multisensory integration. A. WISE*; M. BARNETT-COWAN; R. DUNCAN. *Univ. of Waterloo, Univ. of Waterloo.*

10:00 KK3 **331.19** Utilizing multisensory integration to improve auditory alarm design in the intensive care unit. J. SCHLESINGER*; M. WALLACE. *Vanderbilt Univ. Med. Ctr., Vanderbilt Univ.*

11:00 KK4 **331.20** Neural correlates of rapid audiovisual temporal recalibration. J. NOEL*; D. M. SIMON; M. M. WALLACE. *Vanderbilt Univ.*

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8:00 KK5 **331.21** Weighting perception of ambiguous motion stimuli: The curious case of audition trumping vision. A. THELEN*; M. CHADHA; A. R. NIDIFFER; R. RAMACHANDRAN; M. T. WALLACE. *Vanderbilt Brain Inst., Vanderbilt Univ.*

9:00 KK6 **331.22** Integration of ambiguous auditory-visual motion stimuli to form perceptual judgements. M. CHADHA*; A. THELEN; A. R. NIDIFFER; R. RAMACHANDRAN; M. T. WALLACE. *Vanderbilt Univ. Med. Ctr., Vanderbilt Univ. Med. Ctr.*

10:00 KK7 **331.23** Cortical multisensory circuits: Implications for autism spectrum disorder. G. E. DICARLO*; M. T. WALLACE. *Vanderbilt Univ.*

11:00 KK8 **331.24** Magnetic fields modulate horizontal movements of the fruit fly, *Drosophila melanogaster*. K. CHAE*; S. LEE; I. OH. *Kyungpook Natl. Univ.*

8:00 KK9 **331.25** ● Audiovisual integration in cochlear implant users. I. M. BUTERA*; R. A. STEVENSON; R. H. GIFFORD; M. T. WALLACE. *Vanderbilt Univ., Univ. of Western Ontario, Vanderbilt Univ.*

9:00 KK10 **331.26** Neurophysiological substrates and developmental sequelae of sensory seeking in infants at high risk for autism spectrum disorder. T. G. WOYNAROSKI*; C. DAMIANO; D. SIMON; L. IBANEZ; M. MURIAS; M. WALLACE; W. L. STONE; C. CASCIO. *Vanderbilt Univ. Med. Ctr., Duke Univ., Vanderbilt Univ., Univ. of Washington, Duke Univ., Vanderbilt Univ. Med. Ctr.*

10:00 KK11 **331.27** Neural basis of the expanded temporal binding window in autism spectrum disorder: An MEG study. J. CHAN*; M. NAUMER; A. LANGER; C. FREITAG; J. KAISER. *Univ. Col. Cork, Goethe-University, Goethe-University.*

11:00 KK12 **331.28** Neuromodulation of primary somatosensory cortex alters auditory perception. S. CONVENTO*; M. RAHMAN; J. M. YAU. *Baylor Col. of Med.*

POSTER

332. Reaching: Human Motor-Learning and Adaptation

Theme E: Motor Systems

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

8:00 KK13 **332.01** The influence of visual feedback on perturbed reaches. F. ZAHED*; M. BERNIKER. *Univ. of Illinois at Chicago, Univ. of Illinois at Chicago.*

9:00 KK14 **332.02** Separate motor memories are engaged when controlling different points on the same tool. J. HEALD*; J. N. INGRAM; J. R. FLANAGAN; D. M. WOLPERT. *The Univ. of Cambridge, Queen's Univ.*

10:00 KK15 **332.03** Proprioceptive and predicted consequences of action disentangled. B. M. 'T HART*; A. A. MOSTAFA; D. Y. P. HENRIQUES. *York Univ.*

11:00 KK16 **332.04** Time course of reach adaptation and proprioceptive recalibration: During volitional and exposure training with a rotated cursor. J. E. RUTTLE*; D. Y. P. HENRIQUES. *York Univ., York Univ.*

8:00 KK17 **332.05** Dual adaptation to opposing visuomotor rotations by skewing movement trajectories. M. N. AYALA*; D. Y. P. HENRIQUES. *York Univ., York Univ.*

9:00 KK18 **332.06** Multisensory effects of force field adaptation. B. M. SEXTON*; Y. LIU; A. K. LYNCH; D. J. OSTRY; H. J. BLOCK. *Indiana Universtiy, Indiana Univ., McGill Univ., Yale Univ.*

10:00 LL1 **332.07** Estimating properties of the fast and slow adaptive processes during sensorimotor learning. S. T. ALBERT*; R. SHADMEHR. *Johns Hopkins Sch. of Med.*

11:00 LL2 **332.08** Using a real-world chopping task to study interference in a motor learning task. A. H. NEPOTIUK*; L. E. BROWN. *Trent Univ.*

8:00 LL3 **332.09** Structure of solution space in a redundant motor task determines learning. Z. ZHANG*; M. HUBER; S. PARK; D. STERNAD. *Northeastern Univ.*

9:00 LL4 **332.10** Use-dependent learning reduces movement initiation latency. F. MAWASE*; A. HAITH; P. CELNIK. *Johns Hopkins Univ., Johns Hopkins Univ.*

10:00 LL5 **332.11** Augmenting motor generalization by inducing instance-reliant plasticity. S. BAO*; Y. LEI; J. WANG. *Univ. of Wisconsin Milwaukee, Univ. of Miami, Univ. of Wisconsin Milwaukee.*

11:00 LL6 **332.12** Retrieval of a motor memory triggered by a previously unseen error. N. J. POPP*; M. HARPER; A. M. HAITH. *Univ. of Western Ontario, Johns Hopkins Univ., Johns Hopkins Univ.*

8:00 LL7 **332.13** ▲ Selective retroactive interference between two different functional motor tasks: Effect of training order. T. K. LUMBRERAS*; C. S. WALTER; S. Y. SCHAEFER. *Utah State Univ., Univ. of Utah, Arizona State Univ.*

9:00 LL8 **332.14** ● Motor skill transfer of functional tasks: Is task similarity important? C. WALTER*; G. N. OLIVIER; L. G. RICHARDS; S. Y. SCHAEFER. *Univ. of Utah, Utah State Univ.*

10:00 MM1 **332.15** Motor adaptation in head-mounted virtual reality versus conventional training. J. M. ANGLIN*; T. SUGIYAMA; S. LIEW. *USC.*

11:00 MM2 **332.16** Motor adaptation during a planar reaching using robotic device. J. SHIN*; G. PARK; H. KIM. *Natl. Rehabil. Ctr., Natl. Rehabil. Ctr.*

8:00 MM3 **332.17** Dissociating the role of sensory prediction error from performance errors in strategy based motor adaptation. K. LEE*; Y. OH; J. IZAWA; N. SCHWEIGHOFER. *USC, Univ. of Tsukuba.*

9:00 MM4 **332.18** Learning mechanism of nondominant single-joint elbow extension movements. J. SONG*; K. LEE; S. Y. SCHAEFER; N. SCHWEIGHOFER. *USC, Utah State Univ., USC.*

10:00 MM5 **332.19** The effect of signal-dependent noise on error- and reward-based learning of an isometric force visuomotor transformation task. V. BARRADAS PATINO*; N. SCHWEIGHOFER. *USC, USC.*

11:00 MM6 **332.20** Neural Substrates of reinforcement learning in a continuous visuo-motor task. N. SCHWEIGHOFER*; S. KIM; T. HORIKAWA; S. SCHAAL; Y. KAMITANI; D. CALLAN. *USC, Northwestern U., ATR, Univ. of Southern California and Max Planck Inst., Kyoto Univ.*

8:00 MM7 **332.21** Eye-hand coordination during visuomotor learning: Effects of terminal visual feedback. M. K. RAND*; S. RENTSCH. *IfADo-Leibniz Res. Ctr.*

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* Indicates abstract's submitting author

9:00 MM8 **332.22** Sensorimotor adaptation to small visual errors: Error size-dependent effects on rate but not magnitude. H. E. KIM*; J. R. MOREHEAD; M. J. BOGGESS; W. SHWE; T. C. DIXON; D. PARVIN; R. B. IVRY. *Univ. of California, Berkeley, Harvard Univ., Univ. of California, Berkeley.*

10:00 MM9 **332.23** Sequence specific motor learning in an immersive virtual environment. J. BAER*; J. C. STEWART. *Univ. of South Carolina.*

11:00 MM10 **332.24** ▲ Effect of perturbation uncertainty on the retention of a new visuomotor relationship. C. CANAVERAL*; F. BERRIGAN; P. BERNIER. *Univ. De Sherbrooke.*

8:00 MM11 **332.25** Spatiotemporal properties of motor adaptation generalization. W. ZHOU*; J. FITZGERALD; K. COLUCCI-CHANG; K. MURTHY; W. M. JOINER. *George Mason Univ.*

9:00 MM12 **332.26** Short-term maintenance of motor memory induced by memory retrieval. A. SASAKI*; D. NOZAKI. *Univ. of Tokyo.*

10:00 NN1 **332.27** Rotation of preferred direction of motor primitive explains the dependence of visuomotor adaptation rate on shape of visuomotor map. T. HAYASHI*; K. TAKIYAMA; D. NOZAKI. *The Univ. of Tokyo, Grad Sch. Educ, Tokyo Univ. of Agr. and Technol.*

11:00 NN2 **332.28** Opposite effects of reward probability on learning and motivation in a 3D visuomotor adaptation task. K. VAN DER KOOIJ*; K. E. OVERVLIET; L. OOSTWOUD-WIJDENES; J. B. J. SMEETS. *Vrije Univ. Amsterdam, The Netherlands, Univ. Hamburg, Radboud Univ.*

8:00 NN3 **332.29** Planning different follow-throughs, rather than their execution, activates separate motor memories. H. R. SHEAHAN*; D. W. FRANKLIN; D. M. WOLPERT. *Univ. of Cambridge, Tech. Univ. of Munich.*

9:00 NN4 **332.30** The effects of cognitive aging on attentional context in visuomotor learning. E. K. FESTA*; T. WANG; W. C. HEINDEL; J. SONG. *Brown Univ.*

POSTER

333. Neuroprosthetics: eCoG

Theme E: Motor Systems

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

8:00 NN5 **333.01** Unravelling temporal dynamics of sensorimotor cortex activity during speech for BCI decoding. E. SALARI*; Z. V. FREUDENBURG; M. J. VANSTEENSEL; N. F. RAMSEY. *Univ. Med. Ctr. Utrecht.*

9:00 NN6 **333.02** Preclinical chronical implantation of the wimagine ECOG recording implant: A sheep study. C. CRETALLAZ*; M. FOERSTER; F. SAUTER-STARACE; T. COSTECALDE; D. RATEL; C. GAUDE; A. LAMBERT; G. CHARVET; C. MESTAIS; N. TORRES. *CEA LETI/ CLINATEC.*

10:00 NN7 **333.03** WIMAGINE: An ECoG recording implant validated for clinical trials. G. CHARVET*; C. MESTAIS; F. SAUTER-STARACE; M. FOERSTER; A. LAMBERT; N. TORRES-MARTINEZ; T. COSTECALDE; C. CRETALLAZ; D. RATEL; A. BENABID. *CEA/LETI/CLINATEC - MINATEC Campus.*

11:00 NN8 **333.04** Neural decoding of attentional selection in multi-speaker environments without access to separated sources. Z. CHEN*; J. O'SULLIVAN; S. SHETH; G. MCKANN; A. D. MEHTA; N. MESGARANI. *Columbia Univ. Counseling and Psychological S, The Neurolog. Inst., Hofstra North Shore LIJ Sch. of Med., Feinstein Inst. for Med. Res.*

8:00 NN9 **333.05** Brain Computer Interface human platform to control a 4-limb exoskeleton based on the ECoG-recording implant WIMAGINE®: Toward clinical trials. C. MESTAIS*; G. CHARVET; F. SAUTER; N. ABROUG; S. COKGUNGOR; T. COSTECALDE; M. FOERSTER; E. LABYT; B. MORINIERE; D. RATEL; M. SCHAEFFER; N. TORRES-MARTINEZ; A. VERNEY; I. VERGARA; A. YELISYEYEV; T. AKSENOVA; A. BENABID. *CEA-LETI-CLINATEC, CEA-LIST.*

9:00 NN10 **333.06** Adaptive identification of high-dimensional brain network dynamics to track non-stationarity and plasticity. Y. YANG*; E. F. CHANG; M. M. SHANECHI. *USC, Univ. of California, San Francisco.*

10:00 NN11 **333.07** Cortical activity during object grasp represents movement and force differently. R. D. FLINT*, III; M. C. TATE; M. W. SLUTZKY. *Northwestern Univ., Northwestern Univ., Northwestern Univ., Northwestern Univ., Rehabil. Inst. of Chicago.*

11:00 NN12 **333.08** Using deep learning techniques to decode electrocorticographic signals. T. PAILLA*; K. J. MILLER; V. GILJA. *Univ. of California San Diego, Stanford Univ. Sch. of Med.*

8:00 NN13 **333.09** Online coordinated user-computer based decoding of electrocorticographic signals for brain-machine interfaces. A. PATEL*; V. ELANGO; F. BAEK; K. J. MILLER; V. GILJA. *UCSD, Stanford Univ. Sch. of Med.*

9:00 NN14 **333.10** Decoding naturalistic kinematic states using electrocorticography in humans. P. G. GABRIEL*; W. K. DOYLE; O. DEVINSKY; D. FRIEDMAN; T. THESEN; V. GILJA. *UCSD, New York University, Langone Med. Ctr.*

10:00 OO1 **333.11** Adaptation of neural population activity in rat cortex connected to ECoG-based BMI system. M. YOKOTA*; Y. KUNIMURA; T. SUZUKI. *Osaka Univ., Natl. Inst. of Information and Communications Technol.*

11:00 OO2 **333.12** Behavior classification using multi-site LFP and ECOG signals. A. O. HEBB*; H. GOLSHAN; M. MAHOOR; J. NEDRUD; S. HANRAHAN. *Colorado Brain and Spine Inst., Univ. of Denver, Colorado Neurolog. Inst.*

8:00 OO3 **333.13** Electrocorticographic features of therapeutic deep brain stimulation in Tourette syndrome. J. B. SHUTE*; E. OPRI; R. MOLINA; J. ROSSI; K. FOOTE; M. OKUN; A. GUNDUZ. *UF, UF, UF, UF, UF.*

9:00 OO4 **333.14** Using low frequency components to predict speed and position of fingers during execution of a motor task. J. F. DELGADO SAA*. *Univ. Del Norte.*

POSTER

334. Neuroprosthetics: Network and Motor Processing

Theme E: Motor Systems

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

8:00 OO5 **334.01** Effects of speed tuning on trajectory decoding. Y. INOUE*; X. ZHOU; A. B. SCHWARTZ. *Osaka Univ., Systems Neurosci. Institute, Univ. of Pittsburgh, Biomed. Engineering, Carnegie Mellon Univ.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 OO6 **334.02** Adaptation of motor planning activity in monkey motor, premotor and parietal cortices during BCI control of 3d reaches. E. FERREA*; P. MOREL; M. BERGER; A. GAIL. *German Primate Ctr., Bernstein Ctr. for Computat. Neurosci., Fac. of Biol. and Psychology, Georg-August Univ.*

10:00 OO7 **334.03** Coordinate frames for encoding reach movements by single neurons in the human posterior parietal cortex. M. JAFARI*; T. AFLALO; N. POURATIAN; E. ROSARIO; D. OUELLETTE; K. PEJSA; R. ANDERSEN. *Caltech, Univ. of California Los Angeles, Casa Colina Centers for Rehabil.*

11:00 OO8 **334.04** Decoding objects and grips from the medial posterior parietal cortex of the macaque. M. FILIPPINI; R. BREVEGLIERI; E. CHINELLATO; A. BOSCO; P. FATTORI*. *Univ. of Bologna, Middlesex Univ. London.*

8:00 OO9 **334.05** Decoding for brain-machine interfaces with a new, unsupervised-learning algorithm. J. G. MAKIN*; J. E. O'DOHERTY; P. N. SABES. *Univ. of California, San Francisco.*

9:00 OO10 **334.06** Closed-loop pairing of motor cortex activity and phasic VTA activation reinforces specific spatiotemporal activity patterns. V. R. ATHALYE*; F. J. SANTOS; J. M. CARMENA; R. M. COSTA. *Champalimaud Ctr. For the Unknown, UC Berkeley.*

10:00 OO11 **334.07** Does the brain learns to control robotic limbs using sparse representations? C. KONNARIS; F. MEHRABAN POUR BEHBAHANI; A. A. FAISAL*. *Imperial Col. London, Imperial Col. London.*

11:00 OO12 **334.08** Computational capacity as a function of network size. C. KERR*; S. DURA-BERNAL; R. J. MENZIES; C. MCLAUCHLAN; S. J. VAN ALBADA; D. J. KEDZIORA; S. NEYMOTIN; W. W. LYTTON. *Univ. of Sydney, SUNY Downstate Med. Ctr., Univ. of Sydney, Julich Res. Ctr.*

8:00 OO13 **334.09** A new modeling framework for multiscale neural activity underlying behavior. H. ABBASPOURAZAD*; M. SHANECHI. *USC.*

9:00 OO14 **334.10** Adaptive multiscale brain machine interface decoders. H. HSIEH*; M. SHANECHI. *USC.*

10:00 PP1 **334.11** Increasing brain-machine interface performance by using discrete state selection with hidden Markov models. J. C. KAO*; P. NUYUJUKIAN; S. I. RYU; K. V. SHENOY. *Stanford Univ., Stanford Univ., Stanford Univ., Palo Alto Med. Fndn., Stanford Univ., Howard Hughes Med. Inst.*

11:00 PP2 **334.12** Volitional modulation of neuronal activities among multiple neuron groups via neuronal operant conditioning. K. SONG*; S. TAKAHASHI; Y. SAKURAI. *Doshisha Univ.*

8:00 PP3 **334.13** Self-recalibrating brain-computer interfaces based on population subspace alignment. A. D. DEGENHART*; W. E. BISHOP; E. R. OBY; E. C. TYLER-KABARA; A. P. BATISTA; S. M. CHASE; B. M. YU. *Univ. of Pittsburgh, Univ. of Pittsburgh, Ctr. for the Neural Basis of Cognition, Carnegie Mellon Univ., Univ. of Pittsburgh, Univ. of Pittsburgh, McGowan Inst. for Regenerative Med., Carnegie Mellon Univ., Carnegie Mellon Univ.*

9:00 PP4 **334.14** Distinct subspaces emerge in neuroprosthetic control during different tasks. P. KHANNA*; V. R. ATHALYE; S. GOWDA; R. M. COSTA; J. M. CARMENA. *UC Berkeley, Champalimaud Ctr. For the Unknown.*

10:00 PP5 **334.15** ● Effects of vagus nerve stimulation on cortical activity and excitability in the nonhuman primate. S. ZANOS*; S. MOORJANI; S. SABESAN; E. E. FETZ. *Univ. of Washington Sch. of Med., Rice Univ.*

11:00 PP6 **334.16** Quantifying the information rate of sensory feedback for neuroprosthesis. J. D. RECHENMANN; J. E. O'DOHERTY; P. N. SABES*. *EPFL, UCSF.*

8:00 PP7 **334.17** Decoding the bimanual movements in non-human primate using hybrid-regression method. H. CHOI*; J. LEE; S. LEE; I. KIM; K. AHN; K. LEE; D. JANG. *Hanyang Univ., Seoul Natl. Univ. Hosp.*

9:00 PP8 **334.18** Dorsal premotor area of the macaque monkey encodes internal grasp movement planning. S. GUANGHAO*; S. ZHANG; Q. ZHANG; J. ZHU; X. ZHENG. *Zhejiang Univ., Zhejiang Univ., New York Univ., The 2nd affiliated Hosp.*

10:00 PP9 **334.19** Predicting decision outcomes from single realizations of lateral prefrontal cortex neuronal activity. C. BOULAY*; F. PIEPER; M. LEAVITT; J. MARTINEZ-TRUJILLO; A. SACHS. *Ottawa Hosp. Res. Inst., Univ. of Ottawa, Inst. for Neuro and Pathophysiology, Univ. Med. Ctr. Hamburg, McGill Univ., Robarts Res. Inst., Western Univ.*

11:00 PP10 **334.20** Brain-spinal interface to alleviate gait deficits in rats: Direct-proportional neuromodulation. M. BONIZZATO*; G. PIDPRUZHNYKOVA; G. COURTINE; S. MICERA. *École Polytechnique Fédérale de Lausanne, Scuola Superiore Sant'Anna.*

8:00 PP11 **334.21** A novel rat movement control for rat-robot using electrical stimulation of basal ganglia. C. KOH*; H. PARK; J. SHIN; C. KONG; M. YUN; W. CHANG; H. JUNG; H. SHIN; J. CHANG. *Dept. of Neurosurg. Yonsei Univ., Col. of Medicine, Hallym Univ., Brain Korea 21 PLUS Project for Med. Sci. and Brain Res. Inst.*

9:00 PP12 **334.22** Decoding intended gait modifications from the hindlimb sensorimotor cortex. M. MEYERS*; K. A. MOXON. *Drexel Univ.*

POSTER

335. Posture and Gait: Afferent Control

Theme E: Motor Systems

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

8:00 PP13 **335.01** Training effect of position perceptibility in forward and backward leaning posture using a balance-board for the elderly. K. FUJIWARA*; N. KIYOTA; H. TOYAMA; A. HYODO; F. SATO. *Kanazawa Gakuin Univ., Japan Hlth. Care Col., Kanazawa Univ.*

9:00 PP14 **335.02** Viral expression of excitatory DREADDs in dorsal root ganglia induces reflex hyperexcitability. B. D. ROBERTSON*; M. A. LEMAY; G. M. SMITH; A. J. SPENCE. *Temple Univ., Temple Univ., Temple Univ.*

10:00 PP15 **335.03** Correlation of plantar-surface pressure and lower limb muscle activity during gait. S. D. PERRY*; B. MCGREGOR. *Wilfrid Laurier Univ.*

11:00 PP16 **335.04** Does ankle proprioception modulate muscle recruitment during locomotor-related leg movements in chick embryos? S. SUN*; N. S. BRADLEY. *USC.*

8:00 QQ1 **335.05** Balancing sensory inputs: Sensory reweighing of vision and ankle proprioception during a bipedal posture task. C. S. LAYNE*; R. KABBALIGERE; B. LEE. *Univ. Houston.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 QQ2 **335.06** The influence of physiological arousal on human lower limb cutaneous reflexes during treadmill walking. M. ZABACK*; B. C. HORSLEN; T. W. CLEWORTH; L. COLLINGS; C. LANGLET; T. INGLIS; M. G. CARPENTER. *Univ. of British Columbia, Univ. de Lorraine, Univ. of British Columbia, Univ. of British Columbia.*

8:00 DP06 **335.07** (Dynamic Poster) Walking through aperture with visual information obtained at a distance. T. HIGUCHI*; D. MUROI. *Tokyo Metropolitan Univ.*

11:00 QQ3 **335.08** Gait characteristics of children walking barefoot and with socks. ii. tandem walk. C. W. CHAU*; B. ALTHAUS; K. DE MARREE; E. PRIMUS; H. ZURITA. *Nazareth Col. of Rochester.*

8:00 QQ4 **335.09** Sensori-motor responses evoked by continuous, aperiodic Achilles tendon vibration during standing. R. L. MILDREN*; R. M. PETERS; G. J. MCKENDRY; M. G. CARPENTER; J. BLOUIN; T. INGLIS. *Univ. of British Columbia, Univ. of British Columbia, Univ. of British Columbia, Univ. of British Columbia.*

9:00 QQ5 **335.10** Visual influence on balance response during locomotion. T. D. FETTROW*; H. REIMANN; J. JEKA. *Temple Univ.*

10:00 QQ6 **335.11** Toe flexor reinnervation results in frontal plane motor deficits during slope walking in the cat. M. A. LYLE*; E. KAJTAZ; T. R. NICHOLS. *Georgia Inst. of Technol.*

11:00 QQ7 **335.12** The effect of light touch on standing sway when the touch reference is unreliable. J. E. MISIASZEK*; J. W. VANDER MEULEN; T. SHIVA. *Univ. of Alberta, Univ. of Alberta, Univ. of Alberta.*

8:00 QQ8 **335.13** ● Dorsal root ganglia stimulation elicits behavioral responses during translational postural perturbation. L. E. FISHER*; K. KING; W. CUSACK; A. NANIVADEKAR; R. GAUNT; D. WEBER. *Univ. of Pittsburgh, Univ. of Pittsburgh, St. Jude Med.*

9:00 QQ9 **335.14** Force sensing and muscle synergies in insects: Adapting proprioception to motor action in serially homologous legs. S. N. ZILL*; J. SCHMITZ; A. BŰSCHGES; S. CHAUDHRY. *J.C. Edwards Sch. Med., Univ. of Bielefeld, Univ. of Cologne, J.C. Edwards Sch. Med.*

10:00 QQ10 **335.15** Role of knee joint afferents in rat locomotion. C. ALESSANDRO*; F. BARROSO; M. TRESCH. *Northwestern Univ.*

11:00 QQ11 **335.16** Enhancement of ankle position and force controls contributes to balance improvement. S. YEN*; M. POLETTI; A. FARJADIAN. *Northeastern Univ., MIT.*

8:00 QQ12 **335.17** Role of muscle spindle feedback in the swing movement dynamics and foot placement during walking. W. P. MAYER*; W. G. TOURTELLOTTE; T. AKAY. *Dalhousie University, Brain Repair Ctr. - AMAP, Federal Univ. of Espirito Santo, Northwestern Univ.*

9:00 QQ13 **335.18** Modulation of input from paw cutaneous afferents and quadriceps-sartorius stretch afferents differentially affects lateral static and dynamic stability during cat split-belt locomotion. H. PARK*; R. MEHTA; S. P. DEWEERTH; B. I. PRILUTSKY. *Georgia Inst. of Technol., Georgia Inst. of Technol., Georgia Inst. of Technol.*

10:00 QQ14 **335.19** Effects of increased arm swing cued by a wearable device on gait parameters. E. D. THOMPSON*; H. REIMANN; T. FETTROW; P. AGADA; S. WEISS; M. LEE; J. JEKA. *Temple Univ., Shriners Hosp. for Children.*

11:00 QQ15 **335.20** Rorb interneurons act as essential spinal filters for the refinement of motor movements. S. C. KOCH*; M. GARCIA DEL BARRIO; A. DALET; G. GATTO; M. GOULDING. *The Salk Inst. For Biol. Studies.*

8:00 QQ16 **335.21** ● The sensory origin of the perception of heaviness at the shoulder. D. PHILLIPS*; A. KARDUNA. *Univ. of Oregon.*

9:00 QQ17 **335.22** A spinal reflex based neuromuscular model of human locomotion investigated against unexpected disturbances. S. SONG*; H. GEYER. *Carnegie Mellon Univ.*

10:00 QQ18 **335.23** A novel work loop approach for decoding sensory information in afferent nerves during cyclic muscle contractions. G. S. SAWICKI; P. NARDELLI*; T. C. COPE. *NC State Univ. and UNC Chapel Hill, Georgia Inst. of Technol.*

11:00 QQ19 **335.24** Human microneurography reveals muscle spindles encode small/slow ankle movements associated with standing. J. INGLIS*; R. M. PETERS; B. H. DALTON; J. BLOUIN. *Univ. British Columbia, Univ. of British Columbia, Univ. of Oregon.*

POSTER

336. Neural Control of Respiration II

Theme E: Motor Systems

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

8:00 QQ20 **336.01** Changes in protein expression and ventrolateral medulla network properties accompanying *in utero* mu-opioid agonist and/or nociceptin receptor antagonist exposure. N. M. MELLEN*; B. GOUREVITCH; J. M. CAI, 40202; N. TOPORIKOVA. *Univ. of Louisville, NeuroPsi, UMR CNRS 9197, Univ. of Louisville, Washington and Lee Univ.*

9:00 RR1 **336.02** Inflammation alters cell expression in the respiratory regions of neonatal brainstem of rats. C. G. WILSON*; R. JOHNSON; S. MURRAY. *Loma Linda Univ., Loma Linda Univ.*

10:00 RR2 **336.03** ▲ Effects of melatonin, 5-hydroxytryptamine & acetazolamide on hypoxia induced depression of field excitatory postsynaptic potentials in rat hippocampal CA1 neurons. N. KANG; J. HWANG; Q. NGUYEN; V. SUEN; B. SASTRY*. *Univ. British Columbia Fac Med.*

11:00 RR3 **336.04** Bicarbonate-dependent inhibition of chemosensitive neurons of the retrotrapezoid nucleus. C. M. GONÇALVES*; F. KUO; E. DANIEL; D. K. MULKEY. *Univ. of Connecticut.*

8:00 RR4 **336.05** Hypercapnic acidosis induces glutamate, D-serine, and ATP release from caudal brainstem astrocytes in culture. M. OLIVARES*; V. DONOSO; R. CONTRERAS; G. ZUÑIGA; J. P. HUIDOBRO-TORO; I. LLONA; R. VON BERNHARDI; J. EUGENÍN. *Univ. de Santiago de Chile, Pontificia Univ. Católica de Chile.*

9:00 RR5 **336.06** Suppression of astrocytic activation by arundic acid prevents severe hypoxia-induced seizure and death in mice. I. FUKUSHI*; K. TAKEDA; J. HORIUCHI; Y. OKADA. *Grad. Sch. of Sci. and Engineering, Toyo U, Murayama Med. Ctr., Fujita Hlth. Univ.*

10:00 RR6 **336.07** Effect of nicotinic antagonism in the commissural nucleus of the solitary tract on the respiratory responses to hypercapnia. W. I. FURUYA*; M. BASSI; J. V. MENANI; E. COLOMBARI; D. B. ZOCCAL; D. S. A. COLOMBARI. *Dept. Physiol. & Pathol., UNESP.*

Mon. AM

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 RR7 **336.08** Decrease in central chemosensitivity after perinatal fluoxetine exposure is associated with changes in serotonin receptors contributions. K. A. BRAVO*; J. EUGENÍN; I. LLONA. *Univ. De Santiago De Chile, Univ. de Santiago de Chile.*

8:00 RR8 **336.09** Respiratory chemoreception´s neuroplasticity in a rat model of Parkinson's disease. L. M. OLIVEIRA; M. TUPPY; T. S. MOREIRA; A. T. TAKAKURA*. *Dept of Pharmacology, Inst. of Biomed. Science, Univ. of Sao Paulo, Inst. of Biomed. Science, Univ. of Sao Paulo.*

9:00 RR9 **336.10** The raphe chemosensory amplifier: A novel amplifier network model for respiratory control. K. KEPLINGER; S. A. CAMPBELL; B. E. TAYLOR; M. B. HARRIS*. *Univ. of Waterloo, Univ. of Alaska Fairbanks, Univ. Alaska Fairbanks.*

10:00 RR10 **336.11** Characterization of acute intermittent hypoxia (AIH)-induced respiratory activity in spontaneously breathing 6-OHDA SN-lesioned Parkinson's disease rat model. I. C. SOLOMON*; W. F. COLLINS, III. *Stony Brook Univ., Stony Brook Univ.*

11:00 RR11 **336.12** Activation of cholinergic receptors the pedunculopontine tegmental nucleus suppresses respiratory activity in urethane-anesthetized and awake rats. C. R. SOBRINHO*; J. D. LIMA; A. C. T. TAKAKURA; D. K. MULKEY; T. S. MOREIRA. *Univ. of Sao Paulo, Inst. of Biomed. Sciences- USP, Inst. of Biomed. Sciences-USP, Univ. of Connecticut, Inst. of Biomed. Sciences-USP.*

8:00 RR12 **336.13** ATP-mediated specialized control of vascular tone in the retrotrapezoid nucleus. V. E. HAWKINS*; A. TRINH; A. C. TAKAKURA; I. C. WENKER; T. DUBREUIL; M. T. NELSON; T. S. MORRIERA; D. K. MULKEY. *Univ. of Connecticut, Unoversity of Sao Paulo, Univ. of Vermont, Univ. of Sao Paulo.*

9:00 RR13 **336.14** Adenosine in the retrotrapezoid nucleus inhibits breathing in rats. B. FALQUETTO*; L. OLIVEIRA; A. TAKAKURA; T. MOREIRA. *Univ. of Sao Paulo, Univ. of Sao Paulo.*

10:00 RR14 **336.15** Differential noradrenegic modulation of retrotrapezoid nucleus in neonatal rats. F. KUO*; B. FALQUETTO; D. CHEN; A. C. TAKAKURA; T. S. MOREIRA; D. K. MULKEY. *Univ. of Connecticult, Univ. of Connecticut, Univ. of Sao Paulo, Univ. of Sao Paulo.*

11:00 RR15 **336.16** Retrotrapezoid neurons control breathing during exercise and determine exercise capacity. R. T. HUCKSTEPP*; A. KORSAK; A. MACHHADA; S. SHEIKHBAHAEI; A. V. GOURINE. *UCL, NIH.*

8:00 RR16 **336.17** Influence of developmental nicotine exposure on serotonergic control of breathing-related motor output. A. A. HILL*; R. F. FREGOSI. *Dept. of Physiol., Univ. of Arizona, Univ. of Arizona.*

9:00 RR17 **336.18** Genetic mapping of developmental noradrenergic neuron subpopulations in respiratory homeostasis. J. SUN*; M. KEY; R. RAY. *Baylor Col. of Med., Baylor Col. of Med.*

10:00 RR18 **336.19** Cholinergic modulation of the parafacial respiratory group. S. PAGLIARDINI*; R. C. T. BOUTIN; Z. ALSAHAFI. *Univ. of Alberta.*

11:00 RR19 **336.20** Neuronal morphology changes in the respiratory centers of the developing rat. P. A. WILLIAMS*; C. G. WILSON. *Ctr. For Perinatal Biology, Loma Linda Universit, Loma Linda Univ.*

8:00 RR20 **336.21** Sciatic nerve stimulation activates presympathetic (C1) neurons and retrotrapezoid nucleus (RTN) chemoreceptors in anesthetized rats. R. KANBAR*; P. G. GUYENET. *Lebanese American Univ., Univ. of Virginia.*

9:00 RR21 **336.22** A practical biomarker for obstructive apnea in potential sudden death in epilepsy (SUDEP) cases. M. G. STEWART*; R. KOLLMAR; K. NAKASE; J. SILVERMAN; K. SUNDARAM; R. ORMAN; J. LAZAR. *State Univ. of New York Downstate Med. Ctr., State Univ. of New York Downstate Med. Ctr., State Univ. of New York Downstate Med. Ctr., State Univ. of New York Downstate Med. Ctr.*

10:00 RR22 **336.23** Anatomical arrangement of neurons and astrocytes in the phrenic nucleus of the rat. Y. OKADA*; S. YOKOTA; Y. SHINOZAKI; Y. YASUI. *Murayama Med. Ctr., Shimane Univ. Sch. of Med., Keio Univ. Sch. of Med.*

11:00 SS1 **336.24** Voluntary control of breathing engages multiple supratentorial brain areas and modulates sensory processing. J. L. HERRERO*; A. ASHESH. *Cushing Neurosci. Inst.*

POSTER

337. Neuroethology of Sensory and Motor Systems: Invertebrates

Theme F: Integrative Physiology and Behavior

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

8:00 SS2 **337.01** Neural correlates of responses to mechanical loading in *Aplysia* californica. J. P. GILL*; D. N. LYTTLE; M. J. CULLINS; P. J. THOMAS; H. J. CHIEL. *Case Western Reserve Univ., Case Western Reserve Univ., Case Western Reserve Univ.*

9:00 SS3 **337.02** Grasping by a muscular hydrostat: Function of the radular surface in *Aplysia* californica. C. E. KEHL*; D. M. NEUSTADTER; S. LU; H. J. CHIEL. *Case Western Reserve Univ., Calore Med. LTD, Case Western Reserve Univ.*

10:00 SS4 **337.03** *Aplysia* californica as a source of actuators, scaffolds, and controllers for the development of biohybrid robots and living machines. V. WEBSTER*; K. J. CHAPIN; O. AKKUS; H. J. CHIEL; R. D. QUINN. *Case Western Reserve Univ.*

11:00 SS5 **337.04** A gravity-sensing cell in Trichoplax adhaerens, an early branching metazoan. T. D. MAYOROVA*; C. L. SMITH; N. B. PIVOVAROVA; T. S. REESE. *NINDS, NINDS.*

8:00 SS6 **337.05** *C. elegans* ASE sensory neurons differentially code NaCl information providing greater environmental resolution for successful navigation. M. DESROCHERS*; J. LEE; M. HENDRICKS. *McGill Univ.*

9:00 SS7 **337.06** Dissecting the function of acetylcholine in the *Caenorhabditis elegans* egg-laying behavior circuit. R. KOPCHOCK*, III; K. M. COLLINS. *Univ. of Miami.*

10:00 SS8 **337.07** Behavioral characterization of magnetotaxis in the nematode *C. elegans*. C. BAINBRIDGE*; A. AHLERT; L. BARICKMAN; B. BRACHT; A. VIDAL-GADEA. *Illinois State Univ.*

11:00 SS9 **337.08** Investigations in to the neural deficits of Duchenne muscular dystrophy using *C. elegans*. A. M. RODRIGUEZ*; S. GOEL; A. SCHULER; L. BARICKMAN; M. CISNEROS; P. DEVRIES; B. RODEMOYER; A. VIDAL-GADEA. *Illinois State Univ., Illinois State Univ.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 SS10 **337.09** ▲ Understanding how sex modulates the female nervous system to drive distinct reproductive behavior states. L. M. NASSAR*; A. BODE; K. M. COLLINS. *Univ. of Miami.*

8:00 DP07 **337.1** (Dynamic Poster) Pan-neuronal recording in the leech nervous system using dual-sided voltage sensitive dye imaging. Y. TOMINA*; D. A. WAGENAAR. *Univ. of Cincinnati.*

10:00 SS11 **337.11** Visual responses of the S-cell system of the leech Hirudo verbana suggest complex integration mechanisms. D. A. WAGENAAR*; A. STOWASSER. *Univ. of Cincinnati.*

11:00 SS12 **337.12** S-cell responses to visual and mechanical water waves in the leech Hirudo verbana. A. MUTHUSAMY*; A. M. LEHMKUHL, II; D. A. WAGENAAR. *Univ. of Cincinnati, Univ. of Cincinnati.*

8:00 SS13 **337.13** ▲ Localization of allatotropin-like immunoreactivity in the central nervous system of Biomphalaria glabrata, an intermediate host for intestinal schistosomiasis. J. MALDONADO-ALERS; A. HERNÁNDEZ-VÁZQUEZ; S. ROLÓN-MARTÍNEZ; M. W. MILLER*. *Inst. Neurobio., Univ. of Puerto Rico Med. Sci. Campus.*

POSTER

338. Parental Behavior

Theme F: Integrative Physiology and Behavior

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

8:00 SS14 **338.01** Maternal aggression is impaired by prepartum serotonin-specific lesions of the midbrain dorsal raphe. E. M. VITALE*; M. A. HOLSCHBACH; J. S. LONSTEIN. *Michigan State Univ., Colorado State Univ.*

9:00 SS15 **338.02** Altered monoamines and associated metabolites across the postpartum period in the Wistar-Kyoto rat model of postpartum depression. S. B. WINOKUR*; Y. MOPARTHI; E. ELGUENAOUI; V. LEE; A. FARRAR; M. PEREIRA. *Univ. of Massachusetts, Amherst.*

10:00 SS16 **338.03** Altered genetic expression in the maternal circuitry of Wistar-Kyoto rat model of postpartum depression across the postpartum period. V. LEE*; S. B. WINOKUR; A. M. FARRAR; M. PEREIRA. *Univ. of Massachusetts Amherst.*

11:00 SS17 **338.04** Effects of oxytocin receptor knockdown in the dorsal raphe on maternal and anxiety like behaviors in postpartum rats. Z. GRIEB*; F. MANFREDSSON; J. LONSTEIN. *Michigan State Univ.*

8:00 SS18 **338.05** Intensity of exercise and postpartum exposure to fluoxetine differentially affect behavior and hippocampal neurogenesis in a rat model of postpartum stress. A. R. GOBINATH*; R. J. RICHARDSON; C. CHOW; J. L. WORKMAN; S. E. LIEBLICH; A. M. BARR; L. A. M. GALEA. *Univ. of British Columbia, Univ. of British Columbia, Univ. of British Columbia.*

9:00 SS19 **338.06** Gestational stress effects on dopamine and oxytocin within the postpartum reward circuitry: Implications for mood and mothering. B. LEUNER*; A. HAIM; C. ALBIN-BROOKS; D. JULIAN; B. SPRINGER; H. BROTHERS. *Ohio State Univ., Ohio State Univ., Ohio State Univ.*

10:00 SS20 **338.07** Maternal behavior in virgin forebrain oxytocin receptor knockout mice. S. K. WITCHEY*; H. K. CALDWELL. *Kent State Univ., Kent State Univ.*

11:00 SS21 **338.08** ▲ Arginine vasopressin increases maternal behavior in the biparental California mouse (Peromyscus californicus). N. D. NG; M. F. CONLEY; G. E. MAMMARELLA; J. K. BESTER-MEREDITH*. *Seattle Pacific Univ.*

8:00 SS22 **338.09** Activation of CRF receptor type 1 in the medial preoptic area severely impairs maternal behavior and increases anxiety-related behavior in lactating rats. O. J. BOSCH*; B. M. GAßNER; D. S. BAYERL; S. M. KLAMPFL. *Univ. of Regensburg, Univ. of British Columbia.*

9:00 SS23 **338.10** Investigating neural circuits governing parental behavior. A. E. AUTRY*; Z. WU; B. MARIN-RODRIGUEZ; N. RUBINSTEIN; D. BAMBAH-MUKKU; J. KOHL; C. DULAC. *Harvard Univ., Harvard Univ.*

10:00 SS24 **338.11** Effects of fatherhood on synaptic, intrinsic, and morphological characteristics of neurons in the medial preoptic area of male California mice. N. HORRELL*; P. HICKMOTT; D. LUU; W. SALTZMAN. *Univ. of California Riverside, Univ. of California Riverside, Univ. of California Riverside.*

11:00 SS25 **338.12** Influence of parental interaction and prolactin treatment diminishing kainic acid-induced neurodegeneration in the hippocampus of male mice. I. ANAGNOSTOU; T. MORALES*. *Inst. for Neurobio. UNAM, Intitute for Neurobio. UNAM.*

8:00 SS26 **338.13** Esr1 expressing neurons in the medial preoptic area mediate maternal behaviors. Y. FANG*; D. LIN. *NYU Langone Med. Ctr.*

9:00 TT1 **338.14** Melanin concentrating hormone modulates maternal behavior. A. ALACHKAR*; L. ALHASSEN; Z. WANG; O. CIVELLI. *Univ. of California Irvine, Univ. of California irvine.*

10:00 TT2 **338.15** Experience-dependent alterations in maternal behavior are associated with gene expression changes in maternal neural pathways. H. S. MAYER*; D. S. STOLZENBERG. *Univ. of California Davis, Univ. of California Davis.*

11:00 TT3 **338.16** ▲ Maternal behavior and neuronal activation differs in lactating rats depending on ratio of own pups present. K. A. UNROE; T. C. FRUCHTERMAN; M. L. GRIMES; A. O. RIPLEY; C. L. FRANSSEN; A. FRANSSEN*. *Longwood Univ., Longwood Univ.*

8:00 TT4 **338.17** Exposure to bisphenol-S during pregnancy and lactation alters maternal brain and behavior in CD-1 mice. M. C. CATANESE*; L. N. VANDENBERG. *Univ. of Massachusetts, Amherst, Univ. of Massachusetts, Amherst.*

9:00 TT5 **338.18** Perinatal exposure to a commercial formulation of glyphosate alters maternal behavior and neurobehavioral development in infant rats. E. L. RICCI*; M. O. RIBEIRO; M. M. BERNARDI; H. S. SPINOSA. *Presbyterian Mackenzie Univ., Presbyterian Mackenzie Univ., Paulista Univ., Univ. of São Paulo.*

10:00 TT6 **338.19** Electroencephalographic correlation in biological & adoptive mothers while listening to a baby crying. M. PÉREZ-HERNÁNDEZ*; R. M. HIDALGO-AGUIRRE; M. HERNÁNDEZ-GONZÁLEZ; C. AMEZCUA; M. A. GUEVARA. *Inst. De Neurociencias.*

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POSTER

339. HPG Axis II

Theme F: Integrative Physiology and Behavior

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

8:00 TT7 **339.01** Role of rostral periventricular area of the third ventricle (RP3V) GABAergic neurons in generating the preovulatory luteinizing hormone surge in female mouse. B. KALIL*; T. MCLENNAN; R. PIET; A. E. HERBISON. *Univ. of Otago.*

9:00 TT8 **339.02** Defining subpopulations of arcuate nucleus GABA neurons in male, female and prenatally androgenized female mice: A role for GABAergic NPY neurons in regulating fertility? C. J. MARSHALL*; E. DESROZIERS; R. E. CAMPBELL. *Univ. of Otago.*

10:00 TT9 **339.03** Arcuate kisspeptin neurons connect to hypothalamic histamine, GABA and oxytocin neurons. G. E. HOFFMAN*; K. J. MURPHY; A. WOLFE; H. NOVAIRA; M. KOBAN; S. RADOVICK. *Morgan State Univ., Johns Hopkins Univ., Rutgers Univ.*

11:00 TT10 **339.04** Effects of selective deletion of tyrosine hydroxylase from kisspeptin neurons on puberty and reproduction. S. B. Z. STEPHENS*; M. L. ROUSE; K. P. TOLSON; R. A. PARRA; N. CHAHAL; A. S. KAUFFMAN. *UCSD.*

8:00 TT11 **339.05** Stimulatory effect of neuromedin U on pulsatile LH secretion in ewes is dependent on melanocortin MC_4 receptor signaling. P. GRACHEV*; R. B. MCCOSH; M. N. BEDENBAUGH; M. VALENT; S. L. HARDY; J. M. CONNORS; S. M. HILEMAN; R. L. GOODMAN. *West Virginia University, Sch. of Med.*

9:00 TT12 **339.06** Seasonal gating of chemosensory processing in the male Syrian hamster. K. J. JENNINGS*; M. CHASLES; J. CHO; M. KELLER; L. J. KRIEGSFELD. *Univ. of California, Berkeley, UMR 0085 INRA.*

10:00 TT13 **339.07** Restraint-stress-induced effects or administration of corticosterone on novel object recognition in rats. N. L. GARCIA SALDIVAR*; M. R. GONZÁLEZ LÓPEZ; G. CASTILLO ROBERTO; G. A. BARRIOS DE LA CRUZ; S. E. CRUZ MORALES. *UNAM FES-Iztacala, UNAM FES-Iztacala.*

11:00 TT14 **339.08** Acute effects of blocking β adrenergic receptors in ovaries on ovulation and steroidogenesis in rats with polycystic ovary syndrome. B. VENEGAS MENESES*; L. Y. DE LEÓN GORDILLO; J. A. ESPINOZA MORENO; L. MORALES-LEDESMA. *Physiol. Laboratory, UIBR, FES Zaragoza, UNAM.*

8:00 UU1 **339.09** The effect of PACAP on fertility is relayed through a subset of hypothalamic leptin receptor expressing neurons in the female mouse. R. A. ROSS; S. LEÓN; C. A. MAGUIRE; J. C. MADARA; A. M. J. VERSTEGEN; U. KAISER; B. B. LOWELL; V. M. NAVARRO*. *Beth Israel Deaconess Med. Ctr., Massachusetts Gen. Hosp., Harvard Med. Sch., Brigham and Women's Hosp., Brigham and Women's Hosp. / Harvard Med. Sch.*

9:00 UU2 **339.10** Blockade of somatostatin receptor 2 stimulates episodic LH secretion, but not surge LH secretion, in ewes. R. MCCOSH*; M. N. BEDENBAUGH; J. A. LOPEZ; S. M. HILEMAN,; M. VALENT; P. GRACHEV; R. L. GOODMAN. *West Virginia Univ.*

10:00 UU3 **339.11** Neurokinin B, but not dynorphin, acts in the arcuate nucleus of prepubertal female sheep to control LH secretion. M. BEDENBAUGH*; C. A. RAINEY; R. B. MCCOSH; J. A. LOPEZ; R. L. GOODMAN; S. M. HILEMAN. *West Virginia Univ. HSC, Alderson Broaddus Univ., West Virginia Univ.*

11:00 UU4 **339.12** Rapid activation of classical progesterone receptor in kisspeptin neurons. M. A. MITTELMAN-SMITH*; A. K. SCOTT; A. M. WONG; P. E. MICEVYCH. *UCLA.*

8:00 UU5 **339.13** Sexually dimorphic Kisspeptin neurons in the RP3V regulate testosterone synthesis in male mice. E. SANZ*; A. QUINTANA; A. URPI; G. MCKNIGHT. *Univ. Autonoma de Barcelona, Univ. of Washington.*

9:00 UU6 **339.14** Chemically-induced periestropause is associated with changes in kisspeptin/gonadotrophin-releasing hormone/luteinizing hormone cascade of female rats. C. M. LEITE*; N. P. OLIVEIRA; E. T. UCHOA; J. ANTUNES-RODRIGUES; L. L. K. ELIAS; J. A. ANSELMO-FRANCI. *Univ. of Sao Paulo, Univ. of Sao Paulo, Londrina State Univ., Univ. of Sao Paulo.*

10:00 UU7 **339.15** Kiss1 expression is modulated by estrogen and endocrine disruptors in immortalized female AVPV- and arcuate-specific neuronal kisspeptin cell lines. D. C. JACOBS; R. E. VEITCH; P. E. CHAPPELL*. *Oregon State Univ., Oregon State Univ., Oregon State Univ.*

11:00 UU8 **339.16** ▲ Effects of unilateral orchidectomy to immature rats on dendritic arborization of pyramidal neurons in the hippocampus. N. B. SANTOS TENORIO; N. P. CORDERO FLORES; F. M. GONZÁLEZ CARRERA; G. LEÓN LÓPEZ; G. FLORES ALONSO; R. REYES LUNA; U. QUIRÓZ LÓPEZ; C. MORAN*. *Univ. Autonoma de Puebla, Univ. Autonoma de Puebla, Univ. Autonoma de Puebla.*

8:00 UU9 **339.17** Utility of anti-rabphilin-3A antibodies in the diagnosis of lymphocytic infundibulo-neurohypophysitis in pediatric patients. S. IWAMA*; Y. SUGIMURA; N. IWATA; Y. YASUDA; H. ARIMA. *Nagoya Univ., Nagoya Univ. Grad Schl of Med.*

9:00 UU10 **339.18** Autoantibodies against corticotrophs as a biomarker for IgG4-related hypophysitis. N. IWATA*; S. IWAMA; Y. SUGIMURA; Y. YASUDA; H. ARIMA. *Nagoya Univ., Nagoya Univ.*

10:00 UU11 **339.19** ▲ Viability after permeabilization and introduction of trehalose in intracytoplasmic sperm porcine compartment. M. BARRIENTOS*; E. JACOME-SOSA; M. ORTEGA CASTRO; B. DOMINGUEZ MANCERA; P. CERVANTES ACOSTA; A. HERNANDEZ BELTRAN; D. ROMERO SALAS. *Univ. Veracruzana.*

11:00 UU12 **339.20** Emergence of folliculo-stellate cells in the postnatal pituitary gland development in wistar rats. E. GÓMEZ DOMÍNGUEZ*; C. SOLANO-AGAMA; E. VERA-AGUILAR; J. CAMACHO; M. E. MENDOZA-GARRIDO. *CINVESTAV-IPN, CINVESTAV-IPN.*

8:00 UU13 **339.21** The anatomy and neurohistology of the minipig pituitary. L. TVILLING; A. GLUD; D. ORLOWSKI; J. JAKOBSEN; M. PETERSEN; K. ETTRUP; M. WEST; D. BENDER; C. BJARKAM; J. SORENSEN*. *Aarhus Univ. Hospital, Head-Heart Ctr., Aarhus Univ. Hospital, Head-Heart Ctr., Aarhus Univ. Hospital, Head-Heart Ctr., Aarhus Univ. Hospital, Head-Heart Ctr., Aalborg Univ. Hosp., Aarhus Univ. Hospital, Head-Neuro Ctr.*

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* Indicates abstract's submitting author

POSTER

340. Stress: Hippocampus

Theme F: Integrative Physiology and Behavior

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

8:00 UU14 **340.01** Hippocampal resting-state connectivity: Longitudinal and concurrent associations with parenting and cortisol reactivity during childhood. S. L. BLANKENSHIP*; T. RIGGINS; L. R. DOUGHERTY. *Univ. of Maryland, Univ. of Maryland.*

9:00 VV1 **340.02** Reliability of SES effects on hippocampal and frontal brain structure in children and youth: A systematic review. L. T. WITTMAN; A. J. WINKELMAN; G. M. LAWSON; M. J. FARAH*. *Univ. of Penn, Univ. Pennsylvania.*

10:00 VV2 **340.03** Acute predator odor exposure rapidly activates the CREB turn-off pathway in the hippocampus of adult male Wistar rats. D. R. HOMIACK*; E. O'CINNEIDE; S. HAJMURAD; M. STANLEY; B. BARRILEAUX; L. SCHRADER. *Tulane Univ., Broad Insitute, Tulane Univ.*

11:00 VV3 **340.04** Effect of chronic stress on gene expression in the hippocampus of female and male rats. M. RANDESI; Y. ZHOU; S. MAZID; S. C. ODELL; B. S. MCEWEN; T. A. MILNER*; M. KREEK. *The Rockefeller Univ., Weill Cornell Med., The Rockefeller Univ.*

8:00 VV4 **340.05** Functionally distinct ca1 npy interneurons regulate npy release in schaffer collateral and temporammonic feedforward pathways. Q. LI*; A. BARTLEY; L. DOBRUNZ. *Univ. of Alabama at Birimgham.*

9:00 VV5 **340.06** Daily running exercise mitigates the negative consequences of increased corticosterone due to stress on hippocampal ltp. R. M. MILLER*; D. MARRIOTT; T. HAMMOND; D. LYMAN; J. TROTTER; T. CALL; Z. BADURA; J. G. EDWARDS. *Brigham Young Univ.*

10:00 VV6 **340.07** Repeated restraint stress causes alteration in neuronal maturation makers in the dentate gyrus in BALB/c mice. H. SHOJI*; H. HAGIHARA; T. MIYAKAWA. *Inst. for Comprehensive Med. Sci., Natl. Inst. for Physiological Sci.*

11:00 VV7 **340.08** Klf9 regulates dendritic spines to protect against chronic stress induced maladaptive fear responses. A. SAHAY*; T. LANGBERG; S. LEVINSON; D. CHU; K. SCOBIE; R. HEN; E. LEONARDO; A. BESNARD. *Ctr. For Regenerative Med., Columbia Univ., Massachusetts Gen. Hospital, Harvard Stem Cell Institute, Harvard Med. Sch.*

8:00 VV8 **340.09** Reorganization of hippocampal spatial maps during adaptive behavior in an aversive situation. S. OKADA*; H. IGATA; T. SASAKI; Y. IKEGAYA. *The Univ. of Tokyo.*

9:00 VV9 **340.10** The results of forced swim test in Wistar rats are negatively correlated with the degree of neurogenesis in the subventricular zone and dentate gyrus. K. KIN*; T. YASUHARA; M. KAMEDA; M. UMAKOSHI; I. KIN; K. KUWAHARA; J. MORIMOTO; M. OKAZAKI; H. TAKEUCHI; A. TOYOSHIMA; T. SASAKI; T. AGARI; I. DATE. *Okayama Univ. Grad. Sch. of Med.*

10:00 VV10 **340.11** Social buffering prevents psychosocial stress-decreased neurogenesis in mouse dentate gyrus. C. WANG*; L. YU. *Natl. Cheng Kung Univ., Inst. of Behavioral Medicine, Natl. Cheng Kung Univ.*

11:00 VV11 **340.12** Endogenous CRH enhances excitatory synaptic transmission and intrinsic hippocampal network activity. B. G. GUNN*; C. D. COX; Y. CHEN; C. M. GALL; G. LYNCH; T. Z. BARAM. *Univ. of California Irvine.*

8:00 VV12 **340.13** Temporal analysis of hippocampal glucocorticoid receptor activity in the therapeutic action of fluoxetine. S. HER*; M. JEONG; J. JUNG. *KBSI, KBSI.*

9:00 VV13 **340.14** Folate deficiency-induced depression-like behavior and abnormal neuronal matulation in adult hippocampus in mice. S. NISHIDA*; Y. HIRAKI; M. TSUBOI; Y. NAKAMURA; R. ARAKI; T. YABE. *Setsunan Univ., Meiji Co., Ltd.*

10:00 VV14 **340.15** CA3 neurons of BDNF-Val66Met mice exhibit a unique translational profile in response to stress. J. KOGAN*; J. D. GRAY; T. G. RUBIN; E. F. SCHMIDT; N. HEINTZ; B. S. MCEWEN. *The Rockefeller Univ., Albert Einstein Col. of Med., The Rockefeller Univ.*

11:00 VV15 **340.16** *In vitro* study of chronic stress effect on the adult neurogenesis. J. WOO*; H. RYU; C. HEO; M. SUH. *CNIR IBS, Sungkyunkwan Univ.*

8:00 VV16 **340.17** ▲ ANA12 prevents hippocampal CA3 apical dendritic arbors from becoming more complex in the weeks after chronic stress ends. P. PAODE*; K. NISHIMURA; J. M. ANGLIN; J. M. JUDD; S. KEMMOU; B. Q. LE; A. FLEGENHEIMER; J. B. ORTIZ; C. D. CONRAD. *Arizona State Univ.*

9:00 VV17 **340.18** Hippocampal endocannabinoid signalling mediates the residual effects of early life stress on fear memory. P. ATSAK*; M. MORENA; C. SCHOENMAKER; M. N. HILL; B. ROOZENDAAL. *Radboud Univ. Med. Ctr., Donders Inst. for Brain, Cognition and Behaviour, Hotchkiss Brain Institute, Univ. of Calgary.*

10:00 VV18 **340.19** Early life stress alters the levels of proteostasis markers in the rat hippocampus. J. A. SIERRA FONSECA*; J. N. HAMDAN; G. A. LODOZA; S. SAUCEDO, Jr.; K. L. GOSSELINK. *Univ. of Texas At El Paso.*

11:00 VV19 **340.20** Effects of stress on fibroblast growth factor receptor 1 expression in the tgFgfr1-EGFP BAC transgenic mouse line. J. COLLETTE*; H. M. TORRES; K. M. SMITH. *Univ. of Louisiana At Lafayette.*

POSTER

341. Autonomic Control: Cardiovascular Regulation I

Theme F: Integrative Physiology and Behavior

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

8:00 VV20 **341.01** Effect of hypo- and hyper-perfusion on neurovascular coupling. D. KAIN*; P. BLINDER. *Tel Aviv Univ., Tel Aviv Univ.*

9:00 VV21 **341.02** Effect of endogenous nitric oxide on adrenergic nerve-mediated vasoconstriction and CGRPergic nerve-mediated vasodilation in pithed rats. H. KAWASAKI*; S. TAKATORI; K. YAMAWAKI; Y. ZAMAMI. *Col. of Pharmaceut. Sciences, Matsuyama Univ., Col. of Pharmaceut. Sciences, Matsuyama Univ., Grad. Sch. of Medicine, Dent. and Pharmaceut. Sciences, Okayama Univ., Inst. of Biomed. Sciences, Tokushima Univ. Grad. Sch.*

10:00 VV22 **341.03** Female and male obstructive sleep apnea patients show prior diagnosis of co-morbid hypertension and mental health conditions. E. AN*; A. AGUILA; K. WATSON; M. R. IRWIN; R. AYSOLA; L. DOERING; R. M. HARPER; P. M. MACEY. *UCLA, UCLA, UCLA, UCLA, UCLA, UCLA, UCLA, UCLA.*

11:00 VV23 **341.04** Cardiorespiratory coupling in individuals with spinal cord injury. S. C. ASLAN*; S. HARKEMA; A. OVECHKIN. *Univ. Louisville, Univ. Louisville, Univ. Louisville.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 VV24 **341.05** ▲ Sex differences in insular gyral responses to an autonomic challenge. N. S. RIEKEN*; J. A. OGREN, 91403; R. KUMAR; R. M. HARPER; P. M. MACEY. *Sch. of Nursing, UCLA, UCLA, UCLA, UCLA.*

9:00 VV25 **341.06** Central modulation of cardiac sympathetic nerve activity following acute myocardial infarction. R. ROY*. *Univ. of Otago.*

10:00 VV26 **341.07** Persistence of post-stress blood pressure elevation is induced by activated astrocytes. Y. HASEBE*; S. SUGAMA; K. TAKEDA; K. KOIZUMI; I. FUKUSHI; M. HOSHIAI; Y. KAKINUMA; J. HORIUCHI; K. SUGITA; Y. OKADA. *Sch. of Medicine,University of Yamanashi, Murayama Med. Ctr., Nippon Med. Sch., Fujita Hlth. Univ., Grad. Sch. of Sci. & Engineering, Toyo Univ.*

11:00 WW1 **341.08** Vasopressin contributes to the development of angiotensin II-dependent hypertension. A. KORPAL*; D. O. SCHWENKE; C. H. BROWN. *Univ. of Otago.*

8:00 WW2 **341.09** Temporal structure of metabolic modulation of autonomic nervous system activity. A. PANARESE; M. CRACCHIOLO; J. CARPANETO; J. F. SACRAMENTO; S. V. CONDE*; A. MAZZONI; S. MICERA. *The Biorobotics Institute, Scuola Superiore Sant'Anna, CEDOC, NOVA Med. School, Faculdade De Ciências, Bertarelli Fndn. Chair in Translational NeuroEngineering, Inst. of Bioengineering And Ctr. for Neuroprosthetics, Sch. of Engineering, Ecole Polytechnique Federale De Lausanne.*

9:00 WW3 **341.10** Mapping the brainstem circuitry of transcutaneous vagus nerve stimulation (tVNS) in humans using ultrahigh-field (7T) fMRI. N. W. KETTNER*; R. SCLOCCO; J. R. POLIMENI; R. G. GARCIA; I. MAWLA; N. TOSCHI; L. L. WALD; R. BARBIERI; V. NAPADOW. *Logan Univ., Athinoula A. Martinos Ctr. for Biomed. Imaging, Massachusetts Gen. Hospital, Harvard Med. Sch., Connors Ctr. for Women's Hlth. and Gender Biology, Div. of Women's Health, Brigham and Women's Hosp., Dept. of Biomedicine and Prevention, Univ. of Rome Tor Vergata, Dept. of Electronics, Information and Bioengineering, Politecnico di Milano.*

10:00 WW4 **341.11** Ascending cholinergic neurons in the mesopontine tegmentum regulate blood pressure fluctuation during REM sleep. Y. KOYAMA*; N. TAKAKU; H. SATOU; K. NISHIMURA; N. HARUYAMA; T. KODAMA. *Fukushima Univ., Tokyo Metropol Inst. Med. Sci.*

11:00 WW5 **341.12** Cardiovascular regulation in individuals with chronic motor complete and incomplete spinal cord injury. S. WANG*; S. ASLAN; D. LORENZ; A. OVECHKIN; G. HIRSCH; B. DITTERLINE; S. HARKEMA. *Univ. of Louisville, Frazier Rehab Inst., Univ. of Louisville, Univ. of Louisville.*

8:00 WW6 **341.13** Arterial stiffness predicts white matter burden in patients with mild cognitive impairment. B. C. TSENG*; C. GWO. *Univ. of Texas At Tyler, Chien Hsin Univ. of Sci. and Technol.*

9:00 WW7 **341.14** Non-gaussian diffusion measures show axonal and myelin changes in patients with heart failure. B. ROY*; M. WOO; G. FONAROW; R. KUMAR. *Univ. of California at Los Angeles, Univ. of California at Los Angeles, Univ. of California at Los Angeles, Univ. of California at Los Angeles, Univ. of California at Los Angeles, Univ. of California at Los Angeles.*

10:00 WW8 **341.15** Cholinergic intrinsic cardiac ganglion neurons may glutamatergic in nature. T. WANG*; K. E. MILLER. *Oklahoma State Univ. Ctr. For Hlth. Scienc, Oklahoma State Univ. Ctr. For Hlth. Scienc.*

11:00 WW9 **341.16** Regional brain changes in patients with cystic fibrosis. C. TOM*; M. WOO; B. ROY; K. AFSHAR; A. P. RAO; L. FUKUSHIMA; P. ESHAGHIAN; M. WOO; R. KUMAR. *David Geffen Sch. of Med. At UCLA, David Geffen Sch. of Med. At UCLA, Sch. of Nursing, UCLA, UC San Diego, Keck Med. of USC, Keck Sch. of Med. of USC, David Geffen Sch. of Med. at UCLA, David Geffen Sch. of Med. at UCLA.*

8:00 WW10 **341.17** Regulation of epinephrine biosynthesis by intermittent hypoxia. R. B. MAILLOUX*; S. KHURANA; T. C. TAI. *Laurentian Univ., Northern Ontario Sch. of Med., Laurentian Univ., Laurentian Univ.*

9:00 WW11 **341.18** Quantifying stress through crustacean EKG: A modified detrended fluctuation analysis (mDFA) of the nerve-heart dynamics. T. YAZAWA*. *Tokyo Metropolitan Univ.*

10:00 WW12 **341.19** Dorsal hypothalamic DA neurons contributes to PVN RVLM circuitry and Ang II mediated sympatoexcitation. O. M. OGUNDELE*; C. C. LEE; J. FRANCIS. *Louisiana State Univ., Louisiana State Univ.*

11:00 WW13 **341.20** Reliable and noninvasive protocol for the induction of acute cardiac response to emotional stress in intact freely-moving mice. S. SATO*; T. KANBAYASHI; A. IMANISHI; K. TSUTSUI; T. SHIMIZU. *Akita Univ. Grad. Sch. of Med.*

8:00 WW14 **341.21** The role of dopamine D_2-like receptors in the inhibition of the cardioaccelerator sympathetic outflow in diabetic pithed rats. B. VILLANUEVA-CASTILLO*; E. RIVERA-MANCILLA; A. H. ALTAMIRANO-ESPINOZA; G. MANRIQUE-MALDONADO; C. M. VILLALÓN. *CINVESTAV-IPN.*

9:00 WW15 **341.22** The role of epigenetic regulators in the fetal programming of hypertension. J. LAMOTHE*; S. KHURANA; C. WILLIAMSON; C. J. BYRNE; S. MERCIER; S. THARMALINGAM; T. TAI. *Laurentian Univ., Northern Ontario Sch. of Med., Laurentian Univ., Laurentian Univ.*

POSTER

342. Sleep Behavior and Systems II

Theme F: Integrative Physiology and Behavior

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

8:00 WW16 **342.01** Interhemispheric asymmetry in sleep depth, arousal and behavioral response associated with the first-night effect. M. TAMAKI*; J. BANG; T. WATANABE; Y. SASAKI. *Brown Univ.*

9:00 WW17 **342.02** Genes differentially methylated in young adults with short sleep duration may regulate sleep across species. A. C. HART*; H. HUANG; Y. ZHU; V. KNOPIK; J. E. MCGEARY; M. ELIOT; M. CARSKADON. *Brown Univ., Yale Univ., Rhode Island Hosp., Brown Universty, Providence Veterans Affairs Med. Ctr., Brown Universty, Bradley Hosp.*

10:00 WW18 **342.03** Sleep loss induce diabetes in mice model. S. CHIKAHISA*; S. HARADA; N. SHIMIZU; T. SHIUCHI; S. NISHINO; H. SÉI. *Tokushima Univ. Grad. Sch., Tokushima Univ., Stanford Univ. Sch. of Med.*

11:00 WW19 **342.04** First evidence of sleep in flight. N. C. RATTENBORG*; B. VOIRIN; S. M. CRUZ; R. TISDALE; G. DELL'OMO; H. LIPP; M. WIKELSKI; A. L. VYSSOTSKI. *Max Planck Inst. for Ornithology, Max Planck Inst. for Ornithology, Ornis italica, Univ. of Zurich, Univ. of Zurich.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 WW20 **342.05** No benefits of sleep extension on executive processes during an acute total sleep deprivation. A. RABAT*; P. J. ARNAL; H. MONNARD; C. BOUGARD; M. ERBLANG; P. VAN BEERS; C. DROGOU; M. GUILLARD; D. GOMEZ-MERINO; F. SAUVET; D. LÉGER; M. CHENNAOUI. *French Armed Forces Biomed. Res. Inst., Hôtel Dieu Hosp., Alertness and Sleep Center, Publ. Assistance of Paris Hosp.*

9:00 WW21 **342.06** New declarative learning after sleep is enhanced by pre-sleep D-cycloserine administration. M. ALIZADEH ASFESTANI*; J. SCHWIDETZKY; E. BRAGANZA; S. SOEKADAR; J. BORN; G. FELD. *Univ. of Tuebingen, Universtity of Tuebingen, Universtity of Tuebingen.*

10:00 WW22 **342.07** Increasing acetylcholine levels does not affect odor-induced memory reactivation during slow wave sleep. J. G. KLINZING*; B. RASCH; J. BORN; S. DIEKELMANN. *Univ. Tübingen, Grad. Training Ctr. of Neurosci. / IMPRS for Cognitive & Systems Neurosci., Univ. of Fribourg.*

11:00 XX1 **342.08** Sleep to abstract the gist: A long-term study on visual perceptual memories. N. D. LUZ*; S. DIEKELMANN; J. BORN; K. RAUSS. *Univ. of Tuebingen, Univ. of Tuebingen, Univ. of Tuebingen.*

8:00 XX2 **342.09** Sleep deprivation negatively impacts reproductive output in *Drosophila melanogaster*. S. POTDAR*; D. DANIEL; F. A. THOMAS; S. CHIDAMBARAM; V. SHEEBA; S. LALL. *JNCASR.*

9:00 XX3 **342.10** Repetitive sleep deprivation dysregulates the cortico-cortical connectivity of γ and θ oscillation in REM sleep. B. KIM*; B. KOCSIS; E. HWANG; J. CHOI. *Korea Inst. of Sci. and Technol., Univ. of Sci. and Technol., Harvard Med. Sch.*

10:00 XX4 **342.11** Differential effect of sleep deprivation and behavioral sate on excitatory vs inhibitory neurons in CA1. J. E. HEISS*; A. M. THOMAS; T. S. KILDUFF. *SRI Intl.*

11:00 XX5 **342.12** Prefrontal cortex to accumbens projections regulate reward seeking after sleep deprivation. Z. LIU*; Y. WANG; L. CAI; Y. LI; B. CHEN; Y. DONG; Y. HUANG. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

8:00 XX6 **342.13** Gaba and muscarinic receptors on motor trigeminal neurons are homeostatically regulated with sleep deprivation. H. TOOSSI*; E. DEL CID-PELLITERO; B. JONES. *McGill Univ.*

9:00 XX7 **342.14** The role of nuclear peroxisome proliferator activated receptor α (PPAR) in sleep recovery after sleep deprivation in rats. A. SARRO-RAMIREZ*; G. ARANKOWSKY-SANDOVAL; E. MURILLO-RODRÍGUEZ; K. GUZMÁN. *Univ. Anahuac Mayab, Univ. Nacional Autónoma de México, Univ. Anáhuac Mayab, Univ. Autonoma de Yucatan.*

10:00 XX8 **342.15** Spike timing rigidity is maintained in bursting neurons under pentobarbital-induced anesthetic conditions. R. KATO; M. YAMANAKA; M. KOBAYASHI*. *Nihon Univ. Sch. Dent., Col. of Sci. and Technology, Nihon Univ.*

11:00 XX9 **342.16** Multi-site intracranial recordings in rats under propofol and sevoflurane anesthesia. J. A. GUIDERA*; N. E. TAYLOR; J. T. LEE; K. Y. VLASOV; J. PEI; E. N. BROWN; K. SOLT. *Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., MIT.*

8:00 XX10 **342.17** Nonlinear spatiotemporal analysis of sleep spindles. A. L. SAMPSON*; C. LAINSCSEK; S. S. CASH; E. HALGREN; T. J. SEJNOWSKI. *Salk Inst. For Biol. Studies, UCSD, Massachusetts Gen. Hosp., Harvard Med. Sch.*

9:00 XX11 **342.18** τ oscillations, not slow spindles, precede down state troughs. C. E. GONZALEZ*; R. A. MAK-MCCULLY; S. S. CASH; P. CHAUVEL; H. BASTUJI; M. REY; E. HALGREN. *Univ. of California San Diego, MGH, Aix-Marseille Univ., L'Universite Lyon.*

10:00 XX12 **342.19** Hidden subcortical sleep. B. A. GROSS*; J. J. EMRICK; B. T. RILEY; G. R. POE. *Univ. of Michigan, Univ. of California, San Francisco, Columbia Basin Col.*

11:00 XX13 **342.20** Chronic immobilization stress modify sleep pattern and several metabolic parameters in both stress and recovery period in rats. A. JIMENEZ-ANGUIANO*; A. L. GUZMAN-GUZMAN; A. I. GOMEZ-MORALES; A. K. LEON-OLGUIN; G. BLANCAS-FLORES; J. VELAZQUEZ-MOCTEZUMA. *Univ. Autonoma Metropolitana-Iztapalapa, Univ. Autonoma Metropolitana-Iztapalapa.*

8:00 XX14 **342.21** Sleep and sleep-related motor activity in female rats. Y. CHENG; K. HSIEH; L. RAMANATHAM; J. M. SIEGEL; Y. LAI*. *UCLA, VAGLAHS Sepulveda, UCLA/VAGLAHS Sepulveda, UCLA/VAGLAHS Sepulveda.*

9:00 XX15 **342.22** Short time running exercise enhances sleep pressure in mice. N. SHIMIZU*; Y. YOSHIOKA; S. CHIKAHISA; Y. KITO; T. SHIUCHI; H. SEI. *Tokushima Univ. Grad. Sch., Tokushima Univ. faculty of medicine.*

10:00 XX16 **342.23** Chronic inflammation of the preoptic-hypothalamic sleep-regulatory systems contributes to changes in sleep-wake organization in aging. A. KOSTIN; A. ALAM; J. GERA; R. SZYMUSIAK; D. MCGINTY; N. ALAM*. *VA Greater Los Angeles Healthcare Syst.*

11:00 XX17 **342.24** ● Characterizing sleep, circadian rhythms, and eye closure in Acomys cahirinus (Cairo spiny mouse) using EEG, EMG, piezoelectric sensors, and video. L. E. GUERRIERO*; C. WANG; T. C. BROOKS; A. A. AJWAD; S. SUNDERAM; A. W. SEIFERT; B. F. O'HARA. *Univ. of Kentucky, Univ. of Kentucky.*

8:00 XX18 **342.25** ● A comparative study of sleep and circadian rhythms between the house mouse (Mus musculus) and African spiny mouse (Acomys cahirinus). C. WANG*; T. C. BROOKS; L. E. GUERRIERO; A. A. AJWAD; S. SUNDERAM; A. W. SEIFERT; B. F. O'HARA. *Univ. of Kentucky, Univ. of Kentucky.*

POSTER

343. Sleep Regulators and Pharmacology

Theme F: Integrative Physiology and Behavior

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

8:00 XX19 **343.01** mGluR1-PLCβ4 signal is critical for sleep architecture. J. HONG*; J. LEE; G. HA; K. SONG; H. SHIN; E. CHEONG. *Yonsei Univ., Inst. for Basic Sci.*

9:00 XX20 **343.02** Microinjections of carbachol into dorsomedial pons elicit REM sleep in naturally sleeping rats. V. B. FENIK*; N. J. CARBALLO; I. RUKHADZE. *VA Greater Los Angeles Healthcare Syst., WebSciences Intl., David Geffen Sch. of Med. at UCLA.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 XX21 **343.03** Effects of breath-holding on subjective drowsiness. T. KIKUCHI; M. TAKAYOSE; R. KOSHIZAWA*; K. ARAI; K. FUJIMOTO; Y. SANO; K. SHIROISHI; N. GYODA. *Nihon Univ. Col. of Industrial Technol., Nihon Univ. Col. of Commerce, Tokyo Univ. of Marine Sci. and Technol., Teikyo Univ. Fac. of Med. Technol., Teikyo Univ. of Sceince Fac. of Med. Sci.*

11:00 XX22 **343.04** Forward genetics approach in identification of novel sleep/wakefulness related gene(s). S. J. KIM*; T. FUJIYAMA; C. MIYOSHI; N. HOTTA; S. KANNO; A. IKKYU; M. KAKIZAKI; T. MATSUOKA; S. MIZUNO; I. MIURA; T. SUZUKI; K. VIVEK; J. S. TAKAHASHI; S. TAKAHASHI; S. WAKANA; H. FUNATO; M. YANAGISAWA. *Univ. of Tsukuba, Univ. of Tsukuba, Univ. of Tsukuba, RIKEN Bioresource Ctr., Univ. of Texas Southwestern Med. Ctr., Toho Univ., Univ. of Texas Southwestern Med. Ctr.*

8:00 YY1 **343.05** The unfolded protein response regulates behavioral state. S. LY*; A. I. PACK; N. NAIDOO. *Univ. of Pennsylvania.*

9:00 YY2 **343.06** ▲ Reductions in local and global sleep need following pharmacological depotentiation in rat cerebral cortex. C. CARROLL; H. HSIANG; S. SNYDER; J. FORSBERG; M. B. DASH*. *Middlebury Col., Middlebury Col.*

10:00 YY3 **343.07** ● Hypnotic, anxiolytic and anticonvulsant effect of the methanolic extract of Ricinus communis (Euphorbiaceae) leaves. O. O. SUNDAY*; L. D. IOR; S. ADEDOYIN. *Univ. of Jos, Univ. of Jos.*

11:00 YY4 **343.08** Serotonergic dorsal raphe neurons in hypercapnia-induced arousal from sleep. N. LEIBOLD*; H. R. SMITH; C. M. GINAPP; D. A. RAPPAPORT; G. F. BUCHANAN. *Univ. of Iowa Carver Col. of Med., Maastricht University, Sch. for Mental Hlth. and Neuroscience, European Grad. Sch. of Neurosci., Yale Univ. Sch. of Med., Univ. of Iowa Carver Col. of Med.*

8:00 YY5 **343.09** Identifying genes and gene networks underlying sleep and psychiatric behaviors in an F2 mouse population. V. GAO*; P. JIANG; J. SCARPA; M. VITATERNA; A. KASARSKIS; F. TUREK. *Northwestern Univ., Northwestern Univ., Mt. Sinai Sch. of Med.*

9:00 YY6 **343.10** Effects of subarachnoid infusion of CRF receptor-1 antagonist on sleep and preoptic neuronal activity in rats. S. KUMAR*; I. GVILIA; K. HSIEH; S. RAI; K. CHEW; D. MCGINTY; R. SZYMUSIAK. *VA Greater Los Angeles Healthcare Syst., VA Greater Los Angeles Healthcare Syst., Univ. of California, California Hlth. Sci. Univ., Univerversity of California, Univ. of California, Univ. of California.*

10:00 YY7 **343.11** ● The role of CL thalamic nucleus in the modulation of cortical slow oscillation in mice. A. OZUR*; S. CHAUVETTE; I. TIMOFEEV. *Univ. Laval, CRIUSMQ, CRIUSMQ, Univ. Laval.*

11:00 YY8 **343.12** Effects of the noisy orexin current on firing and input-output gain of cholinergic neurons in the laterodorsal tegmental and pedunculopontine tegmental nuclei of mice. M. ISHIBASHI*; N. E. MOLINA; I. GUMENCHUK; C. S. LEONARD. *New York Med. Coll.*

8:00 YY9 **343.13** Sexually dimorphic increase in kynurenic acid and impaired contextual memory after acute sleep deprivation in rats. A. BARATTA*; A. D. BUCHLA; A. POCIVAVSEK. *Maryland Psychiatric Res. Ctr.*

9:00 YY10 **343.14** Hypothalamic feedforward inhibition of thalamocortical network controls arousal and consciousness. C. G. HERRERA*; M. BANDARABADI; M. CARUS CADAVIECO; K. SCHINDLER; A. PONOMARENKO; T. KOROTKOVA; A. ADAMANTIDIS. *Inselspital Univ. of Bern, Leibniz Inst. for Mol. Pharmacol. (FMP), Univ. of Bern.*

10:00 YY11 **343.15** T-type calcium channel inhibition in thalamic reticular nucleus reduces sleep spindles in mice. C. SHUKLA*; S. THANKACHAN; J. M. MCNALLY; J. T. MCKENNA; C. YANG; R. E. BROWN; R. W. MCCARLEY; R. BASHEER. *VA Boston Healthcare System-Harvard Med. Sch., VA Boston Healthcare System-Harvard Med. Sch.*

11:00 YY12 **343.16** Importance of histamine clearance for brain functions. T. YOSHIKAWA*; F. NAGANUMA; T. NAKAMURA; T. IIDA; A. KARPATI; T. MOCHIZUKI; K. YANAI. *Tohoku Univ., Kyushu Univ.*

8:00 YY13 **343.17** ● Deletion of trace amine-associated receptor 1 attenuates behavioral response to caffeine. M. D. SCHWARTZ*; J. B. PALMERSTON; D. L. LEE; M. C. HOENER; T. S. KILDUFF. *SRI Intl., F. Hoffmann-LaRoche, Ltd.*

9:00 YY14 **343.18** ▲ Pharmacological characterization of primidone in the sleep-wake cycle of rats. M. SALAS-CRISOSTOMO*; K. GUZMÁN; F. SARLAT-ACUNA; N. ELLIS-INFANTE; G. ARANKOWSKY-SANDOVAL; E. MURILLO-RODRÍGUEZ. *Univ. Anahuac Mayab, Dept. de Neuropatología Molecular. Inst. de Fisiología Celular Univ. Nacional Autónoma de México. México D.F. México, Lab. de Neurociencias Moleculares e Integrativas Escuela de Medicina, División Ciencias de la Salud. Univ. Anáhuac Mayab Mérida, Yucatán. México, Ctr. de Investigaciones Regionales "Dr. Hideyo Noguchi" Univ. Autónoma de Yucatán. Mérida, Yucatán. México.*

10:00 ZZ1 **343.19** Trichostatin A attenuates insomnia associated with alcohol withdrawal and normalizes sleep-wakefulness. R. SHARMA*; A. SHARMA; P. SAHOTA; M. THAKKAR. *Harry S Truman Mem. Veterans' Hosp.*

11:00 ZZ2 **343.20** Flumazenil, a GABA antagonist, delays return of righting reflex in mice after isoflurane anesthesia but does not significantly alter dendritic spine density. J. A. FIDLER; Y. A. JAMAL; L. A. SHAPIRO; P. S. GARCIA*. *Atlanta VA Med. Ctr. / Emory Univ.*

POSTER

344. Neurocircuitry of Human Emotion

Theme G: Motivation and Emotion

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

8:00 ZZ3 **344.01** Stress-induced changes in resting state functional connectivity vary with history of violence exposure. H. E. DARK*; N. G. HARNETT; A. GOODMAN; M. WHEELOCK; S. MRUG; M. A. SCHUSTER; M. N. ELLIOTT; S. TORTOLERO; D. C. KNIGHT. *Univ. of Alabama Birmingham, Boston Children's Hosp., RAND Corp., The Univ. of Texas Hlth. Sci. Ctr. at Houston.*

9:00 ZZ4 **344.02** Resting-state functional connectivity in combat veterans suffering from anger and aggression. T. VARKEVISSER; T. GLADWIN; L. HEESINK; J. VAN HONK; E. GEUZE*. *UMC Utrecht, Utrecht Univ., Utrecht Univ. Med. Ctr., Military Mental Healthcare.*

10:00 ZZ5 **344.03** Amygdala response to emotional pictures in veterans with anger and aggression. L. HEESINK*; R. KLEBER; M. VINK; E. GEUZE. *UMC Utrecht, Utrecht Univ., Res. Ctr. Military Mental Hlth. Care.*

11:00 ZZ6 **344.04** Effects of anger induction on human behavior - an agonistic behavior pattern. R. M. DE ALMEIDA*; J. C. CABRAL. *UFRGS.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 ZZ7 **344.05** Developmental perturbation of dopamine signaling increases adult aggression. D. MAHADEVIA*; C. M. TEIXEIRA; Q. YU; D. SURI; M. ANSORGE. *Columbia Univ., Columbia Univ. Med. Ctr., Massachusetts Gen. Hosp.*

9:00 ZZ8 **344.06** ● The relevance of coordinated brain and heart interactions to human personality and emotions. E. SHOKRI-KOJORI*; D. TOMASI; N. VOLKOW. *NIH, NIH.*

10:00 ZZ9 **344.07** Intersubject differences in dynamic functional connectivity associated with successful use of cognitive reappraisal and expressive suppression. S. JUN*; S. HAN. *Yonsei Univ.*

11:00 ZZ10 **344.08** Verbal and nonverbal communications convey distinct emotional qualities through shared neural circuitry. R. ROJIANI*; X. ZHANG; A. NOAH; J. HIRSCH. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Univ. Col. of London.*

8:00 ZZ11 **344.09** The 'rasa' in the 'raga' - brain networks of emotion responses to North Indian Classical ragas. A. MATHUR*; N. C. SINGH. *Natl. Brain Res. Ctr.*

9:00 ZZ12 **344.10** Differentiating neural activity associated with implied motion and emotion in the cervical spinal cord using spinal fMRI. T. KOLESAR*; J. KORNELSEN; S. D. SMITH. *The Univ. of Manitoba, The Univ. of Manitoba, St. Boniface Hosp. Res., Univ. of Winnipeg.*

10:00 ZZ13 **344.11** Aligning brains to extinguish naturally occurring fears with multivoxel neurofeedback. V. TASCHEREAU-DUMOUCHEL*; A. KOIZUMI; A. CORTESE; M. KAWATO; H. LAU. *Univ. of California - Los Angeles, Advance Telecommunication Res. (ATR) Inst. Intl., Natl. Inst. of Information and Communication Technol. (NICT), Nara Inst. of Sci. and Technol., Univ. of California - Los Angeles.*

11:00 ZZ14 **344.12** Real-time fMRI self-regulation of functional network connectivity during a visual motion task. J. ECK*; Q. NOIRHOMME; M. ROSENKE; S. BRUNHEIM; F. KRAUSE; C. BENJAMINS; M. LUEHRS; R. GOEBEL. *Maastricht Univ., Brain Innovation B.V., Univ. of Liège, Stanford Univ., Univ. Duisburg-Essen, Inst. of the Royal Netherlands Acad. of Arts and Sci. (KNAW).*

8:00 AAA1 **344.13** Effects of a virtual reality (VR)-based functional near-infrared spectroscopy (fNIRS) neurofeedback (NF) intervention on highly-impulsive college students. J. HUDAK*; F. BLUME; T. DRESLER; C. GAWRILOW; A. EHLIS. *LEAD Grad. Sch. and Res. Network, Clin. for Psychiatry and Psychotherapy, Eberhard Karls Univ. Tuebingen.*

9:00 AAA2 **344.14** Embodied learning: How interoceptive signals from the heart interact with anxiety in fear conditioning and extinction. S. N. GARFINKEL*; C. D. GOULD VAN PRAAG; M. ENGELS; D. WATSON; T. DUKA; H. CRITCHLEY. *Clin. Imaging Sci. Ctr., Univ. of Sussex, Univ. of Duesseldorf, Univ. of Sussex.*

POSTER

345. Depression: Human Postmortem Studies

Theme G: Motivation and Emotion

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

8:00 AAA3 **345.01** ● Proteomic analysis of postmortem anterior cingulate cortex reveals persistent disease effects across MDD states. E. SCIFO*; M. PABBA; F. KAPADIA; C. MA; D. A. LEWIS; G. C. TSENG; E. SIBILLE. *Campbell Family Mental Hlth. Res. Inst., Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

9:00 AAA4 **345.02** Sex specific transcriptional signatures in human depression. B. LABONTÉ*; O. ENGMANN; I. PURUSHOTHAMAN; G. HODES; J. SCARPA; H. KRONMAN; Z. LORSCH; P. HAMILTON; E. CALIPARI; O. ISSLER; J. WANG; E. LOH; M. CAHILL; D. WALKER; M. PFAU; S. RUSSO; A. KAZARSKIS; R. NEVE; Y. DONG; N. MECHAWAR; C. TAMMINGA; G. TURECKI; B. ZHANG; L. SHEN; E. NESTLER. *Icahn Sch. of Med. At Mount Sinai, Univ. of Pittsburgh, MIT, McGill Univ., The Univ. of Texas Southwestern Med. Ctr.*

10:00 AAA5 **345.03** Exploring the role of long non-coding RNAs in depression. O. ISSLER*; B. LABONTÉ; I. PURUSHOTHAMAN; B. J. HARTLEY; D. M. WALKER; C. J. PEÑA; Z. LORSCH; K. J. BRENNAND; L. SHEN; E. J. NESTLER. *Icahn Sch. of Med. At Mount Sinai.*

11:00 AAA6 **345.04** Fibroblast growth factors 2 and 9 may act as molecular organizers in anterior cingulate cortex and hippocampus to mediate circuit function in MDD. E. L. AURBACH*; M. H. HAGENAUER; K. E. PRATER; W. E. BUNNEY; R. M. MYERS; J. D. BARCHAS; A. SCHATZBERG; J. Z. LI; F. MENG; S. J. WATSON; H. AKIL. *MBNI, Univ. of Michigan, Univ. of California, Irvine, HudsonAlpha Inst., Cornell Univ., Stanford Univ.*

8:00 AAA7 **345.05** Altered levels of polyamine metabolic genes in various sub-nuclei of the human amygdala in major depressive disorder. V. SHARMA*; M. HAGENAUER; S. CHAUDHURY; R. C. THOMPSON; R. M. MYERS; A. F. SCHATZBERG; J. D. BARCHAS; W. E. BUNNEY; H. AKIL; S. J. WATSON. *Univ. of Michigan, HudsonAlpha Inst. of Biotech., Stanford Sch. of Med., Weil Cornell Col. of Med., Univ. of California, Irvine.*

9:00 AAA8 **345.06** A comprehensive regional analysis of genome-wide expression profiles for major depressive disorder. Y. GONZÁLEZ*; G. P. GUIO; D. A. FORERO. *Pontificia Univ. Javeriana, Univ. Antonio Nariño.*

10:00 AAA9 **345.07** The Effect of Early Life Adversity on the Oxytocinergic System: From childhood maltreatment and suicide to natural variation in rat maternal care. D. ALMEIDA*; L. FIORI; G. TURECKI. *McGill Group For Suicide Studies.*

11:00 AAA10 **345.08** Analysis of myelin-associated genes and proteins in postmortem samples of uncinate fasciculus from suicides having experienced early life adversity. M. J. SHAW*; A. TANTI; M. DAVOLI; N. MECHAWAR; G. TURECKI. *McGill Univ., McGill Univ., Mcgill Univ.*

8:00 AAA11 **345.09** Abnormal gene expression of proinflammatory cytokines in the postmortem brain of depressed suicide victims. H. ZHANG*; H. RIZAVI; X. REN; G. PANDEY. *Univ. of Illinois at Chicago.*

9:00 AAA12 **345.10** Molecular insights of dysregulated microrna network in locus coeruleus of suicide brain. B. ROY*; M. PALKOVITS; G. FALUDI; Y. DWIVEDI. *Univ. of Alabama At Birmingham, Univ. of Alabama at Birmingham.*

10:00 AAA13 **345.11** Poly ADP-ribose polymerase are more in subjects with major depressive disorder and disintegrate neural progenitors in dentate gyrus of human hippocampal formation. M. K. JAISWAL*; A. DWORK; V. ARANGO; G. ROSOKIJA; J. MANN; R. HEN; M. BOLDRINI. *New York State Psychiatric Inst., Columbia Univ., Columbia Univ., New York State Psychiatric Inst., Columbia Univ., Columbia Univ.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 AAA14 **345.12** Epigenetic and transcript aberrations of the galanin system in major depressive disorder. S. S. BARDE*; J. RUEGG; T. EKSTRÖM; M. PALKOVITS; G. TURECKI; J. PRUD'HOMME; N. MECHAWAR; T. HÖKFELT. *Karolinska Institutet, Karolinska Institutet, Semmelweis Univ. and the Hungarian Acad. of Sci., McGill Group for Suicide Studies, Douglas Mental Hlth. Univ. Inst., Douglas Mental Hlth. Univ. Inst.*

8:00 AAA15 **345.13** Increased expression of PARP-1 in granule cells of human hippocampus in major depressive disorder. C. ZIZOLA*; A. DWORK; V. ARANGO; G. ROSOKIJA; J. MANN; R. HEN; M. BOLDRINI. *NYSPI, Div. of Mol. Imaging and Neuropathology, NYSPI, NYSPI.*

POSTER

346. Eating Disorders

Theme G: Motivation and Emotion

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

8:00 AAA16 **346.01** Transcriptional effects on hypothalamic inflammatory mediators in an animal model of binge eating. M. V. MICIONI DI BONAVENTURA*; S. ALBONI; C. BENATTI; M. E. GIUSEPPONI; N. BRUNELLO; C. CIFANI. *Univ. of Camerino, Sch. of Pharmacy, Pharmacol. Unit, Univ. of Modena and Reggio Emilia.*

9:00 AAA17 **346.02** Enhanced coupling between salience network and basal ganglia network predicts distorted eating attitude in anorexia nervosa. M. ISOBE*; Y. MORI; J. MIYATA; H. FUKUYAMA; S. NOMA; T. MURAI; H. TAKAHASHI. *Kyoto Univ. Grad. Sch. of Med., Human Brain Res. Ctr.*

10:00 AAA18 **346.03** Sex and strain-dependent response to a stress free animal model of binge eating. H. PAPACOSTAS QUINTANILLA*; V. M. ORTÍZ-ORTEGA; C. LÓPEZ-RUBALCAVA. *CINVESTAV, Inst. Nacional de Ciencias Médicas y Nutrición Salvador Zubirán, CINVESTAV.*

11:00 AAA19 **346.04** Prefrontal cognitive control over interference by food images in binge eating disorder and bulimia nervosa. J. LEE*; K. NAMKOONG; Y. JUNG. *Dept. of Psychiatry, Yonsei Univ. Colleg, Inst. of Behavioral Sci. in Medicine, Yonsei Univ. Col. of Med.*

8:00 AAA20 **346.05** Reinforcement learning during a monetary reward task changes with weight restoration in adolescents with anorexia nervosa. M. DEGUZMAN*; M. SHOTT; G. FRANK. *Univ. of Colorado Anschutz Med. Campus.*

9:00 AAA21 **346.06** Reduced serotonin transporter availability in anorexia nervosa: A [^{11}C]DASB PET study. M. YOKOKURA*; T. TERADA; T. BUNAI; K. NAKAIZUMI; K. TAKEBAYASHI; M. FUTATSUBASHI; E. YOSHIKAWA; Y. OUCHI. *Hamamatsu Univ. Sch. of Med., Hamamatsu Photonics KK.*

10:00 AAA22 **346.07** Psychiatric disorders among diabetic patients attending medical outpatient clinics of Abubakar Tafawa Balewa University Teaching Hospital, Bauchi, Nigeria. Y. M. MAHMUD*; D. SULYMAN. *Abubakar Tafawa Balewa Univ. Teaching Hospita, Abubakar Tafawa Balewa Univ. Teaching Hosp.*

11:00 AAA23 **346.08** Hypersensitivity to pleasant touch in individuals remitted from anorexia nervosa. A. BISCHOFF-GRETHE*; C. E. WIERENGA; L. A. BERNER; A. N. SIMMONS; M. OGASAWARA; L. J. GREATHOUSE; U. BAILER; M. P. PAULUS; W. H. KAYE. *Univ. of California San Diego Dept. of Psychiatry, VA San Diego Healthcare Syst., Laureate Inst. for Brain Res.*

8:00 AAA24 **346.09** Accumbens firing in a dietary-induced model of binge eating. J. STAMOS; A. TAYLOR; D. QUINTIN; K. COFFEY; J. KULIK; A. PAWLAK; N. BELLO; M. O. WEST*. *Rutgers Univ., Rutgers Univ., Rutgers Univ., Rutgers Univ., Panasonic Corp of North America.*

9:00 AAA25 **346.10** Glucose effect on memory is modulated by stress. C. FOX*; J. DOYLE. *Holy Cross Col., Holy Cross Col.*

10:00 AAA26 **346.11** Recovery of brain structural abnormalities in morbidly obese patients after bariatric surgery. Y. ZHANG*; W. CAI; Q. ZHU; G. LI; Q. MENG; G. WANG. *Xidian Univ., Xidian Univ., NIAAA.*

POSTER

347. Alcohol: Behavioral Studies I

Theme G: Motivation and Emotion

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

8:00 BBB1 **347.01** Social defeat stress and escalated ethanol drinking by C57BL/6J mice: Modulation by CRF-R1 antagonism. J. F. DEBOLD*; P. ANDREW; J. G. AULD; E. L. NEWMAN; E. Y. ZHANG; K. A. MICZEK. *Tufts Univ., Tufts Univ.*

9:00 BBB2 **347.02** Paternal chronic variable stress reduces ethanol drinking behavior selectively in male offspring. G. ROMPALA*; G. HOMANICS. *Univ. of Pittsburgh.*

10:00 BBB3 **347.03** No maternal separation- or supplier-dependent effect on basal corticosterone or alcohol intake and preference in female Wistar rats. S. LUNDBERG*; I. NYLANDER; E. ROMAN. *Uppsala Univ.*

11:00 BBB4 **347.04** The effect of stress on ethanol self-administration in Wistar rats. C. J. HEYSER*; B. HOFF; R. E. BLASER. *Univ. of California San Diego, Univ. of San Diego.*

8:00 BBB5 **347.05** Stress and chronic ethanol interactions on drinking and cognitive control. E. M. RODBERG*; C. R. DEN HARTOG; D. E. MOORMAN; E. M. VAZEY. *Univ. of Massachusetts Amherst, Univ. of Massachusetts Amherst.*

9:00 BBB6 **347.06** ● Risk and severity of alcohol dependence are associated with the fatty acid amide hydrolase C385A missense variant. M. E. SLOAN*; J. YAN; J. L. GOWIN; M. L. SCHWANDT; H. SUN; C. HODGKINSON; D. GOLDMAN; V. A. RAMCHANDANI. *NIH, Johns Hopkins, Natl. Inst. on Alcohol Abuse and Alcoholism.*

10:00 BBB7 **347.07** Longitudinal analysis of GPR88 knockout mice behavior under ethological conditions. G. MAROTEAUX*; S. BEN HAMIDA; T. AREFIN; B. KIEFFER; L. HARSAN. *Douglas Res. Ctr., Advanced Mol. Imaging Ctr. (AMIR), Med. Physics, Univ. Med. Ctr., IGBMC, Inst. Génétique Biologie Moléculaire Cellulaire.*

11:00 BBB8 **347.08** FABP5/7 deficiency decreases ethanol consumption in female but not male mice. B. H. CLAVIN*; J. A. HAMILTON; J. O'ROURKE; D. DEUTSCH; S. HAJ-DAHMANE; M. KACZOCHA; P. K. THANOS. *Univ. At Buffalo, Stony Brook Univ., Stony Brook Univ.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 BBB9 **347.09** ●▲Alcohol consumption in response to exercise access is modulated by gonadal hormones. C. E. MCGONIGLE*; L. P. ERCOLANO; Z. J. KOZICK; T. B. NENTWIG; J. E. GRISEL. *Bucknell Univ.*

9:00 BBB10 **347.10** The AMPA antagonist NBQX reduces alcohol intake in sham-operated and olfactory bulbectomized rats. J. RUDA-KUCEROVA; Z. BABINSKA; B. GETACHEW; Y. TIZABI*. *Masaryk Univ., Howard Univ. Col. of Med.*

10:00 BBB11 **347.11** The 5-HT1A partial agonist Tandospirone reduces long term binge-like alcohol drinking and prevents the subsequent deletious effects on anxiety and neurogenesis. A. BELMER*; O. PATKAR; S. BARTLETT. *QUT-IHBI-TRI.*

11:00 BBB12 **347.12** Circadian dysregulation exacerbates alcohol induced tissue injury and mortality. L. C. LYONS*; A. K. DE NOBREGA; A. P. MELLERS; E. J. NOAKES. *Florida State Univ.*

8:00 BBB13 **347.13** Differential rearing alters ethanol preference during adolescence but not operant responding for ethanol in adulthood. T. J. WUKITSCH*; K. PARKS; M. E. CAIN. *Kansas State Univ., Kansas State Univ.*

9:00 BBB14 **347.14** Preconception alcohol increases offspring vulnerability to stress. L. G. CHASTAIN*; S. JABBAR; O. GANGISETTY; M. A. CABRERA; K. SOCHACKI; D. K. SARKAR. *Rutgers The State Univ. of New Jersey.*

10:00 BBB15 **347.15** Gender differentially responds to disruption of circadian rhythm in alcohol drinking and mood behaviors via adenosine transporter 1. Y. JIA*; C. VADNIE; N. CARNEIRO; H. DAVID; D. CHOI. *Mayo Clin. Dept. of Mol. Pharmacol. A, Univ. Federal de Viçosa.*

11:00 BBB16 **347.16** Longitudinal effects of alcohol on sleep distribution using a novel murine model of alcohol abuse: Repeated drinking-in-the-dark alternating with two-bottle choice paradigm. S. PERREAU-LENZ*; J. VAZQUEZ-DEROSE; M. D. SCHWARTZ; W. POLGAR. *SRI Intl.*

8:00 BBB17 **347.17** Intermittent two-bottle choice (I-2BC) chronic alcohol exposure alters REM sleep in a rodent model of alcoholism. J. VAZQUEZ-DEROSE*; S. PERREAU-LENZ; A. NGUYEN. *SRI Intl.*

9:00 BBB18 **347.18** ● Effects of acute, mild sleep deprivation on alcohol-induced effects in mice: Analysis of strain, sex and age. K. M. HAMRE*; J. A. BAKER; N. VO; A. AGARWAL; K. DONOHUE; B. F. O'HARA. *Univ. of Tennessee Hlth. Sci. Ctr., Univ. of Tennessee Hlth. Sci. Ctr., Christian Brothers Univ., Signal Solutions LLC.*

10:00 BBB19 **347.19** Sazetidine-A reduces alcohol but not nicotine consumption in a mouse model of alcohol and nicotine co-addiction. J. C. TOUCHETTE*; K. Y. LEE; E. C. HARTELL; E. J. BADE; R. PEARSON; A. M. LEE. *Univ. of Minnesota Twin Cities.*

11:00 BBB20 **347.20** Microarchitecture of self-administration patterns during concurrent alcohol and nicotine access in mice: Temporal overlap in drug intakes amplifies bout size and extends bout duration. M. M. FORD*; S. S. OSWALD; A. D. MCCRACKEN; N. L. DAVIS. *Oregon Hlth. and Sci. Univ.*

POSTER

348. Amphetamines: Neurocircuitry and Cell Signaling

Theme G: Motivation and Emotion

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

8:00 BBB21 **348.01** Increased methamphetamine self-administration in hnrnph1 heterozygous mice directly implicates this RNA binding protein in genetic susceptibility to methamphetamine addiction. K. K. SZUMLINSKI*; J. SHAHIN; E. K. FULTZ; C. N. BROWN; N. YAZDANI; C. D. BRYANT. *Univ. California-Santa Barbara, Boston Univ. Sch. of Med.*

9:00 BBB22 **348.02** Manipulation of extracellular glutamate in the prelimbic and infralimbic cortices during the incubation of cocaine craving. C. B. SHIN*; T. J. TEMPLETON; E. S. GABLE; A. S. CHIU; T. E. KIPPIN; K. K. SZUMLINSKI. *Univ. of California, Santa Barbara.*

10:00 BBB23 **348.03** Neuroanatomically specific role of Homer2 expression in NAC regulation of methamphetamine reward sensitivity. C. N. BROWN*; E. K. FULTZ; T. E. KIPPIN; K. K. SZUMLINSKI. *UCSB Psychological and Brain Sci.*

11:00 BBB24 **348.04** Transcriptomic and neuroanatomical mechanisms of Hnrnph1 in methamphetamine reward. N. YAZDANI*; Q. T. RUAN; M. CHAU; E. R. REED; F. MORTAZAVI; D. ROSENE; J. GRANT; W. JOHNSON; C. D. BRYANT. *Boston Univ. Sch. of Med., Boston Univ., Boston Univ. Sch. of Med., The Univ. of New Orleans, Boston Univ. Sch. of Med.*

8:00 BBB25 **348.05** The effects of mGlu5 blockade within the nucleus accumbens shell on alcohol withdrawal-induced anxiety in mice. K. M. LEE*; M. A. COELHO; M. A. CLASS; K. R. SERN; M. D. BOCZ; M. SUZUKI; K. K. SZUMLINSKI. *Univ. of California Santa Barbara.*

9:00 BBB26 **348.06** Increased expression of AMPA glutamate receptors in the prefrontal cortex distinguishes abstinent rats from compulsive methamphetamine takers. J. L. CADET*; I. KRASNOVA; B. LADENHEIM; M. MCCOY; N. TERRY; D. WALTHER. *NIH/NIDA, NIH/NIDA.*

10:00 CCC1 **348.07** The dorsomedial striatum is critical for incubation of methamphetamine craving after voluntary abstinence. D. CAPRIOLI*; M. VENNIRO; M. ZHANG; A. LI; B. L. WARREN; Y. SHAHAM. *Natl. Inst. on Drug Abuse.*

11:00 CCC2 **348.08** A critical role of the central amygdala nucleus in relapse to methamphetamine seeking after voluntary abstinence. M. VENNIRO*; M. ZHANG; C. CIFANI; B. L. WARREN; J. M. BOSSERT; N. J. MARCHANT; C. CHIAMULERA; D. CAPRIOLI; Y. SHAHAM. *Natl. Inst. On Drug Abuse, Univ. of Camerino, Univ. of Verona.*

8:00 CCC3 **348.09** ▲Incubation of methamphetamine but not heroin craving after voluntary abstinence in male and female rats. M. ZHANG*; M. VENNIRO; Y. SHAHAM; D. CAPRIOLI. *NIH.*

9:00 CCC4 **348.10** Role of afferents into dorsal striatum in incubation of methamphetamine craving. X. LI*; F. SURJONO; T. ZERIC; J. BOSSERT; Y. SHAHAM. *Natl. Inst. On Drug Abuse.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 CCC5 **348.11** Diazepam inhibits phasic dopamine release in the nucleus accumbens and reverses the increase of phasic dopamine release induced by amphetamine. A. GOMEZ-A.; A. M. FIORENZA; S. L. BOSCHEN; A. H. SUGI; D. BECKMAN; S. T. FERREIRA; K. LEE; C. D. BLAHA; C. DA CUNHA*. *Univ. of North Carolina, Univ. Federal do Parana, Univ. Federal do Parana, Federal Univ. of Rio de Janeiro, Mayo Clin.*

11:00 CCC6 **348.12** Methamphetamine induces striatal dopamine efflux through interactions between VMAT2 and ς receptors. D. HEDGES*; E. Y. JANG; J. T. YORGASON; C. CARR; J. SKIDMORE; V. K. WEERASEKARA; F. P. BELLINGER; J. D. UYS; S. STEFFENSEN, 84602. *Brigham Young Univ., Daegu Haany Univ., Oregon Hlth. & Sci. Univ., Univ. of Hawaii, Med. Univ. of South Carolina.*

8:00 CCC7 **348.13** Methylphenidate significantly alters functional connectivity between the prefrontal cortex and ventral tegmental area dopamine neurons. I. DELA PENA*; W. SHI. *Loma Linda Univ., Loma Linda Univ.*

9:00 CCC8 **348.14** Effect of amphetamine sensitization on single unit activity in the rat dorsolateral striatum. R. I. GATICA*; M. I. AGUILAR-RIVERA; J. A. FUENTEALBA. *Pontificia Univ. Católica De Chile, Pontificia Univ. Católica De Chile, Pontificia Univ. Católica De Chile, UCSD.*

10:00 CCC9 **348.15** Roles of nucleus accumbens core and shell for methamphetamine-induced behavioral sensitization in rats. C. CHENG*; A. C. W. HUANG. *Fo Guang University, Psychology.*

11:00 CCC10 **348.16** Effects of TMEM168 overexpression on methamphetamine-induced hyperlocomotion and place preference, and anxiety in mice via regulating dopaminergic and GABAergic neuronal systems in the nucleus accumbens of mice. K. FU*; Y. MIYAMOTO; E. SAIKA; S. MURAMATSU; K. UNO; A. NITTA. *Univ. of Toyama, Jichi Med. Univ.*

8:00 CCC11 **348.17** Methamphetamine-induced dysfunction of NE signaling in the bed nucleus of the stria terminalis of the rat brain. J. PARK*; R. V. BHIMANI; K. T. WAKABAYASHI. *Univ. At Buffalo.*

9:00 CCC12 **348.18** Time correlated single photon counting *in vivo* reveals enhanced activation of D1-expressing medium spiny neurons in the dorsal striatum following acute amphetamine administration in mice. T. H. CHEUNG*; R. M. MIKOFSKY; T. ZERIC; S. D. CLARK; U. J. KANG; D. L. SULZER. *Columbia Univ.*

10:00 CCC13 **348.19** Medial prefrontal cortex is not required for amphetamine to produce acute-withdrawal related hypoactivity in rats. W. WHITE*; H. L. HOWARD; Z. S. ABBOTT; K. M. HAGER; K. L. EVERMAN; I. M. WHITE. *Morehead State Univ.*

11:00 CCC14 **348.20** The medial prefrontal cortex-basolateral amygdala pathway mediates methamphetamine-induced conditioned saccharin suppression: Evaluation of the reward comparison hypothesis. A. C. HUANG*; A. B. H. HE. *Fo Guang Univ, Psychology.*

8:00 CCC15 **348.21** Chemogenetic inhibition of CaMKII neurons in the rat dorsal medial prefrontal cortex attenuates methamphetamine addiction following concurrent sexual behavior. L. B. KUIPER*; L. M. COOLEN. *Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr.*

9:00 CCC16 **348.22** Glutamatergic output from the medial prefrontal cortex modulates the daily rhythm in amphetamine reward. I. C. WEBB*; G. G. WILSON; N. N. NEMATI; L. M. COOLEN. *Univ. of Mississippi Med. Ctr., Univ. of Mississippi Med. Ctr.*

10:00 CCC17 **348.23** Prelimbic α1-adrenergic receptors modulate extinction of both appetitive and aversive conditioned memories. E. LATAGLIATA*; G. CHIACCHIERINI; M. SANCANDI; S. PUGLISI-ALLEGRA. *Fndn. Santa Lucia, Sapienza Univ., Fndn. Santa Lucia.*

11:00 CCC18 **348.24** Inhibition of withdrawal induced neurogenesis in the dentate gyrus Inhibition of withdrawal-induced neurogenesis in the dentate gyrus blocks methamphetamine relapse. M. H. GALINATO*; J. LOCKNER; M. C. STAPLES; S. S. SOMKUWAR; J. SOBIERAJ; S. CHAING; M. FANNON; A. GHOFRANIAN; A. JOEA; A. I. NAVARRO; B. W. LUIKART; K. JANDA; C. MANDYAM. *UCSD, The Scripps Res. Inst., The Scripps Res. Inst., Dartmouth Geisel Sch. of Med.*

8:00 CCC19 **348.25** ▲ Contributions of neurotrophic factors to exercise-induced attenuation of methamphetamine-induced neurotoxicity. M. F. MURRAY*; A. E. SIMPSON; A. N. FRICKS-GLEASON. *Regis Univ.*

9:00 CCC20 **348.26** Neural substrates of conditioning and extinction on methamphetamine-induced conditioned place preference paradigm: An immunohistochemistry c-Fos and p-ERK staining. B. H. HE*; A. HUANG. *Fo Guang Univ.*

10:00 CCC21 **348.27** ▲ Voluntary exercise attenuates methamphetamine-induced monoaminergic neurotoxicity. A. SIMPSON*; M. F. MURRAY; A. N. FRICKS-GLEASON. *Regis Univ., Regis Univ.*

11:00 CCC22 **348.28** Regulator of G Protein Signaling-12 (RGS12) in the action of amphetamine and related drugs of abuse. J. D. GROSS*; A. SCHROER; K. WIX; D. P. SIDEROVSKI; V. SETOLA. *West Virginia Univ. Sch. of Med., West Virginia Univ.*

8:00 CCC23 **348.29** Sex differences in neural activation patterns within HPA axis associated brain regions following repeated methamphetamine exposure. J. JACOBSKIND*; Z. J. ROSINGER; D. G. ZULOAGA. *SUNY Albany.*

9:00 CCC24 **348.30** Dopamine transporter-inhibiting psychostimulants increase exocytotic dopamine release. P. CHALWADI; S. H. WALTERS; A. C. MICHAEL; P. A. GARRIS*. *Illinois State Univ., Univ. of Pittsburgh.*

POSTER

349. Cellular and Circuit Mechanisms of Cocaine Addiction

Theme G: Motivation and Emotion

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

8:00 CCC25 **349.01** Neural activity in the anterior insula tracks cocaine-induced devaluation of natural rewards. T. M. MOSCHAK*; E. A. WEST; R. M. HAAKE; X. WANG; R. M. CARELLI. *Univ. of North Carolina.*

9:00 CCC26 **349.02** Neuronal correlates of motivational sensitivity to natural and drug rewards. B. O'DONOVAN*; P. HASHEMI; S. SAMARANAYAKE; R. ROBKE; P. I. ORTINSKI. *Univ. of South Carolina, Univ. of South Carolina.*

10:00 DDD1 **349.03** Altered encoding of motivational stimuli in the basolateral and central amygdala in cocaine-experienced rats. K. J. STANSFIELD*; K. L. AGSTER; K. S. MCCONOMY; C. N. BROWN; M. R. PAYNE; M. P. SADDORIS. *Univ. of Colorado Boulder.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 DDD2 **349.04** Reduced dopamine as a substrate of aversive motivation. M. G. SPRING*; R. C. TWINING; M. A. ROBBLE; S. M. CONWAY; D. S. WHEELER; M. G. BLACKMORE; M. F. ROITMAN; R. A. WHEELER. *Marquette Univ., Univ. of Illinois at Chicago.*

8:00 DDD3 **349.05** Dissecting the role of the ventral pallidum in cocaine seeking. J. A. HEINSBROEK*; D. N. NEUHOFER; A. BOBADILLA; P. W. KALIVAS. *Med. Univ. of South Carolina.*

9:00 DDD4 **349.06** Social defeat stress augments economic demand for cocaine via CRF in the rat VTA. M. Z. LEONARD*; D. STEIN; J. F. DEBOLD; K. A. MICZEK. *Tufts Univ.*

10:00 DDD5 **349.07** The impact of cocaine self-administration on value signals in ventral striatum. A. C. BURTON*; G. B. BISSONETTE; K. C. HEATLEY; E. M. BLUME; M. L. DONNELLY; M. R. ROESCH. *Univ. of Maryland, Col. Park, Univ. of Maryland, Col. Park.*

11:00 DDD6 **349.08** Increased limbic connectivity strength and impaired social interaction, recognition memory, and ultrasonic vocalizations, 24 hours after single MDPV exposure. M. FEBO*; M. POMPILUS; J. A. PINO-REYES; S. E. KAPLITZ; N. T. CHOUDHURY; G. E. TORRES; L. M. COLON-PEREZ. *Univ. of Florida, Univ. of Florida.*

8:00 DDD7 **349.09** Enhancement of negative affect by abstinence from cocaine in a preclinical model. R. M. HAAKE*; E. A. WEST; X. WANG; E. L. THOMAS; R. M. CARELLI. *Univ. of North Carolina.*

9:00 DDD8 **349.10** Role of anterior dorsal lateral hypothalamic area perineuronal nets in the acquisition of cocaine-induced conditioned place preference and self-administration. J. M. BLACKTOP*; R. P. TODD; L. CHURCHILL; M. SLAKER; B. A. SORG. *Washington State Univ. Vancouver, Washington State Univ.*

10:00 DDD9 **349.11** Perineuronal nets protect parvalbumin neurons from the effects of cocaine-induced oxidative stress in the rat prefrontal cortex. M. SLAKER*; K. REYES; B. A. SORG. *Washington State Univ. Vancouver.*

11:00 DDD10 **349.12** Optogenetic manipulation of Parvalbumin interneurons in the central amygdala (CeA) modulates the negative affective states and the expression of corticotropin-releasing hormone within morphine withdrawal. L. WANG*; J. M. SHEN; F. F. WANG; L. MA. *The Ninth People's Hosp., Fudan Univ.*

8:00 DDD11 **349.13** Optogenetics reveals that dopamine signaling in the rostral-caudal NAc shell differentially inhibits/facilitates cocaine-induced natural reward devaluation and negative affect in a preclinical model. S. W. HURLEY*; E. A. WEST; R. M. CARELLI. *Univ. of North Carolina At Chapel Hill.*

9:00 DDD12 **349.14** Longitudinal changes in brain metabolic activity after escalation of cocaine self-administration. C. NICOLAS*; C. TAUBER; F. LEPELLETIER; S. CHALON; P. BELUJON; L. GALINEAU; M. SOLINAS. *Natl. Inst. On Drug Abuse-Irp, LNEC, INSERM, U1084, UMR INSERM U930, Univ. François Rabelais de Tours.*

10:00 DDD13 **349.15** Mitochondrial fission in nucleus accumbens projection neurons subtype promotes cocaine behavioral plasticity. R. CHANDRA*; M. ENGELN; L. RIGGS; C. FRANCIS; S. DAS; K. GIRVEN; A. AMGALAN; L. JENSEN; P. KONKALMATT; A. GANCARZ; S. GOLDEN; G. TURECKI; S. RUSSO; S. INIGUEZ; D. DIETZ; M. K. LOBO. *Univ. of Maryland, Baltimore, The George Washington Univ., Univ. at Buffalo, Mount Sinai Sch. of Med., Douglas Mental Hlth. Univ. Inst. and McGill Univ., California State Univ.*

11:00 DDD14 **349.16** Cocaine effects on dopamine neurons in mice are reduced by both deletion of GIRK2 channels specifically in dopamine neurons and with cocaine self-administration experience. A. M. HAGER*; S. DOMINGUEZ LOPEZ; K. WICKMAN; M. J. BECKSTEAD. *Univ. of Texas Hlth. Sci. Ctr. At San A, Univ. of Minnesota.*

8:00 EEE1 **349.17** Selective ablation of GIRK channels in dopamine neurons alters behavioral effects of cocaine in mice. N. M. MCCALL*; L. KOTECKI; S. DOMINGUEZ-LOPEZ; E. MARRON FERNANDEZ DE VELASCO; N. CARLBLOM; A. L. SHARPE; M. J. BECKSTEAD; K. WICKMAN. *Univ. of Minnesota, Univ. of Minnesota, The Univ. of Texas Hlth. Sci. Ctr. at San Antonio, The Univ. of Texas Hlth. Sci. Ctr. at San Antonio; Univ. of the Incarnate Word.*

9:00 EEE2 **349.18** Signaling kinetics of stimulated dopamine release in the nucleus accumbens core and shell are differentially altered following abstinence from cocaine self-administration in behaving rats. M. SADDORIS*. *Univ. of Colorado, Boulder.*

10:00 EEE3 **349.19** Role of endocannabinoid and dopamine signaling in cocaine-induced synaptic AMPAR depotentiation in the nucleus accumbens. A. E. INGEBRETSON*; M. C. HEARING; M. ESGUERRA; E. D. HUFFINGTON; M. J. THOMAS. *Univ. of Minnesota Dept. of Neurosci., Univ. of Minnesota Dept. of Neurosci.*

11:00 EEE4 **349.20** NMDAR dependent intracellular responses associated with cocaine conditioned place preference behavior. S. NYGARD; A. KLAMBATSEN; B. BALOUCH; V. L. QUINONES-JENAB*; S. JENAB. *Washington Univ. Sch. of Med., Hunter College, CUNY.*

8:00 EEE5 **349.21** Presynaptic adenosine A_{2A} receptor inhibition impacts behavioral sensitization to repeated cocaine but not repeated methamphetamine. N. HAYNES*; R. K. BACHTELL. *Univ. of Colorado.*

9:00 EEE6 **349.22** Evaluating of the role of nucleus accumbens nitric oxide and somatostatin release in cocaine seeking. M. D. SCOFIELD*; J. A. HEINSBROEK; C. GARCIA-KELLER; A. W. SMITH; C. D. GIPSON; P. W. KALIVAS. *Med. Univ. of South Carolina, Med. Univ. of South Carolina, Icahn Sch. of Med. an Mount Sinai, Arizona Stat Univ.*

10:00 EEE7 **349.23** Cocaine inhibits α6-containing nicotinic acetylcholine receptor-mediated currents. D. CHEN*; Q. SU; J. NEISEWANDER; J. WU. *NRC 445room, Barrow Neurolog. Inst., Yunfu People's Hosp., Arizona State Univ.*

11:00 EEE8 **349.24** Dysregulation of serotonergic function in orbitofrontal cortex during cocaine withdrawal. A. M. WRIGHT*; A. ZAPATA; A. F. HOFFMAN; C. R. LUPICA. *Natl. Inst. On Drug Abuse.*

8:00 EEE9 **349.25** The 5-HT1B serotonin receptor potentiates methylphenidate-induced gene regulation in the striatum. D. ALTER; J. A. BEVERLEY; H. STEINER*. *Chicago Med. School/RFUMS.*

9:00 EEE10 **349.26** Dopamine neurotransmission in the medial dorsal striatum is associated with vulnerability to cocaine addiction. J. K. SHAW*; R. A. ESPAÑA. *Drexel Univ. Col. of Med.*

10:00 EEE11 **349.27** ● Combining multiple schedules of reinforcement with glutamate biosensors to examine the effects of cocaine and food on prelimbic glutamatergic signaling. S. R. BATTEN*; G. A. GERHARDT; J. S. BECKMANN. *Univ. of Kentucky, Univ. of Kentucky.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

350. Cocaine: Brain Circuitry I

Theme G: Motivation and Emotion

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

8:00 EEE12 **350.01** Resolving the contribution of midline thalamic nuclei efferents during reinstatement of drug-seeking using $G_{i/o}$-coupled DREADDs. A. M. WUNSCH*; L. M. YAGER; C. LE; E. A. DONCKELS; J. F. NEUMAIER; S. M. FERGUSON. *Seattle Children's Res. Inst., Univ. of Washington, Univ. of Washington, Univ. of Washington.*

9:00 EEE13 **350.02** Role of a CRF-mediated dopaminergic projection from the ventral tegmental area to the prelimbic cortex in stress-induced cocaine seeking. E. VAN NEWENHIZEN*; O. VRANJKOVIC; J. M. BLACKTOP; T. M. KLOEHN; G. S. STINNETT; C. H. GERNDT; K. KETCHESIN; M. E. NORDNESS; C. R. MUELLER; J. R. MCREYNOLDS; E. M. DONCHECK; D. A. BAKER; A. F. SEASHOLTZ; J. R. MANTSCH. *Marquette Univ., Univ. of Michigan.*

10:00 EEE14 **350.03** Glucocorticoid-endocannabinoid interactions in the prelimbic cortex mediate stress-potentiated reinstatement of cocaine seeking through increased activation of the cortico-accumbens pathway. J. R. MCREYNOLDS*; E. M. DONCHECK; O. VRANJKOVIC; E. N. GRAF; X. LIU; T. STOLLENWERK; P. J. GOTTSHALL; Q. LIU; C. J. HILLARD; J. R. MANTSCH. *Marquette Univ., Med. Col. of Wisconsin.*

11:00 FFF1 **350.04** ▲ Neurocircuitry and cannabinoid receptor 1 involvement in cocaine-taking and cocaine-seeking behavior following chronic electric footshock stress-induced escalation of self-administration in rats. C. P. WOLF*; J. R. MCREYNOLDS; D. M. STARCK; C. J. HILLARD; J. R. MANTSCH. *Marquette Univ., Med. Col. of Wisconsin.*

8:00 FFF2 **350.05** ▲ Proestrus-level 17β-estradiol potentiates the reinstatement of cocaine seeking. M. C. DEBAKER*; E. M. DONCHECK; J. J. TUSCHER; L. A. URBANIK; L. M. BARRON; L. J. SCHUH; G. T. LIDDIARD; E. E. HERDEMAN; K. M. FRICK; J. R. MANTSCH. *Marquette Univ., Univ. of Wisconsin-Milwaukee.*

9:00 FFF3 **350.06** Localization and mechanisms underlying 17β-estradiol-potentiated reinstatement of cocaine-seeking behavior in female rats. E. M. DONCHECK*; J. J. TUSCHER; L. A. URBANIK; M. C. DEBAKER; L. M. BARRON; K. M. FRICK; Q. LIU; C. J. HILLARD; J. R. MANTSCH. *Marquette Univ., Univ. of Wisconsin-Milwaukee, Med. Col. of Wisconsin.*

10:00 FFF4 **350.07** Transient inactivation of the paraventricular nucleus of the thalamus differentially affects cue-induced reinstatement in sign-trackers and goal-trackers. B. N. KUHN*; M. S. KLUMPNER; S. FLAGEL. *Mol. and Behavioral Neurosci. Inst., Univ. of Michigan, Univ. of Michigan.*

11:00 FFF5 **350.08** Molecular and region specific effects of garcinol on cocaine-associated memory reconsolidation. M. S. MONSEY*; D. M. GERHARD; R. S. DUMAN; J. R. TAYLOR. *Yale Univ. Sch. of Med., Yale Univ., Yale Univ. Sch. of Med.*

8:00 FFF6 **350.09** Blocking D1 receptors in the agranular insular cortex reduces cued and cocaine-prime reinstatement in rats. C. V. COSME*; A. L. GUTMAN; R. T. LALUMIERE. *Univ. of Iowa.*

9:00 FFF7 **350.10** The infralimbic and prelimbic cortices contribute to the inhibitory control of cocaine-seeking behavior during a discriminative stimulus task in rats. A. L. GUTMAN*; V. A. EWALD; C. V. COSME; W. R. WORTH; R. T. LALUMIERE. *Univ. of Iowa, Univ. of Iowa.*

10:00 FFF8 **350.11** Activation of the infralimbic cortex using a stable step-function opsin attenuates cocaine seeking during reinstatement after extinction training. V. A. MULLER EWALD*; W. R. WORTH; R. T. LALUMIERE. *Univ. of Iowa.*

11:00 FFF9 **350.12** Cocaine self-administration alters endogenous pituitary adenylate cyclase activating peptide (PACAP) levels in the bed nucleus of the stria terminalis (BNST). O. MILES*; E. A. THRAILKILL; A. K. LINDEN; V. MAY; M. E. BOUTON; S. E. HAMMACK. *Univ. of Vermont.*

8:00 FFF10 **350.13** Orexin/hypocretin and dynorphin innervation within bed nucleus of stria terminalis: Neuroanatomy and behavioral pharmacology in models of mood and addiction. S. J. SIMMONS*; L. MO; F. H. TRAN; T. A. GENTILE; J. W. MUSCHAMP. *Temple University, Sch. of Med., Temple University, Sch. of Med.*

9:00 FFF11 **350.14** Serotonin 1B receptors in the Bed Nucleus of the Stria Terminalis contribute to the negative/anxiogenic effects of cocaine. A. KLEIN*; S. AKHAVAN; M. BRITO; D. FLANAGAN; K. LEE; A. S. PATIL; E. M. PURVIS; A. WEI; L. ZHOU; A. ETTENBERG. *UC Santa Barbara.*

10:00 FFF12 **350.15** Effects of dopamine receptor modulation in the lateral habenula on operant responding for IV cocaine. K. SHELTON*; E. M. PURVIS; A. GUILLEN; T. DO; A. ETTENBERG. *Univ. of California, Santa Barbara, Univ. of California, Santa Barbara.*

11:00 FFF13 **350.16** The involvement of D2 receptor in basolateral amygdala in the companions-exerted decreasing effects on cocaine conditioning. W. TZENG*; L. YU. *NATIONAL CHENG KUNG UNIVERSITY, Inst. of Behavioral Medicine, Natl. Cheng Kung Univ. Col. of Med.*

POSTER

351. Cocaine: Cell Signaling

Theme G: Motivation and Emotion

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

8:00 FFF14 **351.01** AKAP150 in the nucleus accumbens shell promotes cocaine reinstatement by facilitating PKA phosphorylation of GluA1 AMPA receptors. L. A. GUERCIO*; M. E. WIMMER; H. D. SCHMIDT; C. PIERCE. *Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania.*

9:00 FFF15 **351.02** Neuronal-enriched rna-binding protein hud and microrna mir-495 oppositely regulate cocaine-induced addiction-related gene expression and place preference behavior. R. J. OLIVER*, JR; R. M. BASTLE; J. L. BRIGMAN; A. M. ALLAN; J. L. NEISEWANDER; N. I. PERRONE-BIZZOZERO. *Univ. of New Mexico HSC, Arizona State Univ.*

10:00 FFF16 **351.03** Discovery of selective serotonin (5-HT) 5-HT_{2C} receptor (5-HT_{2C}R) positive allosteric modulators as potential pharmacotherapy for cocaine use disorder. J. ZHOU*; E. A. WOLD; C. WILD; C. MCALLISTER; Y. DING; N. C. ANASTASIO; R. G. FOX; S. J. STUTZ; M. A. WHITE; H. CHEN; K. A. CUNNINGHAM. *Univ. of Texas Med. Br., Univ. of Texas Med. Br., Univ. of Texas Med. Br.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 FFF17 **351.04** $Ca_v1.2$ expression in dopamine D1-receptor containing neurons is required for extinction of cocaine-associated behaviors. C. E. BURGDORF*; K. C. SCHIERBERL; A. S. LEE; S. BROOKSHIRE; T. A. VAN KEMPEN; V. MUDRAGEL; T. A. MILNER; M. J. GLASS; R. L. HUGANIR; A. M. RAJADHYAKSHA. *Weill Cornell Med. Col., Weill Cornell Med. Col., Johns Hopkins Univ. Sch. of Med.*

8:00 FFF18 **351.05** Ventral tegmental area L-type calcium channels mediate cue-induced cocaine seeking and dopamine release during early withdrawal. E. J. NUNES*; S. M. HUGHLEY; K. M. SMALL; A. M. RAJADHYAKSHA; N. A. ADDY. *Yale Univ., Weill Cornell Med. Col.*

9:00 FFF19 **351.06** $Ca_v1.3$ activation within the VTA regulates addictive and depressive-like behaviors. A. MARTINEZ-RIVERA*; J. HAO; T. F. TROPEA; J. STRIESSNIG; N. A. ADDY; A. M. RAJADHYAKSHA. *Weill Cornell Med. Col., Weill Cornell Med. Col., Univ. of Innsbruck, Univ. of Innsbruck, Yale Sch. of Med., Yale Grad. Sch. of Arts and Sci.*

10:00 FFF20 **351.07** Prelimbic cortical firing is decreased during cocaine self-administration in rats. T. S. DENNIS*; T. C. JHOU; J. F. MCGINTY. *Med. Univ. of South Carolina.*

11:00 FFF21 **351.08** SRC family kinase inhibition prevents the suppressive effect of BDNF on cocaine-seeking and BDNF induced phosphorylation of ERK, GluN2A, and GluN2B. S. M. BARRY*; J. F. MCGINTY. *Med. Univ. of South Carolina.*

8:00 FFF22 **351.09** Intra-prelimbic inhibition of striatal-enriched tyrosine phosphatase prevents relapse to cocaine-seeking in rats. B. M. SIEMSEN*; S. M. BARRY; P. L. LOMBROSO; J. F. MCGINTY. *Med. Univ. of South Carolina, Yale Univ. Sch. of Med.*

9:00 FFF23 **351.10** Effect of adolescent isolation on drug responsivity: Alterations in C-fos activation and paired pulse facilitation. A. FOSNOCHT*; A. U. DEUTSCHMANN; A. S. ELLIS; L. BRIAND. *Temple Univ., Temple Univ.*

10:00 FFF24 **351.11** ▲ Cocaine addiction increases vulnerability to stress: Role of AMPAR trafficking. A. S. ELLIS*; A. Q. FOSNOCHT; K. E. LUCERNE; L. A. BRIAND. *Temple Univ.*

11:00 FFF25 **351.12** Intraaccumbal administration of ζ inhibitory peptide (ZIP) blocks cocaine reinstatement and restores accumbal LTD. L. A. BRIAND*; A. U. DEUTSCHMANN; J. D. LENZ. *Temple Univ.*

8:00 FFF26 **351.13** The effects of cocaine self-administration and extinction on NMDA receptor-mediated currents. M. T. SEPULVEDA-ORENGO*; K. L. HEALEY; K. J. REISSNER. *Univ. of North Carolina at Chapel Hill Dept. of Psychology.*

9:00 GGG1 **351.14** Augmentation of D-serine reduces reinstatement to cocaine seeking. K. L. HEALEY*; B. WU; M. SEPULVEDA-ORENGO; K. J. REISSNER. *Univ. of North Carolina At Chapel Hill.*

10:00 GGG2 **351.15** The potential role of Ras in cocaine and nicotine self-administration in mice. R. E. BERNARDI*; A. OLEVSKA; R. HEUMANN; E. SANTOS; R. SPANAGEL. *Central Inst. of Mental Hlth., Ruhr-University, Ctr. de Investigación del Cáncer-Instituto de Biología Mol. y Celular del Cáncer.*

11:00 GGG3 **351.16** Cocaine induced neurotoxicity < stimulant behavior is mediated by ulk1 dependent autophagy. P. P. GUHA*; P. GUHA. *Johns Hopkins Univ.*

8:00 GGG4 **351.17** Autophagy mediates cocaine-induced behavioral effects in mice. M. M. HARRAZ*; P. GUHA; P. CORTES; S. H. SNYDER. *Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ.*

9:00 GGG5 **351.18** ▲ Metabolomics changes within the brain mesolimbic dopamine system following cocaine self-administration. N. RODRIGUEZ-SOSA*; S. SERRANO-TORRES; J. R. ROUSSEL; N. E. CHORNA; C. S. MALDONADO-VLAAR. *Univ. of Puerto Rico-Rio Piedras, Univ. of Puerto Rico-Medical Sci. Campus.*

10:00 GGG6 **351.19** Dopaminergic dynamics underlying sex-specific reward processing. E. S. CALIPARI*; B. JUAREZ; C. MOREL; D. M. WALKER; E. RIBERIO; C. RAMAKRISHNAN; K. DEISSEROTH; M. HAN; E. J. NESTLER. *Mount Sinai Sch. of Med., Stanford Univ.*

11:00 GGG7 **351.20** Casein-kinase 2 activity may mediate camkiia-dependent effects on reconsolidation of a cocaine-associated cue memory. J. J. WEEKS*; M. T. RICH; V. NAGARAJAN; M. M. TORREGROSSA. *Univ. of Pittsburgh.*

POSTER

352. Nicotine: Neural Mechanisms of Addiction

Theme G: Motivation and Emotion

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

8:00 GGG8 **352.01** A corticothalamic inhibitory control pathway mediates smoking relapse vulnerability. B. FROELIGER*; S. BELL; P. A. MCCONNELL; M. SWEITZER; F. J. MCCLERNON. *Med. Univ. of South Carolina, Duke Univ. Med. Ctr.*

9:00 GGG9 **352.02** Nucleus accumbens BDNF overexpression alters the behavioral response to nicotine. S. KIRBY*; K. C. BURGESS; L. A. BEUTTEL; D. J. PETERSON; C. A. BRADLEY; M. ZHU; M. I. PALMATIER, PhD; R. W. BROWN. *East Tennessee State Univ., East Tennessee State Univ.*

10:00 GGG10 **352.03** Does periadolescent nicotine-induced sensitization to cocaine require activation of microglia and expression of ΔFosB in the brain of the rat? P. S. NAGCHOWDHURI; H. L. WILLIAMS; B. A. MCMILLEN*. *East Carolina Univ.*

11:00 GGG11 **352.04** Dysregulation of ACh-GABA-CRF neurotransmission in the CeA contributes to nicotine self-administration in dependent rats. M. KALLUPI*; G. DE GUGLIELMO; P. SCHWEITZER; R. O. MESSING; O. GEORGE. *Scripps Res. Inst., The Scripps Res. Institute, Committee on the Neurobio. of Addictive Disorders, Div. of Pharmacol. and Toxicology, Col. of Pharmacy, The Univ. of Texas at Austin.*

8:00 GGG12 **352.05** Kappa opioid modulation of GABA transmission in the central amygdala is reversed upon chronic nicotine exposure. P. SCHWEITZER*; M. KALLUPI; G. F. KOOB; O. GEORGE. *Scripps Res. Inst., Natl. Inst. on Alcohol Abuse and Alcoholism.*

9:00 GGG13 **352.06** Neurochemical profile of CNS neurons activated by menthol in GAD67-GFP knock in mice. O. DEHKORDI*; J. E. ROSE; A. JAYAM-TROUTH; R. M. MILLIS; K. F. MANAYE; M. I. DÁVILA-GARCÍA. *Howard Univ., Duke Univ. Med. Ctr., American Univ. of Antigua, Howard Univ., Howard Univ.*

10:00 GGG14 **352.07** ▲ The dopamine D1 antagonist SCH23390 and the serotonin 5HT2C agonist lorcaserin potentiate chronic nicotine infusion induced reduction of nicotine self-administration in rats. D. DIPALMA; B. WILLETTE; C. WELLS; S. SLADE; B. J. HALL; A. H. REZVANI; E. D. LEVIN*. *Duke Univ., Duke Univ. Med. Ctr.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 GGG15 **352.08** Nicotine selectively remodels dendrites in the ventral and dorsolateral striatum. H. C. BERGSTROM*; D. G. EHLINGER; J. BURKE; R. F. SMITH; C. G. MCDONALD. *Vassar Col., Harvard Med. Sch., George Mason Univ.*

8:00 GGG16 **352.09** Imaging CA1-hippocampal ensembles during nicotine-contextual associations. L. XIA*; S. K. NYGARD; G. G. SOBCZAK; N. J. HOURGUETTES; M. R. BRUCHAS. *Washington Univ. In St. Louis, Washington Univ. in St louis, Washington Univ. in St. Louis, Washington Univ. in St Louis.*

9:00 GGG17 **352.10** Neural mechanisms of emotion regulation in cigarette smokers. S. BELL*; C. EICHBERG; P. A. MCCONNELL; K. GRAY; F. J. MCCLERNON; B. FROELIGER. *Med. Univ. of South Carolina, Med. Univ. of South Carolina, Duke Univ. Med. Ctr., Med. Univ. of South Carolina, Med. Univ. of South Carolina.*

10:00 GGG18 **352.11** Hippocampus goes depression: Structural and functional correlates of negative mood states after smoking cessation. M. N. SMOLKA*; F. BÖHME; C. BURRASCH; N. B. KROEMER. *Technische Univ. Dresden.*

11:00 GGG19 **352.12** Regulation of metabotropic glutamate receptor 5 phosphorylation by c-jun n-terminal kinase. S. SEO*; I. RYU; J. KIM; J. KIM; J. YANG; J. OH; E. CHOE. *Neurosci. Lab. of Addiction Res., Inst. of Fisheries Sci.*

8:00 GGG20 **352.13** Double jeopardy: Obese smokers show hypoactivation in inhibitory control brain regions compared to normal weight counterparts during smoking cue exposure. A. V. ELY*; K. JAGANNATHAN; N. HAGER; H. PATER; T. R. FRANKLIN. *UCSD, Univ. of Pennsylvania.*

9:00 GGG21 **352.14** ● Substance P neurotransmission in the interpeduncular nucleus contributes to nicotine sensitization. B. L. EGGAN*; S. E. MCCALLUM. *Albany Med. Col., Albany Med. Col.*

10:00 GGG22 **352.15** ● Effects of nicotine withdrawal and Volinanserin on sleep quality in the rat. J. C. SHAHIN; J. J. BAUTISTA; J. J. IZYGON; D. M. NGHIEM; M. M. HENCEROTH; E. S. BURSTEIN; C. P. WARD*; D. H. MALIN. *Univ. of Houston Clear Lake, ACADIA Pharmaceuticals.*

11:00 GGG23 **352.16** Disruption of sleep patterns in rats during continuous nicotine infusion. E. NEYHART*; J. C. SHAHIN; J. J. BAUTISTA; J. J. IZYGON; D. M. NGHIEM; M. M. HENCEROTH; D. H. MALIN; C. P. WARD. *Univ. of Houston-Clear Lake.*

8:00 GGG24 **352.17** Nicotine administration and withdrawal alters sleep and EEG patterns in mice. H. L. MATHEWS*; L. JIMENEZ; S. AHMAD; J. A. STITZEL. *Univ. of Colorado Boulder Dept. of Psychology and Neurosci., Univ. of Colorado - Boulder, Inst. for Behavioral Genet., Univ. of Colorado - Boulder.*

9:00 GGG25 **352.18** Investigating the role of the α 7 nicotinic acetylcholine receptors in nicotine reward. A. JACKSON*; P. MULDOON; M. DAMAJ. *Virginia Commonwealth Univ. Hlth. Syst.*

10:00 GGG26 **352.19** The 5HT2a antagonist volinanserin attenuates spontaneous nicotine withdrawal syndrome in the rat. D. H. MALIN*; S. GADAM; D. J. MCGHIEY; C. L. AGUILAR; J. R. CAMPBELL; R. N. HUGHES; L. CASTILLO; P. GOYARZU; E. S. BURSTEIN; C. A. MADISON. *Univ. of Houston Clear Lake, Univ. of Houston-Clear Lake, Univ. of Houston-Clear Lake, ACADIA Pharmaceuticals.*

11:00 HHH1 **352.20** Molecular histochemistry identifies peptidomic organization and reorganization along striatal projection units. A. HISHIMOTO*; H. NOMARU; A. NISHI; K. YE; J. LIM; J. T. AGUILAN; E. NIEVES; G. KANG; R. H. ANGELETTI; N. HIROI. *Kobe Univ. Grad. Sch. of Med., Albert Einstein Col. of Med., Albert Einstein Col. of Med., Albert Einstein Col. of Med., Albert Einstein Col. of Med., Albert Einstein Col. of Med.*

8:00 HHH2 **352.21** Chronic nicotine induces neuroadaptations in striatopallidal D2 pathway mediated by NR2B containing silent synapses. J. XIA; J. A. BEELER*. *Queens Col. CUNY.*

8:00 DP08 **352.22** (Dynamic Poster) A conditioned place preference forward genetic screen in zebrafish identifies a novel locus affecting nicotine preference in fish and smoking behavior in humans. C. H. BRENNAN*; A. J. BROCK; M. O. PARKER; V. KUAN; D. JOLLIFFE; A. SUDWARTS; A. R. MARTINEAU; R. T. WALTON. *Queen Mary Univ. of London, Queen Mary Univ. of London, Portsmouth Univ., Queen Mary Univ. of London.*

10:00 HHH3 **352.23** Examination of the neurochemical mechanisms that modulate sex differences in nicotine withdrawal. R. J. FLORES GARCIA*; L. CARCOBA; K. URIBE; L. E. O'DELL. *Univ. of Texas at El Paso, Univ. of Texas at El Paso.*

11:00 HHH4 **352.24** Light-enhanced startle sensitivity to acute nicotine withdrawal. R. C. BARNET*; A. C. HENNINGS. *Col. William & Mary.*

8:00 HHH5 **352.25** HIV-1 proteins influence novelty-seeking behavior and alter region-specific transcriptional responses to chronic nicotine treatment in HIV-1Tg rats. Z. YANG*; T. NESIL; S. L. CHANG; M. D. LI. *Zhejiang Univ., Univ. of Virginia, Seton Hall Univ., Seton Hall Univ.*

9:00 HHH6 **352.26** ● Blunted nicotine-induced neural activity in the habenula-interpeduncular nucleus circuit in response to chronic nicotine history. H. ZHANG*; M. D. EHLERS. *Pfizer, Inc, Biogen.*

10:00 HHH7 **352.27** Oxytocin phenocopies the effects of dopamine receptor antagonism on nicotine motivation. T. E. GRIEDER*; M. YEE; O. GEORGE; D. VAN DER KOOY. *Univ. Toronto, The Scripps Res. Inst.*

POSTER

353. Human Cognition and Memory II

Theme H: Cognition

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

8:00 HHH8 **353.01** Brain reorganization following adaptive working load cognitive training in multiple sclerosis. L. BONZANO*; L. PEDULLÀ; M. PARDINI; A. TACCHINO; G. BRICHETTO; M. BOVE. *Univ. Genoa, Multiple Sclerosis Italian Fndn.*

9:00 HHH9 **353.02** Predicting variations in cognitive load: A multimodal approach. M. A. NOLAN*; J. R. WILLIAMSON; M. D. EDDY; J. M. MORAN; C. J. SMALT; T. PATEL; T. F. QUATIERI; R. J. MCKINDLES. *Massachusetts Inst. of Technol. - Lincoln La, MIT Lincoln Lab., US Army Natick Soldier Research, Develop. and Engin. Ctr., Tufts Univ.*

10:00 HHH10 **353.03** Structural plasticity in healthy elderly after working memory training. A randomized control-group trial. N. HUDL*; J. WEICKER; A. VILLRINGER; A. THOENE-OTTO. *Max Planck Inst. For Human Cognitive and Brain Sci., Max Net Aging Res. Sch., Univ. of Leipzig, Uni.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 HHH11 **353.04** Suppression of brain response to a task-irrelevant visual stimulus emerges in a visual hemifield on which VSTM task was imposed. A. SAYAMA*; T. URAKAWA; A. KITAMI; H. AZETAKA; O. ARAKI. *Tokyo Univ. of Sci.*

8:00 HHH12 **353.05** Working memory performance in the elderly closely relates to α oscillations and is predicted by integrity of the parahippocampal cortex and white matter tracts. T. K. STEIGER*; N. A. HERWEG; M. M. MENZ; N. BUNZECK. *Univ. of Luebeck, Univ. Med. Ctr. Hamburg-Eppendorf.*

9:00 HHH13 **353.06** Learning working memory gating policies. A. BHANDARI*; M. J. FRANK; D. BADRE. *Brown Univ., Brown Univ.*

10:00 HHH14 **353.07** Single neuron study of memory for audio-visual episodes in the human brain. E. KRAUSE*; H. TANG; M. ISON; I. FRIED; G. KREIMAN. *Harvard Univ., Harvard Univ., UCLA.*

11:00 HHH15 **353.08** Relationships between ongoing activity fluctuation in the medial temporal lobe and subsequent memory performance. R. KEERATIVITTAYAYUT*; R. AOKI; M. TAGHIZADEH SARABI; K. NAKAHARA. *Kochi Univ. of Technol.*

8:00 HHH16 **353.09** Shifting the balance between pattern separation and completion: Recent memory retrieval increases people's subsequent ability to recall associations. A. PATIL*; F. MIAN; J. LEE; K. DUNCAN. *Univ. of Toronto.*

9:00 HHH17 **353.10** Task representations in the dorsolateral prefrontal cortex. J. DERAEVE*; E. VASSENA; W. ALEXANDER. *Univ. Gent.*

10:00 HHH18 **353.11** Working memory capacity determines maximum chunk sizes. M. V. TSODYKS*; Y. MI. *Weizmann Inst. of Sci.*

11:00 HHH19 **353.12** Recollection precision is supported by posterior-medial hippocampal networks: Causal evidence from non-invasive brain stimulation. A. NILAKANTAN*; D. BRIDGE; E. GAGNON; J. VOSS. *Northwestern Univ.*

8:00 HHH20 **353.13** Externalizing the internal process of context reinstatement through closed-loop neurofeedback. M. T. DEBETTENCOURT*; N. B. TURK-BROWNE; K. A. NORMAN. *Princeton Univ.*

9:00 HHH21 **353.14** Targeted brain stimulation to modulate memory in humans. Y. EZZYAT*; J. E. KRAGEL; J. F. BURKE; D. F. LEVY; L. O'SULLIVAN; P. WANDA; M. R. SPERLING; G. A. WORRELL; M. T. KUCEWICZ; K. A. DAVIS; T. H. LUCAS; C. S. INMAN; B. C. LEGA; B. C. JOBST; S. A. SHETH; K. ZAGHLOUL; J. M. STEIN; S. R. DAS; R. GORNIAK; D. S. RIZZUTO; M. J. KAHANA. *Univ. of Pennsylvania, Univ. of California, San Francisco, Univ. of Pennsylvania, Thomas Jefferson Univ. Hosp., Mayo Clin., Hosp. of the Univ. of Pennsylvania, Emory Univ. Hosp., Univ. of Texas Southwestern Med. Ctr., Dartmouth-Hitchcock Med. Ctr., Columbia Univ. Med. Ctr., NIH.*

10:00 HHH22 **353.15** Pre-stimulus oscillatory activity reveals a preparatory form of episodic retrieval orientation. M. H. PRICE; E. N. WRIGHT; J. A. LACKEY; E. A. GRIFFITHS; J. D. JOHNSON*. *Univ. of Missouri, Univ. of Missouri, Univ. of Surrey, Univ. of Missouri.*

11:00 HHH23 **353.16** Large-scale assessment of the effects of direct electrical stimulation on brain network activity. M. J. KAHANA*; Y. EZZYAT; B. C. LEGA; J. W. GERMI; G. A. WORRELL; M. T. KUCEWICZ; M. R. SPERLING; C. S. INMAN; P. C. HORAK; K. A. DAVIS; K. ZAGHLOUL; S. A. SHETH; J. M. STEIN; S. R. DAS; R. GORNIAK; D. S. RIZZUTO. *Univ. Pennsylvania, Univ. of Texas Southwestern, Mayo Clin., Thomas Jefferson Univ. Hosp., Emory Univ. Hosp., Dartmouth-Hitchcock Med. Ctr., Hosp. of the Univ. of Pennsylvania, NIH, Columbia Univ.*

8:00 HHH24 **353.17** Electrophysiological biomarkers of successful spatial memory encoding. A. JOHRI*; J. MILLER; C. NOVICH; J. JACOBS; M. KAHANA. *Univ. of Pennsylvania, Columbia Univ., Univ. of Pennsylvania.*

9:00 HHH25 **353.18** Identifying biomarkers of spatial memory with direct brain recordings in the Treasure Hunt task. J. MILLER*; A. WATROUS; C. NOVICH; S. LEE; M. SPERLING; A. SHARAN; G. WORRELL; B. BERRY; B. LEGA; B. JOBST; K. DAVIS; S. SHETH; S. DAS; J. STEIN; R. GORNIAK; D. RIZZUTO; J. JACOBS. *Columbia Univ., Thomas Jefferson Univ., Mayo Clin., Univ. of Texas, Southwestern, Geisel Sch. of Med. at Dartmouth, Hosp. of the Univ. of Pennsylvania, Columbia Univ. Med. Ctr., Univ. of Pennsylvania.*

10:00 HHH26 **353.19** Rostral-caudal and hemispheric differences in human hippocampal θ oscillations during episodic memory encoding. J. LIN*; M. KAHANA; D. RIZZUTO; B. LEGA. *Univ. of Texas Southwestern Med. Ctr., Univ. of Pennsylvania.*

11:00 HHH27 **353.20** Architecture of a whole-brain ECoG memory network reveals asynchronous activity of MTL during encoding. E. A. SOLOMON*; M. R. SPERLING; G. A. WORRELL; B. M. BERRY; K. A. DAVIS; C. S. INMAN; B. C. LEGA; B. C. JOBST; S. A. SHETH; K. ZAGHLOUL; J. M. STEIN; S. R. DAS; R. GORNIAK; D. S. RIZZUTO; M. KAHANA. *Univ. of Pennsylvania, Thomas Jefferson Univ., Mayo Clin., Hosp. of the Univ. of Pennsylvania, Emory Univ., UT Southwestern Med. Ctr., Dartmouth Giesel Sch. of Med., Columbia Univ., Natl. Inst. of Neurolog. Disorders and Stroke, Hosp. of the Univ. of Pennsylvania, Univ. of Pennsylvania.*

8:00 HHH28 **353.21** Boundary-related neural oscillations in the human hippocampal formation. S. LEE*; J. MILLER; A. WATROUS; M. SPERLING; A. SHARAN; G. WORRELL; B. BERRY; B. LEGA; B. JOBST; K. DAVIS; R. GROSS; S. SHETH; S. DAS; J. STEIN; R. GORNIAK; D. RIZZUTO; J. JACOBS. *Ctr. For Mind / Brain Sciences, Univ. of Trento, Columbia Univ., Thomas Jefferson Univ., Mayo Clin., UT Southwestern, Dartmouth–Hitchcock Med. Ctr., Hosp. of the Univ. of Pennsylvania, Emory Univ., Columbia Univ. Med. Ctr., Univ. of Pennsylvania.*

9:00 HHH29 **353.22** Direct brain recordings reveal patterns of θ and α oscillations related to spatial navigation and memory. U. R. MOHAN*; J. MILLER; A. WATROUS; S. LEE; M. SPERLING; A. SHARAN; G. WORRELL; B. BERRY; B. LEGA; B. JOBST; K. DAVIS; R. GROSS; S. SHETH; S. DAS; J. STEIN; R. GORNIAK; D. RIZZUTO; J. JACOBS. *Columbia Univ., Thomas Jefferson Univ. Hosp., Thomas Jefferson Univ. Hosp., Mayo Clin., Univ. of Texas-Southwestern, Dartmouth Univ., Hosp. of the Univ. of Pennsylvania, Emory Univ., Columbia Univ. Med. Ctr., Univ. of Pennsylvania, Hosp. of the Univ. of Pennsylvania, Thomas Jefferson Univ. Hosp., Univ. of Pennsylvania.*

10:00 HHH30 **353.23** Strategic orienting of retrieval processes toward simulated memories of different artificial remoteness. E. K. LEIKER*; E. A. GRIFFITHS; E. N. WRIGHT; J. D. JOHNSON. *Univ. of Missouri, Univ. of Surrey.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 HHH31 **353.24** Effects of electrical brain stimulation location on interictal epileptiform activity. B. C. JOBST*; P. HORAK; A. ROBBINS; S. MEISENHELTER; M. TESTORF; A. CONNOLLY; M. SPERLING; A. ASADI-POOYA; G. WORRELL; B. BERRY; K. DAVIS; B. LEGA; K. ZAGHLOUL; R. GROSS; J. STEIN. *Dartmouth-Hitchcock Med. Ctr., Geisel Sch. of Med. at Dartmouth, Thayer Sch. of Engin. at Dartmouth, Thomas Jefferson Univ. Hosp., Mayo Clin., Hosp. of the Univ. of Pennsylvania, Univ. of Texas Southwestern, Natl. Inst. of Neurolog. Disorders and Stroke, Emory Univ.*

8:00 HHH32 **353.25** ● Electrocorticographic changes in hippocampal oscillations during memory tasks and spatial navigation in ambulatory humans. S. MEISENHELTER*; M. E. TESTORF; P. C. HORAK; N. R. HASULAK; T. K. TCHENG; D. S. RIZZUTO; M. J. KAHANA; B. C. JOBST. *Dartmouth Col. Geisel Sch. of Med., NeuroPace, Inc., Univ. of Pennsylvania.*

9:00 HHH33 **353.26** Human memory enhancement through stimulation of middle temporal gyrus. M. T. KUCEWICZ*; B. M. BERRY; Y. EZZYAT; M. KHADJEVAND; L. MILLER; V. KREMEN; B. H. BRINKMANN; M. R. SPERLING; B. C. JOBST; R. E. GROSS; B. LEGA; S. A. SHETH; J. M. STEIN; S. R. DAS; R. GORNIAK; S. M. STEAD; D. S. RIZZUTO; M. J. KAHANA; G. A. WORRELL. *Mayo Clin., Mayo Clin., Univ. of Pennsylvania, Thomas Jefferson Univ. Hosp., Dartmouth-Hitchcock Med. Ctr., Emory Univ., Univ. of Texas Southwestern Med. Ctr., Columbia Univ., Univ. of Pennsylvania Hosp.*

10:00 HHH34 **353.27** Phase synchronization in the human medial temporal lobe predicts the precision of spatial memory encoding: Evidence from direct brain recordings. A. WATROUS*; J. MILLER; S. LEE; M. SPERLING; R. GORNIAK; A. SHARAN; G. WORRELL; B. BERRY; B. JOBST; K. DAVIS; R. GROSS; B. LEGA; J. STEIN; S. DAS; S. SHETH; D. RIZZUTO; J. JACOBS. *Columbia Univ., Thomas Jefferson Univ. Hosp., May Clin., Dartmouth Univ., Univ. of Pennsylvania, Emory Univ., Univ. of Texas-Southwestern.*

11:00 HHH35 **353.28** Core episodic encoding and retrieval processes revealed by dynamics of neural activity. J. E. KRAGEL*; Y. EZZYAT; J. F. BURKE; J. LIN; J. M. STEIN; S. R. DAS; R. J. GORNIAK; R. E. GROSS; K. A. DAVIS; M. R. SPERLING; B. C. JOBST; S. A. SHETH; K. A. ZAGHLOUL; G. A. WORRELL; D. S. RIZZUTO; M. J. KAHANA. *Univ. of Pennsylvania, Univ. of California, San Francisco Med. Ctr., Univ. of Texas Southwestern, Hosp. of the Univ. of Pennsylvania, Thomas Jefferson Univ. Hosp., Emory Univ. Hosp., Dartmouth Med. Ctr., Columbia Univ. Med. Ctr., NIH, Mayo Clin.*

8:00 HHH36 **353.29** Studying the effects of direct subdural electrical stimulation in human subjects during a verbal associative memory task. T. SHEEHAN*; R. YAFFE; J. WITTIG, Jr; S. INATI; G. WORRELL; M. KUCEWICZ; K. DAVIS; M. KAHANA, PhD; M. SPERLING; S. A. SHETH; B. JOBST; B. LEGA; K. ZAGHLOUL. *NIH, Mayo Clin., Univ. of Pennsylvania, Thomas Jefferson Univ. Hosp., Columbia Univ. Med. Ctr., Dartmouth- Hitchcock Med. Ctr., Univ. of Texas Southwestern Med. Ctr.*

9:00 HHH37 **353.30** Another View on Deja vu - a memory illusion that results from a failure of reality monitoring. P. WALLISCH*; M. J. GODDARD. *New York Univ., New York Univ.*

POSTER

354. Decision Making: Orbitofrontal, Anterior Cingulate, and Hippocampal Cortices

Theme H: Cognition

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

8:00 HHH38 **354.01** Orbitofrontal cortex neurons encode confidence in an auditory decision. P. MASSET*; M. LAGLER; J. SANDERS; T. KLAUSBERGER; A. KEPECS. *Cold Spring Harbor Lab., Med. Univ. of Vienna.*

9:00 HHH39 **354.02** Neural signals in the anterior cingulate cortex during effort-based decision-making. S. E. MORRISON*. *Univ. of Pittsburgh.*

10:00 HHH40 **354.03** Representations of probabilistic evidence in the prefrontal cortex during decision making. T. YANG*; Y. ZHANG; Y. CHEN. *Inst. of Neurosci.*

11:00 III1 **354.04** Decision related activities of anterior insular and orbitofrontal cortex in a gambling behavior of rats. H. ISHII*; Y. KAIZU; S. TAKAHASHI; S. OHARA; P. N. TOBLER; K. TSUTSUI; T. IIJIMA. *Div. of Sys. Neurosci., Tohoku Univ., Lab. for Social and Neural Systems Res.*

8:00 III2 **354.05** A circuit model for the interplay between orbitofrontal cortex and lateral prefrontal cortex in value-based economic decision-making. M. Y. YIM*; X. CAI; X. WANG. *NYU Shanghai, New York Univ.*

9:00 III3 **354.06** Properties of value adaptation in orbitofrontal cortex. K. CONEN*; C. PADOA-SCHIOPPA. *Washington Univ. In St Louis.*

10:00 III4 **354.07** Rule encoding in orbitofrontal cortex and striatum. G. LOCONTE*; B. SLEEZER; M. CASTAGNO; B. HAYDEN. *Univ. of Rochester.*

11:00 III5 **354.08** Comparing neural activity patterns in striatum and orbitofrontal cortex during set shifting using a dynamics model. P. BALASUBRAMANI*; B. Y. HAYDEN. *Univ. of Rochester, brain and cognitive sciences, Univ. of Rochester.*

8:00 III6 **354.09** Shared economic roles of subgenual and dorsal anterior cingulate cortices in decision making. H. AZAB*; B. Y. HAYDEN. *Univ. of Rochester, Univ. of Rochester.*

9:00 III7 **354.10** Adolescent alcohol use increases risk preference and alters dopamine receptor expression in OFC. S. D. CORWIN*; E. JACOBS-BRICHFORD; J. D. ROITMAN. *Univ. of Illinois At Chicago.*

10:00 III8 **354.11** The role of the orbitofrontal cortex in incentive learning. E. T. BALTZ; C. M. GREMEL*. *Univ. of California San Diego.*

11:00 III9 **354.12** A hippocampal-posterior parietal cortex circuit for memory-based decision making. U. RUTISHAUSER*; T. AFLALO; N. POURATIAN; C. Y. LIU; A. N. MAMELAK; R. A. ANDERSEN. *Cedars-Sinai Med. Ctr., Caltech, Cedars-Sinai Med. Ctr., UCLA, USC.*

8:00 III10 **354.13** Hippocampal θ entrains and reconfigures prefrontal single-unit activity during delay in a navigational task. M. V. MYROSHNYCHENKO*; C. C. LAPISH. *Indiana Univ.*

9:00 III11 **354.14** Hippocampal contributions to neural representations in OFC during decision making. A. M. WIKENHEISER*; Y. MARRERO-GARCIA; G. SCHOENBAUM. *Natl. Instutite on Drug Abuse, Univ. of Maryland, Sch. of Med., The Johns Hopkins Univ.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 III12 **354.15** Orbitofrontal cortex lesions improve performance in a go/no-go reversal learning task. M. H. RAY*; M. CRABTREE; C. PICKENS. *Kansas State Univ., Kansas State Univ.*

11:00 III13 **354.16** Temporal context and decision-making: Behavioral and neural mechanisms of choice adaptation in rhesus macaque. J. ZIMMERMANN*; P. GLIMCHER; K. LOUIE. *New York Univ.*

8:00 III14 **354.17** Navigation and decision in a virtual foraging task for monkeys. R. AKAISHI*; B. HAYDEN. *Brain & Cognitive Sci.*

9:00 III15 **354.18** Prospective evaluation involves reactivating neural response patterns associated with outcome monitoring. Z. WANG*; B. Y. HAYDEN. *Univ. of Rochester.*

10:00 III16 **354.19** The role of the monkey orbitofrontal cortex during value-based decision-making. T. SETOGAWA*; T. MIZUHIKI; F. AKIZAWA; R. KUBOKI; B. J. RICHMOND; N. MATSUMOTO; M. SHIDARA. *NIH, Univ. of Tsukuba, Univ. of Tsukuba, JSPS, AIST.*

11:00 III17 **354.20** Autocorrelation structure at rest predicts value correlates of single neurons during decision-making. S. E. CAVANAGH*; S. W. KENNERLEY; L. T. HUNT. *UCL Inst. of Neurol*.

8:00 III18 **354.21** Prefrontal coding of strategies to reduce working memory load. F. CHIANG*; J. D. WALLIS. *Univ. of California Berkeley Dept. of Psychology, Helen Wills Neurosci. Inst.*

9:00 III19 **354.22** Biasing decision making through stimulus-outcome specific microstimulation of orbitofrontal cortex. E. B. KNUDSEN*; J. D. WALLIS. *Univ. of California Berkeley.*

10:00 III20 **354.23** Social context influences decision signals in primate ACC. W. S. ONG*; M. L. PLATT. *Duke Univ., Univ. of Pennsylvania.*

11:00 III21 **354.24** Token asset effect on monkey's decision making involving risky gains and losses. Y. YANG*; X. LI; V. STUPHORN. *Johns Hopkins Univ., Johns Hopkins University, Sch. of Med., Zanvyl Krieger Mind/Brain Inst.*

POSTER

355. Animal Cognition: Memory Consolidation and Reconsolidation

Theme H: Cognition

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

8:00 III22 **355.01** Computational model of a positive BDNF feedback loop in hippocampal neurons following inhibitory avoidance training. Y. ZHANG*; P. SMOLEN; C. M. ALBERINI; J. H. BYRNE. *Univ. of Texas at Houston Dept. of Neurobio. and Anat., New York Univ.*

9:00 III23 **355.02** Latent, long-lasting memory traces are stored during the infantile amnesia period in rats. A. TRAVAGLIA*; R. BISAZ; C. M. ALBERINI. *New York Univ.*

10:00 III24 **355.03** The role of glycogenolysis and astrocyte-neuronal coupling in mechanism in memory formation during development. E. CRUZ*; A. TRAVAGLIA; C. M. ALBERINI. *New York Univ. Ctr. for Neural Sci.*

11:00 III25 **355.04** ▲ A critical role of NPAS4 in the medial prefrontal cortex in context retrieval-mediated memory enhancement. D. KAPELLER-LIBERMANN*; X. YE; C. M. ALBERINI. *New York Univ.*

8:00 III26 **355.05** Cell type mapping of insulin-like growth factor 2 mRNA expression in the adult rat brain in basal conditions and following learning. S. L. SHENG*; C. M. ALBERINI. *New York Univ., New York Univ. Sch. of Med.*

9:00 III27 **355.06** Dissecting prelimbic cortical circuits and mechanisms in retrieval-mediated fear memory enhancement. X. YE*; D. KAPELLER-LIBERMANN; A. TRAVAGLIA; C. M. ALBERINI. *New York Univ.*

10:00 III28 **355.07** Expression of ribosomal RNA gene variant 4 is activated by learning and required for memory consolidation of a spatial learning task in mice. K. D. ALLEN*; M. J. TROY-REGIER; C. HSIEH; P. TSOKAS; C. OKEZUE; J. WOLK; A. FENTON; T. C. SACKTOR; A. I. HERNANDEZ. *SUNY Downstate Med. Ctr., SUNY Downstate Med. Ctr., SUNY Downstate Med. Ctr., New York Univ., New York Univ., New York Univ., The Robert F. Furchgott Ctr. for Neural and Behavioral Sci.*

11:00 III29 **355.08** *De novo* transcription conversely modulates the late consolidation of contextual fear remote memory in prefrontal cortex and hippocampus. L. M. PEREIRA*; C. M. CASTRO; J. T. MARQUES; G. S. PEREIRA. *Univ. Federal De Minas Gerais, Univ. Federal de Minas Gerais, Univ. Federal de Minas Gerais.*

8:00 III30 **355.09** Contribution of newly born progenitors generated during the proliferative burst to emotional memory deficits associated with alcohol dependence in male and female rats. M. FANNON; J. WILLIAMS; K. MYSORE; R. MORALES; M. STAPLES; H. CAMERON; C. D. MANDYAM*. *VMRF, TSRI, NIH, UCSD*.

9:00 III31 **355.10** ▲ Hippocampal circadian clock regulates time-dependent memory retrieval and spine morphology of CA1 neuron. M. MIYAHARA*; S. HASEGAWA; S. KIDA. *Tokyo Univ. of Agr., JST, CREST.*

10:00 III32 **355.11** Comparisons and discrimination of fear and extinction neurons at the molecular and cellular levels. R. ISHIKAWA*; S. KIDA. *Tokyo Univ. of Agr., CREST, JST.*

11:00 III33 **355.12** Paired and unpaired conditioning during aging: BDNF, GABA, glutamate and serotonin changes after memory consolidation. C. E. VASQUEZ*; V. MITCHELL; R. COSSIO; J. FORNAGUERA; G. BRITTON. *INDICASAT AIP, Univ. of Utah, Univ. de Costa Rica.*

8:00 III34 **355.13** ● Using viral translating ribosome affinity purification to study associative recognition memory consolidation. J. R. GAUNT*; H. SCOTT; L. MARUCCI; S. SHEARDOWN; E. C. WARBURTON; J. B. UNEY. *Univ. of Bristol, Univ. of Bristol, Takeda Pharmaceut. Co., Univ. of Bristol.*

9:00 III35 **355.14** MTOR-dependent mechanisms in the persistence of contextual fear memory. P. MACCALLUM; T. KENNY; K. FALLON; J. J. BLUNDELL*. *Mem. Univ. of Newfoundland, Mem. Univ.*

10:00 III36 **355.15** Dissociation of contextual fear expression and hippocampal Arc expression following immediate shock. J. A. LEAKE*; R. ZINN; L. H. CORBIT; B. VISSEL. *Garvan Inst. of Med. Res., Univ. of Sydney, Univ. of New South Wales, Univ. of Technol.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 III37 **355.16** Lowering Fkbp5 expression in the ventral hippocampus enhances fear conditioning without affecting anxiety levels. M. CRIADO MARRERO*; B. LÓPEZ-TORRES; A. HERNÁNDEZ; M. COLÓN; R. MISLA DAVID; J. PORTER. *Ponce Hlth. Sci. Univ.*

8:00 III38 **355.17** ● The role of quinone reductase 2 in hippocampal dependent learning. K. ROSENBLUM*; V. SHARMA; M. HLEIHEL, 3498838; E. EDRY; G. NATHANIEL. *Sagol Dept Neuro, Univ. of Haifa, Univ. of Haifa.*

9:00 III39 **355.18** Effects of transcription inhibition in dorsal striatum on gene expression and memory consolidation after moderate and enhanced training. A. C. MEDINA*; E. ALVARADO-ORTÍZ; M. I. HERNÁNDEZ GUITÉRREZ; S. GONZÁLEZ-SALINAS; G. L. QUIRARTE; A. ANTARAMIAN; R. A. PRADO-ALCALÁ. *Neurobiologia Conductual y Cognitiva. Inst. de Neurobiologia-UNAM, Unidad de Proteogenomica. Inst. de Neurobiologia-UNAM.*

10:00 III40 **355.19** Structural changes in medium spiny neurons of dorsal and ventral striatum associated with retrieval of over-reinforced inhibitory avoidance learning. P. BELLO-MEDINA*; G. FLORES; G. L. QUIRARTE; R. A. PRADO-ALCALA. *Inst. de Neurobiología-UNAM, Inst. de fisiología, Inst. de Neurobiologia-UNAM.*

11:00 III41 **355.20** Glucocorticoid receptor phosphorylation in hippocampal and striatal neurons after inhibitory avoidance training. D. A. GONZALEZ FRANCO*; A. M. CRUZ-QUIROZ; R. PEGUEROS-MALDONADO; P. BELLO-MEDINA; R. A. PRADO-ALCALA; G. L. QUIRARTE. *Inst. de Neurobiología UNAM.*

8:00 III42 **355.21** Glucocorticoid receptor phosphorylation in the amygdala and hippocampus after acquisition of contextual fear conditioning. R. PONCE*; M. CARRANZA; N. SERAFIN; R. A. PRADO-ALCALÁ; G. L. QUIRARTE. *Inst. De Neurobiología, UNAM.*

9:00 III43 **355.22** Retrieval of a context fear memory involves sex-specific recruitment of hippocampus and amygdala. A. A. KEISER*; M. A. DARIAN; L. PAN; D. TCHESSALOVA; K. M. COLLETTE; N. C. TRONSON. *Univ. of Michigan.*

10:00 III44 **355.23** Concentration of PKMζ in the basolateral amygdala correlates with fear memory strength. M. BERNABO*; K. NADER. *McGill Univ.*

11:00 III45 **355.24** Gene expression and DNA methylation dynamics in the mouse amygdala during threat consolidation. S. SHARMA*; S. MADDOX; L. LIN; Y. LI; P. JIN; K. RESSLER. *Emory Univ. Sch. of Med., Mclean Hosp., Emory Univ. Dept. of Human Genet.*

8:00 III46 **355.25** Repressive histone methylation regulates mTOR activation in the hippocampus during fear memory reconsolidation. T. J. JAROME*; R. M. HAUSER; M. C. RICH; F. D. LUBIN. *Univ. of Alabama At Birmingham.*

9:00 III47 **355.26** Context fear memory formation is regulated by Neat1 long non-coding RNA mediated histone lysine methylation changes in the hippocampus. A. A. BUTLER*; F. D. LUBIN; A. W. CHANG. *Univ. of Alabama at Birmingham.*

10:00 III48 **355.27** Translational profiling of CA1 projection neurons after fear learning. A. L. JONES*; L. REIJMERS. *Tufts Univ., Tufts Univ.*

11:00 III49 **355.28** Cell-type specific gene profiling from amygdala & cortex during long-term taste aversion memory formation. D. LEVITAN*; D. B. KATZ; S. B. NELSON. *Brandeis Univ., Brandeis, Brandeis.*

8:00 III50 **355.29** Cell type specific translational profiling during sleep dependent memory consolidation. T. KARIHARAN*; S. ATON. *Univ. of Michigan.*

9:00 III51 **355.30** Phosphorylation of eukaryotic translation initiation factor 4E binding protein 2 (4EBP2) is required to rescue memory impairments caused by sleep deprivation. J. C. TUDOR*; C. W. CHUNG; E. SORENSEN; T. ABEL. *Univ. of Pennsylvania.*

POSTER

356. Encoding Spatial Memories: Neural Circuits and Ensembles

Theme H: Cognition

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

8:00 III52 **356.01** ● Hippocampal sharp-wave ripple characteristics during delay periods in the rodent automated search task. K. TAHON*; D. A. JACKSON; W. H. DRINKENBURG. *Janssen Pharmaceuticals, Janssen Res. & Development, a Div. of Janssen Pharmaceutica NV Beerse, Belgium.*

9:00 JJJ1 **356.02** Experience-dependent enhancement of sharp wave ripples near visual targets. K. L. HOFFMAN*; T. K. LEONARD. *York Univ., York Univ.*

8:00 DP09 **356.03** (Dynamic Poster) Single neuron signatures of the cognitive map in virtually navigating rhesus monkeys. R. A. GULLI*; G. DOUCET; B. W. CORRIGAN; L. DUONG; S. WILLIAMS; J. MARTINEZ-TRUJILLO. *Western Univ., McGill Univ., McGill Univ., McGill Univ.*

11:00 JJJ2 **356.04** Closed-loop interruption of hippocampal ripples in macaque. O. TALAKOUB*; A. GOMEZ PALACIO SCHJETNAN; M. R. POPOVIC; T. A. VALIANTE; K. L. HOFFMAN. *Univ. of Toronto, York Univ.*

8:00 JJJ3 **356.05** Population activity during sharp wave-ripples depends on structured interactions and spontaneously generated sequential activity in a network model of hippocampal area CA3. S. KALI*; A. ECKER; E. VERTES; I. MIKLOS; T. F. FREUND; A. I. GULYAS. *Hungarian Acad. of Sci., Pazmany Peter Catholic Univ., Univ. Col. London, Hungarian Acad. of Sci., Hungarian Acad. of Sci.*

9:00 JJJ4 **356.06** Hippocampal-prefrontal synchrony in spatial working memory. A. EDSALL*; A. L. GRIFFIN. *Univ. of Delaware.*

10:00 JJJ5 **356.07** How dentate gyrus place cells represent distinct place memories. M. T. VAN DIJK*; A. A. FENTON. *New York Univ. Ctr. For Neural Sci., New York Univ., State Univ. of New York Downstate Med. Ctr.*

11:00 JJJ6 **356.08** Mnemonic coding of place cells on the 8-arm maze. H. XU*; J. O'NEILL; J. CSICSVARI. *IST Austria.*

8:00 JJJ7 **356.09** The Planar cell polarity pathway regulates the balance between pattern completion and pattern separation. B. J. ROBERT*; M. M. MOREAU; M. CARTA; S. D. CARVALHO; A. QUIEDEVILLE; R. PEYROUTOU; G. BARTHET; M. GARRET; B. ATCHAMA; S. FIÈVRE; L. BRAYDAT-BRUNO; C. GUETTE; C. RACCA; C. MEDINA; D. J. HENDERSON; A. DESMEDT; C. MULLE; A. MARIGHETTO; M. MONTCOUQUIOL; N. SANS. *Neurocentre Magendie, CNRS, Inst. Interdisciplinaire de Neurosciences, CNRS - INCIA, Inst. of Neurosci. - Newcastle Univ., Inst. of Genet. Med. - Newcastle Univ.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 JJJ8 **356.10** Molecular and synaptic mechanisms of learning and persistent hippocampal memory for an active place avoidance. R. M. HARRIS*; H. KAO; A. CHUNG; J. ALARCON; E. KLANN; H. A. HOFMANN; A. A. FENTON. *The Univ. of Texas At Austin, Marine Biol. Labs., New York Univ., SUNY Downstate Medicacl Ctr., SUNY Downstate Medicacl Ctr.*

10:00 JJJ9 **356.11** Long-term imaging of neural ensembles in a mouse model of intellectual disability. E. H. SCHUT*; N. NADIF KASRI; F. P. BATTAGLIA. *Radboudumc, Radboud Univ.*

11:00 JJJ10 **356.12** Cross-activation of hippocampal place cell patterns by social subjects. X. MOU*; D. JI. *BCM.*

8:00 JJJ11 **356.13** Role of the hippocampus during observational learning of a spatial memory task. Y. FUENTEALBA*; J. VALDÉS G. *Univ. of Chile, Unviersity of Chile.*

9:00 JJJ12 **356.14** Do distance cues support memory retrieval in response discriminations and reversal learning? S. WRIGHT*; D. M. SKINNER; M. L. INGRAM; G. M. MARTIN. *Grenfell Campus, Mem. Univ. of Newfoundland, St. John's Campus, Mem. Univ. of Newfoundland.*

10:00 JJJ13 **356.15** Comparing the effects of dorsoventral CA1 lesions and full hippocampal lesions on anterograde tests of spatial memory in rats. A. OCAMPO*; S. VINCENT; A. HASHI; M. GRAVES; L. R. SQUIRE; R. E. CLARK. *UCSD, UCSD, VA Med. Ctr., UCSD, UCSD.*

11:00 JJJ14 **356.16** Internally organized spatial firing of MEC cells during navigation: If space was time. E. PARK*; S. KEELEY; A. A. FENTON. *New York Univ.*

8:00 JJJ15 **356.17** Neurophysiological correlates of spatial navigation optimization in the rodent. T. PELC*; M. LLOFRIU; N. CAZIN; P. SCLEIDOROVICH CHIODI; P. DOMINEY; A. WEITZENFELD; J. FELLOUS. *Arizona Univ., Univ. of South Florida, INSERM.*

9:00 JJJ16 **356.18** Interactions between brain-behavior state and stimulation frequency determine responses to fornix stimulation in the macaque hippocampus. A. GÓMEZ PALACIO SCHJETNAN*; T. K. LEONARD; O. TALAKOUB; K. L. HOFFMAN. *York Univ.*

10:00 JJJ17 **356.19** Robust spatial memories encoded by transient neuronal networks: A topological model. Y. A. DABAGHIAN*. *Jan and Dan Duncan Neurolog. Res. Institute, Baylor Col. of Med.*

11:00 JJJ18 **356.20** Long-lasting input-specific place learning-induced changes of the hippocampal circuit measured in the freely-behaving mouse. A. CHUNG*; A. A. FENTON. *New York Univ.*

8:00 JJJ19 **356.21** Sharp-wave-ripple disruption after one session learning erases memory. L. GENZEL*; F. BATTAGLIA; R. MORRIS. *Univ. of Edinburgh, Donders Inst.*

9:00 JJJ20 **356.22** Mapping time to hippocampus CA1 sequences. A. G. KAMBADUR*; S. PALCHAUDHURI; D. SINGH; U. S. BHALLA. *Natl. Ctr. For Biol. Sci. (NCBS).*

10:00 JJJ21 **356.23** ● CA1 hippocampal ensemble neural activity reveals associative representations in mice learning a bi-conditional learning task. T. ROGERSON*; J. MAXEY; P. JERCOG; T. H. KIM; S. EISMANN; B. AHANONU; B. GREWE; M. SCHNITZER. *Stanford Univ., Stanford Univ., Stanford Univ.*

11:00 JJJ22 **356.24** Circuit architectures for the encoding and processing of 3D orientation. H. ROUAULT*; A. RUBIN; S. ROMANI. *Janelia Res. Campus, HHMI, Weizmann Inst. of Sci.*

8:00 JJJ23 **356.25** Neural firing correlates of visual scene memory performance in the subiculum and CA1. S. LEE*; H. LEE; I. LEE. *Dept. of Brain & Cognitive Sci.*

9:00 JJJ24 **356.26** Place cells in the septohippocampal nucleus of freely behaving rats. A. G. HOWE*; R. M. DEGUZMAN; G. J. BLAIR; H. T. BLAIR. *UCLA, Univ. at Albany, UCLA.*

10:00 JJJ25 **356.27** Intra ripple features are constant, but post ripple features vary across behavioral state in macaques. A. T. HUSSIN*; T. K. LEONARD; K. L. HOFFMAN. *York Univ., York Univ., York Univ., York Univ., York Univ.*

11:00 JJJ26 **356.28** Control of recollection by competition between slow and fast γ in hippocampus CA1. A. A. FENTON*; B. RADWAN; F. SPARKS; D. DVORAK. *New York Univ.*

8:00 JJJ27 **356.29** Hippocampal CA1 activity encodes space (response key) and time (order). T. G. WEYAND*; M. KETCHUM; P. WINSAUER. *Louisiana State Univ. Med. Ctr., LSU Hlth. Sci. Ctr.*

9:00 JJJ28 **356.30** A generic model for the generation of θ and replay sequences in the hippocampus. A. AZIZI*; K. DIBA; S. CHENG. *RUB, Univ. of Wisconsin–Milwaukee.*

POSTER

357. Learning and Memory: Role of Hippocampal GABAergic Inhibition

Theme H: Cognition

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

8:00 JJJ29 **357.01** Distinct lateral septal interneurons broadcast instructive and permissive hippocampal signals to calibrate fear responses. A. BESNARD*; T. LANGBERG; D. CHU; W. FENG; D. SAUR; X. XU; A. SAHAY. *Harvard Stem Cell Inst., Ctr. for Regenerative Med., Dept. of Psychiatry, II. Medizinische Klinik und Poliklinik, Departments of Neurobio. and Anat.*

9:00 JJJ30 **357.02** Optogenetic inhibition of striatal GABAergic neurons promotes functional recovery after ischemic stroke in mice. L. JIANG; W. LI; Y. LU; Y. MA; Z. ZHANG; G. YANG; Y. WANG*. *Shanghai Jiao Tong Univ.*

10:00 JJJ31 **357.03** Modulation of the hippocampal circuit by oriens lacunosum-moleculare neurons. J. HAAM*; J. L. YAKEL. *NIH/NIEHS.*

11:00 JJJ32 **357.04** Decreased cholinergic input to hippocampal CA1 olm interneurons in an appps1 mouse model. M. MITTAG*; L. SCHMID; K. KEPPLER; J. STEFFEN; M. FUHRMANN. *German Ctr. of Neurodegenerative Dis. (DZNE).*

8:00 JJJ33 **357.05** Neuroligin-3 in hippocampal parvalbumin interneurons facilitates contextual fear extinction by regulating presynaptic Group-III mGluRs. J. S. POLEPALLI*; T. C. SUDHOF; R. C. MALENKA. *Stanford Univ., Stanford Univ., Stanford Univ.*

9:00 JJJ34 **357.06** Viral-mediated overexpression of NLGN2 enhances GABAergic synapses in the hippocampus and alters social behavior and anxiety. M. A. VAN ZANDT*; J. GUPTA; E. WEISS; S. SHRESTHA; S. MAISEL; J. R. NAEGELE. *Wesleyan.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 JJJ35 **357.07** Role of hippocampal VIP interneurons in reward-oriented spatial learning. G. F. TURI*; Z. LIAO; W. LI; J. D. ZAREMBA; A. GROSMARK; X. LUO; L. TOPOLNIK; A. LOSONCZY. *Columbia Univ., Laval Univ.*

11:00 JJJ36 **357.08** Somatostatin-positive interneurons in the dentate gyrus provide local- and long-range septal synaptic inhibition. M. BARTOS*; M. YUAN; T. MEYER. *Univ. Freiburg, Univ. of Freiburg.*

8:00 JJJ37 **357.09** Feed forward inhibition dictates reactivation of hippocampo-cortical ensembles to maintain remote memory percision. N. GUO*; M. E. SODEN; A. BESNARD; L. S. ZWEIFEL; A. SAHAY. *Ctr. For Regenerative Med., Harvard Stem Cell Inst., Dept. of Psychiatry, Massachusetts Gen. Hospital, Harvard Med. Sch., Dept. of Pharmacology, Univ. of Washington, Dept. of Psychiatry and Behavioral Sciences, Univ. of Washington.*

9:00 JJJ38 **357.10** Network state dependent recruitment of VIP interneurons in awake mice. R. FRANCAVILLA; V. VILLETTE; X. LUO; O. CAMIRE; L. TOPOLNIK*. *CRCHUQ-CHUL, Laval Univ.*

10:00 JJJ39 **357.11** Altered metabolic and synaptic functional connectivity in the MAM model of neurodevelopmental insult. K. C. O'REILLY*; E. R. LEVY; M. I. PERICA; A. A. FENTON. *New York Univ.*

11:00 JJJ40 **357.12** Long-lasting input-specific modifications of excitation and inhibition in the hippocampus following spatial training measured in the anesthetized rat. E. LEVY*; K. C. O'REILLY; A. A. FENTON. *NYU.*

8:00 JJJ41 **357.13** ● Genetic deletion of Fgf14 disrupts inhibitory connections of the brain hippocampal region in a sex specific manner. T. K. ALSHAMMARI*; M. A. ALSHAMMARI; M. N. NENOV,; E. HOXHA; F. TEMPIA; F. LAEZZA. *Col. of Pharmacy, King Saud Univ., Univ. of Texas Med. Br., Univ. of Torino.*

9:00 JJJ42 **357.14** Role of oxytocin receptor in GABAergic actions. A. L. GUEDEA*; K. A. CORCORAN; K. NISHIMORI; J. RADULOVIC. *Northwestern Univ., Tohoku University-Graduate Sch. of Agr. Sci.*

POSTER

358. Learning and Memory: Amygdala Circuits

Theme H: Cognition

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

8:00 JJJ43 **358.01** A competitive inhibitory circuit for selection of active and passive fear responses. J. P. FADOK*; S. KRABBE; J. COURTIN; M. MARKOVIC; C. XU; L. MASSI; P. BOTTA; K. BYLUND; C. MUELLER; P. TOVOTE; A. LÜTHI. *Friedrich Miescher Inst., Biozentrum.*

9:00 JJJ44 **358.02** Acquired taste valence encoding in cortico-amygdala circuits. K. LAVI*; G. JACOBSON; K. ROSENBLUM; A. LUTHI. *FMI, Bar Ilan Univ., Univ. of Haifa.*

10:00 JJJ45 **358.03** Central amygdala microcircuit mediating learning and expression of active avoidance. M. MARKOVIC*; C. XU; S. KRABBE; J. GRUENDEMANN; J. CUSULIN; A. LUTHI. *Friedrich Miescher Inst.*

11:00 JJJ46 **358.04** Amygdalar PV-interneurons gate prefrontal input to control fear ensemble activity. P. DAVIS*; S. VIOLA; L. REIJMERS. *Tufts Univ. Sch. of Med.*

8:00 JJJ47 **358.05** Intercalated cells of the amygdala in fear and extinction learning. O. BUKALO*; A. LIMOGES; M. NONAKA; R. PALMITER; L. ZWEIFEL; A. HOLMES. *NIH/NIAAA, Univ. of Washington, Univ. of Washington.*

9:00 JJJ48 **358.06** GABAergic and Adrenergic modulation of excitatory inputs to the lateral division of the central amygdala blocks fear conditioning. A. DELANEY*; J. CRANE; N. HOLMES; F. WESTBROOK. *Charles Sturt Univ., Univ. of New South Wales.*

10:00 JJJ49 **358.07** Associative learning is gated by $GABA_B$-GIRK signaling in pyramidal neurons of the basolateral amygdala. M. E. TIPPS*; E. MARRON FERNANDEZ DE VELASCO; N. M. MCCALL; K. WICKMAN. *Univ. of Minnesota, Univ. of Minnesota.*

11:00 JJJ50 **358.08** Interactive modulation of the medial prefrontal cortex and orbitofrontal cortex on amygdala neuronal activities. C. CHANG*. *Natl. Tsing Hua Univ.*

8:00 JJJ51 **358.09** Role of the prefrontal-amygdala synapses in the enhancement of Pavlovian conditioning after observational fear. W. ITO*; A. MOROZOV. *Virginia Tech. Carilion Res. Inst.*

9:00 JJJ52 **358.10** Synaptic targeting of double-projecting ventral hippocampal neurons to the medial prefrontal cortex and basomedial amygdala. J. CHO*; W. KIM. *Univ. of California.*

10:00 JJJ53 **358.11** Defensive behavior switching mediated by top-down inhibition of freezing cells in the centromedial amygdala. J. JHANG*; J. HAN. *Korea Advanced Inst. of Sci. and Technol.*

11:00 JJJ54 **358.12** The retrorubral field is necessary for accurate fear discrimination in Pavlovian conditioning. K. M. WRIGHT*; M. MCDANNALD. *Boston Col.*

8:00 JJJ55 **358.13** Prevention of fear re-appearance by blockage of dopamine signaling. N. HITORA-IMAMURA*; Y. MIURA; C. TESHIROGI; Y. IKEGAYA; N. MATSUKI; H. NOMURA. *Hokkaido Univ., Univ. of Tokyo.*

9:00 JJJ56 **358.14** Differential effects of D1-mediated dopamine signaling in the amygdala on fear, safety, reward cue discrimination learning. K. NG; M. POLLOCK; P. URBANCZYK; E. WOON; E. GREINER; S. SANGHA*. *Purdue Univ., Purdue Inst. for Integrative Neurosci., Purdue Univ.*

10:00 JJJ57 **358.15** Optogenetic manipulation of the amygdalar pyramidal cells alters fear behavior in foraging rats. M. KONG*; E. KIM; J. J. KIM. *Univ. of Washington, Univ. of Washington, Univ. of Washington.*

11:00 JJJ58 **358.16** Basolateral amygdala nucleus responses to appetitive conditioned stimuli correlate with variations in conditioned behavior. S. LEE*; A. AMIR; D. B. HEADLEY; D. HAUFLER; D. PARE. *Rutgers Univ.*

8:00 JJJ59 **358.17** Increasing the GluN2A/GluN2B ratio within neurons of the mouse basal and lateral amygdala inhibits the modification of an existing fear memory trace. R. HOLEHONNUR*; A. J. PHENSY; L. J. KIM; M. MILIVOJEVIC; D. T. VUONG; D. K. DAISON; S. ALEX; M. TINER; L. E. JONES; J. E. PLOSKI; S. KROENER. *Univ. of Texas at Dallas.*

9:00 JJJ60 **358.18** LTP induction and maintenance at persistent memory engram. J. OH*; J. KWON; H. KIM; Y. JEONG; H. CHO; J. HAN. *Korea Advanced Inst. of Sci. and Technol.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

10:00 JJJ61 **358.19** Multimodal and site-specific plasticity of amygdala parvalbumin interneurons after fear learning. E. K. LUCAS*; A. JEGARL; R. L. CLEM. *Icahn Sch. of Med. At Mount Sinai, Cornell Univ., Icahn Sch. of Med. at Mount Sinai.*

11:00 KKK1 **358.20** Cortico-amygdalar functional network underlying contextual fear learning in the absence of hippocampus. C. A. COELHO*; J. C. K. SOARES; T. L. FERREIRA; J. R. SATO; M. G. M. OLIVEIRA. *Univ. Federal De Sao Paulo, Univ. Federal do ABC.*

8:00 KKK2 **358.21** ▲ Threat anticipation during encoding impairs visual object recognition memory and pattern separation. S. H. BRAREN*; J. E. DUNSMOOR; M. C. W. KROES; V. P. MURTY; E. A. PHELPS. *New York Univ., Univ. of Pittsburgh.*

POSTER

359. Spatial Navigation: Head Direction Cells and Spatial Orientation

Theme H: Cognition

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

8:00 KKK3 **359.01** Projections from the nucleus prepositus hypoglossi to the head direction circuit and an extraocular motor nucleus are separate but overlapping. M. L. MEHLMAN*; S. S. WINTER; J. S. TAUBE. *Dartmouth Col.*

9:00 KKK4 **359.02** Contributions of self-generated movements and vestibular inputs to spatial correlates within the dorsal tegmental nucleus of Gudden. J. R. DUMONT*; M. L. MEHLMAN; M. E. SHINDER; J. S. TAUBE. *Dartmouth Col., Dartmouth Col.*

10:00 KKK5 **359.03** Interthalamic oscillatory coordination in the head direction cell network. W. N. BUTLER*; J. S. TAUBE. *Dartmouth Col.*

11:00 KKK6 **359.04** Grid cell representation across a multi-level maze. S. S. WINTER*; M. L. MEHLMAN; J. S. TAUBE. *Dartmouth Col.*

8:00 KKK7 **359.05** Performance in a spatial reorientation task is correlated with orientation of grid and head direction cells. S. WEISS*; G. TELHAMI; X. GOFMAN; D. EILAM; D. DERDIKMAN. *Technion – Israel Inst. of Technol., Tel-Aviv Univ.*

9:00 KKK8 **359.06** Quantification of head direction drift in rat pups. G. TOCKER*; E. BORODACH; D. DERDIKMAN. *Bar-Ilan Univ., Technion - Israel Inst. of Technol.*

10:00 KKK9 **359.07** Hippocampal lesions impair place and direction learning in a water plus maze. D. M. SKINNER*.

11:00 KKK10 **359.08** ▲ Interactions between vestibular and proximal-distal allothetic frames of reference in an object-place paired associate task. L. M. SANCHEZ; S. M. THOMPSON; B. J. CLARK*. *Univ. of New Mexico.*

8:00 KKK11 **359.09** Longitudinal assessment of Papez circuit structural change and spatial disorientation in the TgF344-AD transgenic rat model of Alzheimer's disease. L. E. BERKOWITZ*; Y. YANG; S. M. THOMPSON; E. N. DRAKE; E. A. SNEDDON; L. O. SILLERUD; B. J. CLARK. *Univ. of New Mexico, Univ. of New Mexico.*

9:00 KKK12 **359.10** Impaired retrieval of spatial memory and response perseveration in a radial arm maze after muscimol inactivation of the anterodorsal thalamus. R. E. HARVEY*; S. M. THOMPSON; L. M. SANCHEZ; E. A. SNEDDON; R. M. YODER; B. J. CLARK. *Univ. of New Mexico, indiana university, purdue university fort wayne.*

10:00 KKK13 **359.11** Directional discrimination in an object-place paired associate memory is impaired after muscimol inactivation of the anterior thalamus. S. M. THOMPSON*; S. S. WINTERS; B. J. CLARK. *Univ. of New Mexico, Dartmouth college, Univ. of New Mexico.*

11:00 KKK14 **359.12** Repetition of place cell fields depends on the head direction system. E. R. WOOD; B. HARLAND; R. GRIEVES; R. STENTIFORD; D. BETT; P. A. DUDCHENKO*. *Univ. of Edinburgh, Univ. Stirling.*

8:00 KKK15 **359.13** Representation of environmental boundaries within an egocentric reference frame. J. R. HINMAN*; G. W. CHAPMAN, IV; M. E. HASSELMO. *Boston Univ.*

9:00 KKK16 **359.14** Involvement of the head direction system in discrimination of visually ambiguous spaces. D. W. OVERINGTON*; P. JACOB; K. JEFFERY. *UCL.*

10:00 KKK17 **359.15** A hypothesis for path integration of orientation via oscillatory inhibition. C. KIRST*; J. GREEN; G. MAIMON. *Rockefeller Univ.*

11:00 KKK18 **359.16** Learning head directional information by spike timing-dependent plasticity enhances the boundary avoidance in neuromorphic navigational model. S. KIM*; J. KWAG. *Korea Univ.*

8:00 KKK19 **359.17** Gravity tuning in mice head direction cells. D. ANGELAKI; H. CHAM; M. SHINDER; J. DICKMAN*; J. LAURENS. *Baylor Col. of Med.*

9:00 KKK20 **359.18** Ring attractor dynamics in the *Drosophila* central complex. S. KIM*; H. ROUAULT; J. D. SEELIG; S. DRUCKMANN; V. JAYARAMAN. *Janelia Res. Campus / HHMI, research center caesar / Max Planck Society.*

10:00 KKK21 **359.19** How to move a compass needle: Angular velocity integration in the *Drosophila* central complex. D. B. TURNER-EVANS; J. D. SEELIG; S. WEGENER; H. ROUAULT; S. KIM; R. FRANCONVILLE; C. DAN; H. HABERKERN; Y. SUN; T. WOLFF; S. DRUCKMANN; V. JAYARAMAN*. *Janelia Res. Campus, HHMI, research center caesar/Max Planck Society.*

11:00 KKK22 **359.20** Visual inputs to a neural representation of heading in *Drosophila*. D. TURNER-EVANS*; V. JAYARAMAN; H. HABERKERN. *Janelia Res. Campus, HHMI.*

8:00 KKK23 **359.21** Landmark-guided navigation in a 2D virtual reality environment. H. J. HABERKERN*; C. BRUNS; M. BASNAK; B. AHANONU; M. BOLSTAD; J. COHEN; V. JAYARAMAN. *HHMI Janelia Res. Campus, Univ. of Buenos Aires, Stanford Univ.*

9:00 KKK24 **359.22** Exploring the neural circuit basis of visual learning in *Drosophila*. C. DAN*; T. WOLFF; Y. ASO; G. RUBIN; V. JAYARAMAN. *Janelia Res. Campus, HHMI.*

10:00 KKK25 **359.23** Dual-color imaging reveals transformation of visual representations along an input pathway to the central complex. Y. SUN*; A. NERN; H. DANA; J. P. HASSEMAN; G. TSEGAYE; G. HOLT; E. R. SCHREITER; L. L. LOOGER; K. SVOBODA; M. B. REISER; G. M. RUBIN; D. S. KIM; V. JAYARAMAN. *HHMI Janelia Res. Campus.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 KKK26 **359.24** Sparse reconstruction of recurrent networks within the *Drosophila* central complex. S. ALI*; R. FRANCONVILLE; S. WEGENER; C. PETERSON; S. TRAN; A. SHERIDAN; B. QU; E. NIELSON; T. WOLFF; J. S. LAURITZEN; D. BOCK; V. JAYARAMAN. *Janelia Res. Campus, HHMI.*

8:00 KKK27 **359.25** A functional connectivity atlas of the fly central complex. R. FRANCONVILLE*; C. BERON; S. NAMIKI; T. WOLFF; V. JAYARAMAN. *Janelia Res. Campus.*

POSTER

360. Perception and Imagery: Visual Processing

Theme H: Cognition

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

8:00 KKK28 **360.01** Concurrent tracking of global and local processing using MEG. L. LIU*; H. LUO. *Peking Univ., Peking Univ.*

9:00 KKK29 **360.02** A generic mechanism for Gestalt and high-level stimulus interpretation in the human brain. P. R. GRASSI*; N. ZARETSKAYA; A. BARTELS. *Ctr. For Integrative Neurosci., Univ. of Tübingen, Max Planck Inst. for Biol. Cybernetics.*

10:00 KKK30 **360.03** Externally applied noise influences state-switching dynamics of binocular rivalry. O. L. VAN DER GROEN*; N. WENDEROTH. *ETH Zürich, Neural Control of Movement Lab.*

11:00 KKK31 **360.04** Changes of α oscillations during binocular rivalry reflect neural competition. V. PETRUK*; S. ENGEL; B. HE; S. HE. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota.*

8:00 KKK32 **360.05** Transcranial alternating current stimulation modulated steady-state visual evoked potentials and conscious perception in binocular rivalry. M. KATSURAKAWA*; K. KITAJO. *RIKEN, Univ. of Tokyo.*

9:00 KKK33 **360.06** A population of neurons that signal interocular conflict signal in human visual cortex. S. KATYAL*; S. HE; M. JI; B. HE; G. PETERSON; S. A. ENGEL. *Univ. of Minnesota Twin Cities.*

10:00 KKK34 **360.07** Visual change detection process is relevant to exogenously-driven perceptual alternation of the bistable image. T. URAKAWA*; M. BUNYA; O. ARAKI. *Dept. of Applied Physics.*

11:00 KKK35 **360.08** The relation of oscillatory-phase to visual perception is dependent on attention and location of stimuli. T. DONOGHUE*; W. FOX; A. KIM; B. VOYTEK. *Univ. of California San Diego, La Costa Canyon High Sch., Univ. of California San Diego, Univ. of California San Diego.*

8:00 KKK36 **360.09** Coupled δ and α oscillations mediate top-down control on visual perception. R. F. HELFRICH*; M. HUANG; G. WILSON; R. T. KNIGHT. *Univ. of California Berkeley.*

9:00 KKK37 **360.10** Saturation of population activity predicts small phosphene size produced with electrical stimulation of human visual cortex. W. H. BOSKING*; P. SUN; M. OZKER; X. PEI; M. S. BEAUCHAMP; D. YOSHOR. *Baylor Col. of Med., Univ. of Texas Hlth. Sci. Ctr.*

10:00 KKK38 **360.11** Perception of backward visual masking in a patient with bilateral frontal leucotomy. H. RIEIRO; S. MARTINEZ-CONDE; J. CHANOVAS; E. GALLEGO; F. VALLE-INCLÁN; S. L. MACKNIK*. *Univ. of Granada, SUNY Downstate Med. Ctr. Col. of Med., Univ. of A Coruña, SUNY Downstate Med. Ctr. Col. of Med.*

11:00 KKK39 **360.12** Orienting of endogenous spatial attention can impact subjective awareness more than objective performance. M. VERNET*; S. LOKEY; S. JAPEE; L. G. UNGERLEIDER. *NIMH/NIH/DHHS, NIMH/NIH/DHHS.*

8:00 KKK40 **360.13** Attention to object form modulates informational connectivity between dorsal and ventral visual streams. J. TAYLOR*; M. VAZIRI-PASHKAM; Y. XU. *Harvard Univ., Harvard Univ.*

9:00 KKK41 **360.14** Neo's spoon and Newton's apples: Motion of rigid and non-rigid deformations as cues to material properties. L. M. ALLEY*; A. C. SCHMID; K. DOERSCHNER. *Justus-Liebig-Universität Gießen.*

10:00 KKK42 **360.15** Investigating the Reversed Letter Effect for stimuli with and without basic features by means of event-related brain potentials. L. BECKER*; T. SCHENK. *Technische Univ. Chemnitz, Ludwig-Maximilians-Universitaet Muenchen.*

11:00 KKK43 **360.16** Examining the segregation of number, letter, and word form selectivity in human ventral visual cortex. D. JANINI*; C. BAKER. *NIH.*

8:00 KKK44 **360.17** Predicting stimulus and response category in a multisensory simulated real world environment with fMRI and EEG. J. C. ELLIOTT*; W. WANG; D. KRNAVEK; A. ASTURIAS; V. BABENKO; A. SHAPIRO; P. CONNOLLY; S. T. GRAFTON. *Univ. of California, Santa Barbara, Teledyne.*

9:00 KKK45 **360.18** Differential impact of stimulus format on representational spaces. B. B. BANKSON*; C. BAKER. *NIH.*

10:00 KKK46 **360.19** Category boundaries and typicality warp the neural representation space of real-world objects. M. IORDAN*; M. R. GREENE; D. M. BECK; L. FEI-FEI. *Stanford Univ., Univ. of Illinois.*

11:00 KKK47 **360.20** ▲ You gain some you lose some: Changes in synesthetic perception overtime. A. S. HOCHMAN*; J. BUENROSTRO; J. F. AWAD; A. ILNICKI; R. MOSHER; S. A. DREW. *California State University, Northridge, California State University, Northridge.*

8:00 KKK48 **360.21** ▲ Synesthetic grapheme-color associations are processed early in time and can guide attention during visual search. O. F. CHESLEY*; C. GRAULTY; E. CANSECO-GONZALEZ; M. PITTS. *Reed Col.*

9:00 KKK49 **360.22** Consistently Incorrect: Potential implicit numerical activation in non-synesthetes. J. F. AWAD*; N. URENDA; D. LARRANAGA; B. C. HACKNEY; S. A. DREW. *California State University, Northridge, California State University, Northridge.*

10:00 KKK50 **360.23** On harnessing eye movements to read the mind and to alter it. B. R. SHETH*; A. R. TIJIBOY. *Univ. of Houston, Univ. Houston.*

11:00 KKK51 **360.24** ▲ EEG oscillations during visual processing task are different in expert and non expert subjects. D. NOURI*; M. JAVIDJAM; A. BONYADINAEINI; R. LASHGARI. *Inst. For Res. In Fundamental Sci., Iran Univ. of Sci. and Technol. (IUST), Inst. For Res. In Fundamental Sci.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 KKK52 **360.25** Human single unit activity during attentional blink. T. P. REBER*; J. FABER; J. NIEDIEK; J. BOSTRÖM; V. COENEN; C. E. ELGER; F. MORMANN. *Dept. of Epileptology, Univ. of Bonn, Dept. of Neurology, Univ. of Bonn, Stereotaxy and MR based OR Techniques, Dept. of Neurosurgery, Univ. of Bonn.*

9:00 KKK53 **360.26** Probing the causality between neural activation and perception using electrical stimulation in the human medial-temporal lobe. S. KNIELING*; T. P. REBER; J. BOSTROEM; C. E. ELGER; F. MORMANN. *Dept. of Epileptology, Univ. of Bonn, Dept. of Neurosurgery, Univ. of Bonn.*

10:00 KKK54 **360.27** Neural dynamics of event segmentation: Evidence from intracranial recording. A. JAFARPOUR*; J. J. LIN; R. T. KNIGHT. *Helen Wills Neurosci. Instutite, Dept. of Neurol.*

11:00 KKK55 **360.28** Representation of real-world event schemas during narrative perception. C. BALDASSANO*; U. HASSON; K. A. NORMAN. *Princeton Univ.*

8:00 KKK56 **360.29** The dorsal and ventral default mode network respond differentially to the valence and vividness of imagined events. T. PARTHASARATHI*; J. W. KABLE. *Univ. of Pennsylvania.*

9:00 KKK57 **360.30** A gaze into the mind's eye: Gaze as an indicator of cortical reinstatement during mental imagery. M. BONE*; M. ST-LAURENT; C. DANG; D. MCQUIGGAN; J. D. RYAN; B. R. BUCHSBAUM. *Rotman Res. Inst.*

POSTER

361. Human Long-Term Memory: Medial Temporal Lobe

Theme H: Cognition

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

8:00 KKK58 **361.01** Explaining the role of the hippocampus in verbal memory. I. A. CLARK*; E. A. MAGUIRE. *Wellcome Trust Ctr. For Neuroimaging.*

9:00 KKK59 **361.02** The impact of video game experience on hippocampal grey matter integrity. G. WEST*; K. KONISHI; M. DIARRA; J. BENADY-CHORNEY; B. DRISDELLE; L. DAHMANI; D. SODUMS; F. LEPORE; P. JOLICOEUR; V. BOHBOT. *Univ. of Montreal, Univ. of Montreal, Douglas Res. Inst.*

10:00 KKK60 **361.03** Neural dynamics underlying the acquisition of wikipedia concepts. L. S. SCHURMANN*; S. THEVES; N. DE HAAS; A. R. BACKUS; C. F. DOELLER. *Donders Institute, Radboud Univ.*

11:00 KKK61 **361.04** Goal-directed search in natural scenes improves with explicit, MTL-dependent long term memory. S. YOO*; R. S. ROSENBAUM; J. K. TSOTSOS; M. FALLAH; K. HOFFMAN. *York Univ., York Univ., Rotman Res. Institute, Baycrest, York Univ., York Univ., York Univ.*

8:00 KKK62 **361.05** Action-based prediction for known and novel associations between real-world objects. N. C. HINDY*; E. W. AVERY; N. B. TURK-BROWNE. *Princeton Univ.*

9:00 KKK63 **361.06** Visual responses of single neurons in the human medial temporal lobe are modulated by context. M. BAUSCH*; J. NIEDIEK; T. P. REBER; S. MACKAY; J. BOSTRÖM; C. E. ELGER; F. MORMANN. *Univ. of Bonn Med. Ctr., Univ. of Bonn Med. Ctr.*

10:00 KKK64 **361.07** Encoding of auditory-visual associations by single neurons in the human medial temporal lobe. M. S. KEHL*; A. RACZ; J. NIEDIEK; T. P. REBER; M. BAUSCH; B. SAMIMIZAD; J. BOSTRÖM; C. E. ELGER; F. MORMANN. *Univ. of Bonn Med. Ctr., Dept. of Neurosurgery, Univ. of Bonn Med. Ctr.*

11:00 KKK65 **361.08** Visually and memory-selective single neurons in the human medial temporal lobe during a spatial memory task. S. MACKAY*; T. P. REBER; M. BAUSCH; J. BOSTRÖM; C. E. ELGER; F. MORMANN. *Univ. of Bonn Med. Ctr., Univ. of Bonn Med. Ctr.*

8:00 KKK66 **361.09** Perceptual and conceptual object information is integrated in perirhinal cortex. C. B. MARTIN*; L. MAN; D. M. DOUGLAS; R. N. NEWSOME; M. D. BARENSE. *Univ. of Toronto, Rotman Res. Inst.*

9:00 KKK67 **361.10** Tracking dynamic connectivity shifts between memory systems during context dependent rule learning. A. E. CHANG*; A. S. WHITEMAN; C. E. STERN. *Boston Univ.*

10:00 KKK68 **361.11** The hippocampus and generalization: Investigating the underlying mechanisms using 7T fMRI. R. KOSTER*; Y. CHEN; M. CHADWICK; D. BERRON; A. BANINO; E. DUZEL; D. KUMARAN. *Google DeepMind, Inst. of Cognitive Neurol. and Dementia Res., German Ctr. for Neurodegenerative Dis., UCL Inst. of Cognitive Neurosci.*

11:00 KKK69 **361.12** Identification of nucleus reuniens in humans using probabilistic tractography. T. A. ALLEN*; P. C. REEDERS; R. P. VERTES; A. T. MATTFELD. *Florida Intl. Univ., Florida Atlantic Univ.*

8:00 KKK70 **361.13** Sequence memory predicts temporal reward discounting and both activate medial prefrontal cortex and medial temporal lobe regions. P. C. REEDERS*; T. A. ALLEN; A. T. MATTFELD. *Florida Intl. Univ.*

9:00 LLL1 **361.14** Activity of semantically invariant neurons in the human MTL during LFP ripples during sleep. J. NIEDIEK*; T. P. REBER; H. GAST; J. BOSTRÖM; V. A. COENEN; C. E. ELGER; F. MORMANN. *Univ. of Bonn, Univ. of Bonn, Univ. of Bonn.*

10:00 LLL2 **361.15** Features in prior night's sleep relates to changes in memory representations. E. COWAN*; A. LIU; S. KOTHARE; O. DEVINKSY; L. DAVACHI. *Ctr. For Neural Science/ New York Univ., NYU Langone Sch. of Med., Comprehensive Epilepsy Ctr., New York Univ.*

11:00 LLL3 **361.16** Examining the functions of the hippocampus using multimodal neuroimaging. N. KESHAVARZIAN*; K. MCWILLIAMS; J. PETERSEN; J. WILLIAMS; K. OSIPOWICZ. *Drexel Univ., Drexel Univ.*

8:00 LLL4 **361.17** Mediation of musical expectancies through hippocampus and amygdala interactions. D. OMIGIE*; S. SAMSON. *Max Planck Inst. For Empirical Aesthtetics, Univ. of Lille.*

9:00 LLL5 **361.18** Recall deficits with preserved recognition memory in limbic encephalitis. M. LAD*; S. MULLALY; T. KELLY; T. GRIFFITHS. *Newcastle Univ., Newcastle Univ., Royal Victoria Infirmary, Wellcome Trust Ctr. for Neuroimaging.*

10:00 LLL6 **361.19** Memory integration in patients with hippocampal lesions. A. PAJKERT; C. FINKE; Y. SHING; M. HOFFMANN; W. SOMMER; H. R. HEEKEREN; C. J. PLONER*. *Charité, Univ. of Stirling, Humboldt-Universität zu Berlin, Freie Univ. Berlin.*

11:00 LLL7 **361.20** Trial timing in fMRI designs for pattern information analyses. M. DE ARAUJO SANCHEZ; A. ADKE; D. ZEITHAMOVA*. *Univ. of Oregon.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 LLL8 **361.21** Neural representations of concepts and exemplars: Comparing generalization and recognition. C. R. BOWMAN*; D. ZEITHAMOVA. *Univ. of Oregon.*

9:00 LLL9 **361.22** Does novelty detection in single neurons of the human amygdala underlie the word frequency effect in recognition memory performance? J. KUHN*; J. T. WXTED; L. R. SQUIRE; P. N. STEINMETZ. *UCSD, Nakamoto Brain Res. Inst.*

10:00 LLL10 **361.23** Neural substrates of fear-conditioning induced retroactive and selective memory enhancement. D. S. YI*; J. E. DUNSMOOR; E. A. PHELPS; L. DAVACHI. *New York Univ., New York Univ.*

11:00 LLL11 **361.24** Memory, interrupted- Examining multi-voxel representations when perception clashes with the contents of working memory. E. B. O'NEIL*; A. C. H. LEE. *Univ. of Toronto, Scarborough, Baycrest Ctr. for Geriatric Care.*

8:00 LLL12 **361.25** ▲ Ibuprofen, but not paracetamol, enhances word recall memory in humans. M. S. GALLO*; K. A. BUCKHAULTS; R. G. OWENS; P. T. ORR. *Univ. of Scranton, Univ. of Scranton.*

9:00 LLL13 **361.26** Ec cortical thickness predicts cognitive decline in MCI in the ADNI sample. J. M. ROBERTS*; A. J. HOLBROOK; N. TUSTISON; J. STONE; D. GILLEN; M. A. YASSA. *Univ. of California Irvine Dept. of Neurobio. and Behavior, Univ. of California Irvine Dept. of Statistics, Univ. of Virginia, Univ. of Virginia.*

10:00 LLL14 **361.27** High-frequency band activity in human hippocampal CA1 predicts the precision of spatial memory retrieval. R. F. STEVENSON*; J. ZHENG; S. L. LEAL; A. P. CHUN; S. VADERA; R. T. KNIGHT; J. J. LIN; M. A. YASSA. *UC Irvine, Johns Hopkins Univ., UC Berkeley.*

11:00 LLL15 **361.28** Hippocampal-cortical networks for temporal memory precision. M. E. MONTCHAL*; M. A. YASSA. *UC Irvine.*

8:00 LLL16 **361.29** Category specific phase encoding for facial expressions in the orbitofrontal cortex. J. ZHENG*; R. F. STEVENSON; H. ERKOL; M. A. YASSA; R. T. KNIGHT; J. J. LIN. *Univ. of California, Irvine, Univ. of California, Irvine, Univ. of California, Irvine, Univ. of California, Irvine, Univ. of California, Berkeley, Univ. of California, Irvine.*

POSTER

362. Cortical Control of Executive Function

Theme H: Cognition

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

8:00 LLL17 **362.01** Individual differences in abstract rule selection. K. D. JUSTUS; B. A. ANDERSON; S. M. COURTNEY*. *Johns Hopkins Univ., Johns Hopkins Univ.*

9:00 LLL18 **362.02** Young adults born preterm with very low birth weight exhibit hyper-reactive cognitive control processing accompanied by disrupted white matter integrity. A. OLSEN*; E. DENNIS; K. A. I. EVENSEN; A. BRUBAKK; L. EIKENES; A. K. HÅBERG. *Norwegian Univ. of Sci. and Technol., Norwegian Univ. of Sci. and Technol., St. Olavs Hopital, Trondheim Univ. Hosp., USC, Norwegian Univ. of Sci. and Technol., Norwegian Univ. of Sci. and Technol., Trondheim Municipality, Norwegian Univ. of Sci. and Technol., St. Olavs Hopital, Trondheim Univ. Hosp.*

10:00 LLL19 **362.03** ▲ Effects of repetitive transcranial magnetic stimulation at 1 Hz on right dorsolateral prefrontal cortex on impulse control, quality of life and disability self-assessment in patients with borderline personality disorder. E. MORELOS SANTANA*; J. REYES-LÓPEZ; K. CERRILLO-AVILA; R. ALCALÁ-LOZANO; E. REYES-ZAMORANO; E. MIRANDA-TERRES; J. RICARDO-GARCELL; M. GARCÍA-ANAYA; J. GONZÁLEZ-OLVERA. *Inst. Nacional De Psiquiatría Ramón De La Fuen, Univ. Autónoma de Querétaro, Inst. de Neurobiología, UNAM.*

11:00 LLL20 **362.04** Sequence monitoring in the frontal cortex. T. M. DESROCHERS*; D. BADRE. *Brown Univ., Brown Univ., Brown Univ.*

8:00 LLL21 **362.05** Medial prefrontal cortex signals prediction errors across domains of pain and cognitive control. A. JAHN*; D. NEE; W. ALEXANDER; J. BROWN. *Haskins Labs., Helen Wills Neurosci. Inst., Ghent Univ., Indiana Univ.*

9:00 LLL22 **362.06** Human single-neuron correlate of error monitoring in the medial frontal cortex. Z. FU*; A. MAMELAK; I. ROSS; J. CHUNG; R. ADOLPHS; U. RUTISHAUSER. *Caltech, Cedars-Sinai Med. Ctr., Huntington Mem. Hosp., Cedars-Sinai Med. Ctr., Caltech.*

10:00 LLL23 **362.07** Disentangling the relative timing of right inferior frontal cortex and anterior insula in response inhibition with intracranial recordings in humans. E. BARTOLI*; A. ARON; N. TANDON. *Uthealth Sci. Ctr. At Houston, Univ. of California.*

11:00 LLL24 **362.08** CLOCK regulation of circadian rhythms in the human neocortex. M. FONTENOT; G. KONOPKA*. *UT Southwestern, UT Southwestern Med. Ctr.*

8:00 LLL25 **362.09** A computational neural model of sequential action in the fronto-parietal network. N. ZARR*; J. W. BROWN. *Indiana Univ.*

9:00 LLL26 **362.10** Frontal dysfunction in resting state networks in Multiple Sclerosis. J. GIELEN*; J. VAN SCHEPENDOM; J. LATON; J. DE MEY; A. VANBINST; M. CAMBRON; M. D'HAESELEER; M. D'HOOGHE; G. NAGELS. *Vrije Univ. Brussel, Univ. de Mons, UZ Brussel, Natl. MS Ctr. Melsbroek.*

10:00 LLL27 **362.11** Effects of the cholinergic agonist nicotine on cognitive flexibility and stability are modulated by baseline prefrontal functions. C. M. THIEL*; S. PUSCHMANN; S. AHRENS. *Univ. of Oldenburg.*

11:00 LLL28 **362.12** Fronto-parietal regions represent both abstract goals and goal-relevant feature information. N. M. LONG*; B. A. KUHL. *Univ. of Oregon.*

8:00 LLL29 **362.13** The impact of poly-victimization and traumatic stress on psychological and neuropsychological functioning of undergraduate college students. A. STIVER; W. M. MEIL*. *Indiana Univ. of Pennsylvania Dept. of Psychology.*

9:00 LLL30 **362.14** Is punishment impairing cognitive control in procrastinators? - an fMRI monetary Go/NoGo study. M. WYPYCH*; J. MICHAŁOWSKI; D. DROŹDZIEL; M. BANIA; M. SZCZEPANIK; A. MARCHEWKA. *Nencki Inst. of Experimenal Biol., Warsaw Univ., Warsaw Univ.*

10:00 LLL31 **362.15** Complementary physiological and behavioral data streams enhance analysis of fNIRS data during a real-world driving task. A. GUNDRAN*; A. M. PICCIRILLI; J. M. BAKER; J. L. BRUNO; L. K. HARBOTT; H. HOSSEINI; J. C. GERDES; A. L. REISS. *Stanford Univ., Stanford Univ.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 LLL32 **362.16** Neural, physiological, and behavioral correlates of visuomotor cognitive load: A functional NIRS study. H. HOSSEINI*; J. L. BRUNO; J. M. BAKER; A. GUNDRAN; A. M. PICCIRILLI; L. K. HARBOTT; J. C. GERDES; A. L. REISS. *Stanford Univ., Stanford Univ.*

8:00 LLL33 **362.17** fNIRS measurement of cortical activation and functional connectivity during a visuospatial working memory task. J. BAKER*; J. L. BRUNO; A. GUNDRAN; H. HOSSEINI; A. L. REISS. *Stanford Univ.*

9:00 LLL34 **362.18** Characterizing brain and behavioral correlates of steering control during simulated driving. J. BRUNO*; J. M. BAKER; A. GUNDRAN; L. K. HARBOTT; Z. STUART; A. PICCIRILLI; S. H. HOSSEINI; J. C. GERDES; A. REISS. *Stanford Univ., Stanford Univ.*

10:00 LLL35 **362.19** Brain network connectivity of a world record contender for simultaneous blindfold chess. M. JOHNSON*; J. POCHON; N. REGGENTE; J. C. WEBSTER; J. RISSMAN. *UCLA.*

11:00 LLL36 **362.20** Executive system recruitment is specific to goal-related and intentionally directed mind-wandering: Direct evidence for the functional role of the frontoparietal control network in self-generated thought. K. C. FOX*; M. L. DIXON; M. GIRN; S. SHETH; A. HERRERA-BENNETT; K. CHRISTOFF. *Univ. of British Columbia.*

8:00 LLL37 **362.21** Fractionating the frontoparietal network into distinct anterior and posterior systems based on stable and dynamic network architecture. M. L. DIXON*; K. CHRISTOFF. *UBC.*

9:00 LLL38 **362.22** Neurophysiological correlates of executive function in children and adolescents with attention-deficit hyperactivity disorder: A preliminary qEEG study. K. JHUNG*; J. PARK; J. CHOI; J. SONG. *Catholic Kwandong Univ., Yonsei Univ. Col. of Med., Natl. Ctr. for Mental Hlth., Natl. Hlth. Insurance Service Ilsan Hosp.*

10:00 LLL39 **362.23** A method for prediction of performance errors from single-trial EEG data. H. ORA*; Y. MIYAKE. *Tokyo Inst. of Technol.*

11:00 LLL40 **362.24** Sustained vs. instantaneous connectivity differentiates processing speed and fluid intelligence. J. B. KING*; A. K. MALLIK; L. M. SHAH; J. S. ANDERSON. *Univ. of Utah.*

8:00 LLL41 **362.25** Who does what? Neural representations of identity and ownership of one's own and a partner's subtasks. D. PISCHEDDA*; S. SEYED-ALLAEI; K. GÖRGEN; J. HAYNES; C. F. REVERBERI. *Bernstein Ctr. for Computat. Neurosci., Univ. of Milano-Bicocca, NeuroMI - Milan Ctr. for Neurosci., Bernstein Ctr. for Advanced Neuroimaging, Charité-Universitätsmedizin, Humboldt Univ. zu Berlin, Charité-Universitätsmedizin.*

9:00 LLL42 **362.26** Neural correlates of role switching: A functional MRI study. H. KADOTA*; Y. KOKAGE. *Kochi Univ. of Technol.*

10:00 LLL43 **362.27** Neural correlates of response inhibition in mild-moderate traumatic brain injury: An fMRI study. K. A. HOLIDAY*; L. T. EYLER; R. T. KIM; S. SORG; A. M. CLARK; L. DELANO-WOOD; D. M. SCHIEHSER. *SDSU/UCSD Joint Doctoral Program In Clin. Psych, VA San Diego Healthcare Syst., Desert Pacific Mental Illness Research, Education,and Clin. Ctr., Dept. of Psychiatry, Univ. of California San Diego.*

11:00 LLL44 **362.28** Neural substrate of shifting visual-spatial attention during task-switching. S. IWAKI*; K. RANA; L. M. VAINA. *Natl. Inst. Adv Indust Sci. & Tech., Boston Univ., Massachusetts Gen. Hospital, Dept. of Neurology, Harvard Med. Sch.*

8:00 LLL45 **362.29** Neural networks associated with response selection Revealed by a flanker task with averted eye-gazes serving as response cues. H. LEE*; F. LIN; W. KUO. *Natl. Yang-Ming Univ., Natl. Taiwan Univ.*

POSTER

363. Cortical Mechanisms of Language

Theme H: Cognition

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

8:00 LLL46 **363.01** Intracranial electrophysiology demonstrates hippocampal activation in verbal fluency tasks. S. T. WILLIAMS*. *Univ. of Pennsylvania.*

9:00 LLL47 **363.02** Inner speech activates auditory cortex: An fmri study. K. OKADA*; G. HICKOK. *Univ. California, Irvine.*

10:00 LLL48 **363.03** The role of feature type and semantic domain in effective connectivity underlying semantic retrieval. S. F. CAPPA*; E. CATRICALA'; E. ZANIN; A. FALINI; N. CANESSA. *IUSS Pavia, Div. of Neuroscience, San Raffaele Scientific Inst., Vita-Salute Univ. and Div. of Neuroscience, San Raffaele Scientific Inst.*

11:00 LLL49 **363.04** Neural correlates of semantic and syntactic processing in sign language. A. STROH*; F. ROESLER; G. DORMAL; N. SKOTARA; B. HAENEL-FAULHABER; B. ROEDER. *Univ. of Hamburg.*

8:00 LLL50 **363.05** Earlier than expected: Functional and structural connectivity of early auditory cortex influences broca's involvement during speech production. P. FRIEDRICH*; S. OCKLENBURG; C. FRAENZ; O. GUNTURKUN; E. GENC. *Ruhr-University.*

9:00 LLL51 **363.06** Children's language exposure predicts their neural activation during language processing. R. R. ROMEO*; J. A. LEONARD; S. T. ROBINSON; M. L. ROWE; A. P. MACKEY; J. D. E. GABRIELI. *Harvard Univ., MIT, McGovern Inst. for Brain Res., Harvard Grad. Sch. of Educ.*

10:00 LLL52 **363.07** ● Comprehension-dependent cortical activation during speech comprehension tasks with multiple languages: Functional near-infrared spectroscopy (fNIRS) study. M. LEI; T. MIYOSHI; Y. NIWA; I. DAN; H. SATO*. *Ctr. for Exploratory Research, Hitachi, Ltd., Chuo Univ.*

11:00 LLL53 **363.08** Fractional anisotropy decreases at extended segments in the left arcuate fasciculus in people who stutter. K. YASU*; R. A; K. MORI; N. SAKAI. *Natl. Rehab. Ctr. For Persons With Disabilities.*

8:00 LLL54 **363.09** The shared mechanism underlying music and reading. M. YU*; M. XU; X. WANG; J. LIU. *Beijing Normal Univ., Beijing Normal Univ.*

9:00 LLL55 **363.10** fMRI inter-trial variability as behavioral predictor in reading. J. SCHEFF*; S. BAILEY; M. RICHMOND; L. CUTTING. *Vanderbilt Univ., Vanderbilt Brain Inst.*

10:00 LLL56 **363.11** The visual-linguistic interface: Anatomically aligned semantic representations of vision and language. A. G. HUTH; S. F. POPHAM; N. Y. BILENKO; J. L. GALLANT*. *Univ. of California Berkeley.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 LLL57 **363.12** Contribution of the motor system to McGurk effect —event-related fMRI and TMS studies—. T. MURAKAMI*; J. FUJIWARA; Y. SAKAMOTO; M. OKAMOTO; T. MIZUOCHI; T. IWABUCHI; M. MAKUUCHI; M. ABE; H. KUBO; N. MATSUDA; S. KOBAYASHI; Y. UGAWA. *Fukushima Med. Univ., Natl. Rehabil. Ctr. for Persons with Disabilities, Tohoku Univ.*

8:00 LLL58 **363.13** The left dorsal premotor cortex in foreign visual-word processing for beginner readers. L. LI*; X. FENG; X. MENG; G. DING. *Beijing Normal Univ., Peking Univ.*

9:00 LLL59 **363.14** ▲ Functional plasticity of sentence-processing brain networks: An fMRI study of late American Sign Language acquisition. L. JOHNSON; Y. YI; S. MICKELSEN; S. MAZE; L. C. BAXTER; P. M. HOWARD; C. ROGALSKY*. *Arizona State Univ., Barrow Neurolog. Inst.*

10:00 LLL60 **363.15** Infants' sensitivity to visual rhythmic-temporal patterning of language: An integrated fNIRS neuroimaging, thermal infrared imaging, and eye tracking investigation. A. STONE*; B. MANINI; G. KARTHEISER; C. LANGDON; A. MERLA; L. PETITTO. *Gallaudet Univ., Gallaudet Univ., Univ. of Chieti-Pescara, Italy, Univ. of Chieti-Pescara, Italy.*

11:00 LLL61 **363.16** Oxytocin modulates semantic integration in speech comprehension. Z. YE*; A. STOLK; I. TONI; P. HAGOORT. *Chinese Acad. of Sci., Donders Inst. for Brain, Cognition and Behaviour.*

8:00 LLL62 **363.17** Development of an assessment tool for the study of pragmatic language comprehension for use in neuroimaging studies. A. V. CARRILLO-PEÑA; G. L. LICEA-HAQUET; D. E. VALLES-CAPETILLO; M. GIORDANO*. *Univ. Nacional Autónoma De México, Univ. Nacional Autónoma De México.*

9:00 LLL63 **363.18** Language lateralization assessed by magnetoencephalography imaging using three different language tasks. E. DE WITTE*; L. HINKLEY; D. MIZUIRI; C. GARRETT; S. HONMA; H. KIRSCH; J. HOUDE; M. BERGER; S. NAGARAJAN. *UCSF Med. Ctr., UCSF Med. Ctr., UCSF Med. Ctr., UCSF Med. Ctr., UCSF Med. Ctr., UCSF Med. Ctr.*

10:00 LLL64 **363.19** Noninvasive measurement of language-related frontal γ band activity with magnetoencephalography. H. HASHIMOTO*; Y. HASEGAWA; T. ARAKI; T. YANAGISAWA; S. YORIHUJI; M. HIRATA. *Osaka Univ., Osaka university.*

11:00 LLL65 **363.20** ▲ How can the time length of being bilingual affect the white matter of the brain? connectometry approach. M. DOLATSHAHI*; A. ANJOMSHOA; A. KAMALIAN; F. RAHMANI; N. HOSSEINI; M. AARABI. *Tehran Univ. of Med. Sci. _ Students', Tehran Univ. of Med. Sciences_Students' Scientific Res. Ctr., Basir Eye Hlth. Res. Ctr.*

8:00 LLL66 **363.21** Resting-state EEG as joint indicator of language performance and age-related cognitive decline. C. BEESE*; L. MEYER; B. VASSILEIOU; A. FRIEDERICI. *Max Planck Inst. Cognitive and Brain Sci.*

9:00 LLL67 **363.22** The right inferior frontal gyrus supports processing of nested structures in music. V. K. CHEUNG*; L. MEYER; A. D. FRIEDERICI; S. KOELSCH. *Max Planck Inst. for Human Cognitive and Brain Sci., Bernstein Ctr. for Computat. Neurosci., Univ. of Bergen.*

10:00 LLL68 **363.23** Learning new words in a second language from spontaneous speech: An N400 study. M. NOORDENBOS*; M. ERNESTUS. *Radboud Univ., Max Planck Inst. for Psycholinguistics.*

11:00 LLL69 **363.24** False belief and complementation: An electroencephalography study. Y. GUAN*; M. J. FARRAR; A. KEIL. *Univ. of Florida, Univ. of Florida.*

8:00 LLL70 **363.25** Induced high-γ oscillations during speaking distinguish variants of primary progressive aphasia. L. B. HINKLEY*; M. CAHILL-THOMPSON; Z. MILLER; K. RANASINGHE; D. MIZUIRI; C. GARRETT; S. HONMA; B. MILLER; K. VOSSEL; J. HOUDE; M. GORNO-TEMPINI; S. S. NAGARAJAN. *UC San Francisco, Univ. of California, San Francisco.*

9:00 MMM1 **363.26** Using the N400 as a neural distance metric for unsupervised clustering of words. M. VAN VLIET*; M. M. VAN HULLE; R. SALMELIN. *Aalto Univ., KU Leuven.*

10:00 MMM2 **363.27** Enhancement of high-γ power in 9-month-old infants with early active acoustic experience suggests accelerated phonemic mapping. S. C. ORTIZ-MANTILLA*; T. REALPE-BONILLA; J. DICICCO-BLOOM; A. A. BENASICH. *Rutgers The State Univ. of New Jersey.*

11:00 MMM3 **363.28** ● Kohonen networks for unsupervised identification of unique multimodal spectral-temporal profiles. K. FORSETH*; N. TANDON. *UT Hlth. Sci. Ctr. In Houston.*

POSTER

364. Animal Models of Schizophrenia and Pharmacological Treatments

Theme H: Cognition

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

8:00 MMM4 **364.01** ● A novel Muscarinic M4 receptor modulator PGM039678 inhibits Dopamine D1 receptor signalling pathways *in vivo*. T. R. PATEL*; S. BECHAR; S. STAFFORD; R. FOSBEARY; M. SHEARDOWN; L. WALSH; J. REEVES; P. RUPRAH; M. BARNES. *Takeda Cambridge Ltd.*

9:00 MMM5 **364.02** Effects of repeated aripiprazole treatment on $D2^{High}$ receptors and the Akt-GSK3β signaling pathway in preadolescent and adult rat. M. L. BECKER*; V. REAL; A. D. HARDIN; C. A. CRAWFORD; S. A. MCDOUGALL. *California State Univ.*

10:00 MMM6 **364.03** Targeted deletion of both kynurenine aminotransferase II and kynurenine 3-monooxygenase in mice: Implications for studying kynurenine pathway metabolism. A. POCIVAVSEK*; M. A. R. THOMAS; F. GIORGINI; R. SCHWARCZ. *Univ. of Maryland Sch. of Med., Univ. of Leicester.*

11:00 MMM7 **364.04** Withdrawn.

8:00 MMM8 **364.05** Activation of the VPAC2 receptor inhibits neurite outgrowth and branching of cortical neurons by a PKA-dependent mechanism. H. HASHIMOTO; Y. AGO*; A. HAYATA-TAKANO; T. KAWANAI; R. YAMAUCHI; J. A. WASCHEK. *Osaka Univ., Univ. of California.*

9:00 MMM9 **364.06** ● Characterization of PGM039678, a positive allosteric modulator of the muscarinic M4 receptor, in animal models of schizophrenia. E. CAYRE; D. PARACHOU; B. MÉOT; B. RION; C. DRIEU LA ROCHELLE*; M. SHEARDOWN; P. RUPRAH; L. WALSH; J. REEVES; R. FOSBEARY; M. BARNES; T. PATEL. *Biotrial Pharmacol., Takeda Cambridge Ltd.*

10:00 MMM10 **364.07** Neonatal phencyclidine (PCP) in the rat induces psychotomimetic effects in adulthood which can be inhibited by chronic treatment with antipsychotics. V. CASTAGNÉ*; A. HERNIER. *Porsolt S.A.S.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 MMM11 **364.08** ● Selective M_1 potentiation improves PCP-induced deficits in working memory and pattern separation in rats. E. P. LEBOIS*; D. VOLFSON; D. BUHL; S. GRIMWOOD; J. EDGERTON. *Pfizer, Inc., Pfizer, Inc, Pfizer, Inc.*

8:00 MMM12 **364.09** Positive allosteric modulators of the α7 nicotinic acetylcholine receptor reinstate cognitive control and potentiate glutamate levels in prefrontal cortex. D. PHENIS*; J. D. SCHUMACHER; V. VALENTINI; J. P. BRUNO. *The Ohio State Univ., Univ. of Cagliari.*

9:00 MMM13 **364.10** Atypical antipsychotic clozapine reversed deficit on prepulse inhibition of the acoustic startle reflex produced by microinjection of DOI into the inferior colliculus in rats. R. B. SILVA*; R. OLIVEIRA. *Univ. Federal de São Paulo.*

10:00 MMM14 **364.11** Pharmacological state-dependent functional connectivity MRI in conscious nonhuman primates: Validating a translational model for evaluating antipsychotics. E. MALTBIE*; K. GOPINATH; D. KEMPF; L. HOWELL. *Emory Univ., Yerkes Natl. Primate Res. Ctr.*

11:00 MMM15 **364.12** ● The atypical antipsychotic drug lurasidone to prevent and reverse the impairment in novel object recognition in phencyclidine-treated mice. M. HUANG*; L. RAJAGOPAL; S. KWON; H. Y. MELTZER. *Northwestern Univ. Feinberg Sch. of Med.*

8:00 MMM16 **364.13** Serotonergic hyperfunction in an NMDAR hypofunction mouse model of schizophrenia. K. NAKAO*; S. YAMAGUCHI; K. NAKAZAWA. *Univ. of Alabama at Birmingham, Gifu Univ. Grad. Sch. of Med.*

9:00 MMM17 **364.14** Antipsychotics and 5-HT_{2A} receptor: Insights from the 5-HT_{2A} knockout mouse. R. JOSHI*; M. M. PANICKER. *Natl. Ctr. For Biol. Sci.*

10:00 MMM18 **364.15** Comparison of the discriminative stimulus properties of the antipsychotics amperozide and amisulpride in C57BL/6 mice and antagonist activity at dopamine D_2 and serotonin 5-HT_2 receptors in Xenopus oocytes. T. J. DONAHUE*; J. YOUNKIN; J. C. KING; D. E. LOGOTHETIS; J. H. PORTER. *Virginia Commonwealth Univ., Viginia Commonwealth Univ., Virginia Commonwealth Univ.*

11:00 MMM19 **364.16** ● Does the antipsychotic-like effect of acute oxytocin on prepulse inhibition persist with chronic administration? P. D. SHILLING*; G. MELENDEZ; B. ROBERTS; J. TRAN; A. AVALOS; A. DAQIAN; A. NARWAN; B. KIAEI; D. FEIFEL. *Univ. California, San Diego.*

8:00 MMM20 **364.17** Chemogenetic activation of CCK-GABA neurons: Implications for schizophrenia. P. D. WHISSELL*; I. KHAN; J. KIM. *Univ. of Toronto.*

9:00 MMM21 **364.18** ▲ Amelioration of working memory deficits induced by prefrontal GABA hypofunction by D1 receptor agonists and D-govadine. J. MECCIA*; M. AUGER; A. G. PHILLIPS; S. B. FLORESCO. *Univ. of British Columbia, Univ. of British Columbia.*

10:00 MMM22 **364.19** ● Ivermectin, a positive modulator of P2X4 receptors, interacts with D1 receptors in modulation of prepulse inhibition of acoustic startle reflex. S. KHOJA*; L. ASATRYAN; M. W. JAKOWEC; D. L. DAVIES. *USC, USC, USC.*

11:00 MMM23 **364.20** ● Efficacy of β-arrestin biased dopamine D2 receptor compounds as preclinical treatment for schizophrenia-like behaviors. W. C. WETSEL*; R. M. RODRIGUIZ; V. M. POGORELOV; S. PARK; C. M. SCHMERBERG; M. G. CARON; J. JIN. *Duke Univ. Dept. of Psychiatry and Behavioral Sci., Duke Univ. Med. Ctr., Duke Univ. Med. Ctr., Icahn Sch. of Med. at Mount Sinai.*

8:00 MMM24 **364.21** Diencephalic D2 dopamine receptor expression in a rat model for tardive dyskinesia. S. E. BACHUS*. *Univ. of Maryland Baltimore County.*

9:00 MMM25 **364.22** Effects of sodium nitroprusside on MK-801-induced impairments in the trial-unique, delayed nonmatching-to-location task. J. HURTUBISE*; W. N. MARKS; D. A. DAVIES; J. K. CATTON; G. B. BAKER; J. G. HOWLAND. *Univ. of Saskatchewan, Univ. of Alberta.*

10:00 MMM26 **364.23** Accumbens-prefrontal interactions in the regulation of multiple transmitter systems: Implications for cognitive deficits in schizophrenia. V. VALENTINI*; J. D. SCHUMACHER; D. PHENIS; D. BORTZ; J. P. BRUNO. *Univ. of Cagliari-Dept. Biomed. Sci., Ohio State Univ.*

11:00 MMM27 **364.24** Investigation of α-7 nicotinic receptor modulation effects on VTA dopamine neuron activity in the MAM animal model of schizophrenia. G. A. NEVES*; A. A. GRACE. *Univ. of Pittsburgh.*

8:00 MMM28 **364.25** Risperidone ameliorates behavioral and morphological changes induced by neonatal ventral hippocampus lesion in rat. H. TENDILLA*; S. MENESES-PRADO; R. A. VÁZQUEZ-ROQUE; G. FLORES. *Inst. De Fisiología, Benemérita Univ. Autónoma De Puebla.*

9:00 MMM29 **364.26** Involvement of prefrontal GABAergic transmission in schizophrenia-like behaviour induced by chronic adolescent THC exposure. J. RENARD*; C. KRAMAR; H. HSZKUDLAREK; L. G. ROSEN; W. J. RUSHLOW; S. R. LAVIOLETTE. *Western Ontario Univ.*

10:00 MMM30 **364.27** Chronic risperidone administration attenuates neuronal abnormalities in the basolateral amygdala induced by an animal model of schizophrenia in the rat. R. A. VAZQUEZ*, SR; H. TENDILLA-BELTRAN; S. MENESES-PRADO; G. FLORES. *Inst. De Fisiología Benemérita Univ. Autónoma De Puebla.*

11:00 MMM31 **364.28** Repeated ropinirole treatment resulting in recovery of sensorimotor gating induces ΔFosB in mouse nucleus accumbens neurons that co-express D1 and D3 dopamine receptors, but not D2 receptors. K. T. MEYERS; A. M. MAPLE; D. M. WALKER; M. E. CAHILL; A. L. GALLITANO; E. M. NIKULINA; E. J. NESTLER; R. P. HAMMER*, Jr. *Arizona State Univ., Univ. of Arizona Col. of Med., Icahn Sch. of Med. at Mount Sinai, Univ. of Arizona Col. of Med., Univ. of Arizona Col. of Med.*

8:00 MMM32 **364.29** Gender specific interactions between the prebiotic B-GOS and the antipsychotic olanzapine: An analysis of central NMDA receptor subunits and weight gain. A. KAO*; B. LENNOX; P. W. J. BURNET. *Univ. of Oxford.*

9:00 MMM33 **364.30** Behavioral dissection of the dot-pattern expectancy task (DPX) in non-human primates. A. L. DENICOLA*; M. V. CHAFEE. *Univ. of Minnesota.*

POSTER

365. Anatomical Techniques: Circuit Tracing and Staining

Theme I: Techniques

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

8:00 MMM34 **365.01** ● Quantitative, real-time live-cell analysis method and reagents for evaluation of cell health in neuronal cultures. J. N. RAUCH; M. L. BOWE; L. OUPICKA; D. M. APPLEDORN; D. M. ROCK*. *Essen Biosci. Inc, Essen Biosci. Inc.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

9:00 MMM35 **365.02** A signal amplification system for fluorescent microscopy. R. LIN*; Q. FENG; Y. SHI; M. LUO. *Natl. Inst. of Biol. Sciences, Beijing.*

10:00 MMM36 **365.03** ● Validated Antibody Database: A curated database of antibodies validated in literature. H. XIE*. *Synatom Res.*

11:00 MMM37 **365.04** Miniature picosecond diode laser system for two-photon fluorescence imaging of the mouse brain. R. D. NIEDERRITER; B. N. OZBAY; G. L. FUTIA; D. RESTREPO*; E. A. GIBSON; J. T. GOPINATH. *Univ. of Colorado Boulder, Univ. of Colorado Anschutz Med. Campus, Univ. of Colorado Anschutz Med. Campus, Univ. of Colorado Boulder.*

8:00 MMM38 **365.05** Determining the contributions of cell and myelin densities to diffusion magnetic resonance imaging (DMRI) parameters in the cortex of squirrel monkey using quantitative histology. V. JANVE*; K. SCHILLING; Y. GAO; B. A. LANDMAN; I. STEPNIEWSKA; A. W. ANDERSON. *Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ.*

9:00 MMM39 **365.06** A whole-brain imaging platform for fast identifying molecular phenotype in specific neural circuit. J. YUAN*; T. JIANG; B. LONG; T. XU; Q. LUO; H. GONG. *HUAZHONG UNIVERSITY OF SCIENCE AND TENCHNOLOGY.*

10:00 MMM40 **365.07** ▲ Semiautomated quantification of Toxoplasma - CNS host cell interactions. C. J. POTTER*; O. A. MENDEZ; T. BELLO; M. VALDEZ; E. G. FERNANDEZ; T. P. TROUARD; A. A. KOSHY. *Univ. of Arizona, Univ. of Arizona, Univ. of Arizona, Univ. of Arizona.*

11:00 MMM41 **365.08** Axonal divergence of noradrenergic locus coeruleus neurons that innervate discrete terminal fields. D. J. CHANDLER*; N. W. PLUMMER; B. D. WATERHOUSE; P. JENSEN. *Drexel Univ. Col. of Med., Natl. Inst. of Envrn. Hlth. Sci., Rowan Univ. Sch. of Med.*

8:00 MMM42 **365.09** *Ex vivo* retrograde transport in rat cortex: A model for human cortical connectivity. A. KSENDZOVSKY*; A. S. TOLPYGO; S. WALBRIDGE; J. S. DIAMOND; D. D. FERRANTE; A. CUMMINS; J. D. HEISS; J. KAPUR; P. P. MITRA; K. A. ZAGHLOUL. *Natl. Inst. of Hlth. Office of Intramural, Cold Spring Harbor Lab., NIH, Univ. of Virginia.*

9:00 MMM43 **365.10** Adeno-associated virus injection to rat motor cortex for fluorescent tracing of the corticospinal tract: Effects of survival time and delivery method. H. PARK*; J. B. CARMEL. *Burke Med. Res. Inst., Weil Cornell Med.*

10:00 MMM44 **365.11** ● Mapping neocortical visual circuits by labeling neurons with unique hues using HSV-1 vectors expressing Brainbow. A. I. GELLER*; G. ZHANG; O. CHAO; H. ZHAO; H. CAO; X. LI. *LSUHSC.*

11:00 MMM45 **365.12** Investigating small intestine neuromuscular anatomy using optical imaging. M. AHMED*; Y. BAI; J. GOMES; J. C. RAMELLA-ROMAN; R. JUNG. *Florida Intl. Univ.*

8:00 MMM46 **365.13** Stereology of the substantia nigra pars compacta comparing totalnumbers of tyrosine hydroxylase negative neurons to tyrosine hydroxylasepositive neurons in 3 different mouse models. S. O. AHMAD*; E. SCHLEIF. *St. Louis Univ., St. Louis Univ.*

9:00 MMM47 **365.14** *In vivo* MRI overestimates amygdala damage following ibotenic acid lesions in rhesus monkeys. B. M. BASILE*; E. C. FIUZAT; C. L. KARASKIEWICZ; E. A. MURRAY. *Natl. Inst. of Mental Health, NIH.*

10:00 MMM48 **365.15** ● Room temperature subdissection of rodent brain possible following heat inactivation. K. SKOLD*; L. SEGERSTRÖM; M. BORÉN; I. NYLANDER. *Denator AB, Addiction & Behavior.*

POSTER

366. Transsynaptic Tracing

Theme I: Techniques

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

8:00 MMM49 **366.01** Wiring transmission in the serotonergic system. A. BERTERO*; A. BIFONE; M. PASQUALETTI. *Univ. of Pisa, Italian institute of technology.*

8:00 DP10 **366.02** (Dynamic Poster) High resolution and high field diffusion MRI in the visual system of primates. J. R. KORENBERG*; O. ABDULLAH; L. DAI; J. TIPPETS; M. NAVAS-MORENO; M. BURBACK; A. ANGELUCCI; E. HSU; S. JOSHI. *Univ. of Utah, Univ. of Utah, Univ. of Utah, Univ. of Utah, Univ. of Utah, Univ. of Utah/Moran Eye Ctr.*

10:00 MMM50 **366.03** Non-human primate white matter anatomy: Klingler fiber dissection study. T. DECRAMER*; J. VAN LOON; P. JANSSEN; T. THEYS. *KU Leuven, KU Leuven.*

11:00 MMM51 **366.04** High throughput imaging of motor system connectivity in the mouse brain. S. GOKHALE*; K. POINSATTE; S. MIRZA; D. M. RAMIREZ; X. KONG; E. J. PLAUTZ; M. P. GOLDBERG. *UT Southwestern Med. Ctr.*

8:00 MMM52 **366.05** An improved viral method to overcome viral tropisms for retrograde labelling of neurons. S. LI*; A. VAUGHAN; A. KEPECS. *Cold Spring Harbor Lab.*

9:00 MMM53 **366.06** Transgenic expression of rabies glycoprotein in mouse hind limb muscle increases the efficiency of motor pool infection by SADB19dG rabies virus. L. GOMEZ PEREZ*; R. W. GRIFFITH; F. J. ALVAREZ. *Emory Univ.*

POSTER

367. Staining, Tracing, and Imaging Techniques: Novel Probes

Theme I: Techniques

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

8:00 MMM54 **367.01** Development of methods for longitudinal imaging of DREADDs *in vivo*. J. L. GOMEZ*; L. A. RODRIGUEZ; R. ELLIS; M. MICHAELIDES. *Natl. Inst. on Drug Abuse.*

9:00 MMM55 **367.02** Novel human nerve binding peptides for fluorescence guided surgery. D. V. HINGORANI*. *Univ. of California San Diego.*

10:00 MMM56 **367.03** Characterization of a transgenic mouse expressing fluorophores in neurons, microglia, astrocytes, and oligodendrocytes. J. GAIRE; H. C. LEE; S. CURRLIN; K. J. OTTO*. *Univ. of Florida, Purdue Univ.*

11:00 MMM57 **367.04** Fluorogen-activating peptide tagged neuroligin (FAP-NL), a powerful new tool for high-throughput synapse identification and connectomics. D. A. KULJIS*; M. T. MATSUSHITA; T. A. SPIX; C. A. TELMER; M. P. BRUCHEZ; A. L. BARTH. *Carnegie Mellon Univ., Carnegie Mellon Univ., Carnegie Mellon Univ.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

8:00 MMM58 **367.05** Development of a PET probe targeting P2X7 receptor for imaging neuroinflammation. M. SHUKURI*; K. KATO; T. KUMAMOTO; N. IHARA; T. HANAKAWA. *Showa Pharmaceut. Univ., Natl. Ctr. of Neurol. and Psychiatry, Musashino Univ., Univ. of Tokyo.*

9:00 MMM59 **367.06** High-performance probes for two-photon phosphorescence lifetime microscopy (2PLM) of oxygen. S. VINOGRADOV*; T. ESIPOVA; M. BARRETT; B. WEBER. *Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Zurich.*

10:00 MMM60 **367.07** Identification and characterization of hippocampal neurons that encode novel environments using a genetically-encoded optical voltage sensor. Y. MA*; P. O. BAYGUINOV; M. B. JACKSON. *Univ. of Wisconsin Madison, Univ. of Wisconsin Madison.*

11:00 MMM61 **367.08** Functional innervation of hilar mossy cells revealed using a genetically-encoded hybrid optical voltage sensor. P. BAYGUINOV*; Y. MA; M. B. JACKSON. *Univ. of Wisconsin, Univ. of Wisconsin, Univ. of Wisconsin.*

8:00 MMM62 **367.09** Brain cell type mapping by *in situ* sequencing. X. QIAN*; T. HAULING; L. MAGNO; A. MUÑOZ MANCHADO; P. LÖNNERBERG; N. SKENE; M. PACHITARIU; N. KESSARIS; S. LINNARSSON; J. HJERLING-LEFFLER; K. D. HARRIS; M. NILSSON. *Stockholm Univ., Univ. Col. London, Karolinska Institutet.*

9:00 NNN1 **367.10** Molecular classification of CA1 interneurons by single-cell and *in-situ* RNA sequencing. K. D. HARRIS*; X. QIAN; T. HAULING; L. MAGNO; P. LONNERBERG; A. MUNOZ MANCHADO; N. SKENE; M. PACHITARIU; N. KESSARIS; S. LINNARSSON; J. HJERLING-LEFFLER; M. NILSSON. *Univ. Col. London, SciLifeLab, Karolinska Institutet.*

10:00 NNN2 **367.11** Mapping brain-wide corticocortical projections at single-cell resolution by sequencing of barcoded RNA. L. HUANG*; J. M. KEBSCHULL; A. M. ZADOR. *Cold Spring Harbor Lab.*

11:00 NNN3 **367.12** High-throughput mapping of single neuron projections by sequencing of barcoded RNA. J. M. KEBSCHULL*; L. HUANG; P. GARCIA DA SILVA; A. P. REID; I. D. PEIKON; D. F. ALBEANU; A. M. ZADOR. *Cold Spring Harbor Lab.*

8:00 NNN4 **367.13** ● Cellular analysis of ErbB4 isoforms in CNS neurons using a next generation *in situ* hybridization technology for single exon detection. L. M. ERBEN*; M. HE; M. XIAO-MING; E. PARK; A. BUONANNO. *Section on Mol. Neurobiology, NICHD, NIH, Univ. of Bonn, Advanced Cell Diagnostics.*

9:00 NNN5 **367.14** Vascular neuroanatomy of the short-tailed fruit bat, Carollia perspicillata. R. ORMAN*; T. RAGAN; R. KOLLMAR; M. STEWART. *SUNY Downstate Med. Ctr., Tissue Vision, Inc., SUNY Downstate Med. Ctr.*

10:00 NNN6 **367.15** Crossing the Styx: An integrative pipeline translating post mortem findings to *in vivo* MRI space. N. JUDD*; A. ALKEMADE; M. KEUKEN; G. DE HOLLANDER; R. BALESAR; D. SWAAB; B. FORSTMANN. *Univ. of Amsterdam, Univ. of Amsterdam, Netherlands Inst. for Neurosci.*

11:00 NNN7 **367.16** Methods for automated neuroanatomical annotations from zebrafish gene expression data. S. PAJEVIC*; G. D. MARQUART; K. M. TABOR; D. E. DALLE NOGARE; T. MUELLER; H. A. BURGESS. *NIH, Kansas State Univ.*

8:00 NNN8 **367.17** Predictive sub-voxel fiber tractography of the primate limbic system using high-resolution confocal to diffusion-tensor MRI maps. A. VAN HOEK*; L. DAI; I. YEUNG; O. ABDULLAH; E. HSU; S. JOSHI; J. R. KORENBERG. *Univ. of Utah, Univ. of Utah, Univ. of Utah, Univ. of Utah, Univ. of Utah.*

9:00 NNN9 **367.18** Estimation of stage-specific progression in Th17 cell-induced adoptive transfer experimental autoimmune encephalomyelitis (EAE) using *in vivo* fluorescence imaging analysis. S. LEE*; H. CHO; Y. SHIN; H. SALAPA; M. LEVIN. *Univ. of Tennessee.*

10:00 NNN10 **367.19** Novel method for quantitative assessment of cortical lesion location and size. J. A. MASIS*; M. JÖSCH; D. MANKUS; D. D. COX. *Harvard Univ., Harvard Univ.*

11:00 NNN11 **367.20** Real-time *in vivo* electrochemical measurement of local drug concentrations by using diamond microelectrode. G. OGATA*; Y. ISHII; K. ASAI; Y. SANO; F. NIN; T. YOSHIDA; T. HIGUCHI; K. HORI; K. MAEDA; S. KOMUNE; M. TAKAI; H. KUSUHARA; Y. EINAGA; H. HIBINO. *Niigata Univ. Sch. of Med., Niigata Univ., Keio Univ., The Univ. of Tokyo, Kyushu Univ., Yuaikai Oda Hosp., The Univ. of Tokyo, JST-ACCEL, AMED-CREST, AMED.*

8:00 NNN12 **367.21** Physiological activity monitoring with conductive polymer based silk electrode. Y. TAKIZAWA; H. TAKAHASHI; M. NISIZAWA; K. TORIMITSU*. *Tohoku Univ.*

9:00 NNN13 **367.22** *In vivo* zinc imaging in mouse brain using two-photon microscopy. Z. NANNAN; S. DING*. *Univ. of Missouri, Univ. of Missouri.*

10:00 NNN14 **367.23** Nonlinear regression of *in vitro* fast scan cyclic voltammetry data for extraction of neurochemical biomarkers. H. PARK*; B. S. PAEK; J. K. TREVATHAN; K. A. LUDWIG; J. L. LUJAN; K. H. LEE. *Mayo Clin.*

11:00 NNN15 **367.24** Development of a micro-immunoelectrode for rapid detection of α-synuclein *in vivo*. C. M. YUEDE*; H. LEE; H. M. EDWARDS; M. XIONG; C. LI; J. R. CIRRITO. *Washington Univ., Florida Intl. Univ.*

8:00 NNN16 **367.25** A new reporter for copper (II) detects specifically the lysosome compartment in live cells. M. GIUFFRIDA*; G. TRUSSO; C. SATRIANO; S. ZIMBONE; A. COPANI; G. TOMASELLI; E. RIZZARELLI. *Natl. Council of Res. (CNR), Univ. of Catania, Univ. of Catania.*

POSTER

368. Models of Excitability: Networks and Single Neurons I

Theme I: Techniques

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

8:00 NNN17 **368.01** Consequences of sparse activity in the ento-dentate-CA3 pathway: Investigations using a large-scale, biologically realistic, computational model of the hippocampus. G. J. YU*; T. W. BERGER; D. SONG. *USC.*

9:00 NNN18 **368.02** Simulated effects of acetylcholinesterase inhibitors on hippocampal cell network activity. A. MERGENTHAL*; J. C. BOUTEILLER; E. HU; T. W. BERGER. *USC.*

10:00 NNN19 **368.03** A model of axonal branching for medium and long range fibers in a multi-scale model of hippocampal tissue. C. S. BINGHAM*; J. BOUTEILLER; D. SONG; T. W. BERGER. *USC.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

11:00 NNN20 **368.04** A detailed computational model of mechanisms underlyingcalcium regulation and dysregulations in glutamatergic postsynaptic spines. E. Y. HU*; A. MERGENTHAL; J. C. BOUTEILLER; D. SONG; T. W. BERGER. *USC.*

8:00 NNN21 **368.05** A closed-loop multi-scale simulation paradigm for accurate modeling of electrical stimulation in hippocampus. P. HENDRICKSON*; K. LOIZOS; A. GILBERT; D. SONG; G. LAZZI; T. W. BERGER. *USC, Univ. of Utah.*

9:00 NNN22 **368.06** Extracellular potentials generated by axon bundles. T. MCCOLGAN*; P. T. KUOKKANEN; J. LIU; H. WAGNER; C. E. CARR; R. KEMPTER. *Humboldt-Universität Zu Berlin, Univ. of Maryland, RWTH Aachen.*

10:00 NNN23 **368.07** Model-based control of spreading depression by applied electric field in spatially extended neuron-glia model. S. VAN WERT*; S. J. SCHIFF. *The Pennsylvania State Univ.*

11:00 NNN24 **368.08** Impact of dendritic morphology on functional subunits in dendrites. S. HONG*; A. TAKASHIMA; E. DE SCHUTTER. *Okinawa Inst. of Sci. and Technol.*

8:00 NNN25 **368.09** Explicitly incorporating dendritic spines of different morphological classes into a multi-compartment model of a pyramidal neuron. S. E. MOTLEY*; T. HOANG-TRONG; J. KOZLOSKI; J. H. MORRISON; R. KERR. *Icahn Sch. of Med. At Mount Sinai, Computat. Biol. Center, IBM Res. Division, IBM T. J. Watson Res. Ctr., Icahn Sch. of Med. at Mount Sinai, Univ. of California Davis, IBM Res. Australia.*

9:00 NNN26 **368.10** Atomistic study of the interaction PPAR -γ and PPAR-β/δ with its agonists: A computational study. A. MORALES*; F. PÉREZ-SEVERIANO; A. ZAMORANO-CARRILLO. *THE NATIONAL INSTITUTE OF NEUROLOGY AND NEUROSURGERY, ENMH-IPN.*

10:00 NNN27 **368.11** ▲ The substances transportation in the brain extracellular space can be modulated with External Stimulation. Z. TENG*; X. GUAN; Q. HE; Y. FU; H. HAN. *Peking Univ. Third Hosp.*

11:00 NNN28 **368.12** A novel method to create an *in vitro* dynamic blood brain barrier model. P. MIRANDA-AZPIAZU; G. JOSE; S. PANAGIOTOU; S. SAHA*. *Univ. of Leeds, Univ. of Liverpool.*

8:00 NNN29 **368.13** ▲ A mathematical model of ischemic stroke. M. SARKAR*; C. CONTE; R. LEE; D. H. TERMAN. *Ohio State Univ.*

9:00 NNN30 **368.14** A bayesian hierarchical model for the biophysical properties of melanopsin. B. V. EHINGER*; D. EICKELBECK; K. SPOIDA; S. HERLITZE; P. KÖNIG. *Osnabrück Univ., Ruhr-University Bochum, Univ. Med. Ctr. Hamburg Eppendorf.*

10:00 NNN31 **368.15** Determinants of spontaneous synchronized network activity in primary neuronal cultures: A computational approach. D. LONARDONI*; H. AMIN; A. MACCIONE; T. NIEUS; L. BERDONDINI. *Inst. Italiano Di Tecnologia.*

11:00 NNN32 **368.16** Network dynamics in early infantile epileptic encephalopathies. R. E. ROSCH*; F. MOELLER; T. BALDEWEG; G. BAIER. *Univ. Col. London, Univ. Col. London, Great Ormond Street Hosp. for Children NHS Fndn. Trust, Univ. Col. London, Univ. Col. London.*

8:00 NNN33 **368.17** From callosal axonal injury to neurobehavioral dysfunction: Computational modeling of cortical network dynamics in mild traumatic brain injury. J. CUI*; L. NG; V. VOLMAN. *L-3 Communications/Applied Technologies, Inc.*

9:00 NNN34 **368.18** Tms-induced neuronal activation - a computational study. H. SEO*; N. SCHAWORONKOW; J. TRIESCH; S. JUN. *Gwangju Inst. of Sci. and Technol., Frankfurt Inst. for Advanced Studies.*

10:00 NNN35 **368.19** ▲ Learning with discrete representations using continuous chaotic. neural populations. S. HAXBY*; E. PETERSON. *Univ. California, San Diego, UCSD.*

11:00 NNN36 **368.20** Effects of synaptic transmission probability on functional network structure. M. BUDAK*; M. R. ZOCHOWSKI. *Univ. of Michigan Ann Arbor.*

8:00 NNN37 **368.21** Dynamics of rate-model networks with separate excitatory and inhibitory populations. M. STERN*; L. ABBOTT. *Hebrew Univ., Columbia Univ.*

9:00 NNN38 **368.22** Cortical circuit organized through the log-STDP leads to an internal representation of sensory experience during development: A model study. T. MATSUMURA; T. YUASA; S. KANG*. *Yamagata Univ., Lab. for Neural Circuit Theory, Brain Sci. Institute, RIKEN.*

10:00 NNN39 **368.23** ● Quasi cycle induced cross frequency. R. FARHOUDI*; A. ABBASIAN; M. FOTOUHI. *Sharif Univ., Inst. For Res. In Fundamental Sci., Shrif Univ. of Technol.*

11:00 NNN40 **368.24** ● PyPN - a tool for simulating peripheral nerves. C. H. LUBBA*; Y. LE GUEN; S. JARVIS; N. JONES; S. SCHULTZ. *Imperial Col. London, Imperial Col. London, Imperial Col. London, Imperial Col. London.*

POSTER

369. Computational Tools for Human Data I

Theme I: Techniques

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

8:00 NNN41 **369.01** The capacity of information integration of α band is associated with non-responsiveness. H. KIM*; U. LEE; V. PHILLIP; B. TARIK; J. LEE; G. MASHOUR. *Univ. of Michigan.*

9:00 NNN42 **369.02** Reintegration of regional brain functions during gradual and abrupt brain recoveries after a major perturbation. U. LEE*; M. KIM; G. MASHOUR. *Univ. of Michigan Med. Sch., Ctr. for Consciousness Sci., Pohang Univ. of Sci. and Technol., Neurosci. Grad. Program.*

10:00 NNN43 **369.03** Sparse-tensor framework for computational analysis of brain connectomes. C. F. CAIAFA*; F. PESTILLI. *Indiana Univ. / CONICET, Indiana Univ.*

11:00 NNN44 **369.04** Studying intersubject networks and standard graph measures during dynamic threat processing. M. NAJAFI*; L. PESSOA. *Univ. of Maryland.*

8:00 NNN45 **369.05** A quantitative systems pharmacology platform of brain and serum progranulin (PGRN) to investigate targets in frontotemporal dementia (FTD). C. FRIEDRICH*; M. M. PRYOR. *www.rosaandco.com.*

9:00 NNN46 **369.06** Developing patient-specific, *in-situ* computational models using intraoperative ultrasound. I. CUBEROVIC*; M. A. SCHIEFER; J. ANDERSON; D. J. TYLER. *Case Western Reserve Univ., Case Western Reserve Univ., Louis Stokes Cleveland VA Med. Ctr.*

10:00 NNN47 **369.07** Fear - driven changes of mind in a decision-making neural network model. P. A. GONZALEZ-PARRA*; J. HURTADO-LOPEZ; D. F. RAMIREZ-MORENO. *Univ. Autonoma de Occidente, Univ. Autonoma de Occidente.*

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11:00 NNN48 **369.08** A hybrid computational model for optimizing neuromuscular electrical stimulation of peripheral nerve fibers. P. D. ARGUELLO*; I. PEREZ; L. TONG; D. S. WON. *California State University, Los Angeles.*

8:00 NNN49 **369.09** Diagnostic prediction of autism in resting-state functional mri using conditional random forest. B. T. FAIRES*; C. A. NASAMRAN; A. JAHEDI; C. CHEN; J. FAN; R. MÜLLER. *San Diego State Univ., San Diego State Univ., San Diego State Univ., San Diego State Univ.*

9:00 NNN50 **369.10** Resting state fMRI connectome differentiating autism from typical development. A. JAHEDI*; V. MEENI; A. LINKE; S. NAIR; C. P. CHEN; B. A. BAILEY; R. MÜLLER. *San Diego State Univ., San Diego State Univ., SDSU Brain Imaging Develop. Lab., San Diego State Univ., San Diego State Univ.*

10:00 NNN51 **369.11** Explicitly linking regional activation and functional connectivity: Community structure of weighted networks with continuous annotation. A. MURPHY*; S. GU; N. F. WYMBS; S. T. GRAFTON; D. S. BASSETT. *Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of California Santa Barbara.*

11:00 NNN52 **369.12** Interrogating temporal functional cortical connectivity patterns with source level narrowband induced activity and deep recursive neural networks. Z. HARPER; C. M. WELZIG*. *Med. Col. of Wisconsin, Med. Col. of Wisconsin.*

8:00 OOO1 **369.13** Video compression applied to 10-TB-sized volumetric brain images: A preliminary study. A. LI*; Y. CHEN; Y. LI; Q. LUO; H. GONG. *Huazhong Univ. of Sci. and Technol.*

9:00 OOO2 **369.14** ● Prediction of EMG trajectory using stochastic dynamical operators and neural recordings. M. ABOLFATH-BEYGI*; T. D. SANGER; S. F. GISZTER. *USC, Children's Hosp. of Los Angeles, Drexel Univ. Col. of Med.*

10:00 OOO3 **369.15** Hyperalignment improves between subject classification of fmri brain activity during motor imagery. S. M. AL-WASITY*; A. VUCKOVIC; S. VOGT; Y. KOIKE; F. POLLICK. *Univ. of Glasgow, Lancaster Univ., Tokyo Inst. of Technol., Univ. of Glasgow.*

11:00 OOO4 **369.16** ▲ Sensitivity of the human brain structural networks to brain atlases, weighting methods, and tractography parameters. K. WEI*; M. CIESLAK; C. GREENE; S. T. GRAFTON; J. M. CARLSON. *Univ. of California, Santa Barbara, Univ. of California, Santa Barbara, Univ. of California, Santa Barbara.*

8:00 OOO5 **369.17** Symmetric Streamline Normalization: A simple, accurate, and fast approach to spatially normalize tractography data. C. A. GREENE*; M. CIESLAK; S. GRAFTON. *UC Santa Barbara, UC Santa Barbara, UC Santa Barbara.*

9:00 OOO6 **369.18** Non-invasive skull conductivity estimation and EEG source localization. Z. AKALIN ACAR*; S. MAKEIG. *Univ. of California San Diego.*

10:00 OOO7 **369.19** The posterior associative white matter network between the human temporal and parietal brain lobes. D. BULLOCK*; H. TAKEMURA; C. CAIAFA; F. PESTILLI. *Indiana Univ. - Bloomington, Ctr. for Information and Neural Networks (CiNet), htakemura0207@gmail.com, Osaka Univ., Inst. Argentino de Radioastronomía –CCT La Plata–CONICET, Indiana Univ.*

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SYMPOSIUM *San Diego Convention Center*

371. Mechanisms of Object Organization in the Visual Cortex — CME

Mon. 1:30 PM - 4:00 PM — 6F

Chair: R. VON DER HEYDT

How does the visual cortex organize elementary features to objects? This symposium will provide a comprehensive picture of recent findings on object-based coding at low and intermediate cortical levels (V1-V2-V4), its possible mechanisms, and its hypothetical role in vision. The session will also question where the organizing influence comes from, what its time course is relative to other stages of visual processing, and how the organizing influence relates to object individuation, awareness, recognition, and selective attention.

1:30 **371.01** Introduction.

1:35 **371.02** Figuring out objects from background and the modulation by fixational saccades. H. SLOVIN. *Gonda Brain Res. Ctr.*

2:10 **371.03** Parallel processing of surfaces and borders in early visual cortex. A. V. MAIER. *Vanderbilt Univ.*

2:45 **371.04** Border-ownership coding and the emergence of early object representations in the visual cortex. R. VON DER HEYDT. *The Johns Hopkins Univ.*

3:20 **371.05** Segmentation and discrimination of partially occluded shapes: Insights from visual and frontal cortex. A. K. PASUPATHY. *Univ. of Washington.*

3:55 **371.06** Closing Remarks.

SYMPOSIUM *San Diego Convention Center*

372. Facilitation of Recovery of Motor Function After Paralysis With Noninvasive Spinal Cord Stimulation — CME

Mon. 1:30 PM - 4:00 PM — 6A

Chair: V. EDGERTON

This symposium describes changes of the physiological state of spinal networks using noninvasive spinal cord stimulation combined with step training in an exoskeleton. The speakers will demonstrate recovery of voluntary movement, posture, and locomotor function in individuals that have been paralyzed for over one year, a time which historically has been considered beyond the critical period for motor recovery. A subject that has received these interventions will share his experiences.

1:30 **372.01** Introduction.

1:35 **372.02** ● Recovery of voluntary movement and postural control after paralysis. Y. GERASIMENKO. *UCLA.*

2:10 **372.03** Transcutaneous spinal cord stimulation for modification of spasticity and motor control. U. HOFSTOETTER. *Med. Univ. of Vienna.*

2:45 **372.04** ● Modeling of intensity and spatial distribution of currents using noninvasive spinal stimulation. J. BURDICK. *Caltech.*

3:20 **372.05** ● Use of noninvasive spinal stimulation combined with exoskeleton training to facilitate recovery of locomotor function. P. GAD. *UCLA.*

3:55 **372.06** Closing Remarks.

SYMPOSIUM *San Diego Convention Center*

373. Advances in Noninvasive Brain Stimulation Along the Space-Time Continuum — CME

Mon. 1:30 PM - 4:00 PM — 6B

Chair: C. GODDARD
Co-Chair: S. H. LISANBY

Noninvasive brain stimulation (NBS) is a key tool for probing neural circuit function and is being tested to ameliorate a host of neurological and psychiatric conditions. Recent studies suggest that specific spatial and temporal NBS parameters are critical for achieving effective modulation of intact neural circuitry. This symposium will highlight several studies that explore the importance and physiological relevance of specific spatial or temporal patterns using different forms of NBS.

1:30 **373.01** Introduction.

1:35 **373.02** ● Optimizing seizure therapy: Sculpting the temporal and spatial aspects of therapeutic seizures. S. H. LISANBY. *Natl. Inst. of Mental Hlth.*

2:10 **373.03** ● Shaping the TMS waveform for selective neural recruitment and enhanced neuromodulation. A. PETERCHEV. *Duke Univ.*

2:45 **373.04** ● From biophysics to treatment: Rational design of non-invasive brain stimulation to modulate thalamo-cortical oscillations. F. FROHLICH. *Univ. of North Carolina.*

3:20 **373.05** ● Informing clinical transcranial brain stimulation spatial and temporal parameters by preclinical research *in vivo* and *in vitro*. A. ROTENBERG. *Boston Children's Hosp.*

3:55 **373.06** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

374. Casting a Wide Net: Role of Perineuronal Nets in Neural Plasticity — CME

Mon. 1:30 PM - 4:00 PM — 29D

Chair: B. A. SORG

Perineuronal nets (PNN) are specialized extracellular matrices surrounding certain central nervous system (CNS) neurons that stabilize synapses during development. Removal of PNNs in adults can restore juvenile-like plasticity. At this minisymposium, speakers will describe details of the assembly and specific components of PNNs, and the role PNNs play in schizophrenia, bipolar disorder, aging, Alzheimer's disease, and in plasticity associated with memory and drugs of abuse.

1:30 **374.01** Introduction.

1:35 **374.02** ● Targeting perineuronal nets to restore function after damage, neurodegeneration and ageing. J. W. FAWCETT. *Cambridge Univ.*

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1:55 **374.03** The molecular complexity of perineuronal net as a controller in CNS plasticity. J. KWOK. *Univ. of Leeds.*

2:15 **374.04** Cerebellar perineuronal nets in drug addiction: Brain tattoos or temporary stickers? M. MIQUEL. *Univ. Jaume I, Avenida Sos Baynat.*

2:35 **374.05** Perineuronal nets in tatters: Current findings in psychiatric disorders. S. BERRETTA. *Harvard Med. Sch.*

2:55 **374.06** Chondroitin 6-sulfation regulates perineuronal net formation and neural plasticity. H. KITAGAWA. *Kobe Pharmaceut. Univ.*

3:15 **374.07** Perineuronal net contribution to cocaine-induced plasticity. J. M. BLACKTOP. *Washington State Univ.*

3:35 **374.08** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

375. Object Encoding, Semantic Representation, and Memory Formation by Single Neurons in the Human Medial Temporal Lobe — CME

Mon. 1:30 PM - 4:00 PM — 28A

Chair: F. MORMANN
Co-Chair: P. N. STEINMETZ

This minisymposium will compare and contrast recent results examining object encoding, semantic representation, and memory formation by single neurons in the human medial temporal lobe. Speakers from different single-unit recording centers across the world will examine the level of sparsity present in the representations, whether they exclusively reflect semantic properties of the stimuli, and the role of these representations in memory encoding, retrieval, and consolidation.

1:30 **375.01** Introduction.

1:35 **375.02** Effects of non-semantic stimulus properties on the responses of medial temporal lobe neurons. P. N. STEINMETZ. *Nakamoto Brain Res. Inst.*

1:55 **375.03** Sparse coding of emotions and concepts and volitional control in human single neurons. M. CERF. *Northwestern Univ.*

2:15 **375.04** Learning of anticipatory responses in single neurons of the human MTL. L. REDDY. *Ctr. Natl. de la Recherche Scientifique.*

2:35 **375.05** Stimulus-selective, sparsely coded episodic memory and non-specific novelty detection in single units of the human hippocampus. J. T. WIXTED. *UCSD.*

2:55 **375.06** Single-neuron representation of location in human spatial navigation and memory. J. JACOBS. *Columbia Univ.*

3:15 **375.07** Sparse and not-so-sparse semantic coding in the human MTL and its role in memory consolidation during sleep. F. MORMANN. *Univ. of Bonn.*

3:35 **375.08** Closing Remarks.

MINISYMPOSIUM *San Diego Convention Center*

376. Mammalian Nervous System Cell Types: CNS Diversity Through the Lens of Single-Cell RNA Sequencing (RNA-seq) — CME

Mon. 1:30 PM - 4:00 PM — 6E

Chair: B. TASIC

The brain contains a myriad of highly specialized cells, but comprehension of the gene expression programs that produce this cell-type diversity is incomplete at best. This session highlights pioneering work from multiple groups using single-cell RNA-seq approaches to characterize cells from the developing and adult CNS in mice and humans. These studies lay the groundwork for a new taxonomy of nervous system cells and create new opportunities for investigating CNS function and development.

1:30 **376.01** Introduction.

1:35 **376.02** Cellular diversity of human neocortical germinal zones. A. POLLEN. *Univ. of California, San Francisco.*

1:55 **376.03** Reconstructing neurogenesis using single-cell RNA-seq. B. TREUTLEIN. *Max-Planck-Institute for Evolutionary Anthrop.*

2:15 **376.04** A census of cell types across the adult mouse brain by high-throughout single-cell RNA-seq. E. MACOSKO. *Broad Inst. of MIT and Harvard.*

2:35 **376.05** Cellular taxonomy of visual thalamus and cortex by single cell transcriptomics. B. TASIC. *Allen Inst. For Brain Sci.*

2:55 **376.06** Telencephalic interneurons: A single cell transcriptome comparison. A. B. MUÑOZ MANCHADO. *Karolinska Institutet.*

3:15 **376.07** Electrophysiological, transcriptomic and morphologic profiling of single neurons using patch-seq. C. R. CADWELL. *Baylor Col. of Med.*

3:35 **376.08** Closing Remarks.

LECTURE *San Diego Convention Center*

377. ● ALBERT AND ELLEN GRASS LECTURE - Natural Products as Probes of the Pain Pathway: From Physiology to Atomic Structure — CME

Mon. 3:15 PM - 4:25 PM — Ballroom 20

Speaker: D. J. JULIUS, *Univ. of California, San Francisco.*

The study of somatosensation, nociception, and pain has undergone a revolution with the application of molecular genetic, biochemical, and biophysical methods. With these approaches, investigators have begun to identify molecules, cells, and circuits that underlie stimulus detection, perception, and maladaptive processes. Together, these studies are providing an intellectual and technical foundation for developing new classes of analgesic agents.

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LECTURE *San Diego Convention Center*

378. PRESIDENTIAL SPECIAL LECTURE - Toward Whole-body Connectome in *Drosophila* — CME

Mon. 5:15 PM - 6:25 PM — Ballroom 20

Speaker: A. CHIANG, *Natl. Tsing Hua University, Taiwan.*

Support contributed by: Janssen Research & Development LLC

Our brains receive information from sensory neurons about our external environment and internal organs. To understand how the brain processes information and initiates motor outputs, scientists are constructing complete wiring diagrams called “connectomes” that map all neural connections in the brain and body. Taking *Drosophila melanogaster* as an example, this lecture will address challenges in building whole-body connectomes and how that knowledge may help us better understand normal function and treat disease.

NANOSYMPOSIUM

379. Axon and Dendrite Development and Regeneration

Theme A: Development

Mon. 1:00 PM – *San Diego Convention Center*, 30B

1:00 **379.01** Enhancing neuronal activity by melanopsin/GPCR signaling promotes axon regeneration in the adult CNS. K. LIU*; C. YANG; X. WANG. *HKUST.*

1:15 **379.02** Vangl2 directs stereotyped turning of peripheral neuronal processes during development of the mouse cochlea. M. R. DEANS*; S. R. GHIMIRE. *Univ. of Utah, Univ. of Utah.*

1:30 **379.03** Sonic Hedgehog is a midline switch for Wnt/planar cell polarity signaling in commissural axons. K. ONISHI*; Y. ZOU. *Univ. of California San Diego.*

1:45 **379.04** Netrin1 establishes short-range axon guidance boundaries in the developing spinal cord. S. G. VARADARAJAN*; J. H. KONG; K. D. PHAN; C. S. PANAITOF; J. CARDIN; A. KANIA; B. G. NOVITCH; S. J. BUTLER. *UCLA, Univ. of Nebraska, Inst. de Recherches Cliniques de Montreal, UCLA.*

2:00 **379.05** A gradient of Reelin regulates axonal lamination in the vertebrate visual system. F. DEL BENE*; V. DI DONATO; T. AUER; K. DUROURE; J. CONCORDET. *Inst. Curie - Ctr. de Recherche, Muséum Natl. d’Histoire Naturelle.*

2:15 **379.06** MAP7 regulates microtubule bundles during development of axon collateral branches. S. TYMANSKYJ*; B. YANG; L. MA. *Thomas Jefferson Univ.*

2:30 **379.07** ▲ Heterogeneity of the axon initial segment in interneuron and pyramidal cells of rat visual cortex. F. HOEFFLIN; A. JACK; J. BUCHER; C. SCHULTZ; P. WAHLE; M. ENGELHARDT*. *Univ. Heidelberg, Med. Fac. Mannheim, Ruhr-University Bochum, Univ. Heidelberg, Med. Fac. Mannheim, Univ. Heidelberg, Med. Fac. Mannheim.*

2:45 **379.08** Hierarchical ordering of molecular controls over corticospinal motor neuron segmental targeting: Implications for evolution of motor control. V. V. SAHNI*; S. SHNIDER; D. JABAUDON; J. SONG; J. MACKLIS. *Harvard Univ.*

3:00 **379.09** Developmental regulation of dendritic dynamics and growth in *Drosophila* larval visual circuit. C. SHENG*; U. JAVED; J. YIN; B. QIN; C. LONG; Q. YUAN. *NINDS, NIH.*

3:15 **379.10** Independent and overlapping ankyrin-B- and β2-spectrin-based mechanisms control axonal organelle transport and development of long axonal tracts. D. N. LORENZO*; V. BENNETT; A. BADEA. *Duke Univ., Howard Hughes Med. Inst., Duke Univ.*

3:30 **379.11** EphB2 released via extracellular vesicles, a contact-independent signaling mechanism in axon guidance. J. GONG*; R. KÖRNER; R. KLEIN. *Max Planck Insitute of Neurobio., Max Planck Insitute of Biochem.*

NANOSYMPOSIUM

380. Mechanisms and Role of Synaptic Pathology in Alzheimer’s Disease

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *San Diego Convention Center*, 24A

1:00 **380.01** Copaxone induces macrophage clearance of amyloid-β42 oligomers and preserves synapses in AD models. M. KORONYO-HAMAOUI*; S. LI; Y. KORONYO; D. DALEY; E. Y. HAYDEN; J. SHEYN; D. FUCHS; T. TORBATI; A. RENTSENDORJ; D. B. TEPLOW; K. L. BLACK. *Cedars-Sinai Med. Ctr., Wenzhou Univ., Univ. of California Los Angeles.*

1:15 **380.02** ZCCHC17 impairment is a potential disrupter of neuronal activity in Alzheimer’s disease. A. F. TEICH*; Z. TOMLJANOVIC; M. PATEL. *Columbia Univ., Columbia Univ., Mem. Sloan Kettering Cancer Ctr.*

1:30 **380.03** Inhibition of mammalian phospholipase D isoform 1 prevents amyloid β oligomer driven synaptic dysfunction and memory deficits in rodents. B. KRISHNAN*; W. ZHANG; G. TAGLIALATELA. *Univ. of Texas Med. Br. At Galveston, Univ. of Texas Med. Br. At Galveston.*

1:45 **380.04** NSC-derived exosomes reduce hippocampal synapses vulnerability to the dysfunctional impact of amyloid β oligomers. M. MICCI*; B. KRISHNAN; W. ZHANG; E. BISHOP; S. G. KERNIE; C. ANACKER; R. HEN; G. TAGLIALATELA. *UTMB, UTMB, Columbia Univ., Columbia Univ.*

2:00 **380.05** The plasticity disrupting activity of Aβ requires expression of the amyloid precursor protein. Z. WANG*; W. HONG; A. SERONO; T. WALTER; W. LIU; T. T. O’MALLEY; S. LI; T. YOUNG-PEARSE; D. M. WALSH. *Brigham and Women’s Hosp. & Harvard Medcial Sch., Brigham and Women’s Hosp.*

2:15 **380.06** Microtubule-associated protein τ is essential for stress-driven hippocampal pathology. I. SOTIROPOULOS*; S. LOPES; J. VAZ-SILVA; V. PINTO; C. DALLA; N. KOKRAS; B. T. BEDENK; M. CZISCH; O. F. X. ALMEIDA; N. SOUSA. *ICVS, Sch. of Hlth. Sciences, Minho Univ., ICVS/3B’s - PT Government Associate Lab., Dept. of Pharmacology, Med. Sch. of Athens, Max Planck Inst. of Psychiatry.*

2:30 **380.07** Optogenetic restoration of disrupted slow oscillations halts amyloid deposition and restores calcium homeostasis in an animal model of Alzheimer’s disease. K. KASTANENKA*; S. S. HOU; N. SHAKERDGE; R. LOGAN; D. FENG; S. WEGMANN; J. M. HAWKES; X. CHEN; B. J. BACSKAI. *Massachusetts Gen. Hosp.*

2:45 **380.08** Heightened synaptic integrity in elderly with exceptional memory capacity (SuperAgers). O. MELÉNDEZ-FERNÁNDEZ; L. KUKREJA; S. WEINTRAUB; C. WU*; E. BIGIO; E. ROGALSKI; M. MESULAM; C. GEULA. *Northwestern Univ., Univ. of California - Irvine Sch. of Medici, Northwestern Univ.*

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NANOSYMPOSIUM

381. Motor Neuron Disease Mechanisms

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *San Diego Convention Center*, 32B

1:00 **381.01** ● Overexpression of the Cdk5 inhibitory peptide (CIP) in motor neurons delay disease and extend survival of a mouse model of amyotropic lateral sclerosis. B. BALACHANDRAN KRISHNAMMA*; S. KESAVAPANY; S. SKUNTZ; V. SHUKLA; N. AMIN; M. BHASKAR; P. GRANT; H. PANT. *NIH, Singapore University, Singapore, NINDS, NIH.*

1:15 **381.02** Preconditioning induced by low doses of L-BMAA in SOD1-G93A mice modulates the ionic transporter NCX3 leading to a state refractory to ALS. G. PIGNATARO*; S. ANZILOTTI; G. SIMEONE; A. VINCIGUERRA; P. BRANCACCIO; P. CEPPARULO; N. GUIDA; L. ANNUNZIATO. *FEDERICO II UNIVERSITY OF NAPLES.*

1:30 **381.03** Monosynaptic excitatory inputs to spinal motoneurons are depressed in SOD1-G93A mice, model of Amyotrophic Lateral Sclerosis (ALS). M. BACZYK; M. MANUEL; C. MARTINOT; N. DELESTREE; D. ZYTNICKI*. *Paris Descartes Univ.*

1:45 **381.04** Regulation of motoneuron excitability in ALS. S. M. ELBASIOUNY*; T. GARRETT; K. QUINLAN; C. HECKMAN; S. DUKKIPATI. *Wright State Univ., Wright State Univ., Northwestern Univ.*

2:00 **381.05** Excitability of adult spinal motor neurons in the FUS-P525L model of ALS. M. MARTINEZ-SILVA; D. ZYTNICKI; M. MANUEL*. *CNRS / Univ. Paris Descartes.*

2:15 **381.06** Does it really change? Identifying potential sources of variability in experimental studies of ALS mouse models. S. S. DUKKIPATI*; A. CHIHI; R. E. W. FYFFE; S. M. ELBASIOUNY. *Wright State Univ.*

2:30 **381.07** Loss of tdp-43 contributes to non-coding RNA mediated toxicity. E. Y. LIU*; J. RUSS; E. LEE. *Perelman Sch. of Med. At Univ. of Pennsylvania.*

NANOSYMPOSIUM

382. Neuroinflammation: Neurotoxicity and Protection

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *San Diego Convention Center*, 25A

1:00 **382.01** Natural Killer cells target sensory neurons for degeneration after peripheral nerve injury. A. J. DAVIES*; H. KIM; J. CHOI; S. BACK; Y. KIM; S. ROH; S. KIM; Y. BAE; H. NA; A. LATREMOLIERE; M. COSTIGAN; S. OH. *Seoul Natl. Univ., Konyang Univ., Kyungpook Natl. Univ., Korea Univ., Harvard Med. Sch.*

1:15 **382.02** Ganciclovir suppresses brain inflammation by activating the STING dependent type I interferon response. V. MATHUR*; R. BURAI; R. T. VEST; D. DO; K. N. MISTRY; H. A. LASHUEL; T. WYSS-CORAY. *Stanford Univ., Palo Alto Veterans Inst. for Res., École Polytechnique Fédérale de Lausanne, Stanford Univ.*

1:30 **382.03** TGFβ-1 mediates ABCD1 dependent brain endothelial dysfunction. N. SASIDHARAN; M. C. VISSERS; J. M. T. SNYDER; Y. GONG; F. EICHLER; P. L. MUSOLINO*. *MGH/Harvard.*

1:45 **382.04** The complement receptor C5aR1 drives NLRP3 inflammasome activation and neuropathology in experimental models of Parkinson's disease. R. GORDON*; E. A. BALMACEDA; S. MANTOVANI; K. ZHOU; A. G. KANTHASAMY; M. A. COOPER; K. SCHRODER; T. M. WOODRUFF. *The Univ. of Queensland, The Univ. of Queensland, The Univ. of Queensland, Iowa State Univ.*

2:00 **382.05** Targeting the alternative pathway of complement to improve functional recovery after spinal cord injury. A. NARANG*; C. ATKINSON; N. L. BANIK; M. MEHROTRA; S. TOMLINSON. *Med. Univ. of South Carolina Dept. of Microbiology and Immunol., Med. Univ. of South Carolina, Med. Univ. of South Carolina, Ralph H. Johnson Veterans Affairs Med. Ctr.*

2:15 **382.06** Effects of LPS on expression of mRNA for IL-6, IL-7, and IL-10 and mRNA for IL-6 and IL-7 receptors in CNS and spleen. P. SZOT*; A. FRANKLIN; T. PETRU BEUCA; K. BULLOCK; K. HANSEN; W. BANKS; D. LATTEMANN; M. RASKIND; E. PESKIND. *Puget Sound Hlth. Care Syst., Univ. of Washington, Puget Sound Hlth. Care Syst., Univ. of Washington, Puget Sound Hlth. Care Syst.*

2:30 **382.07** IL-1β, a HAND-relevant proinflammatory cytokine, increases MMP-13 release and PAR-1 signaling in astrocytes. K. A. MAGUIRE-ZEISS*; T. YIN; E. WENZEL; K. CONANT. *Georgetown Univ. Med. Ctr., Georgetown Univ. Med. Ctr.*

2:45 **382.08** Comparison of the injury, and consequent inflammatory response, after spinal cord injury in neonates and mature rats may lead to a novel therapeutic avenue. T. SUTHERLAND*; A. SAPKOTA; C. GORRIE. *Univ. of Technol. Sydney.*

3:00 **382.09** Treatment of erythropoietin decreases the cognitive and memory dysfunction by regulating inflammatory response in Post-operative cognitive decline. B. KOO*; J. LEE; E. KAM; S. CHEON; S. KIM; J. KIM; E. KIM. *Yonsei Univ.*

3:15 **382.10** Linking low dose chronic peripheral LPS injection to neuroinflammation. S. N. CAMPBELL*; Y. HE; A. BHATTACHARYA; N. C. DERECKI. *Janssen Res. & Develop.*

3:30 **382.11** Characterizing the effects of mammary tumor development on neuroinflammation. W. H. WALKER*; M. M. GAUDIER-DIAZ; J. C. BORNIGER; A. A. ZALENSKI; N. ZHANG; A. DEVRIES. *The Ohio State Univ.*

3:45 **382.12** Human monoclonal NMDA receptor auto-antibodies are sufficient for encephalitis pathogenesis. J. KREYE; N. K. WENKE; M. CHAYKA; J. LEUBNER; R. MURUGAN; N. MAIER; A. G. MEISEL*; H. WARDEMANN; H. PRÜSS. *Charite Univ. Med. Berlin, Max Planck Inst. for Infection Biol., Charité Univ. Med. Berlin, Charite Univ. Med. Berlin, Deutsches Krebsforschungszentrum.*

4:00 **382.13** Identifying a link between metabolic signaling, functional changes and inflammation in different brain regions using a unique SNAP-25 mouse model and western diet. M. IRFAN*; I. VALLADOID ACEBES; T. DARAIO; P. STANTON; K. BRISMAR; T. HOKFELT; C. BARK. *Karolinska Institutet, New York Med. Col., Karolinska Institutet.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:15 **382.14** ● Deep space radiation with ^{56}Fe iron has early, sex-specific effects on CNS in WT and Alzheimer transgenic mice. B. LIU*; E. FITZPATRICK; K. LE; Q. SHI; L. TROJANCZYK; M. PARK; S. WANG; A. BELANGER; S. DUBEY; P. HOLTON; V. REISER; W. TRIGG; P. J. LORELLO; K. M. O'BANION; B. CALDARONE; M. DICARLI; C. A. LEMERE. *Ann Romney Ctr. For Neurologic Diseases, BWH, Harvard Med. Sch., Univ. of Rochester Med. Ctr., Dept. of Radiology, BWH, GE Healthcare, GE Healthcare, NBL, Harvard NeuroDiscovery Ctr. and Dept Neurology, BWH.*

NANOSYMPOSIUM

383. Brain and Spinal Cord Injury

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *San Diego Convention Center*, 33C

1:00 **383.01** Terminal axonal sprouting is augmented in partially injured motor nerves of BACE1 KO mice. C. TALLON*; M. H. FARAH. *Johns Hopkins Univ. SOM.*

1:15 **383.02** Establishment of the safety evaluation of integration-free human iPS cell-derived neural stem/progenitor cells as a source of cell therapy for spinal cord injury. T. IIDA*; A. IWANAMI; J. KOHYAMA; N. NAGOSHI; M. MATSUMOTO; H. OKANO; M. NAKAMURA. *Dept of Orthop, Sch. of Med, Keio Univ., Dept of Physiology, Sch. of Med, Keio Univ.*

1:30 **383.03** Hyaluronic acid hydrogels for spinal cord regeneration. C. WALTHERS*; J. LIANG; A. EHSANIPOUR; S. SEIDLITS. *UCLA.*

1:45 **383.04** Matrine facilitates axonal growth and improves motor function in spinal cord injury in acute and chronic phases. N. TANABE*; T. KUBOYAMA; C. TOHDA. *Inst. of Natural Med., Univ. of Toyama.*

2:00 **383.05** HDAC3 inhibition ameliorates spinal cord injury by modulation of innate immune response. T. KUBOYAMA*; Y. HUANG; J. WONG; A. KOEMETER-COX; M. MARTINI; R. H. FRIEDEL; H. ZOU. *Instit of Natural Medicine, Univ. of Toyama, Fishberg Dept. of Neuroscience, Friedman Brain Institute, Icahn Sch. of Med. at Mount Sinai, Tisch MS Res. Ctr. of New York, Dept. of Neurosurgery, Friedman Brain Institute, Icahn Sch. of Med. at Mount Sinai.*

2:15 **383.06** ● The Neuro-Spinal Scaffold promotes tissue remodeling, axonal sprouting, and Schwann cell myelination following acute spinal cord contusion injury in rats. S. W. MOORE*; R. T. LAYER; A. B. KUTIKOV; P. PODELL; A. A. AIMETTI; T. R. ULICH; J. D. GUEST. *InVivo Therapeut., Miller Sch. of Med.*

2:30 **383.07** Extracellular neuroleukin improves hindlimb motor dysfunction of spinal cord injury. Y. TANIE*; N. TANABE; T. KUBOYAMA; C. TOHDA. *Inst. of Natural Medicine, Univ. of Toyam.*

2:45 **383.08** ● T2*–weighted MRI provides a novel assessment of spinal cord white matter that correlates more precisely with clinical features of degenerative cervical myelopathy than DTI or MT. A. R. MARTIN*; B. DE LEENER; J. COHEN-ADAD; D. W. CADOTTE; S. KALSI-RYAN; S. F. LANGE; A. CRAWLEY; D. J. MIKULIS; H. GINSBERG; M. G. FEHLINGS. *Univ. of Toronto, Polytechnique Montreal, Univ. of Toronto.*

3:00 **383.09** Increased TNF/TNFR1 signaling on macrophages in the injured peripheral nerve of BACE1 KO mice. J. A. FISSEL*; M. FARAH. *Johns Hopkins Univ. Sch. of Med., Johns Hopkins Univ. Sch. of Med.*

3:15 **383.10** Neuregulin-1 promotes an anti-inflammatory response associated with reduced glial scarring and improved neurological recovery following spinal cord injury. A. ALIZADEH*; S. M. DYCK; H. KATARIA; D. NGUYEN; T. SANTHOSH; S. KARIMI-ABDOLREZAEE. *Univ. of Manitoba.*

3:30 **383.12** Aging negatively affects axon regeneration in the mammalian central nervous system. C. G. GEOFFROY*; B. J. HILTON; M. CHEN; W. TETZLAFF; B. ZHENG. *UCSD, Intl. Collaboration on Repair Discoveries.*

3:45 **383.11** ● Targeting GSK-3β signaling to prevent maladaptive sensory growth and the development of at and below level spinal cord injury pain. S. K. BAREISS*; M. ROWE; B. CONNER; A. WONKA; J. YOW; K. L. BREWER. *East Carolina Univ., East Carolina Univ.*

NANOSYMPOSIUM

384. Representation of Objects and Numbers across Ventral and Dorsal Pathways

Theme D: Sensory Systems

Mon. 1:00 PM – *San Diego Convention Center*, 23A

1:00 **384.01** Neural coding of object shape in the macaque frontal cortex. I. CAPRARA; E. PREMEREUR; M. C. ROMERO; P. JANSSEN*. *KU Leuven.*

1:15 **384.02** Luminance gradient at object borders communicates object location to the human oculo-motor system. M. J. KILPELAINEN*; M. A. GEORGESON. *Univ. of Helsinki, Aston Univ.*

1:30 **384.03** Differential sensitivity to whole vs. scrambled objects in ventral and dorsal pathways. E. FREUD*; J. C. CULHAM; M. BEHRMANN. *Carnegie Mellon Univ., Univ. of Western Ontario.*

1:45 **384.04** Rediscovering the ventral and dorsal pathways of visual information processing. Y. XU*; M. VAZIRI PASHKAM. *Harvard Univ.*

2:00 **384.05** Task context overrules action-related representational content in the human frontoparietal areas. S. BRACCI*; N. DANIELS; H. OP DE BEECK. *KU Leuven.*

2:15 **384.06** Real-world size improves recognition of real objects, not images. J. C. SNOW*. *Univ. of Nevada Reno Dept. of Psychology.*

2:30 **384.07** Distinct neural signatures for very small and very large numerosities. M. FORNACIAI; J. PARK*. *Univ. of Massachusetts.*

2:45 **384.08** A generalized sense of number for perception and action. D. BURR*; R. ARRIGHI; G. ANOBILE; I. TOGOLI. *Univ. of Florence.*

3:00 **384.09** Integration of Number across separate dot clusters. M. J. MORGAN*; M. KRELLNER; J. A. SOLOMON. *Max-Planck Inst., City Univ. London.*

3:15 **384.10** Coupling of human temporal and parietal neural activity during numerical processing. A. L. DAITCH*; J. PARVIZI. *Stanford Univ.*

3:30 **384.11** A network of topographic numerosity maps throughout human association cortex. B. M. HARVEY*; S. O. DUMOULIN. *Utrecht Univ., Spinoza Ctr. for Neuroimaging.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:45 **384.12** Exploring the neuronal population responses in the human prefrontal cortex during integrated and segmented arithmetic processing. X. YANG*; A. DAITCH; J. PARVIZI. *Stanford Univ., Lab. of Behavioral and Cognitive Neurosci. (LBCN).*

4:00 **384.13** Pharmacological inactivation of intraparietal sulcus reveals a causal role in ordinal comparison in macaque monkeys. N. K. DEWIND*; J. PENG; E. M. BRANNON; M. L. PLATT. *Univ. of Pennsylvania, Rutgers, Univ. of Pennsylvania.*

NANOSYMPOSIUM

385. Spatial Attention and Working Memory

Theme D: Sensory Systems

Mon. 1:00 PM – *San Diego Convention Center*, 7B

1:00 **385.01** The neural basis of dynamic coding in prefrontal cortex during a spatial working memory task. E. SPAAK*; D. WASMUHT; T. J. BUSCHMAN; E. K. MILLER; M. STOKES. *Oxford Univ., Princeton Univ., MIT.*

1:15 **385.02** Noise correlation structure shapes ensemble coding of working memory in prefrontal cortex. M. LEAVITT*; F. PIEPER; A. J. SACHS; J. C. MARTINEZ-TRUJILLO. *McGill Univ., Univ. Med. Ctr. Hamburg-Eppendorf, Univ. of Ottawa, Univ. of Western Ontario.*

1:30 **385.03** Neural correlate of visual working memory in the macaque monkey. M. PARE*; C. LI; J. BARBER. *Queen's Univ.*

1:45 **385.04** Modulation of neuronal activity in macaque area V4 during spatial working memory and saccade preparation. D. JONIKAITIS*; T. MOORE. *Stanford Univ. Sch. of Med., Howard Hughes Med. Inst. and Stanford Univ.*

2:00 **385.05** Spatial working memory enhances visual cortical representations. B. NOUDOOST*; Y. MERRIKHI; T. MOORE; K. CLARK; E. ALBARRAN; M. PARSA. *Montana State Univ., Inst. for Res. In Fundamental Sci. (IPM), Stanford Univ., Montana State Univ.*

2:15 **385.06** Graded representations of stimulus salience and attentional priority across visually-responsive cortex. T. C. SPRAGUE*; S. ITTHIPURIPAT; V. A. VO; J. T. SERENCES. *New York Univ., UC San Diego, UC San Diego.*

2:30 **385.07** Rhythmic neural activity within the macaque attention network modulates moment-to-moment sampling of the visual environment. I. C. FIEBELKORN*; M. A. PINSK; S. KASTNER. *Princeton Univ., Princeton Univ.*

2:45 **385.08** Neural modulation of visual input at expected distractor locations. M. STOKES*; Y. BAUER; A. VON LAUTZ; C. SUMMERFIELD; M. NOONAN. *Oxford Univ., Univ. of Tübingen, Bernstein Ctr. for Computat. Neuroscience, Univ. of Oxford.*

3:00 **385.09** Preparatory encoding of the location and scope of human spatial attention. J. SAMAHA*; T. C. SPRAGUE; B. VOYTEK; A. GAZZALEY; B. R. POSTLE. *UW Madison, New York Univ., UCSD, Univ. of California, San Francisco.*

3:15 **385.10** Visual field maps constrain working memory precision. C. E. CURTIS*; W. E. MACKEY; X. DING; X. WANG; J. WINAWER. *NYU, NYU, NYU.*

3:30 **385.11** Spatial attention modulates voxel receptive fields to boost the fidelity of multi-voxel stimulus representations. V. A. VO*; T. C. SPRAGUE; J. T. SERENCES. *UC San Diego, New York Univ., UC San Diego.*

3:45 **385.12** Handedness-dependent hemispheric asymmetries in parietal spatial attention maps. S. L. SHEREMATA*; M. A. SILVER. *Florida Atlantic Univ., Florida Atlantic Univ., Univ. of California, Univ. of California, Univ. of California.*

NANOSYMPOSIUM

386. Physiological and Pathophysiological Mechanisms of the Blood Brain Barrier

Theme F: Integrative Physiology and Behavior

Mon. 1:00 PM – *San Diego Convention Center*, 1B

1:00 **386.01** Pericyte modulation by functional antibodies obtained by a novel selection strategy. J. JUST*; K. DRASBEK; S. LYKKEMARK; C. NIELSEN; P. KRISTENSEN. *Aarhus Univ., Aarhus Univ., Sino-Danish Ctr. for Educ. and Research, Univ. of Chinese Acad. of Sci., Aarhus Univ.*

1:15 **386.02** Pericyte degeneration causes diffuse white matter dysfunction as assessed by advanced magnetic resonance imaging. A. MONTAGNE*; A. M. NIKOLAKOPOULOU; Z. ZHAO; G. SI; D. LAZIC; M. DAIANU; A. P. SAGARE; R. E. JACOBS; S. R. BARNES; P. M. THOMPSON; B. V. ZLOKOVIC. *USC, USC, Caltech.*

1:30 **386.03** ● Validation of CD98hc as a novel blood brain barrier target. B. CHIH*; J. J. ZUCHERO; X. CHEN; N. BIEN-LY; D. BUMBACA; R. K. TONG; X. GAO; S. ZHANG; K. HOYTE; W. LUK; M. A. HUNTLEY; L. PHU; C. TAN; D. KALLOP; R. M. WEIMER; Y. LU; D. S. KIRKPATRICK; J. ERNST; M. S. DENNIS; R. J. WATTS. *Genentech Inc, Genentech, Genentech, Genentech, Genentech, Genentech, Genentech, Genentech.*

1:45 **386.04** Regional Heterogeneity of the Blood-Brain Barrier. M. BLANCHETTE*; N. RUDERISCH; R. DANEMAN. *UCSD, Roche, UCSD.*

2:00 **386.05** Intranasal delivery of peptidergic corticotropin-releasing factor receptor antagonists is facilitated by cell-penetrating peptides. L. A. TAN*; J. M. VAUGHAN; K. P. GARIBAY; P. E. SAWCHENKO. *Salk Inst. For Biol. Studies.*

2:15 **386.06** Pericyte ablation leads to disruption of the neurovascular unit. B. V. ZLOKOVIC*; A. M. NIKOLAKOPOULOU; Z. ZHAO; K. KISLER; P. KONG; D. LAZIC; A. P. SAGARE; M. D. SWEENEY; E. J. LAWSON; Y. YANG; A. GO. *Keck Sch. of Med. of the Univ. of Southern California.*

2:30 **386.07** Glymphatic function is suppressed in the experimental autoimmune encephalomyelitis, EAE, model of multiple sclerosis. I. LUNDGAARD*; S. O'NEIL; E. YANG; H. VINITSKY; M. NEDERGAARD. *Univ. of Rochester, Univ. of Copenhagen.*

2:45 **386.08** ● Microfluidics to model the human blood-brain barrier for studies of barrier function, drug penetration, and leukocyte-endothelial interactions. B. R. OBERMEIER*; G. MARSH; A. HUANG; M. KOLLER; K. FISHER; A. C. COTLEUR; F. SHIMIZU; Y. SANO; T. KANDA; J. DUFFIELD; R. M. RANSOHOFF. *Biogen, Nortis, Inc., Yamaguchi Univ.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

NANOSYMPOSIUM

387. Oxytocin and Social Behavior

Theme G: Motivation and Emotion

Mon. 1:00 PM – *San Diego Convention Center*, 5B

1:00 **387.01** The endocrinome of social communication. C. THEOFANOPOULOU*; C. BOECKX. *Univ. De Barcelona, Univ. de Barcelona, ICREA.*

1:15 **387.02** Oxytocin gates VTA dopamine neurons to promote pro-social behaviors. L. W. HUNG*; K. BEIER; J. S. POLEPALLI; S. NEUNER; M. WRIGHT; G. DOLEN; K. DEISSEROTH; R. MALENKA. *Stanford Univ., Johns Hopkins Univ., Stanford Univ.*

1:30 **387.03** Consolation behavior in prairie vole is predicted by oxytocin receptor density in anterior cingulate cortex. J. P. BURKETT*; L. KING; E. ANDARI; L. YOUNG. *Emory Univ., Scripps Res. Inst., Emory Univ.*

1:45 **387.04** Oxytocin and vasopressin inhibit virgin female aggression via V_{1a} receptors. T. R. DE JONG*; V. E. M. OLIVEIRA; I. D. NEUMANN. *Univ. of Regensburg, Univ. of Regensburg.*

2:00 **387.05** Developmental consequences in offspring following maternal oxytocin treatment at birth. W. KENKEL*; A. PERKEYBILE; J. R. YEE; T. LILLARD; C. F. FERRIS; S. CARTER; J. CONNELLY. *Indiana Univ. Bloomington, Univ. of Virginia, Northeastern Univ.*

2:15 **387.06** Retinoic acid signaling in the anterior insula: A fail-safe system for social cognition complementary to the oxytocin cascade. S. KIM*; M. RANNALS; J. R. MOORE; M. KONDO; T. CASH-PADGETT; B. MAHER; A. SAWA. *Johns Hopkins Univ., Johns Hopkins Univ., Lieber Inst. for Brain Develop.*

2:30 **387.07** Investigating the genetic basis of natural behavior using topic modeling. S. MADLON-KAY*; M. MONTAGUE; N. SNYDER-MACKLER; K. WATSON; P. SKENE; J. HORVATH; L. BRENT; K. HELLER; M. PLATT. *Univ. of Pennsylvania, Univ. of Pennsylvania, Duke Univ., Univ. of Colorado, Duke Univ., North Carolina Central Univ., North Carolina Museum of Natural Sci., Univ. of Exeter, Duke Univ., Univ. of Pennsylvania.*

NANOSYMPOSIUM

388. Neural Basis of Emotions

Theme G: Motivation and Emotion

Mon. 1:00 PM – *San Diego Convention Center*, 2

1:00 **388.01** Distinct brain systems mediate social influence and conditioned cue effects on pain. L. KOBAN*; M. JEPMA; T. D. WAGER. *Univ. of Colorado Boulder.*

1:15 **388.02** Transgenerational transmission of learned fears via observational conditioning. J. A. SILVERS*; B. CALLAGHAN; K. O'SULLIVAN; M. VAN TIEGHEM; N. TOTTENHAM. *UCLA, Columbia Univ.*

1:30 **388.03** Dissociating hippocampal contributions to anxiety-like behaviour in human approach/avoidance conflict. D. R. BACH*; M. HOFFMANN; C. FINKE; H. HEEKEREN; C. J. PLONER. *Univ. of Zurich, Charite Univ. Med., Free Univ.*

1:45 **388.04** Chronic social defeat stress produces profound alterations in both behavior and in the brain pituitary adenylate cyclase-activated polypeptide (PACAP)/PAC1 receptor system. M. SEIGLIE*; C. VELÁZQUEZ-SANCHEZ; A. FERRAGUD FAUS; P. COTTONE; V. SABINO. *Boston Univ. Sch. of Med.*

2:00 **388.05** Rewarded approach of threatening spiders engages areas of the mesolimbic dopamine system. F. AHS*; J. BJÖRKSTRAND; M. FREDRIKSON. *Uppsala Univ., Karolinska Inst.*

2:15 **388.06** Central amygdala mediates socially transferred fear. E. A. KNAPSKA*; K. ROKOSZ; A. HAMED; K. KONDRAKIEWICZ. *Nencki Inst. of Exptl. Biol. PAS.*

2:30 **388.07** Inducing human fear memory extinction during sleep. J. HE*; J. YUE; J. BAN; P. LI; L. SHI; L. LU. *Peking Univ. Sixth Hosp., Natl. Inst. on Drug Dependence and Beijing Key laboratory of Drug Dependence, Peking Univ., Peking-Tsinghua Ctr. for Life Sci. and PKU-IDG/McGovern Inst. for Brain Research, Peking Univ.*

2:45 **388.08** ● Dampened BOLD activation to life threat fear in prairie vole fathers. J. R. YEE*; W. M. KENKEL; A. PERKEYBILE; K. MOORE; P. KULKARNI; S. W. PORGES; C. CARTER; C. F. FERRIS. *Northeastern Univ., Indiana Univ.*

3:00 **388.09** ▲ The need for neutral speaking controls in laboratory-induced emotional states. S. GRIMLEY; C. KO; F. GRACE; L. E. OLSON*. *Univ. of Redlands, Univ. of Redlands, Univ. of Redlands.*

3:15 **388.10** Behavioral and neurobiological aspects of cultural attachment. W. YAP*; G. I. CHRISTOPOULOS; B. CHEON; Y. HONG. *Nanyang Business School, Nanyang Technological Uni, Culture Sci. Institute, Nanyang Business School, Nanyang Technological Univ., Decision and Organizational Neurosci. Lab, Nanyang Business School, Nanyang Technological Univ., Div. of Psychology, Nanyang Technological Univ., Singapore Inst. for Clin. Sci. (A*Star), Chinese Univ. of Hong Kong.*

NANOSYMPOSIUM

389. The Role of Neuromodulators in Attentional Processing

Theme H: Cognition

Mon. 1:00 PM – *San Diego Convention Center*, 4

1:00 **389.01** Cholinergic, glutamatergic and attention induced modulation of oscillatory activity in macaque area V1 and frontal eye field. A. THIELE*; J. HERRERO; M. GIESELMANN; C. BRANDT; M. DASILVA; S. GOTTHARDT. *Newcastle Univ., Newcaslte Univ.*

1:15 **389.02** Dopamine affects attention-related activity of neurons in the macaque FEF. A. L. MUELLER*; T. MOORE. *Stanford Univ.*

1:30 **389.03** Cholinergic compromise on attentional function and cortical reorganization in aging. B. YEGLA*; S. JOSHI; J. A. FRANCESCONI; J. C. FORDE; V. PARIKH. *Temple Univ.*

1:45 **389.04** Dopaminergic contribution to attentional signals in parietal cortex. J. VAN KEMPEN*; C. BRANDT; M. A. BELLGROVE; A. THIELE. *Newcastle Univ., Univ. of Southern Denmark, Monash Univ.*

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

2:00 **389.05** The contribution of acetylcholine to working memory circuits in primate prefrontal cortex. V. C. GALVIN*; Y. YANG; T. C. LIGHTBOURNE; S. YANG; C. PASPALAS; A. F. T. ARNSTEN; M. WANG. *Yale Univ., Pennsylvania State Univ.*

2:15 **389.06** Muscarinic M1 receptor modulation of abstract rule representation in primate dorsolateral prefrontal cortex. A. J. MAJOR*; S. VIJAYRAGHAVAN; S. EVERLING. *Western Univ.*

2:30 **389.07** Cholinergic influences on spatial attention modulation in area MT of primate visual cortex. C. QUIGLEY*; V. K. VEITH; S. TREUE. *German Primate Ctr.*

2:45 **389.08** Poor attentional control as a trait in sign-tracking rats: Cortical cholinergic-GABAergic mechanisms. Y. KIM*; C. R. RIVET; C. LUSTIG; M. SARTER. *Univ. of Michigan.*

3:00 **389.09** Amphetamine-induced improvement in rat 5-choice continuous performance test (5C-CPT) in poor performers and irrespective of concurrent haloperidol treatment. J. W. YOUNG*; M. R. BREIER; N. R. SWERDLOW. *UCSD, UCSD.*

POSTER

390. Oligodendrocytes and Schwann Cells: Development, Neuron-Interaction, and Myelination

Theme A: Development

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 A1 **390.01** Developmental increase in cortical myelination and internodal length variability in the mouse neocortex. E. PAMA*; K. A. EVANS; P. HUMPHREYS; R. T. KÁRADÓTTIR. *Univ. of Cambridge.*

2:00 A2 **390.02** Characterization of an *in vivo* tool to study oligodendrocyte metabolic support to neurons. T. PHILIPS*; B. M. MORRISON; J. D. ROTHSTEIN. *Johns Hopkins Univ., Johns Hopkins Univ.*

3:00 A3 **390.03** ▲ Vesicular trafficking in Schwann cell development and myelination. B. ABDELMESIH*; C. EYERMANN; C. MELENDEZ-VASQUEZ. *Hunter Col.*

4:00 A4 **390.04** Investigating oligodendrocyte axonal preference in the mammalian central nervous system. A whole-tissue high-resolution approach. E. M. FLORIDDIA*; C. BELLARDITA; P. LÖW; O. KIEHN; G. CASTELO-BRANCO. *Karolinska Institutet.*

1:00 A5 **390.05** Preservation of Schwann cell identity *in vitro* through bone morphogenetic protein signaling. Y. CHAN*; Y. P. TSUI; D. K. Y. SHUM. *Sch. of Biomedic. Sci., Fac. Med., Univ. Hong Kong.*

2:00 A6 **390.06** Human Schwann cell senescence is not prevented by ectopic expression of human telomerase reverse transcriptase. N. D. ANDERSEN*; B. KUO; G. PIÑERO; K. RAVELO; P. RAI; P. MONJE. *Univ. of Miami Miller Sch. of Med., Univ. of Miami Miller Sch. of Med.*

3:00 A7 **390.07** Role of neural stem factor sox2 in postnatal oligodendrocyte development. S. ZHANG*; C. CREATO; E. HAMMOND; D. PLEASURE; J. XU; L. SONG; F. GUO. *Inst. For Pediatric Regenerative Medicine, Sh, Departments of Neurology,School of Medicine, Univ. of California, Davis.*

4:00 A8 **390.08** Regulation of oligodendrocyte differentiation by the control of B-cell CLL lymphoma 11B expression. C. WANG; K. FANG; C. HO; S. TZENG*. *Natl. Cheng Kung Univ., Natl. Cheng Kung Univ., Natl. Cheng Kung Univ.*

1:00 A9 **390.09** Zeb2 recruits Hdac-NuRD to inhibit Notch and controls Schwann cell differentiation and remyelination. L. WU*; J. WANG; J. R. CHAN; M. JANKOWSKI; D. HUYLEBROECK; Q. LU, 45229. *CCHMC, UCSF, KU Leuven Dept. of Develop. & Regeneration.*

2:00 A10 **390.10** Ionotropic glutamate receptor-triggered cell signaling in Schwann cells. W. M. CAMPANA*; K. W. HENRY; E. MANTUANO; S. GONIAS. *Univ. of California San Diego, UCSD, Univ. of California San Diego, Sapienz Univ. of Rome.*

3:00 A11 **390.11** Impact of Mtmr2 knockdown in Schwann cells. J. KIM; R. DOBROWOLSKI; H. A. KIM*. *Rutgers Univ. Newark.*

4:00 A12 **390.12** Schwann cell population responses to nerve stimulation. T. W. GOULD*; D. J. HEREDIA; G. W. HENNIG. *Univ. of Nevada Sch. of Med.*

1:00 A13 **390.13** *In vitro* modeling of Canavan´s disease using human induced pluripotent stem cells. J. SAAL*; J. FISCHER; V. KAPS; M. MIZHOROVA; M. ECKHARD; J. O. SASS; M. KARUS; O. BRÜSTLE. *Univ. of Bonn, Univ. of Bonn, Univ. of Bonn, Bonn Rhein-Sieg Univ. of Applied Sci.*

2:00 B1 **390.14** Efficient pharmacogenetic ablation of oligodendrocyte progenitor cells (NG2 glia) in mice. T. D. MERSON*; B. H. A. CHUANG; T. J. KILPATRICK; Y. L. XING. *Florey Dept of Neurosci. and Mental Hlth., Florey Inst. of Neurosci. and Mental Hlth., Univ. of Melbourne.*

3:00 B2 **390.15** Regulatory function of nogo-a in oligodendrocyte differentiation. M. A. MAIBACH*; F. MÜLLER; O. WEINMANN; M. E. SCHWAB. *ETH Zürich.*

4:00 B3 **390.16** MicroRNA control of myelination and remyelination in the CNS. H. WANG*; Z. MA; Y. DENG; R. LU. *Cincinnati Children's Hosp.*

1:00 B4 **390.17** Fyn-Dab1 signaling during oligodendrocyte differentiation. D. J. OSTERHOUT*; H. BHATTI; I. I. GENEVA. *SUNY Upstate Med. Univ.*

2:00 B5 **390.18** Acute oligodendrocyte loss and persisting white matter injury in a third trimester equivalent model of fetal alcohol spectrum disorder. J. C. NEWVILLE; C. F. VALENZUELA; L. LI; L. L. JANTZIE; L. A. CUNNINGHAM*. *Univ. of New Mexico Sch. of Med., Univ. of New Mexico Sch. of Med.*

3:00 B6 **390.19** Heterogeneity of astrocyte and NG2 cell insertion at the node of Ranvier. P. JUKKOLA*; D. R. SERWANSKI; A. NISHIYAMA. *Univ. of Connecticut.*

4:00 B7 **390.20** Glycogen synthase kinase 3 β inhibition promotes myelination in preterm rabbit pups with intraventricular hemorrhage. P. DOHARE*; F. HU; P. BALLABH. *New York Med. Col.*

1:00 B8 **390.21** Association between stress-induced Ranvier nodes structural abnormalities and reduced oligodendrocyte activity in major depressive disorder. S. MIYATA*; S. SHIMIZU; T. TANAKA; M. TOHYAMA. *Kindai Univ/ Res. Ins Trad Asian Med.*

2:00 B9 **390.22** Protease activated receptor 2 is a novel regulator of myelin development and repair. I. A. SCARISBRICK*; M. RADULOVIC; H. YOON. *Mayo Clin., Mayo Clin.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 B10 **390.23** Motor neuron sonic hedgehog regulates oligodendrocyte proliferation and maturation in the developing spinal cord. L. STARIKOV*; A. KOTTMANN. *Sophie Davis Sch. of Biomed. Education, CUNY, CUNY Grad. Ctr.*

4:00 B11 **390.24** Nogo/RTN4 as an extracellular vesicle-associated ligand. M. M. HOLM*; D. VAN ROSSUM; M. EGGER; O. WEINMANN; I. K. HERMANN; M. E. SCHWAB. *Brain Res. Inst., EMPA Swiss Federal Labs. for Materials Sci. and Technol.*

1:00 B12 **390.25** Sox17 suppression of Wnt/β-catenin promotes oligodendrocyte regeneration through Hedgehog-Smoothened signaling. L. CHEW*; X. MING; B. MCELLIN; V. GALLO. *Children's Res. Inst.*

2:00 B13 **390.26** Pain-induced spinal NG2 cell proliferation: A critical role of β-catenin in neurons but not in NG2 cells. Y. SHI*; S. TANG. *Univ. of Texas Med. Br.*

POSTER

391. Autism: Models

Theme A: Development

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 B14 **391.01** ● Early behavioral abnormalities and perinatal alterations of PTEN/AKT pathway in valproic acid atuism model mice. E. YANG*; S. AHN; K. LEE; U. MAHMOOD; H. KIM. *Seoul Natl. Univ., Dept. of Pharmacology, Inje Univeirsity Col. of Med., Seoul Natl. Univ. Bundang Hospital, Seoul Natl. Univ. Col. of Med.*

2:00 B15 **391.02** MicroRNAs as potential biomarkers in Autism spectrum disorder. M. NAKATA*; R. KIMURA; K. TOMIWA; T. AWAYA; T. KATO; Y. FUNABIKI; T. HEIKE; M. HAGIWARA. *Kyoto Univ. Grad. Sch. of Med., Todaiji Med. and Educational Ctr., Kyoto Univ. Grad. Sch. of Med., Kyoto Univ. Grad. Sch. of Human and Envrn. Studies.*

3:00 B16 **391.03** Autism-related protein MeCP2 regulates FGF13 expression and emotional behaviours. B. YUAN*. *Inst. of Neurosci.*

4:00 B17 **391.04** Shank2 and Shank3 gene - environment interactions in autism spectrum disorders. S. GRABRUCKER*; G. EHRET; T. M. BOECKERS; A. M. GRABRUCKER. *Ulm Univ., Ulm Univ., Ulm Univ., Ulm Univ.*

1:00 B18 **391.05** A rubber tail task in Ca^{2+}-dependent activator protein for secretion (CAPS) 2 knockout mice. M. WADA*; M. IDE; T. ATSUMI; K. YAGISHITA; M. KATAKAI; Y. SHINODA; T. FURUICHI; K. KANSAKU. *Res. Inst. of NRCD, Res. Inst. of NRCD, Japan Society for the Promotion of Sci., Tokyo Univ. of Sci., Tokyo Univ. of Pharm. and Life Sci., The Univ. of Electro-Communications.*

2:00 B19 **391.06** The effects of vagus nerve stimulation on abnormal emotional learning and social anxiety in an animal model of autism. A. ALVAREZ-DIEPPA*; S. CAVALIER; K. GRIFFIN; C. MCINTYRE. *Univ. of Texas At Dallas.*

3:00 B20 **391.07** The behavioral expression and genetic regulation of repetitive and restricted behaviors in mice in the context of autism spectrum disorder. R. T. MOLENHUIS*; H. BRUINING; M. J. V. BRANDT; P. E. VAN SOLDT; J. P. H. BURBACH; F. A. IRAQI; R. MOTT; M. J. H. KAS. *Univ. Med. Ctr. Utrecht, Univ. Med. Ctr. Utrecht, Tel Aviv Univ., Univ. Col. London.*

4:00 B21 **391.08** Behavioral effects of an m_1 muscarinic cholinergic receptor agonist in the BTBR mouse model of autism. M. E. RAGOZZINO*; H. RAMIREZ; J. T. DUNN; W. S. MESSER, Jr. *Univ. of Illinois at Chicago, Univ. of Illinois at Chicago, Univ. of Toledo.*

1:00 B22 **391.09** Atypical behavioral and neural phenotypes in a non-human primate model of autism spectrum disorders. K. MIMURA*; C. SATO; K. NAKAGAKI; I. AOKI; T. MINAMIMOTO; N. ICHINOHE. *Natl. Ctr. of Neurol. and Psychiatry, Natl. Inst. of Radiological Sciences, QST, Japan Society for the Promotion of Sci.*

2:00 B23 **391.10** Neonatal RU-486 exposure; a gender specific animal model for the low maternal progesterone hypothesis of autism. H. GARMAN*; J. KASS; S. KWON; R. MALSKY; C. INFANTINO; P. WHITAKER. *Stony Brook Univ., Stony Brook Univ., Stony Brook Univ., Stony Brook Univ.*

3:00 B24 **391.11** Continuous activation of dopaminergic system improves autism-related behavioral abnormalities in mice prenatally exposed to valproic acid. S. HASEBE*; Y. HARA; M. HIGUCHI; Y. AGO; T. NAKAZAWA; H. HASHIMOTO; T. MATSUDA; K. TAKUMA. *Grad. Sch. of Dent., Osaka Univ., Grad. Sch. of Pharmaceut. Sci., Osaka Univ., United Grad. Sch. of Child Develop., Osaka Univ.*

4:00 B25 **391.12** Neonatal treatments with risperidone partially reverses aberrant striatal compartmentation and ultrasonic vocalizations in a mouse model of autism spectrum disorder. H. KUO; F. LIU*. *Natl. Yang-Ming Univ.*

1:00 B26 **391.13** ▲ Autism-related behavior in juvenile and adult mice following perinatal antidepressant exposure. C. M. BOND; N. S. WOEHRLE*. *Wittenberg Univ.*

2:00 C1 **391.14** Autistic-like behaviors with hyperactivity in mice lacking kirrel3. T. HISAOKA*; T. KOMORI; H. GYOBU; T. KITAMURA; Y. MORIKAWA. *Dept. of Anat. & Neurobiology, Wakayama Med. Univ., The Inst. of Med. Science, The Univ. of Tokyo.*

3:00 C2 **391.15** Stereological investigation of the rat thalamic nuclei following developmental hyperserotonemia. L. HOUGH*; R. FOREMAN; C. GRUBB. *Missouri State Univ.*

4:00 C3 **391.16** ● Dietary docosahexaenoic acid alleviates autistic-like behaviors resulting from maternal immune activation in mice. M. J. WEISER*; B. MUCHA; H. DENHEYER; D. ATKINSON; N. SCHANZ; E. VASSILIOU; R. H. BENNO. *DSM, William Patterson Univ., Kean Univ.*

1:00 C4 **391.17** Valproic acid induction of nrf2 in fetal but not adult brain. J. GIFFORD*; S. NORTON; A. KUSNECOV; G. C. WAGNER. *Rutgers Univ., Rutgers Univ.*

2:00 C5 **391.18** The effects of fastigial nuclei inactivation on social behavior in the rat. V. K. BEHNKE*; M. E. STEVENSON; H. E. HOBSON; J. R. KRUEGER; V. G. BELTRONE; A. S. NAZARIO; R. A. SWAIN. *Univ. of Wisconsin-Milwaukee.*

3:00 C6 **391.19** Developmental exposure to the selective serotonin reuptake inhibitor citalopram alters spatial learning and memory, anxiety, sociability, and acoustic startle response in the offspring of Sprague-Dawley rats as adults. J. NELMS SPROWLES*; J. R. HUFGARD; A. GUTIERREZ; R. A. BAILEY; S. A. JABLONSKI; M. T. WILLIAMS; C. V. VORHEES. *Cincinnati Children's Hosp. Med. Ctr., Univ. of Cincinnati.*

4:00 C7 **391.20** ▲ GABA-B receptor agonist r-baclofen reverses behavioral deficits in 16p11.2 deletion mice. M. SCHAFFLER*; T. M. KAZDOBA; J. N. CRAWLEY. *UC Davis, UC Davis MIND Inst.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 C8 **391.21** The impact of maternal care on a female mouse model of Rett syndrome. A. VOGEL CIERNIA*; M. PRIDE; A. NORONHA; A. CHANG; D. YASUI; J. N. CRAWLEY; J. M. LASALLE. *Univ. of California Davis, Univ. of California Davis.*

2:00 C9 **391.22** Correction of cognitive and behavioral deficits in a 16p11.2 CNV mouse model by selective activation of $GABA_B$ receptors with r-baclofen. L. J. STOPPEL*; A. R. PREZA; A. J. HEYNEN; M. F. BEAR. *MIT.*

3:00 C10 **391.23** Withdrawn.

4:00 C11 **391.24** Evaluation of the TrkB agonist 7,8-dihydroxyflavone in the BTBR mouse model of autism. T. M. KAZDOBA*; P. T. LEACH; K. SISON; J. N. CRAWLEY. *Univ. of California Davis, Univ. of California, Davis.*

1:00 C12 **391.25** Touchscreen visual discrimination learning and water maze deficits in the Ts65Dn mouse model of Down syndrome. P. T. LEACH*; T. M. KAZDOBA; K. SISON; C. M. GALL; G. LYNCH; J. N. CRAWLEY. *Biogen, Univ. of California Davis Sch. of Med., Univ. of California Irvine Sch. of Med., Univ. of California Irvine Sch. of Med.*

2:00 C13 **391.26** Forebrain loss of active Met tyrosine kinase disrupts cortical connectivity and GABA signaling. S. TANG; S. XU; W. ZHU; F. LO; R. S. ERZURUMLU; E. M. POWELL*. *Univ. of Maryland Sch. of Med., Univ. of Maryland Sch. of Med., Univ. of Maryland Sch. of Med., Univ. Maryland, Baltimore.*

3:00 C14 **391.27** Ketogenic diets improve behaviors associated with autism spectrum disorder in the EL mouse. D. N. RUSKIN*; J. A. FORTIN; S. BISNAUTH; S. A. MASINO. *Trinity Col.*

4:00 C15 **391.28** Ketogenic diet improves decreased mitochondrial respiration and activities of electron transport chain complex I and pyruvate dehydrogenase in BTBR autistic mice. Y. AHN; N. YEE; R. TOBIAS; J. M. RHO*. *Univ. of Calgary, Alberta Children's Hospital, Univ. of Calgary.*

1:00 C16 **391.29** ● Identification of circuits regulating socially-directed behavior using DREADD-fMRI. M. BENEKAREDDY*; T. J. STACHNIAK; M. VON KIENLIN; B. KUENNECKE; A. GHOSH. *Roche Pharma Res. & Early Development, Roche I, Roche Pharma Res. & Early Development, Roche Innovation Ctr. Basel, E-Scape Bio.*

2:00 C17 **391.30** Digging behavior discrimination: A new test you will dig. H. L. POND; J. ADELMAN; O. MCKISSICK; M. MANZINI*. *The George Washington Univ.*

POSTER

392. Behavior in Fragile X Syndrome and Other Neurodevelopmental Diseases

Theme A: Development

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 C18 **392.01** Delayed and reduced baseline and social isolation-potentiated ultrasonic vocalization in neonatal fragile X knockout mice. B. ZUPAN*; S. R. M. DEWIL; L. MORSE. *Vassar Col., Vassar Col.*

2:00 C19 **392.02** Characterization of the behavioral phenotype and neuroinflammatory profile of the FMR1 KO mouse. S. L. HODGES*; S. O. NOLAN; C. REYNOLDS; G. D. SMITH; A. HOLLEY; T. JEFFERSON; J. HUEBSCHMAN; M. VOLQUARDSEN; A. PANDIAN; J. N. LUGO. *Baylor Univ., Baylor Univ., Baylor Univ.*

3:00 C20 **392.03** The effects of dietary supplementation with n-3 fatty acids on behavioral and neuroinflammatory phenotype of the Fmr1-knockout mouse. S. O. NOLAN*; S. L. HODGES; G. D. SMITH; T. JEFFERSON; B. ESCOBAR; A. J. HOLLEY; J. N. LUGO. *Baylor Univ., Baylor Univ.*

4:00 C21 **392.04** Decrease of MMP-9 level in central amygdala rescues cognitive deficit in mouse model of fragile X syndrome. A. PUSCIAN*; S. LESKI; M. WINIARSKI; J. BOROWSKA; M. CHATURVEDI; J. SADOWSKA; H. LIPP; E. KNAPSKA. *Nencki Inst. of Exptl. Biology, PAS, Inst. of Anatomy, Univ. of Zurich, Sch. of Lab. Medicine, Kwazulu-Natal Univ. Durban.*

1:00 C22 **392.05** Chronic sleep restriction in Fmr1 knockout and WT mice has long term effects on behavior. R. M. SARE*; A. SONG; M. LEVINE; C. HILDRETH; A. MFON; C. SHEELER; C. BEEBE SMITH. *Natl. Inst. of Mental Hlth.*

2:00 C23 **392.06** Chronic administration of metformin restores behavioral and morphological abnormalities in the Fragile X Syndrome mouse model. I. GANTOIS*; J. POPIC; A. KHOUTORSKY; E. FREEMANTLE; A. AGUILAR-VALLES; R. CAO; V. SHARMA; A. NAGPAL; K. GAMACHE; C. CHAPAT; T. POOTERS; K. NADER; J. LACAILLE; C. G. GKOGKAS; N. SONENBERG. *McGill Univ., Univ. de Montreal, McGill Univ., Univ. of Edinburgh.*

3:00 C24 **392.07** Lovastatin treatment early in life prevents development of cognitive deficits in a rat model of Fragile X Syndrome. A. ASIMINAS*; S. M. TILL; E. K. OSTERWEIL; M. F. BEAR; S. CHATTARJI; D. J. A. WYLLIE; P. C. KIND; E. R. WOOD. *The Univ. of Edinburgh, The Univ. of Edinburgh, The Univ. of Edinburgh, MIT, Ctr. for Brain Develop. and Repair, Natl. Ctr. for Biol. Sci.*

4:00 C25 **392.08** Modulation of behavioral inhibition in attention deficit hyperactivity disorder. J. REN*; A. PANAMENO; L. M. HIRSHBERG; L. M. OBERMAN. *Brown Univ., Bradley Hosptal, Bradley Hosptal, Brown Univ., The NeuroDevelopment Ctr.*

1:00 C26 **392.09** Children with DCD (development coordination disorder) have a normal rate of learning of Active Video Games both in a variable and repetitive learning protocol. B. C. M. SMITS-ENGELSMAN; E. BONNEY; L. D. JELSMA; G. FERGUSON; J. E. DUYSENS*. *Univ. of Cape Town, Univ. of Ghana, Univ. of Groningen, Dept of Kinesiology (faber).*

2:00 C27 **392.10** Consequences of excessive sensory stimulation during development on addiction, impulsivity and attention. S. RAVINDER*; S. GADIWALLA; D. CHRISTAKIS; S. FERGUSON; J. RAMIREZ. *Seattle Children's Res. Inst.*

3:00 C28 **392.11** Attention training in children with sensory processing dysfunction. A. AITKEN*; J. A. ANGUERA; A. D. ANTOVICH; C. E. ROLLE; S. S. DESAI; E. J. MARCO. *UCSF.*

POSTER

393. Molecular Mechanisms of Neuronal and Glial Migration

Theme A: Development

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 C29 **393.01** C-terminal RELN deletion disrupts an interaction with VLDLR causing abnormal cerebral cortex and hippocampus development. S. HA*; P. P. TRIPATHI; R. F. HEVNER; D. R. BEIER. *Seattle Children's Res. Inst., Univ. of Washington Med. Sch., Seattle Children's Res. Inst.*

Mon. PM

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 C30 **393.02** A possible novel mode of action for Dab1 in modulation of neuronal migration of neocortical neurons. S. KIKKAWA*; T. NAMIKAWA; T. TERASHIMA. *Kobe Univ. Grad. Sch. of Med.*

3:00 C31 **393.03** Cdk12 regulates neurogenesis and late-born neuronal migration in the developing cerebral cortex. M. FANN*; H. CHEN; H. JUAN; Y. WONG; J. TSAI. *Natl. Yang-Ming Univ.*

4:00 C32 **393.04** Loss-of-function of the epileptic encephalopathy-associated TRIO gene impairs the morphological development of cortical GABAergic interneurons. F. CHARRON-LIGEZ*; J. LAROUCHE; F. HANSSON; M. LACHANCE; J. FALARDEAU; E. ROSSIGNOL. *CHU Ste-Justine Res. Ctr., Univ. de Montréal, Univ. de Montréal, Univ. de Montréal, Univ. de Montréal.*

1:00 C33 **393.05** Dopamine D1 receptor activation and neuronal migration. M. M. MARTIN*; D. M. MCCARTHY; C. METIN; P. G. BHIDE. *Florida State Univ., Ctr. for Brain Repair at Florida State Univ., Inserm - Inst. du Fer à Moulin.*

2:00 C34 **393.06** Polysialic acid synthesis by ST8SIA2 is essential for cortical interneuron development. U. E. DIEDERICHS*; C. ROSSDAM; T. KRÖCHER; I. RÖCKLE; N. KESSARIS; Y. YANAGAWA; B. WEINHOLD; H. HILDEBRANDT. *Hannover Med. Sch., Univ. Col. London, Gunma Univ.*

3:00 D1 **393.07** Dynamin-related protein 1 controls the migration and neuronal differentiation of subventricular zone-derived neural progenitor cells. H. KIM*; M. SHAKER; B. CHO; H. CHO; H. KIM; J. KIM; W. SUN. *Korea Univ., DGIST.*

4:00 D2 **393.08** Insulin growth factor 1 control of subventricular zone progenitor migration. M. DUCKER*; B. HASSAN; F. SZELE. *Univ. of Oxford, Univ. of Oxford.*

1:00 D3 **393.09** *In vivo* two-photon imaging of cell migration in embryos reveals a differential effect of ketamine application. M. YURYEV*; L. ANDRIICHUK; V. JOKINEN; C. RIVERA. *Univ. of Helsinki, Aalto Univ., Inst. de Neurobiologie de la Méditerranée, Aix-Marseille Univ.*

2:00 D4 **393.10** Understanding neurovascular endothelial cell migration using *in vitro* three dimensional models. M. BOUTIN; J. SEVETSON; L. KRAMER; D. HOFFMAN-KIM*. *Brown Univ., Brown Univ., Brown Univ., Brown Univ.*

3:00 D5 **393.11** The effect of migration in Schwann cell line using NRG1, NGF, and GDNF as guidance signals. M. E. DE BELLARD*; B. ORTEGA; T. DUONG; E. KLEIN; J. KOWALEWSKI; A. MAYORAL. *Cal State Univ. Northridge, Cal State Univ. Northridge.*

1:00 DP01 **393.12** (Dynamic Poster) Erratic migration: A unique migratory behavior of astrocyte progenitors. H. TABATA*; M. SASAKI; Y. INAGUMA; H. ITO; H. TAKEBAYASHI; M. EMA; K. IKENAKA; K. NAGATA; K. NAKAJIMA. *Inst. For Dev. Res., Aichi Human Service Cen., Dept. of Anatomy, Keio Univ. Sch. of Med., Div. of Neurobiol. and Anatomy, Grad. Sch. of Med. and Dent. Sciences, Niigata Univ., Res. Ctr. for Animal Life Science, Shiga Univ. of Med. Sci., Div. of Neurobiol. and Bioinformatics, Natl. Inst. for Physiological Sci.*

1:00 D6 **393.13** EphA4 signaling controls neuroblast migration and astrocyte organization in the rostral migratory stream. J. C. CONOVER*; K. L. TODD; K. L. BAKER; M. EASTMAN; F. KOLLING, 4th; C. E. NELSON. *Univ. Connecticut, Univ. of Connecticut, Univ. of Connecticut.*

2:00 D7 **393.14** Cytoskeletal dynamics during neuronal migration: Role of actin binding protein drebrin in GnRH neuronal movement. Y. SHAN*; S. WRAY. *NIH.*

3:00 D8 **393.15** Does GPR56 play a role in the developing GnRH/Olfactory system? F. VILSON*; Y. SHAN; X. PIAO; S. WRAY. *NIH, Boston's Children's Hospital, Harvard Med. Sch.*

4:00 D9 **393.16** Distinct roles for the adhesion molecule Contactin2 in the development and function of neural circuits in zebrafish. S. GURUNG*; A. CHANDRASEKHAR. *Div. of Biol. Sci.*

1:00 D10 **393.17** The spinal muscular atrophy with pontocerebellar hypoplasia gene vrk1 regulates neuronal migration through an amyloid-β precursor protein-dependent mechanism. H. VINOGRAD-BYK*; T. SAPIR; L. CANTARERO; P. LAZO; S. ZELIGSON; R. ORLY; P. RENBAUM; E. LEVY-LAHAD. *Shaare Zedek Med. Ctr., Weizmann Inst. of Sci., Hosp. Universitario de Salamanca.*

POSTER

394. Adolescent Development: Animal Models II

Theme A: Development

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 D11 **394.01** Impact of voluntary exercise during adolescence on cognitive performance in a touchscreen operant chamber during adulthood. J. O'LEARY*; C. BROUWERS; N. BROSENS; O. F. O'LEARY; J. F. CRYAN; A. M. SULLIVAN; Y. M. NOLAN. *Univ. Col. Cork, Alimentary Pharmabiotic Ctr.*

2:00 D12 **394.02** Aripiprazole sensitization: Adolescence to adulthood in the conditioned avoidance response model and pcp model. E. D. FREEMAN*; J. LIN, 68526; C. CHOW; C. DAVIS; M. LI. *Univ. of Nebraska-Lincoln, Univ. of Nebraska-Lincoln.*

3:00 D13 **394.03** ▲ Investigating the paranodal domain structure of myelinated axons in the medial prefrontal cortex of adolescent male and female rats. E. TAVARES*; A. SILVA-GOTAY; W. M. VARGAS; H. N. RICHARDSON. *Univ. of Massachusetts - Amherst, Univ. of Massachusetts - Amherst.*

4:00 D14 **394.04** chronic adolescent stress impairs spatial working memory in adult female rats. R. MORANO*. *Univ. of Cincinnati.*

1:00 D15 **394.05** Effect of pubertal delay and social stress on hippocampal connectivity in adolescent female rhesus macaques. M. PINCUS*; J. GODFREY; E. FECZKO; E. EARL; C. KELLY; M. WILSON; D. FAIR; M. SANCHEZ. *Emory Univ., Oregon Hlth. & Sci. Univ., Trinity Col.*

2:00 D16 **394.06** Role of CB1 receptor signaling in the regulation of afferent-evoked plasticity in the prefrontal cortex *in vivo*. H. M. MOLLA*; D. R. THOMASES; K. Y. TSENG. *The Chicago Med. Sch. At RFUMS.*

3:00 D17 **394.07** Neuroimmune signaling in the nucleus accumbens underlying the adolescent critical period for drugs of abuse. A. M. KOPEC*; S. C. SWEAT; N. R. AYRE; S. D. BILBO. *Duke Univ.*

4:00 D18 **394.08** Differential effects of paradoxical sleep deprivation on adolescent and adult mice. L. TUAN*; L. LEE. *Natl. Taiwan Univ., Natl. Taiwan Univ., Natl. Taiwan Univ.*

1:00 D19 **394.09** Arginine vasopressin expression mediates paternal influence on female offspring aggression in Peromyscus californicus. C. YOHN*; A. LEITHEAD; E. A. BECKER. *St. Joseph's Univ.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 D20 **394.10** Gonadal steroids at puberty drive organizational effects on inhibitory neurotransmission in the mouse frontal cortex. D. PIEKARSKI*; J. R. BOIVIN; A. W. THOMAS; L. WILBRECHT. *Univ. of California, Berkeley, Univ. of California, San Francisco.*

3:00 D21 **394.11** Social defeat stress during adolescence impairs the maturation of GABAergic function in the adult prefrontal cortex. E. FLORES-BARRERA*; D. R. THOMASES; A. CABALLERO; J. S. CARTER; K. E. GRANT; J. A. ROSENKRANZ; K. Y. TSENG. *Rosalind Franklin Univ. of Med. and Sci., DePaul Univ.*

4:00 D22 **394.12** Hedonic reward consumption is elevated in male, but not female, adolescent rats. A. T. LIU*; Y. CUI; N. P. MURPHY; N. T. MAIDMENT; S. B. OSTLUND. *UC Irvine, UCLA.*

POSTER

395. Invertebrate Neurotransmitters

Theme B: Neural Excitability, Synapses, and Glia

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 D23 **395.01** ● Neuronal signal molecules in developing and adult Dreissena, an environmental biofouling mollusk. I. BATTONYAI*; E. E. VORONEZSHKAYA; A. OBUKHOVA; L. P. NEZLIN; K. ELEKES. *MTA Ctr. For Ecolog. Res., Balaton Limnol. Inst., Inst. of Developmental Biology, Russian Acad. of Sci.*

2:00 D24 **395.02** ▲ Behavioral pharmacology of planaria (Giardia) as a model for glutamate excitotoxicity. M. SCRIBNER; B. R. MILLER*. *Texas Wesleyan Univ.*

3:00 D25 **395.03** Requirement of IP_3R function and SOCE in dopaminergic interneurons for *Drosophila* flight. S. SADAF*; S. P. SANE; G. HASAN. *Natl. Ctr. For Biol. Sci., Natl. Ctr. for Biol. Sci., Natl. Ctr. for Biol. Scirnces.*

4:00 D26 **395.04** A diurnal rhythm in head histamine in wild-type and white *Drosophila*. J. BORYCZ*; J. A. BORYCZ; I. A. MEINERTZHAGEN. *Dalhousie Univ., Dalhousie Univ.*

1:00 D27 **395.05** Temporal profiling of the phosphorylation of CaMKII at Threonine 286 & Threonine 305 following classical conditioning. H. WAN*; G. KEMENES. *Univ. of Sussex, Univ. of Sussex.*

2:00 D28 **395.06** Dynamics of change of pattern of serotonin-containing neurons in the terminal abdominal ganglion of a tenebrionid beetle during metamorphic development. R. C. ELSON*. *Point Loma Nazarene Univ.*

3:00 D29 **395.07** Automated behavioral pharmacology assay using planaria (Girardia) in a 3-D printed apparatus. D. POE*; A. CORNWALL; M. TAYLOR; B. MILLER. *Univ. of North Texas Hlth. Sci. Ctr., Texas Wesleyan Univ.*

POSTER

396. NMDA Receptors II

Theme B: Neural Excitability, Synapses, and Glia

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 D30 **396.01** Dysfunctional NMDA receptors affect excitatory transmission causing neurological disease. L. FEDELE*; R. J. HARVEY; T. G. SMART. *Univ. Col. of London, UCL Sch. of Pharm.*

2:00 D31 **396.02** Neuromorphological characterization of CA1 pyramidal cells in transgenic mice expressing chimeric NMDAR GluN2 subunits. R. KEITH*; J. M. AZCARATE; T. C. DUMAS; Z. SAFI; M. F. BADAKHSH; M. J. KEITH; K. S. ZECHMAN; G. J. LEE. *George Mason Univ. Krasnow Inst., George Mason Univ., Robinson Secondary Sch., Thomas Jefferson High Sch. for Sci. and Technol.*

3:00 D32 **396.03** Exploration of the molecular mechanisms underlying the effect of L-lactate on long term memory. E. K. IBRAHIM; O. AL ZAHRANI; H. FIUMELLI; P. J. MAGISTRETTI*. *King Abdullah Univ. for Sci. and Technol., Ecole Polytechnique.*

4:00 D33 **396.04** Optophysiological characterization of endogenous and recombinant glutamate receptors in neuroblastoma cells. N. A. ALMUZAINI*; K. S. JONES. *Howard Univ., Howard Univ.*

1:00 D34 **396.05** ● Epilepsy-associated GRIN2A mutations - functional analysis and pharmacological rescue of phenotypic deficits. L. ADDIS*; J. K. VIRDEE; L. R. VIDLER; D. A. COLLIER; D. K. PAL; D. URSU. *King's Col. London, Eli Lilly Res. Ctr.*

2:00 E1 **396.06** Peculiarities of agonist activity of homocysteine on GluN2A- and GluN2B-containing NMDA receptors. S. M. ANTONOV*; D. A. SIBAROV; P. A. ABUSHIK; R. GINIATULLIN. *Sechenov Inst. of Evolutionary Physiol. and Biochem., A. I. Virtanen Inst. for Mol. Sciences, Univ. of Eastern Finland.*

3:00 E2 **396.07** ▲ Positive modulatory interactions of NMDA receptor GluN1/2 ligand binding domain attenuate competitive antagonists activity. D. BLEDSOE; C. TAMER; I. MESIC; C. MADRY; H. BETZ; B. G. KLEIN*; B. LAUBE; B. COSTA. *Virginia Tech., Technische Univ. Darmstadt, Univ. Col. London, Max-Planck-Institut für Medizinische Forschung, Virginia Tech, Col. of Vet. Med., Edward Via Virginia Col. of Osteo. Med.*

4:00 E3 **396.08** Regulation of striatal neuronal NMDAR trafficking by palmitoylation: Potential role in Huntington disease. R. KANG*; L. WANG; S. S. SANDERS; K. ZUO; M. R. HAYDEN; L. A. RAYMOND. *Univ. of British Columbia, Univ. of British Columbia, Univ. of British Columbia.*

1:00 E4 **396.09** ● Human anti-GluN1 antibody-mediated effects on NMDA receptor subtypes. J. A. PANZER*; A. RATTELLE; D. R. LYNCH. *Children's Hosp. of Philadelphia.*

2:00 E5 **396.10** Lateral mobility of synaptic NMDA receptors in hippocampal slices. A. L. MCQUATE*; A. BARRIA. *Univ. of Washington.*

3:00 E6 **396.11** Characterisation of two NMDA NR2B subunit (grin2b) antagonists across tests of impulsivity and attention. G. A. HIGGINS*; L. B. SILENIEKS; C. MACMILLAN; J. SEVO; F. D. ZEEB; S. THEVARKUNNEL. *Intervivo Solutions Inc, U. Toronto, Vivocore, CAMH.*

4:00 E7 **396.12** ● N-Methyl-D-Aspartate (NMDA) receptor glycine site agonist shows pronounced subtype-dependent pharmacological profiles. M. JESSEN*; K. FREDERIKSEN; H. BRÄUNER-OSBORNE; P. KILBURN; A. DAMHOLT. *H. Lundbeck A/S, Univ. of Copenhagen, H. Lundbeck A/S.*

1:00 E8 **396.13** Investigating the impact of NMDA receptor hypounction on the synaptic integration of hippocampal neurogliaform cells. R. CHITTAJALLU*; J. C. WESTER; M. C. CRAIG; E. BARKSDALE; G. AKGUL; S. HUNT; C. FANG; X. YUAN; D. COLLINS; K. A. PELKEY; C. J. MCBAIN. *NICHD, NIH.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 E9 **396.14** Low-dose NMDAR antagonists increase the excitation/inhibition balance onto CA1 pyramidal cells causing disinhibition. A. J. WIDMAN*; L. L. MCMAHON. *Univ. of Alabama, Birmingham (UAB).*

3:00 E10 **396.15** Structure activity relationships and mechanism of action of NMDA receptor positive allosteric modulators based upon 2-naphthoic acid. K. SAPKOTA*; G. FANG; M. W. IRVINE; E. BURNELL; G. CULLEY; D. CHOPRA; S. DRAVID; G. L. COLLINGRIDGE; D. E. JANE; D. T. MONAGHAN. *Univ. of Nebraska Med. Ctr., Univ. of Bristol, Creighton Univ., Univ. of Toronto.*

4:00 E11 **396.16** Protons exert distinct influences on the translocation of the M3 domains of GluN1 and GluN2A N-methyl-D-aspartate receptor subunits. N. N. JACKSON*; S. N. REID; K. S. JONES. *Howard Univ., Howard Univ. Col. of Med.*

1:00 E12 **396.17** Endogenous expression of SAP97 in PV interneurons is correlated to decreased NMDAR synaptic activity. R. C. FERRER FIERRO*; A. BAEZ; L. WOLLMUTH. *Stony Brook Univ., Stony Brook Univ.*

2:00 E13 **396.18** Presynaptic NMDA receptors rely on RIM1α β to control readily-releasable pool at synapses onto layer-5 pyramidal neurons. Y. CHOU*; T. ABRAHAMSSON; S. LI; A. MANCINO; E. NURO; R. P. COSTA; K. A. BUCHANAN; D. ELGAR; A. V. BLACKMAN; A. T. JONES; K. MURAI; P. J. SJÖSTRÖM. *The Res. Inst. of the McGill Univ. He, Ctr. for Neural Circuits and Behaviour, Univ. Col. London.*

3:00 E14 **396.19** Emerging role of GluN2D-containing NMDARs in modulating synaptic plasticity within the bed nucleus of the stria terminalis and anxiety/depressive-like behaviors. G. J. SALIMANDO*; T. A. WILLS; D. G. WINDER. *Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Louisiana State Univ. Hlth. Sci. Ctr.*

4:00 E15 **396.20** The role of protein phosphatase 1 in regulating NMDA receptor trafficking. A. M. CHIU*; T. TEDESCHI; A. SANZ-CLEMENTE. *Northwestern Univ., Northwestern Univ.*

1:00 E16 **396.21** Physiological differences between the primary visual cortex and dorsolateral prefrontal cortex in primate. S. YANG*; M. WANG; M. ALTMAN; L. E. JIN; V. GALVIN; A. F. T. ARNSTEN; J. A. MAZER. *Yale Univ., Yale Univ.*

2:00 E17 **396.22** Effects on magnesium block and potentiation of non-pore lining residues in NMDA receptor transmembrane domains. M. WILCOX*; S. MESBAHI, 15217; M. KURNIKOVA, 15217; J. W. JOHNSON. *Univ. of Pittsburgh, Carnegie Mellon Univ.*

3:00 E18 **396.23** Effects of lithium on NMDAR currents and intracellular calcium responses of rat cortical neurons. D. A. SIBAROV*; E. E. POGUZHELSKAYA; P. A. ABUSHIK; S. M. ANTONOV. *Iephb RAS.*

4:00 E19 **396.24** Modulation of NMDA receptors by TRPC6 and its function in synaptic plasticity. H. SHEN*; W. HU. *Nantong Univ., Univ. of California, Davis.*

1:00 E20 **396.25** NMDA receptor antagonist-induced γ neuronal oscillations are augmented in the GluN-2C knockout mouse; implications for schizophrenia. Z. MAO*; Y. ZHANG; K. SAPKOTA; H. ALSAAD; S. DRAVID; D. MONAGHAN. *Univ. of Nebraska Med. Ctr., Univ. of Nebraska Med. Ctr., Univ. of Nebraska Med. Ctr., Creighton Univ.*

2:00 E21 **396.26** Psd95 deficiency alters nmda and ampa receptor expression and function during development in the prefrontal cortex. A. COLEY*; W. GAO. *Drexel Univ. Col. of Med., Drexel Univ.*

POSTER

397. AMPA Receptors

Theme B: Neural Excitability, Synapses, and Glia

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 E22 **397.01** ● Novel AMPA receptor modulators with an enhanced safety profile. J. R. ATACK*; P. BESWICK; M. HERD; N. UPTON; D. SPANSWICK; R. PORTER; M. GOSLING; J. LAMBERT; S. E. WARD. *Sussex Drug Discovery Ctr., Dundee Univ., Transpharmation, Neurosolutions, Rod Porter Consultancy.*

2:00 E23 **397.02** Pharmacological characterisation of the clinical AMPA receptor positive allosteric modulator [N-[(2S)-5-(6-fluoro-3-pyridinyl)-2,3-dihydro 1H-inden-2-yl]-2-propanesulfonamide]. S. WARD*; P. BESWICK; M. H. HARRIS; N. CALCINAGHI; J. GARTLON; F. GRAZIANI; L. LACROIX; S. MOK; B. OLIOSI; J. PARDOE; K. STARR. *Univ. of Sussex, GlaxoSmithKline, GlaxoSmithKline.*

3:00 E24 **397.03** Identification and characterization of the binding pocket for negative allosteric modulators in AMPA receptors. C. STENUM-BERG*; C. L. THISTED; S. C. ABIEGA; A. S. KRISTENSEN. *Univ. of Copenhagen.*

4:00 E25 **397.04** Defective FRRS1l impairs AMPA-receptor biogenesis and causes severe intellectual disability. J. SCHWENK; A. BRECHET; S. BOUDKKAZI; R. BUCHERT; G. ZOLLES; K. SIQUIER-PERNET; W. BILDL; A. SAADI; C. BOLE-FEYSOT; P. NITSCHKE; N. AL-SANNA'A; A. REIS; A. KULIK; U. SCHULTE; L. COLLEAUX; R. ABOU JAMRA; B. FAKLER*. *Inst. of Physiol., Inst. of Human Genet., INSERM UMR 1163, Inst. IMAGINE, Dept. de Neurologie, Dharan Hlth. Ctr., Inst. of Human Genet., Inst. of Human Genet.*

1:00 E26 **397.05** Identification of a novel protein that regulates endosome pH, AMPAR trafficking and synaptic function. A. J. KALLARACKAL*; J. MELLEM; D. M. MADSEN; V. MARICQ. *Univ. of Utah, Univ. of Utah.*

2:00 E27 **397.06** Mechanisms underlying slow AMPA-receptor mediated current at mossy fiber-unipolar brush cell synapse. H. LU; T. S. BALMER*; G. E. ROMERO; L. O. TRUSSELL. *Oregon Hlth. and Sci. Univ., Oregon Hlth. and Sci. Univ., Oregon Hlth. and Sci. Univ.*

3:00 E28 **397.07** ● Claudins: An unexpected source for more tetraspanning proteins acting as transmembrane AMPA receptor modulatory proteins. S. HAERING; S. BHATTACHARYA; M. ASLAM; T. STRASDEIT; J. VON ENGELHARDT; S. F. TRAYNELIS; M. HOLLMANN*. *NIH/NICHD, Emory Univ. Sch. of Med., Deutsches Krebsforschungszentrum & Deutsches Zentrum für Neurodegenerative Erkrankungen, Ruhr Univ. Bochum, Ruhr Univ. Bochum.*

4:00 E29 **397.08** Secreted amyloid precursor protein-α regulates synthesis of the AMPA receptor subunit GluA1. M. K. ELDER*; K. PEPPERCORN; S. TOM DIECK; L. KOCHEN; E. SCHUMAN; W. TATE; C. ABRAHAM; J. WILLIAMS. *Univ. of Otago, Univ. of Otago, Max Planck Inst. for Brain Res., Univ. of Otago.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 E30 **397.09** Extensive phosphorylation of AMPA receptors in neurons. N. K. HUSSAIN SHULER*; G. H. DIERING; S. HEO; B. LIU; R. L. HUGANIR. *Johns Hopkins Univ. Sch. of Med.*

2:00 E31 **397.10** The auxiliary subunit C9orf4 (FRRS1l) slows AMPAR recovery from desensitization. S. PEARCE*; M. FARRANT; S. G. CULL-CANDY. *Univ. Col. London.*

3:00 E32 **397.11** Characterization of AMPAR auxiliary subunit GSG1L expression pattern and function using transgenic model systems. A. KAMALOVA*; E. ZAIKA; K. FUTAI; E. DELPIRE; T. NAKAGAWA. *Vanderbilt Univ., Univ. of Massachusetts Med. Sch.*

4:00 E33 **397.12** Using high throughput screening methods to identify small molecule modulators that specifically target the GluA2-auxiliary subunit complex. C. AZUMAYA*; E. DAYS; P. VINSON; S. STAUFFER; G. SULIKOWSKI; D. WEAVER; T. NAKAGAWA. *Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ.*

POSTER

398. Ca2+ Channels and Ca2+ Signaling

Theme B: Neural Excitability, Synapses, and Glia

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 E34 **398.01** Decreased palmitoylation of PSD-95 contributes to src mediated NMDA receptor hypoactivity in schizophrenia. A. BANERJEE*; A. SENGAR; J. KIM; R. RAY; K. BORGMANN-WINTER; M. SALTER; C. HAHN. *Univ. Pennsylvania, Sick Kids, Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania and Children Hosp. of Philadelphia, Sick Kids and Univ. of Toronto.*

2:00 E35 **398.02** ● State-dependence alone does not provide a sufficient CNS margin with an orally efficacious Cav2 selective small molecule. K. S. RATLIFF*; K. KNOPP; J. SCHKERYANTZ; B. T. PRIEST; M. CLARK; R. CERNE; M. WAKULCHIK; B. HEINZ; M. WALKER; A. VANDERGRIFF; X. HUANG; M. J. VALLI; W. J. PORTER; J. K. REEL; D. LUFFER-ATLAS; T. JONES; R. M. A. SIMMONS; B. FORSTER; W. GUO; B. ADAMS; L. YANG; J. S. MCDERMOTT. *Neurosci. Discovery, Eli Lilly & Co.*

3:00 E36 **398.03** L-type voltage gated calcium channels functionally couple with IKCa channels in CA1 pyramidal cells to generate the slow afterhyperpolarization. G. SAHU*; J. MICLAT; H. ASMARA; G. W. ZAMPONI; R. W. TURNER. *Univ. of Calgary.*

4:00 E37 **398.04** The $5HT_{2C}$ receptor decreases seizure susceptibility in the dorsal subiculum by inhibiting Ca_V3 ion channels. A. PETERSEN*; C. S. JENSEN; V. CRÉPEL; M. FALKERSLEV; J. PERRIER. *Copenhagen Univ., INMED.*

1:00 E38 **398.05** Crosstalk between $InsP_3R$ and TRPV4 in Ca^{2+} microdomains contributes to paclitaxel-induced neurotoxicity. W. BOEHMERLE*; P. HUEHNCHEN; C. HARMS; M. ENDRES. *Charite Universitaetsmedizin Berlin.*

2:00 F1 **398.06** Acute estrogen causes a prolonged alteration of intracellular calcium signaling in basal forebrain neurons of F344 rats. D. A. MURCHISON*; A. S. FINCHER; W. H. GRIFFITH. *Texas A&M Hlth. Sci. Ctr.*

3:00 F2 **398.07** Regulation of NMDA receptor phosphorylation by multiple calcium signaling pathways. R. V. OMKUMAR*; M. JOHN; M. KUMAR; J. JAMES; M. MAYADEVI. *Rajiv Gandhi Ctr. For Biotech.*

4:00 F3 **398.08** Relationship between ketamine-induced toxicity and nmda receptor-mediated calcium influx in developing neurons. C. WANG*; F. LIU; T. A. PATTERSON; M. G. PAULE; W. SLIKKER, Jr. *Natl. Ctr. for Toxicological Res.*

1:00 F4 **398.09** Suppression of peripheral sympathetic activity underlies agmatine-mediated hypotension. Y. KIM*; S. CHUNG. *Yonsei Univ. Col. of Med., Brain Korea 21 Project for Med. Science, Yonsei Univ. Col. of Med.*

2:00 F5 **398.10** Characterization of the P-type voltage-gated calcium channel in chick. Q. LI*; B. ELLIOTT; E. F. STANLEY. *Krembil Res. Inst.*

3:00 F6 **398.11** Examination of the effects of NCLX knock-out on mitochondrial and cytosolic Ca^{2+} signaling in hippocampal neurons. Z. LIN; J. RYSTED; A. GNANASEKARAN; Y. M. USACHEV*. *Univ. of Iowa Dept. of Pharmacol.*

4:00 F7 **398.12** ▲ Effect of ghrelin and leptin on voltage gated calcium channels in rin-m5f cells. B. DOMINGUEZ MANCERA*; A. HERNÁNDEZ-BELTRÁN; M. BARRIENTOS-MORALES; P. CERVANTES-ACOSTA; A. RODRÍGUEZ-ANDRADE. *Univ. Veracruzana, Dept Fisiología, Univ. Veracruzana, Dept Fisiología, Univ. Veracruzana, Dept Fisiología, Univ. Veracruzana, Dept Fisiología, Inst. Tecnológico de Veracruz.*

1:00 F8 **398.13** Differential translocation *in vitro* and *in vivo* of two closely related Neuronal Calcium Sensor Proteins Neurocalcin δ and Hippocalcin. J. ZHANG*; J. VIVIANO; A. KRISHNAN; P. BELAN; V. VENKATARAMAN. *Rowan Univ. Sch. of Osteo. Med., Rowan Univ. Sch. of Osteo. Med., Bogomoletz Inst. of Physiol.*

POSTER

399. Dopamine Transporter Regulation

Theme B: Neural Excitability, Synapses, and Glia

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 F9 **399.01** Dopamine transporter amino and carboxy termini synergistically mediate ack1-dependent endocytosis. C. G. SWEENEY*; B. P. TREMBLAY; H. E. MELIKIAN. *Univ. of Massachusetts Med. Sch.*

2:00 F10 **399.02** Using *Drosophila melanogaster* as a model to study how regulated dopamine transporter trafficking impacts psychostimulant associated reward. R. R. FAGAN*; P. EMERY; H. E. MELIKIAN. *Univ. of Massachusetts Med. Sch., Univ. of Massachusetts Med. Sch., Univ. of Massachusetts Med. Sch.*

3:00 F11 **399.03** Role of G protein βγ subunits in amphetamine-stimulated increase in extracellular dopamine. S. S. HARRIS*; M. TERMINEL; E. CASTANEDA; J. C. MAUNA; E. THIELS; G. E. TORRES. *Univ. of Florida, Texas A&M Univ., Univ. of Texas at El Paso, Univ. of Pittsburgh.*

4:00 F12 **399.04** Presynaptic determinants of dopamine signaling *in vivo* elucidated via forward genetic analysis of swimming induced paralysis (Swip). O. REFAI*; J. HARDAWAY; C. L. SNARRENBERG; S. ROBINSON; S. L. HARDIE; P. FREEMAN; R. D. BLAKELY. *Florida Atlantic Univ., Vanderbilt Univ., Fisk Univ., Florida Atlantic Univ.*

1:00 F13 **399.05** Methamphetamine regulates the firing activity of dopamine neurons via a calcium-dependent potassium channel. M. LIN; D. SAMBO; H. KHOSHBOUEI*. *Univ. of Florida.*

Mon. PM

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 F14 **399.06** The ς-1 receptor decreases methamphetamine stimulation of the dopamine transporter via a calcium-dependent mechanism. D. O. SAMBO*; M. LIN; H. KHOSHBOUEI. *Univ. of Florida.*

3:00 F15 **399.07** Mechanistic and behavioral characterization of the dopamine transporter using a novel allosteric modulator. S. AGGARWAL*; P. MENELL; A. CHANG; S. KORTAGERE; O. V. MORTENSEN. *Drexel Univ., Drexel Univ. Col. of Med., Drexel Univ. Col. of Med.*

4:00 F16 **399.08** Kv2.1 and the dopamine transporter interact in dopaminergic neurons. J. LEBOWITZ*; J. A. PINO REYES; S. STREIT; D. SAMBO; M. LIN; H. KHOSHBOUEI; G. E. TORRES. *Univ. of Florida, Univ. of Florida, Col. of Medicine, Heinrich-Heine-Universität.*

1:00 F17 **399.09** Altered sensitivity to serotonin transporter blockade underlies loss of locomotor response to cocaine in DAT Val559 mice. A. STEWART*; G. L. DAVIS; R. GOWRISHANKAR; P. J. GRESCH; F. I. CARROLL; M. K. HAHN; R. D. BLAKELY. *Florida Atlantic Univ., Florida Atlantic Univ., Vanderbilt Univ., Vanderbilt Univ., Res. Triangle Inst.*

2:00 F18 **399.10** N-terminus phosphorylation in the Dopamine Transporter mediates Gβγ-stimulated dopamine efflux. J. GARCIA-OLIVARES*; J. A. BORIS; S. G. AMARA. *Natl. Inst. of Mental Hlth.*

3:00 F19 **399.11** Dopamine transporter interactome when exposed to psychostimulants. S. INGRAM; T. RANA; J. S. GOODWIN*. *Meharry Med. Col.*

4:00 F20 **399.12** Aberrant dopamine D2 autoreceptor regulation of the dopamine transporter in striatal dopaminergic terminals of mice expressing the ADHD-associated dopamine transporter variant DAT Val559. R. GOWRISHANKAR*; G. L. DAVIS; A. M. STEWART; J. S. RIELE; M. K. HAHN; R. D. BLAKELY. *Florida Atlantic Univ., Florida Atlantic Univ., Vanderbilt Univ., Vanderbilt Univ.*

1:00 F21 **399.13** Dopamine transporter expression evaluated in perinatally asphyxiated rats. S. J. LOPEZ-PEREZ*; J. U. MORA-VENADERO. *Univ. of Guadalajara (CUCBA), Univ. of Guadalajara.*

2:00 F22 **399.14** Identification of residues involved in the dopamine transporter-G βγ interaction and dopamine efflux. J. A. PINO*; M. H. CHENG; F. PULLARA; A. GOPINATH; K. SAHA; J. LEBOWITZ; H. KHOSHBOUEI; J. GARCIA-OLIVARES; S. G. AMARA; I. BAHAR; G. E. TORRES. *Univ. of Florida, Univ. of Pittsburgh, Univ. of Florida, NIH.*

3:00 F23 **399.15** Changes in motivation, impulsivity, cognition and DAergic signaling cascades with ADHD-associated DAT Val559 transgenic mouse. G. L. DAVIS*; L. A. WALKER; R. D. BLAKELY. *Florida Atlantic Univ., Florida Atlantic Univ., Vanderbilt Univ., Vanderbilt Univ.*

4:00 F24 **399.16** Noncanonical neurotoxicity of hiv-1 tat on midbrain dopamine neurons. D. MILLER*; S. STREIT; K. SAHA; S. BUCH; W. STREIT; J. MCLAUGHLIN; H. KHOSHBOUEI. *Univ. of Florida, Heinrich-Heine-Universität Düsseldorf, Univ. of Nebraska.*

1:00 F25 **399.17** Pharmacological chaperones of the dopamine transporter rescue dopamine transporter deficiency syndrome mutations in heterologous cells. P. BEEREPOOT*; V. M. LAM; A. SALAHPOUR. *Univ. of Toronto.*

2:00 F26 **399.18** Role of the dopamine transporter and G protein βγ interaction in amphetamine-induced hyperlocomotion and reward-conditioned behavior in rats. C. M. EDWARDS*; J. C. MAUNA; C. D. BASSI; R. LUDER; J. A. PINO; J. GARCIA-OLIVARES; S. G. AMARA; G. E. TORRES; E. THIELS. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Florida, Natl. Inst. of Mental Hlth., Natl. Institude of Mental Hlth.*

3:00 F27 **399.19** Psychoactive "benzofury" compounds, 5-APB and 6-APB, mimic the effects of 3,4-methylenedioxyamphetamine (MDA) on monoamine transmission in rats. M. H. BAUMANN*; H. M. WALTERS; J. S. PARTILLA; B. E. BLOUGH; S. D. BRANDT. *IRP, NIDA, NIH, DHHS, RTI, Liverpool John Moores Univ.*

POSTER

400. Visualizing Presynaptic Structure and Function

Theme B: Neural Excitability, Synapses, and Glia

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 F28 **400.01** ▲ Structural and synaptic organization of the adult reeler mouse somatosensory neocortex. M. PRUME*; A. ROLLENHAGEN; J. LÜBKE. *Res. Ctr. Jülich Gmbh, Res. Ctr. Jülich Gmbh, Dept. of Psychiatry, Psychotherapy and Psychosomatics, RWTH Univ. Hosp. Aachen, JARA Translational Brain Med.*

2:00 F29 **400.02** Synaptic organization in layer 5 of the human temporal lobe: A quantitative electron microscopic analysis. R. YAKOUBI*; A. ROLLENHAGEN; M. VON LEHE; K. SÄTZLER; J. LÜBKE. *Res. Ctr. Jülich Gmbh, Inst. of Neurosci. and Med. INM-2, Res. Ctr. Jülich Gmbh, Dept. of Neurosurg. at the Univ. Hosp., Sch. of Biomed. Sciences, Univ. of Ulster, Dept. of Psychiatry, Psychotherapy and Psychosomatics, RWTH/University Hosp. Aachen, JARA Translational Brain Med.*

3:00 F30 **400.03** Immunogold labeling of presynaptic proteins in developing hippocampal neurons. J. TAO-CHENG*. *NIH.*

4:00 F31 **400.04** Super resolution microscopy analysis of neuromuscular junction active zones in adult and aged mice. Y. BADAWI*; S. MORI; K. SHIGEMOTO; H. NISHIMUNE. *Univ. of Kansas Med. Ctr., Tokyo Metropolitan Inst. of Gerontology.*

1:00 F32 **400.05** Structural heterogeneity of presynaptic active zones underlies variability in synaptic latency across synapses at the frog neuromuscular junction. A. E. HOMAN*; R. LAGHAEI; M. DITTRICH; S. D. MERINEY. *Univ. of Pittsburgh, Carnegie Mellon Univ., Carnegie Mellon Unversity, Univ. of Pittsburgh.*

2:00 F33 **400.06** Withdrawn.

3:00 F34 **400.07** Oriented docking of dense core vesicles at active zones on the presynaptic membrane of neuromuscular junctions. J. JUNG*; J. SZULE; K. STOUDER; U. MCMAHAN. *Texas A&M Univ., Texas A&M Univ.*

4:00 F35 **400.08** Characterization of a synaptic vesicle binding site on the CaV channel distal C-terminal. S. GARDEZI*; Q. LI; A. R. NATH; E. F. STANLEY. *Krembil Res. Inst.*

1:00 F36 **400.09** RIM-binding proteins are crucial for clustering calcium channels and synaptic transmission in ribbon synapse. F. LUO*; C. ACUNA; T. SÜDHOF. *Hhmi/ Stanford Univ., Stanford Univ., HHMI/Stanford Univ.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 F37 **400.10** Analysis of vamp7 function at the *Drosophila* neuromuscular junction. I. D. SANTIAGO*; B. MELENDEZ; T. J. LITTLETON; R. JORQUERA. *Univ. Central Del Caribe, Univ. Central del Caribe, MIT, Univ. de Chile.*

3:00 F38 **400.11** Dynamics of the Extended Synaptotagmins in the endoplasmic reticulum of neurons. C. WHITEUS*; J. WANG; R. YASUDA; P. DE CAMILLI. *Yale Univ., Max Planck Florida Inst. for Neurosci., Yale University, Howard Hughes Med. Inst.*

4:00 F39 **400.12** Genetic expression of an active zone peptide to induce cell-specific synaptic depression and to screen for vesicle tethering factors. R. J. KITTEL*; N. SCHOLZ; N. EHMANN; C. STIGLOHER; T. LANGENHAN. *Univ. of Wuerzburg, Univ. of Wuerzburg.*

1:00 F40 **400.13** Proteomic screening of GABAergic and glutamatergic neurons isolated by fluorescence activated sorting. Z. WEI*; X. LI; L. QIN; H. YU; Z. GAO; S. DUAN. *Inst. of Neuroscience, Zhejiang Univ., Nantong Univ.*

2:00 F41 **400.14** Synaptotagmin1 sorting to synaptic vesicles is probabilistic. T. A. SCHIKORSKI*; D. CRUZ. *Univ. Central Del Caribe, Univ. Puerto Rico.*

3:00 F42 **400.15** Distinct Ca^{2+} dynamics in glutamatergic and aminergic synapses determined by intrinsic neuronal properties independent of synaptic bouton physical dimensions and GCaMP expression levels. X. XING*; C. WU. *Univ. of Iowa, the Univ. of Iowa.*

4:00 F43 **400.16** Signaling pathway controlling mitochondria-dependent presynaptic calcium clearance and neurotransmitter release properties at single synapses along cortical axons. S. KWON*; R. SANDO, III; T. L. LEWIS, Jr; Y. HIRABAYASHI; A. MAXIMOV; F. POLLEUX. *Columbia Univ., The Scripps Res. Inst.*

1:00 F44 **400.17** Quantification of fast presynaptic Ca^{2+} kinetics using non-stationary single compartment model. Y. TIMOFEEVA; D. RUSAKOV; K. E. VOLYNSKI*. *Dept. of Computer Sci. and Ctr. for Complexity Science, Univ. of Warwick, UCL Inst. of Neurol.*

2:00 F45 **400.18** Presynaptic calcium dynamics translate bursts of action potential to control the mode of neurotransmitter release at the mossy fiber to CA3 pyramidal cell synapse. S. CHAMBERLAND*; A. EVSTRATOVA; K. TOTH. *CRULRG.*

3:00 F46 **400.19** Hemi-fused structure mediates and controls fusion and fission in live cells. S. A. VILLARREAL*; W. ZHAO; E. HAMID; P. J. WEN; E. S. KRYSTOFIAK; H. CHIANG; B. KACHAR; L. WU. *NINDS, NIDCD.*

4:00 F47 **400.20** Activity-dependent movement of synapsin between *Drosophila* motor boutons. A. VASIN*; M. BYKHOVSKAIA. *Wayne State Univ. Sch. of Med.*

1:00 F48 **400.21** Monitoring vesicle dynamics in gaba-depleted hippocampal neurons using vgat-phluorin. L. BONET*; S. SUPPLISSON. *IBENS.*

2:00 F49 **400.22** *In vivo* time lapse imaging of axonal dense core vesicle trafficking in anaesthesized and awake mice. J. KNABBE*; J. NASSAL; H. HORSTMANN; M. VERHAGE; T. KUNER. *Inst. of Functional Neuroanatomy, Ctr. for Neurogenomics and Cognitive Res.*

3:00 F50 **400.23** Dynamics of synaptic vesicle protein after single vesicle exocytosis at a hippocampal presynaptic active zone recorded by a novel live-cell imaging method. J. FUNAHASHI*; H. TANAKA; T. HIRANO. *Dept. of Biophys., Grad. Sch. of Sci., Kyoto Univ.*

4:00 F51 **400.24** Rapid and spatially-confined $PI(4,5)P_2$ manipulations by optogenetic approaches regulate vesicle docking and secretion. C. JI*; F. FAN; X. LOU. *Univ. of Wisconsin-Madison.*

POSTER

401. Spike-Timing Dependent Plasticity

Theme B: Neural Excitability, Synapses, and Glia

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 F52 **401.01** Spike-timing dependent plasticity in the long latency stretch reflex following paired stimulation from a wearable electronic device. K. FOYSAL*; F. DE CARVALHO; S. BAKER. *Newcastle Univ.*

2:00 F53 **401.02** The role of local excitatory networks in the lateral amygdala in emotional memory learning. M. ABATIS*; R. NIU; R. PERIN; H. MARKRAM; H. BITO; R. STOOP. *Dept. of Psychiatry, CHUV, BMI, EPFL, Dept. of Neurochemistry, Univ. of Tokyo.*

3:00 G1 **401.03** Postsynaptic calcium dynamics associated with bidirectional plasticity of NMDA receptor-mediated transmission. S. LUTZU; K. ALVINA*; P. CASTILLO. *Albert Einstein Col. of Med., Albert Einstein Col. of Med.*

4:00 G2 **401.04** Paired transspinal and transcortical associative stimulation modulates human spinal motor output. M. KNIKOU*; D. SANTORA; L. DIXON; M. M. IBRAHIM. *City Univ. of New York.*

1:00 G3 **401.05** Optimal learning with redundant synaptic connections. N. HIRATANI*; T. FUKAI. *RIKEN Brain Sci. Inst., The Univ. of Tokyo, JST CREST.*

2:00 G4 **401.06** Anti-Hebbian learning of optimal homeostatic IPSG amplitude and decay time. J. K. KIM*; C. D. FIORILLO. *Korea Advanced Inst. of Sci. and Technol.*

3:00 G5 **401.07** Activity-dependent anti-Hebbian glutamatergic spike-timing dependent plasticity within the lateral habenula. L. D. LANGLOIS*; F. NUGENT. *Uniformed Services Univ. of the Hlth. Scienc, Uniformed Services Univ. of the Hlth. Sci.*

4:00 G6 **401.08** Identification of a functional spike-timing-dependent plasticity rule from ensemble hippocampal spiking activity with generalized multilinear modeling. B. S. ROBINSON*; D. SONG; R. E. HAMPSON; S. A. DEADWYLER; T. W. BERGER. *USC, Wake Forest Sch. of Med.*

1:00 G7 **401.09** Potential roles of intracellular calcium dynamics regulated by calcium stores for spatial association of synaptic plasticity. D. FUTAGI; K. KITANO*. *Ritsumeikan Univ.*

2:00 G8 **401.10** Cholinergic modulation on LTD in rat hippocampal network. E. SUGISAKI*; Y. FUKUSHIMA; S. FUJII; N. NAKAJIMA; T. AIHARA. *Tamagawa Univ. Grad. Sch. of Engin., Kawasaki Univ., Yamagata Univ.*

3:00 G9 **401.11** Developmental profile of spike timing-dependent plasticity at CA3-CA1 synapses of mouse hippocampus. A. RODRIGUEZ-MORENO*; Y. ANDRADE-TALAVERA; P. DUQUE-FERIA. *Univ. Pablo De Olavide.*

4:00 G10 **401.12** Complex circuits from simple learning rules. J. OLSON*; G. KREIMAN. *Harvard Univ.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 G11 **401.13** Experience-dependent regulation of spike-timing dependent plasticity of inhibition in auditory cortex. E. D. VICKERS*; R. SCHNEGGENBURGER. *EPFL, EPFL.*

2:00 G12 **401.14** Spike-timing-dependent plasticity for short-term memory and long-term memory. Y. PARK*; W. CHOI; S. PAIK. *KAIST, Program of Brain and Cognitive Engineering, KAIST.*

POSTER

402. Structural Plasticity I

Theme B: Neural Excitability, Synapses, and Glia

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 G13 **402.01** CD44 adhesion molecule involved in molecular mechanisms responsible for stabilization of dendritic spines. A. SKUPIEN*; M. ROSZKOWSKA; G. WILCZYNSKI; J. DZWONEK. *Nencki Inst. of Exptl. Biol. Polish Ac, Nencki Inst. of Exptl. Biol. Polish Acad. of Sci.*

2:00 G14 **402.02** CD44, a novel synaptic cell adhesion molecule regulating structural and functional plasticity of dendritic spines. J. DZWONEK*; M. ROSZKOWSKA; A. SKUPIEN; T. WOJTOWICZ; M. KISIEL; B. RUSZCZYCKI; H. DOLEZYCZEK; J. W. MOZRZYMAS; J. WLODARCZYK; G. M. WILCZYNSKI. *Nencki Inst. of Exptl. Biol., Nencki Inst. of Exptl. Biol., Wroclaw Med. University, Nencki Inst. of Exptl. Biol.*

3:00 G15 **402.03** Dendritic spine changes associated with long-term synaptic plasticity in nigral dopamine neurons. M. KIM*; M. PARK. *Sungkyunkwan Univ. Sch. of Med.*

4:00 G16 **402.04** ▲ Localization and regulation of nogo receptor 1 and its partners. A. T. BRODIN*; K. WELLFELT; G. SMEDFORS; E. ARVIDSSON; L. OLSON; T. E. KARLSSON. *Karolinska Institutet.*

1:00 G17 **402.05** Structural plasticity of dendritic spines during long-term synaptic depression. A. THOMAZEAU*; M. BOSCH; S. ESSAYAN-PEREZ; M. F. BEAR. *The Picower Inst. For Learning and Memory, Inst. for Bioengineering of Catalonia.*

2:00 G18 **402.06** Intracerebroventricular administration of growth hormone induces neural morphological changes in the CA1 region of the dorsal hippocampus and the prefrontal cerebral cortex of adult rats. J. OLIVARES HERNANDEZ; F. A. GARCÍA-GARCÍA*; E. JUAREZ AGUILAR. *Univ. Veracruzana, Univ. Veracruzana.*

3:00 G19 **402.07** Analysis of the specificity of MMP-9 inhibitor on the nectin-3 shedding upon neuronal stimulation. E. REJMAK-KOZICKA*; M. DZIEMBOWSKA; K. KALITA; L. KACZMAREK. *Nencki Inst. of Exptl. Biol.*

4:00 G20 **402.08** Exploring the molecular mechanisms underlying rapid estrogenic modulation of cortical connectivity. P. RAVAL*; K. J. SELLERS; J. MUKHERJEE; N. J. BRANDON; D. P. SRIVASTAVA. *King's Col. London, Tufts Univ. Med. Sch., AstraZeneca Neurosci. IMED.*

1:00 G21 **402.09** Early postnatal manganese exposure affects primary motor cortex development in adolescent mice. C. E. MOYER*; S. A. BEAUDIN; D. R. SMITH; Y. ZUO. *Univ. of California Santa Cruz, Univ. of California Santa Cruz.*

2:00 G22 **402.10** Physical exercise prevented the loss of spines and improved the ability of memory through the BDNF-TrkB signal pathway. K. CHEN*; C. LAI; M. TAN; L. HUANG; L. ZHANG; A. LI; W. GAN; K. SO; C. REN. *Jinan Univ., The Univ. of Hong Kong, Jinan Univ., New York Univ.*

3:00 G23 **402.11** Age-dependent alterations in dendritic spine dynamics in the somatosensory cortex following whisker stimulation. R. L. VOGLEWEDE*; A. R. DEWITT; E. H. TRIMMER; R. MOSTANY. *Tulane Univ. Sch. of Med., Tulane Univ. Sch. of Med.*

4:00 G24 **402.12** Parvalbumin-positive interneurons of the hippocampus show input-dependent structural plasticity. A. FOGGETTI; T. SCHIFFELHOLZ; P. WULFF*. *Inst. of Physiology, Univ. of Kiel, Dept. of Psychiatry and Psychotherapy, Univ. of Kiel.*

1:00 G25 **402.13** Estrogen sensitive G-protein coupled receptor (GPER1) rapidly regulates dendritic spine turnover and PSD-95 dynamics. K. SELLERS*; P. RAVAL; I. A. WATSON; T. DEEB; J. MUKHERJEE; F. ERLI; D. A. GADD; N. BRANDON; D. P. SRIVASTAVA. *Kings Col. London, Tufts Univ. Med. Sch., Univ. of Milano-Bicocca, AstraZeneca Neurosci. IMED.*

2:00 G26 **402.14** Actin dynamics contribute to the storage of drug-associated memories in both sexes. E. J. YOUNG*; G. RUMBAUGH; C. A. MILLER. *Scripps Res. Inst., Scripps Res. Inst.*

3:00 G27 **402.15** PRG-1 regulates synaptic plasticity via intracellular PP2A/ITGB1-signaling. X. LIU; J. HUAI; H. ENDLE; L. SCHÜTER; W. FAN; Y. LI; S. RICHERS; H. YURUGI; K. RAJALINGAM; H. JI; H. CHENG; B. RISTER; G. HORTA; J. BAUMGART; H. BERGER; G. LAUBE; U. SCHMIDT; M. J. SCHMEISSER; T. BÖCKERS; T. DELLER; A. VLACHOS; S. TENZER; R. NITSCH*; J. VOGT. *Univ. Med. Ctr. Mainz, Charité, Univ. of Ulm, Goethe Univ. Frankfurt.*

4:00 G28 **402.16** Dendritic coordination between excitatory and inhibitory plasticity. C. WIERENGA; D. KRUIJSSEN; H. HU*; B. RÓSZA. *Univ. of Utrecht, Two photon Imaging Lab. / Inst. of Exptl. Med. of the Hungarian Acad. of Sci.*

1:00 G29 **402.17** Dissection of molecular mechanism of *Aplysia* Sec7 protein-induced neurite outgrowth. Y. JUN; J. LEE; B. KAANG; D. JANG*. *Kyungpook Natl. Univ., Hannam Univ., Seoul Natl. Univ., Kyungpook Natl. Univ.*

2:00 G30 **402.18** A new optical method for rapidly erasing hippocampal synaptic memory. A. GOTO*; K. MIYA; T. MATSUDA; T. NAGAI; Y. HAYASHI. *RIKEN Brain Sci. Inst., Dept. of Mol. Neurobiology, Fac. of Medicine, Univ. of Tsukuba, The Inst. of Scientific and Industrial Research, Osaka Univ., Saitama Univ. Brain Sci. Institute, Saitama Univ., Sch. of Life Science, South China Normal Univ.*

3:00 G31 **402.19** The formation concept of protected areas of the human neocortex in focal damage. V. AKULININ*; A. MYTSIK; S. STEPANOV; V. RASUMOVSKY. *Omsk State Med. Univ.*

4:00 G32 **402.20** ▲ Enhancement of neuronal differentiation of mice olfactory epithelium stem cells by DNA methylation inhibition. I. B. FRANCO ESTRADA*; G. R. R. RAMIREZ-RODRIGUEZ; M. L. G. LAMAS GREGORI. *Ctr. of Res. and Advanced Studies of the Nat, Natl. Inst. of Psychiatry Ramón de la Fuente Muñiz, México., Ctr. of Res. and Advanced Studies.*

1:00 G33 **402.21** Spines in parvalbumin-expressing interneurons undergo structural reorganization depending on behavioral experience. D. KAUFHOLD*; M. STRÜBER; M. BARTOS. *Inst. of Physiol.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 G34 **402.22** Neural circuit rewiring in the frontal association cortex of social defeated mice. T. XU*; Y. SHU. *Wuhan Natl. Lab. For Optoelectronics.*

3:00 G35 **402.23** PGE1 in liposomes containing antagonized dendritic spine loss and reduction of VEGF & VEGFR2 in hippocampus of diabetic rats. M. C. MOSTALLINO*; F. BIGGIO; V. LOCCI; L. BOI; M. L. MANCA; A. M. FADDA; G. BROTZU; G. BIGGIO. *Natl. Res. Council, CNR, Univ. of Cagliari, BioRicerca.*

4:00 G36 **402.24** NMDA receptor signaling mechanisms in activity-dependent spine shrinkage. I. S. STEIN*; K. ZITO. *UC Davis.*

1:00 G37 **402.25** The RapGEF Gef26 regulates synaptic development via inhibition of BMP signalling. K. HEO*. *Seoul Natl. Univ.*

2:00 G38 **402.26** ● Vortioxetine increases phosphorylation of GluA1 subunit of AMPA receptor and alters other molecules associated with neuroplasticity. L. WESTRICH*; J. WALLER; B. CASE-WHITESIDE; M. GULINELLO; C. SANCHEZ; Y. LI. *Fairleigh Dickinson Univ., Lundbeck Res., Albert Einstein Col. of Med.*

POSTER

403. Transcription and Translation: Synaptic and Circuit Plasticity

Theme B: Neural Excitability, Synapses, and Glia

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 G39 **403.01** Phosphorylation status of eIF4B S406 is a molecular switch in BC RNA-mediated translational control. T. EOM*; I. A. MUSLIMOV; S. CHUANG; R. K. S. WONG; H. TIEDGE. *SUNY Downstate Med. Ctr., SUNY Downstate Med. Ctr.*

2:00 G40 **403.02** Identification of the newly synthesized protein required for synaptic plasticity in Xenopus laevis. H. LIU*; W. SHEN; L. SCHIAPARELLI; D. MCCLATCHY; J. R. YATES, III; H. T. CLINE. *The Scripps Res. Inst., The Scripps Res. Inst., Hangzhou Normal Univ., The Scripps Res. Inst.*

3:00 G41 **403.03** Role of FMRP bound miRISC at the crossroads of NMDAR and mGluR signalling. P. M. KUTE*; N. NEELAGANDAN; S. GOSH DASTIDAR; S. CHATTERJI; R. MUDDASHETTY. *Inst. for Stem Cell Biol and Regenerative Med., SASTRA Univ., Natl. Ctr. for Biol. Sci. (NCBS).*

4:00 G42 **403.04** Communication of pathway-specific circuit activity to the genome by dendritic translation of the immediate early gene Npas4. S. BRIGIDI*; P. LIN; B. L. BLOODGOOD. *Univ. of California San Diego, Univ. of California San Diego.*

1:00 G43 **403.05** Transcriptome profiling in hippocampal dendrites. S. FARRIS*; J. M. WARD; M. SAMADI; Y. WANG; S. M. DUDEK. *Natl. Inst. of Envrn. Hlth. Sci.*

2:00 G44 **403.06** β-adrenergic receptors activation in conditional dendritic RNA transport. I. A. MUSLIMOV*; H. TIEDGE. *SUNY Downstate Med. Ctr., SUNY Downstate Med. Ctr.*

3:00 G45 **403.07** The kinesin motor protein KIF5B regulates RNA trafficking and dendritic spine morphogenesis in hippocampal neuron. H. CHAN*; J. HUANG; K. LAI. *The Univ. Of Hong Kong, The Univ. Of Hong Kong.*

4:00 G46 **403.08** A transcriptional program underlying homeostatic scaling. K. SCHAUKOWITCH*; A. L. REESE; S. KIM; G. KILARU; J. JOO; E. T. KAVALALI; T. KIM. *UT Southwestern Med. Ctr.*

1:00 G47 **403.09** Npas4 is necessary for circuit homeostasis and plasticity in the mouse primary visual cortex. X. SUN*; S. F. COOKE; M. J. BERNSTEIN; R. W. KOMOROWSKI; M. F. BEAR; Y. LIN. *MIT.*

2:00 G48 **403.10** Experience-dependent transcriptional regulation of inhibition in the CA1 microcircuit. A. L. HARTZELL*; K. M. MARTYNIUK; G. P. HIGERD; B. L. BLOODGOOD. *UCSD, UCSD.*

3:00 G49 **403.11** Deconstructing the relationship between neural activity patterns and Npas4-mediated gene expression. P. LIN*; G. S. BRIGIDI; B. L. BLOODGOOD. *Univ. of California San Diego, Univ. of California San Diego.*

4:00 G50 **403.12** The role of activity-induced DNA breaks in synaptic plasticity, learning, and memory. R. MADABHUSHI*; O. KRITSKIY; F. GAO; T. X. PHAN; S. YAMAKAWA; T. GILLINGHAM; R. RUEDA; J. D. JAFFE; L. TSAI. *MIT, The Broad Inst. of Harvard and MIT.*

1:00 H1 **403.13** Adult Notch signaling underlies the rewarding memory of alcohol in *Drosophila*. E. PETRUCCELLI*; M. FEYDER; R. MUSTER; N. LEDRU; K. R. KAUN. *Brown Univ., Brown Univ.*

2:00 H2 **403.14** Examination of stalled polysomes in protein-synthesis dependent long-term potentiation in hippocampal cultures. K. GINZBERG*; M. ANADOLU; T. E. GRABER; W. SOSSIN. *McGill Univ.*

1:00 DP02 **403.15** (Dynamic Poster) A combinatorial code of immediate-early genes encodes salient experiences. A. CITRI*. *The Hebrew Univ.*

4:00 H3 **403.16** Absence of the long non-coding rna bc1 disrupts spine morphology and experience-dependent plasticity and learning. V. BRIZ*; L. RESTIVO; E. PASCIUTO; K. JUCZEWSKI; V. MERCALDO; A. BORRECA; T. GIRARDI; R. LUCA; N. GUNKO; P. BAATSEN; R. POORTHUIS; H. MANSEVELDER; G. FISONE; M. AMMASSARI-TEULE; J. NYS; L. ATCKENS; P. KRIEGER; R. MEREDITH; C. BAGNI. *VIB Ctr. For the Biol. of Disease-Ku Leuven, Hosp. for Sick Children, Inst. di Ricerca a Carattere Clinico e Scientifico Fondazione Santa Lucia, Natl. Inst. of Alcoholism and Alcohol Abuse, Natl. Inst. of Hlth., Karolinska Institutet, Univ. of Rome Tor Vergata, KU Leuven, VIB Bio Imaging Core, Ctr. for Neurogenomics and Cognitive Research, VU Univ., KU Leuven, Ruhr-University Bochum, Univ. of Lausanne.*

1:00 H4 **403.17** Serum response factor regulates structural plasticity of dendritic spines during development. K. KALITA-BYKOWSKA*; A. KRYSIAK; A. SUSKA; S. LESKI; L. KACZMAREK. *Nencki Inst. of Exptl. Biol.*

POSTER

404. Synaptic Excitability and Dendritic Integration

Theme B: Neural Excitability, Synapses, and Glia

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 H5 **404.01** Network dynamics of nociceptive processing in the anterior cingulate cortex. F. KASANETZ; M. SANTELLO; T. NEVIAN*. *Univ. of Bern.*

2:00 H6 **404.02** Exploring input-output relations of neurons *in vivo*. C. J. ROOME; B. KUHN*. *OIST Grad. Univ.*

Mon. PM

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 H7 **404.03** Glutamate-mediated plateau potentials studied by simultaneous multi-site dendritic sodium and calcium imaging. S. D. ANTIC*; K. MIYAZAKI; W. N. ROSS. *UConn Hlth., New York Med. Col.*

4:00 H8 **404.04** Somatic membrane potential modulates the propagation of dendritic spikes in CA1 pyramidal neurons. T. BOCK*; S. A. SIEGELBAUM. *Columbia Univ.*

1:00 H9 **404.05** Synaptically activated sodium changes in dendritic spines of rat hippocampal pyramidal neurons. K. MIYAZAKI; W. N. ROSS*. *New York Med. Col.*

2:00 H10 **404.06** Dendritic Integration in the basal and proximal apical oblique dendrites of two distinct layer 5 pyramidal neuron populations. N. C. DEMBROW*; G. S. NEWKIRK; W. SPAIN. *Univ. of Washington Dept. of Physiol. and Biophysics, VA Epilepsy Ctr. for Excellence, Univ. of Washington.*

3:00 H11 **404.07** Dendritic NMDA spikes: From full-blown to graded boosting supralinearities. What causes the switch? F. BRANDALISE*; U. GERBER. *Univ. of Zurich.*

4:00 H12 **404.08** Dendritic spikes determine input selectivity in pyramidal cells. L. GOETZ; M. R. GROEN; A. ROTH*; M. HAUSSER. *Univ. Col. London.*

1:00 H13 **404.09** Rostro-caudal gradient of the dendritic integrative properties of layer 5 pyramidal neurons across the primary visual cortex. L. N. FLETCHER; S. R. WILLIAMS*. *Queensland Brain Inst.*

2:00 H14 **404.10** Three-dimensional calcium imaging of mouse hippocampal neuronal ensembles during Sharp wave-ripple complexes. D. PALFI*; B. CHIOVINI; L. JUDAK; G. SZALAY; G. JUHÁSZ; G. KATONA; B. ROZSA. *Peter Pazmany Catholic Univ., IEM HAS.*

3:00 H15 **404.11** Dendritic morphology of corticospinal and crossed-corticostriatal neurons in mouse primary motor cortex. B. A. SUTER*; S. A. NEYMOTIN; G. M. G. SHEPHERD; W. W. LYTTON. *IST Austria / Jonas Group, SUNY Downstate, Yale University, Sch. of Med., Northwestern University, Feinberg Sch. of Med., SUNY Downstate, Kings County Hosp. Ctr.*

4:00 H16 **404.12** Schizophrenia as a disorder of cellular excitability: Insights from computational models of cortical neurons and cardiac pacemaker cells. T. MÄKI-MARTTUNEN*; G. HALNES; A. DEVOR; G. T. LINES; A. G. EDWARDS; A. TVEITO; A. WITOELAR; F. BETTELLA; S. DJUROVIC; Y. WANG; A. M. DALE; G. T. EINEVOLL; O. A. ANDREASSEN. *Univ. of Oslo, Norwegian Univ. of Life Sci., UCSD San Diego, Simula Res. Lab., Univ. of Oslo.*

1:00 H17 **404.13** Down-regulation of TrkB expression and signaling by the anti-convulsant drug valproic acid. S. DEDONI*; M. C. OLIANAS; P. ONALI. *Univ. of Cagliari, Dept Biomed. Sci.*

2:00 H18 **404.14** Inhibition enhances rate and phase coding of place in hippocampal CA1. C. GRIENBERGER*; A. D. MILSTEIN; K. C. BITTNER; S. ROMANI; J. C. MAGEE. *Janelia Farm Res. Campus.*

3:00 H19 **404.15** Synaptic input distribution plays a role in the dendritic computation of motion direction in the retina. A. VLASITS*; R. D. MORRIE; A. TRAN-VAN-MINH; A. BLECKERT; C. F. GAINER; V. DUTELL; D. A. DIGREGORIO; M. B. FELLER. *Univ. of California Berkeley, Univ. of California Berkeley, Inst. Pasteur, Ctr. Natl. de la Recherche Scientifique, Univ. of Washington, Univ. of California Berkeley.*

4:00 H20 **404.16** Role of synaptic amplification in spatial selectivity in a biophysical model of the CA1 microcircuit. A. D. MILSTEIN*; C. GRIENBERGER; J. C. MAGEE; S. ROMANI. *Hhmi/Janelia Farm.*

POSTER

405. Oscillations and Synchrony: EEG studies

Theme B: Neural Excitability, Synapses, and Glia

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 H21 **405.01** Inactivation of the hippocampo-septal GABAergic feedback modulates θ rhythm. A. DOMONKOS*; L. NIKITIDOU LEDRI; A. M. BARTH; M. JELITAI; R. KARLÓCAI; K. DEISSEROTH; T. F. FREUND; V. VARGA. *Inst. of Exptl. Medicine, Hungarian Acad. of Sci., Stanford Univ.*

2:00 H22 **405.02** ▲ Microphysiology of the Human α Rhythm. M. HALGREN*; J. R. MADSEN; D. SCHOMER; O. DEVINSKY; W. K. DOYLE; I. ULBERT; L. EROSS; D. FABO; E. HALGREN; S. S. CASH. *UCSD, Boston Children's Hosp. and Harvard Med. Sch., Beth Israel Deaconess Med. Ctr., New York Univ. Sch. of Med., Comprehensive Epilepsy Center, New York Univ. Sch. of Med., Inst. of Cognitive Neurosci. and Psychology, Res. Ctr. for Natural Sciences, Hungarian Acad. of Sci. and Péter Pázmány Catholic University, Fac. of Information Technol. and Bionics, Péter Pázmány Catholic University, Fac. of Information Technol. and Bionics. Dept. of Functional Neurosurgery, Natl. Inst. of Clin. Neurosciences., Epilepsy Centrum, Natl. Inst. of Clin. Neurosciences, Multimodal Imaging Laboratory, Univ. of California at San Diego, Massachusetts Gen. Hospital, Harvard Med. Sch.*

3:00 H23 **405.03** Boosting occipital α power by transcranial alternating current stimulation at the second harmonic. S. FARA*; J. MCINTOSH; H. CHOI; C. MEHRING. *Bernstein Ctr. Freiburg, Univ. of Freiburg, Imperial Col. London.*

4:00 H24 **405.04** ● EEG source localization of human α rhythms under propofol anesthesia. E. P. STEPHEN*; M. S. HÄMÄLÄINEN; S. KHAN; E. T. PIERCE; P. G. HARRELL; J. L. WALSH; E. N. BROWN; P. L. PURDON. *MIT, Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., MIT.*

1:00 H25 **405.05** Differentiating psychotic disorders with EEG δ and α band frequency and the effects of brief high frequency repetitive transcranial magnetic stimulation. F. M. HOWELLS*; J. HSIEH; H. TEMMINGH; D. J. STEIN. *Univ. of Cape Town.*

2:00 H26 **405.06** Spontaneous cortical γ oscillation and the auditory evoked steady state response: A pharmacological investigation. B. D. HARVEY*; E. MOROZOVA; C. KELLEY; M. HAJOS. *Biogen, Yale Sch. of Med.*

3:00 I1 **405.07** Age-related changes in EEG during isoflurane-induced surgical vs. very deep coma anesthesia. P. J. SOJA*; T. MARIAM; X. DONG; R. TADAVARTY. *The Univ. of British Columbia.*

4:00 I2 **405.08** Investigations of phase-amplitude coupling and long-range phase synchronization during multisensory working memory maintenance - an MEG study. J. DAUME*; T. GRUBER; A. K. ENGEL; U. FRIESE. *Univ. Med. Ctr. Hamburg-Eppendorf, Osnabrueck Univ.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 I3 **405.09** Dopaminergic medication restores abnormal θ-band neural synchronies during a working memory task in patients with restless legs syndrome. K. CHA*; J. CHOI; P. SEO; B. LEE; K. JUNG; K. KIM. *Yonsei Univ., Yonsei Univ., Dept. of Neurology, Seoul Natl. Univ. Med. Ctr.*

2:00 I4 **405.10** High frequency oscillations evoked by tones in auditory cortex. Y. KAJIKAWA*; C. E. SCHROEDER. *Nathan Kline Inst., Columbia Univ.*

3:00 I5 **405.11** Abnormal cortical rhythm and network during rapid-eye movement sleep in patients with rapid-eye movement sleep behavior disorder. S. HEO*; H. KIM; B. LEE; S. KU; J. BYUN; J. SUNWOO; K. JUNG; K. KIM. *Yonsei Univ., Seoul Natl. Univ. Hosp., Kyung Hee Univ. Hosp., Soonchunhyang Univ. Hosp.*

4:00 I6 **405.12** Stability of timing and connectivity in functional networks of the human cortex. J. CHAPETON*; S. K. INATI; K. A. ZAGHLOUL. *NIH.*

1:00 I7 **405.13** EEG connectivity analysis for healthy adults under anesthesia. J. CHOI*; S. AHN; H. CHO; M. KWON; S. LEE; S. JANG; B. CHOI; G. NOH; S. JUN. *Gwangju Inst. of Sci. and Technol., Asan Med. Ctr., Asan Med. Ctr.*

2:00 I8 **405.14** Inter-brain connectivity during live verbal interaction. S. AHN*; H. CHO; M. KWON; K. KIM; B. KIM; W. CHANG; J. CHANG; S. JUN. *Gwangju Inst. of Sci. and Technol., Korea Res. Inst. of Standards and Sci., Univ. of Sci. and Technol., Inst. for Integrative Medicine, Intl. St. Mary's Hosp. Catholic Kwandong Univ., Brain Res. Institute, Yonsei Univ. Col. of Med.*

3:00 I9 **405.15** 0.0002 Hz fluctuations in human intracranial DC recordings. G. PIANTONI*; E. S. ROSENTHAL; E. HALGREN; S. S. CASH. *Massachusetts Gen. Hosp., Harvard Med. Sch., UCSD.*

4:00 I10 **405.16** Neural network dynamics during recovery from isoflurane as revealed by electroencephalogram in young and old rats. B. F. COUGHLIN*; S. S. CASH; E. Y. KIMCHI. *Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., Harvard Med. Sch.*

1:00 I11 **405.17** Characterization of networks for rule processing in human stereoEEG data using consensus-based partial coherence. M. TER WAL*; P. CARDELLICCHIO; G. A. ORBAN; P. H. TIESINGA. *Radboud Univ., Donders Inst., Univ. of Parma.*

2:00 I12 **405.18** Cross-frequency coupling: The theoretical framework. G. CISOTTO*. *Univ. of Padua.*

3:00 J1 **405.19** Site-dependent effects of optogenetic stimulation in thalamic reticular nucleus on cortical states. V. VISOCKIS*; S. SAKATA; B. MORRIS; J. PRATT. *Strathclyde Univ., Glasgow Univ.*

POSTER

406. Epilepsy: Synaptic and Post-Seizure Mechanisms

Theme B: Neural Excitability, Synapses, and Glia

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 J2 **406.01** Contrasting properties of hippocampal dentate gyrus and CA1 principal cells. S. A. PARK*; D. A. COULTER. *Children's Hosp. of Philadelphia, Children's Hosp. of Philadelphia, Univ. of Pennsylvania.*

2:00 J3 **406.02** Impairment of homeostatic synaptic scaling in epileptic immature brain. H. SUN*; D. TALOS; F. E. JENSEN. *Univ. of Pennsylvania.*

3:00 J4 **406.03** Effects of *de novo* epilepsy encephalopathy mutations of KCNQ2 on voltage-dependent activation of Kv7/KCNQ channels via their interaction with CaM. E. KIM*; S. WANG; W. PANG; J. CAVARETTA; H. CHUNG. *Univ. of Illinois At Urbana-Champaign, Neurosci. Program.*

4:00 J5 **406.04** Low KCC2 expression in reticular thalamic neurons is sufficient to regulate network activity. P. M. KLEIN*; M. E. HARPER; H. M. MCKOWN; M. P. BEENHAKKER. *Univ. of Virginia.*

1:00 J6 **406.05** ● Cardiac and respiratory consequences of repeated epileptic seizures in rat. D. PEDERSON; A. ASHBY-LUMSDEN; P. P. IRAZOQUI; J. G. JEFFERYS*. *Purdue, Univ. of Oxford, Purdue, Univ. of Oxford.*

2:00 J7 **406.06** Elevated gonadotropin-releasing hormone neuron firing activity in a female mouse model of temporal lobe epilepsy. J. LI; V. A. ABEJUELA; J. KIM; J. B. LAMANO; N. J. KLEIN; M. A. GHANE; D. J. REYNISH; C. A. CHRISTIAN*. *Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign, Univ. of Illinois at Urbana-Champaign.*

3:00 J8 **406.07** Resting state glutamatergic activity revealed two independent epileptogenic networks in mesial temporal lobe epilepsy. J. BANERJEE*; A. DIXIT; V. VISHWANATHAN; A. SRIVASTAVA; B. RAMANUJAM; M. TRIPATHI; P. SARAT CHANDRA. *Natl. Brain Res. Ctr., All India Inst. of Med. Sci., All India Inst. of Med. Sci., All India Inst. of Med. Sci.*

4:00 J9 **406.08** Modulation of thalamic and cortical GABA transporter: The potential mechanism for the anti-absence activity of mGlu5 receptors. R. CELLI; I. SANTOLINI; V. D'AMORE; A. PITTALUGA; R. GRADINI*; G. VAN LUIJTELAAR; G. BATTAGLIA; V. BRUNO; F. NICOLETTI; R. T. NGOMBA. *I.R.C.C.S. Neuromed, Univ. of Genova, Univ. Sapienza, Donders Ctr. for Cognition, Radboud Univ., Univ. of Lincoln.*

1:00 J10 **406.09** A novel fluorescent probe for monitoring extracellular pH shifts during neuronal hyperactivity. M. CHIACCHIARETTA*; S. LATIFI; M. FADDA; M. BRAMINI; A. FASSIO; F. CESCA; F. BENFENATI. *Inst. Italiano Di Tecnologia, Dept. of Exptl. Medicine, Univ. of Genova.*

2:00 J11 **406.10** Involvement of toll-like receptor 2 in inflammatory responses and seizure generation in two mouse models of temporal lobe epilepsy. Y. HUNG*; Y. TSENG; Y. WU; Y. LIN. *Natl. Yang-Ming Univ., Taipei Veterans Gen. Hosp., Hsinchu MacKay Mem. Hosp., Taipei Veterans Gen. Hosp.*

3:00 J12 **406.11** Role for 5-HT2C receptors in absence seizures: An electrophysiological and immunohistochemical study in GAERS and NEC rats. G. DI GIOVANNI*; M. VENZI; A. CAVACCINI; C. BOMBARDI; V. CRUNELLI. *Univ. of Malta, AstraZeneca Translational Sci. Ctr. at Karolinska Institutet, Inst. Italiano di Tecnologia, Univ. of Bologna, Cardiff Univ.*

4:00 J13 **406.12** Role of Chd2 in cortical development and function. S. ABBASI*; J. C. FRANKOWSKI; S. LEE; K. GONZALEZ; S. SMITH; R. F. HUNT. *Univ. of California, Irvine.*

1:00 J14 **406.13** Neural activity propagation by endogenous electric field in the hippocampus *in vitro*. R. SHIVACHARAN*; D. DURAND. *Case Western Reserve Univ.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 J15 **406.14** Emergence of epilepsy in a transgenic mouse strain that overexpresses brain-derived neurotrophic factor in the forebrain. C. YEPES; M. LAQUERRE; W. ZHOU; K. GUTHRIE; C. ISGOR*. *Florida Atlantic Univ. Charles E Schmidt Col. of Med., Florida Atlantic Univ. Charles E Schmidt Col. of Med.*

3:00 J16 **406.15** Selective activation of somatostatin or parvalbumin expressing interneurons triggers GABA-mediated LLDs in rat neocortex. A. BOHANNON*; J. HABLITZ. *Univ. of Alabama At Birmingham, Univ. of Alabama at Birmingham.*

4:00 J17 **406.16** Defective synaptic vesicle recycling in epilepsy and developmental delay-associated *de novo* mutations of dynamin 1. K. BONNYCASTLE*; D. C. SOARES; W. W. K. LAM; M. A. COUSIN. *Univ. of Edinburgh, Univ. of Edinburgh.*

1:00 J18 **406.17** Selective inhibition of inflammatory cascades following experimental febrile status epilepticus. M. M. CURRAN*; K. P. PATTERSON; M. SARGIOUS; T. Z. BARAM. *Univ. of California Irvine.*

2:00 K1 **406.18** The role of gluk2-containing kainate receptors in acute hypoxic seizures in the neonatal mouse. S. A. ZANELLI*; P. WAGLEY; D. GROSENBAUGH; J. KAPUR. *Univ. of Virginia, Univ. of Virginia.*

3:00 K2 **406.19** Different electrographic epileptic discharge types associated with absence epilepsy are interrelated in rat association cortex. S. HALL*; M. A. WHITTINGTON; R. D. TRAUB. *Univ. of York, Dept. of Physical Sci.*

4:00 K3 **406.20** Collagen VI extracellular matrix protein modulates short-term plasticity in the hippocampus: Implications for epileptogenesis. T. RAMOS-MORENO*; A. CIFRA; L. NIKITIDOU-LEDRI; S. H. CHRISTIANSEN; C. GØTZSCHE; M. CESCON; P. BONALDO; D. P. WOLDBYE; K. MERAB. *Wallenberg Neurosci. Center/Stem Cell Ctr., Lund Univ., Univ. of Copenhagen, Univ. of Padova.*

1:00 K4 **406.21** Structure and function of sprouted mossy fiber synapses in epilepsy. W. HENDRICKS*; A. L. BENSEN; G. L. WESTBROOK; E. SCHNELL. *Vollum Inst., Oregon Hlth. and Sci. Univ., Portland VA Med. Ctr.*

2:00 K5 **406.22** Potential role of β-amyloid peptides in kainic acid-induced toxicity. D. I. OURDEV*; A. KODAM; M. MAULIK; Y. WANG; M. BANERJEE; S. KAR. *Univ. of Alberta.*

3:00 K6 **406.23** Regulation of synaptic transmission by mTORC1 and mTORC2. M. MCCABE*; C. BARROWS; M. C. WESTON. *Univ. of Vermont.*

POSTER

407. Epilepsy: Anticonvulsant and Antiepileptic Strategies

Theme B: Neural Excitability, Synapses, and Glia

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 K7 **407.01** ● Hippocampal hypermetabolism following kainic acid administration in awake and anesthetized rats: FDG-PET study. T. BERDYYEVA*; Y. HSIEH; S. YUN; J. SHELTON; C. DUGOVIC; H. KOLB; A. SZARDENINGS. *Janssen.*

2:00 K8 **407.02** Cannabidiolic acid controls seizure-like activity and neuronal excitability. M. HOSSEINI ZARE*; A. ABDULLA; K. AKULLA; J. ZIURKUS. *Univ. of Houston, Ultragenyx Pharmaceut. INC.*

3:00 K9 **407.03** A temperature-dependent neural mass model for suppression of epileptic discharges. J. SORIANO*; T. KUBO; T. INOUE; H. KIDA; T. YAMAKAWA; M. SUZUKI; K. IKEDA. *Nara Inst. of Sci. and Technol., Univ. of the Philippines - Diliman, Yamaguchi Univ., Kumamoto Univ.*

4:00 K10 **407.04** Cannabidiol increases inhibitory transmission and rescues social deficits in a mouse model of Dravet Syndrome. J. KAPLAN*; W. A. CATTERALL; N. STELLA; R. E. WESTENBROEK. *Univ. of Washington, Univ. of Washington.*

1:00 K11 **407.05** Cannabidiol reduces the duration and severity of thermally evoked seizures in a mouse model of Dravet Syndrome. R. E. WESTENBROEK*; J. S. KAPLAN; N. STELLA; W. A. CATTERALL. *Univ. Washington, Univ. of Washington.*

2:00 K12 **407.06** Anticonvulsant, antiepileptic and neuroprotective effects of ketamine, valproate and midazolam polytherapy against soman exposure in rats. L. A. LUMLEY*; F. ROSSETTI; M. F. STONE; C. R. SCHULTZ; M. Q. PHAM; J. NIQUET; C. WASTERLAIN. *USAMRICD, Walter Reed Army Inst. of Res., UCLA-West LA VAMC.*

3:00 K13 **407.07** Retrospective analysis of acute seizure management of 215 pediatric cases with intravenous levetiracetam. B. F. KIRMANI*, ESQ; P. LAKIREDDY; M. DANG; A. SARODE; S. LONG; P. PATEL; O. KHAN. *T, Scott and White Epilepsy Center, Baylor Scott and White Health/ Texas A& M Univ. HSC Coll of Med., Baylor Scott and White Hlth., Texas A & M Col. of Med., Baylor Univ.*

4:00 K14 **407.08** ● Ganaxolone and diazepam administered IV produce a synergistic anti-epileptic effect in a treatment refractory model of status epilepticus. M. S. SAPORITO*; J. A. GRUNER; J. TSAI; A. PATRONEVA. *Marinus Pharmaceuticals, Inc., Melior Discovery, Inc.*

1:00 K15 **407.09** Using high-throughput screening to predict novel antiseizure interventions. A. MOUSAVI NIK*; S. HULSIZER; I. PESSAH. *Univ. of California Davis.*

2:00 K16 **407.10** Title: The MED64-Quad II system increases throughput for studies of antiepileptic drug targets with *in vitro* MEA pharmacology on acute brain slices. S. YASUOKA; R. ARANT; G. CHENG*. *Alpha MED Scientific Inc., Alpha Med. Scientific Inc./ Automate Scientific Inc.*

3:00 K17 **407.11** ● Neuroactive Steroids exhibit synergistic interactions with barbiturates at the $GABA_A$ receptor *in vitro* and this impacts on activity in an animal model of seizure. M. A. ACKLEY*; G. M. BELFORT; R. S. HAMMOND; M. C. QUIRK; G. MARTINEZ-BOTELLA; F. G. SALITURO; A. J. ROBICHAUD; J. J. DOHERTY. *SAGE Therapeut.*

4:00 L1 **407.12** Partial activation of TrkB receptors corrects interneuronal calcium channel dysfunction and reduces epileptogenic activity in neocortical circuits following injury. F. GU*; I. PARADA; T. YANG; F. LONGO; D. PRINCE. *Stanford Univ.*

1:00 L2 **407.13** A critical developmental window for 17β-estradiol antiepileptogenic effect in a mouse model of x-linked infantile spasms. M. SIEHR*; R. LUCERO; J. LALONDE; J. NOEBELS. *Baylor Col. of Med.*

2:00 L3 **407.14** Valproic acid decreases the absence seizures in a myelin mutant taiep rat: A new animal model of epilepsy. M. CORTES*; Y. SILVA; J. R. EGUIBAR. *B. Univ. Autonoma de Puebla.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 L4 **407.15** Acute effects of lacosamide on spasms in the multiple-hit rat model of infantile spasms. O. SHANDRA*; W. B. MOWREY; S. L. MOSHÉ; A. S. GALANOPOULOU. *Albert Einstein Col. of Med., Albert Einstein Col. of Med., Albert Einstein Col. of Med., Albert Einstein Col. of Med.*

4:00 L5 **407.16** Transcranial focal electrical stimulation via concentric ring electrodes in freely moving cats, antiepileptogenic and postictal effects. A. VALDÉS-CRUZ*; B. VILLASANA-SALAZAR; W. G. BESIO; V. M. MAGDALENO-MADRIGAL; D. MARTÍNEZ-VARGAS; S. ALMAZÁN-ALVARADO; R. FERNÁNDEZ-MAS. *Inst. Nacional De Psiquiatría RFM, Inst. Nacional de Psiquiatría Ramón de la Fuente Muñiz, Univ. of Rhode Island.*

1:00 L6 **407.17** Effects of High- and Low-frequency stimulation of thalamic reticular nucleus on ptz-induced seizures in rats. V. M. MAGDALENO-MADRIGAL*; A. VALDÉS-CRUZ; D. MARTÍNEZ-VARGAZ; S. ALMAZÁN-ALVARADO; R. FERNÁNDEZ-MAS. *Inst. Nacional De Psiquiatría Ramón De La Fuente Muñiz.*

POSTER

408. Epilepsy: Human Studies I

Theme B: Neural Excitability, Synapses, and Glia

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 L7 **408.01** Characteristics and consistency of seizure offset dynamics in humans. D. N. CRISP*; J. SCOTT; M. COOK; M. DUEMPELMANN; G. WORRELL; W. STACEY. *Univ. of Michigan, Univ. of Melbourne, Univ. of Freiburg, Mayo Clin., Univ. of Michigan.*

2:00 L8 **408.02** Comparing interictal discharges from intracranial EEG in patients with and without epilepsy. B. N. LUNDSTROM*; G. WORRELL; M. STEAD. *Mayo Clin.*

3:00 L9 **408.03** Mechanisms of widespread cortical fMRI increases and decreases in absence seizures. Y. CHEN*; S. BRAUN; J. GUO; H. BLUMENFELD. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Yale Univ. Sch. of Med.*

4:00 L10 **408.04** Driving simulation testing of patients with epilepsy during inpatient video/EEG monitoring. L. GOBER; Y. SI; G. TOULOUMES; W. CHEN; E. MORSE; R. GEBRE; A. BAUERSCHMIDT; M. YOUNGBLOOD; C. CUNNINGHAM; C. EZEANI; Z. KRATOCHVIL; J. BRONEN; J. THOMSON; K. RIORDAN; L. HIRSCH; H. BLUMENFELD*. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., Yale Univ. Sch. of Med.*

1:00 L11 **408.05** ● Frontal lobe seizures and impaired consciousness: Intracranial EEG markers. R. GEBRE*; M. DHAKAR; E. GROVER; I. QURAISHI; E. STERNBERG; I. GEORGE; A. SIVARAJU; J. BONITO; H. ZAVERI; L. GOBER; S. AHAMMAD; S. GHOSHAL; L. HIRSCH; D. D. SPENCER; J. L. GERRARD; H. BLUMENFELD. *Yale Sch. of Med., Yale Sch. of Med., Yale Sch. of Med.*

2:00 L12 **408.06** Synergism of cross-frequency coupling and phase synchrony in epileptic focus localization: An iEEG study. T. NÁNÁSI*; B. FILE; L. ERőSS; L. ENTZ; D. FABÓ; I. ULBERT. *Natl. Inst. of Clin. Neurosciences, Insitute of Cognitive Neurosci. and Psychology, RCNS, HAS, Fac. of Information Technol. and Bionics, Pázmány Péter Catholic Univ.*

3:00 L13 **408.07** Ripples show increased phase-amplitude coupling in mesial temporal lobe epilepsy seizure onset zones. S. A. WEISS*; I. OROSZ; S. MOY; L. WEI; M. VAN'T KLOOSTER; R. T. KNIGHT; R. F. HELFRICH; R. M. HARPER; A. BRAGIN; I. FRIED; J. ENGEL, Jr.; R. STABA. *Thomas Jefferson Univ., Univ. of California Los Angeles, Univ. of California Los Angeles, Brain Ctr. Rudolf Magnus, Univ. of California Berkeley.*

4:00 L14 **408.08** An algorithmic adjunct to visual inspection: Using an Empirical Mode Decomposition based algorithm to detect seizures. K. R. ASHMONT*; J. KERRIGAN; M. TROESTER; R. JARRAR; S. HELMS TILLERY; P. ADELSON; B. GREGER. *Barrow Neurolog. Inst. At Phoenix Children', Barrow Neurolog. Inst. At Phoenix Children's Hosp., Univ. of Arizona Col. of Med., Creighton Univ. Sch. of Med., Arizona State Univ.*

1:00 M1 **408.09** Disruption of resting state networks by section of the corpus callosum in humans. J. L. ROLAND*; A. Z. SNYDER; C. D. HACKER; E. C. LEUTHARDT; M. D. SMYTH. *Washington Univ. in St. Louis, Washington Univ. in St. Louis, Washington Univ. in St. Louis.*

2:00 M2 **408.10** Association between white matter changes and cognitive deficits in patients with temporal lobe epilepsy. R. RODRÍGUEZ CRUCES*; V. CAMACHO; L. CONCHA. *Natl. Autonomous Univ. of Mexico.*

3:00 M3 **408.11** ● A prospective study of the prevalence of cell-surface neuronal autoantibodies in adult patients with recent-onset epilepsies of unknown aetiology. T. C. MOLONEY*; S. R. IRANI; J. ADCOCK; A. SEN; P. WATERS; A. VINCENT; B. LANG. *Royal Col. of Surgeons, Ireland, Univ. of Oxford.*

4:00 M4 **408.12** Ictal-like HFOs during interictal periods can identify the seizure onset zone. W. C. STACEY*; K. R. MOON; A. O. HERO, III; S. V. GLISKE. *Univ. of Michigan, Univ. of Michigan.*

1:00 M5 **408.13** Interictal determination of the seizure onset zone and laterality of patients developing a cognitive task. J. GONZALEZ-DAMIAN*; P. E. SAUCEDO ALVARADO; M. MONTES DE OCA; A. L. VELASCO. *Univ. Nacional Autónoma De México, Hosp. Gen. de México.*

2:00 M6 **408.14** Selective changes in cb1 receptor functional coupling to g-proteins in patients with temporal lobe epilepsy. F. CARMONA CRUZ*; M. CUELLAR-HERRERA; M. ALONSO-VANEGAS; R. CINAR; L. ROCHA. *Ctr. For Res. and Advanced Studies, Epilepsy Clin. of Hosp. Gen. de Mexico, Natl. Inst. of Neurol. and Neurosurg. "Manuel Velasco Suarez", Natl. Inst. on Alcohol Abuse and Alcoholism, Natl. Inst. of Hlth.*

3:00 M7 **408.15** Vagus nerve stimulation activates inhibitory neuronal network in human cerebral cortex. T. MATSUO*; K. KAWAI; K. USAMI. *NTT Med. Ctr. Tokyo, Jichi medical university, Natl. Ctr. for Child Hlth. and Develop.*

POSTER

409. Oligodendrocytes

Theme B: Neural Excitability, Synapses, and Glia

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 M8 **409.01** Loss of primary cilia in the oligodendrocyte lineage in relation to myelination. A. SUBEDI; J. L. FUCHS*. *Univ. of North Texas.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 M9 **409.02** ● Regulation of oligodendrocyte lineage cell function by the RXRγ nuclear receptor. L. DI CANIO*; A. GUZMÁN DE LA FUENTE; G. J. WAYNE; R. J. M. FRANKLIN. *Univ. of Cambridge, GSK.*

3:00 M10 **409.03** Comparing probes for zinc detection in developing and mature oligodendrocytes. C. M. ELITT*; K. PATEL; J. WANG; C. FAHRNI; P. ROSENBERG. *Boston Children's Hosp., F.M. Kirby Neurobio. Ctr. and Harvard Med. Sch., Georgia Inst. of Technol.*

4:00 M11 **409.04** Transcription factor regulation by mTOR during oligodendrocyte differentiation. I. M. ORNELAS*; S. WAHL; L. KHANDKER; L. E. MCLANE; T. L. WOOD. *Rutgers Univ.*

1:00 M12 **409.05** Regulation of oligodendrocyte progenitors through AMPA receptor signaling. A. AGARWAL*; L. CHAKRAVARTI; K. SPARKS; A. MENON; D. E. BERGLES. *Johns Hopkins Univ.*

2:00 M13 **409.06** *In vitro* pre-transplant patterning of forebrain and spinal cord oligodendrocyte fates from human pluripotent stem cells. T. MAJOR*; A. H. KUROPATNICKA; S. A. GOLDMAN. *Univ. of Copenhagen, Univ. of Rochester Med. Ctr.*

3:00 M14 **409.07** Oligodendrocyte precursor cells (OPCs) dynamics and Kir4.1 profile in ageing brain. I. CHACON DE LA ROCHA*; A. D. RIVERA; A. M. BUTT. *Univ. of Portsmouth.*

4:00 M15 **409.08** Identification of a microRNA regulating the maturation of oligodendroglial precursor cells and pathologically up-regulated in human multiple sclerosis. D. LECCA*; D. MARANGON; G. T. COPPOLINO; A. MENÉNDEZ MÉNDEZ; A. FINARDI; G. DALLA COSTA; R. FURLAN; M. P. ABBRACCHIO. *Univ. of Milan, Univ. Complutense de Madrid, San Raffaele Scientific Inst.*

1:00 M16 **409.09** Withdrawn.

2:00 M17 **409.10** Fibroblast Growth Factor Receptor 1 in a mouse model of demyelination. K. M. SMITH*; H. M. TORRES; J. C. COLLETTE. *Univ. of Louisiana At Lafayette, Univ. of Louisiana at Lafayette.*

3:00 M18 **409.11** Investigating immune system activation following loss of the Quaking (QKI) RNA binding proteins using PLP-CreERT. L. DARBELLI*; S. RICHARD. *Jewish Gen. Hospital, McGill Univ.*

4:00 N1 **409.12** DNA damage-associated loss of cortical oligodendrocytes in dementia and Alzheimer's disease. K. TSE*; A. CHENG; F. MA; H. CHOW; K. HERRUP. *The Hong Kong Univ. of Sci. and Technol.*

1:00 N2 **409.13** ▲ GPR17-expressing oligodendrocyte progenitors participate in the reparative response after brain ischemia and their behaviour is influenced by microglia-derived vesicles. M. FUMAGALLI*; E. BONFANTI; P. GELOSA; M. LOMBARDI; E. TREMOLI; M. CIMINO; L. DIMOU; L. SIRONI; C. VERDERIO; M. P. ABBRACCHIO. *Univ. Degli Studi Di Milano, Ctr. Cardiologico Monzino IRCCS, IRCCS Humanitas, Univ. of Urbino, Physiological Genomics, Biomed. Center, Ludwig-Maximilians Univ., CNR Inst. of Neurosci.*

2:00 N3 **409.14** Glial disruptions in response to cerebral hypoperfusion in young adult and aged rats. E. T. CURFMAN; H. C. PARAISO; R. D. SWEAZEY*; F. CHANG; I. YU. *Indiana Univ. Sch. of Medicine-Fort Wayne, Indiana University-Purdue Univ. Fort Wayne, Indiana Univ. Syst.*

3:00 N4 **409.15** A stroke-specific oligodendrocyte progenitor cell transcriptome reveals novel genes impacting recovery after white matter stroke. D. J. DITULLIO*; E. G. SOZMEN; S. T. CARMICHAEL. *UCLA.*

4:00 N5 **409.16** Functional heterogeneity of oligodendrocyte progenitors in the central nervous system. S. FÖRSTER*; A. C. CRAWFORD; R. B. TRIPATHI; W. D. RICHARDSON; R. J. M. FRANKLIN. *Univ. of Cambridge, Univ. Col. London.*

1:00 N6 **409.17** ▲ Preferential axon-oligodendrocyte interactions at axon varicosities preceding initial myelin ensheathment. M. MARTELL*; B. B. DUXBURY; S. W. STEELE; A. G. TRUDEL; A. J. TREICHEL; J. H. HINES. *Winona State Univ.*

2:00 N7 **409.18** The role of neuronal activity in myelination, axon targeting and maintenance of specified cortical projection neuron populations. K. KORRELL*; A. HOERDER-SUABEDISSEN; Z. MOLNÁR. *Oxford Univ.*

3:00 N8 **409.19** Proteolipid protein null mice exhibit altered numbers of oligodendrocytes. E. A. GOULD*; D. SHEPHERD; D. RESTREPO; W. MACKLIN. *Univ. of Colorado Denver Sch. of Med., Univ. of Colorado Denver.*

4:00 N9 **409.20** Oligodendrocytes labelling with Sulforhodamine 101 depends on astrocytic uptake via the thyroid hormone transporter OATP1c1 (slco1c1). S. HÜLSMANN*; L. HAGOS. *Georg August Univ. Goettingen, Univ. Med. Ctr.*

POSTER

410. Alzheimer's Disease: Treatment in Humans

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 N10 **410.01** ● A dual incretin receptor agonist is especially potent in reducing insulin resistance in brains of mild cognitive impairment (MCI) and Alzheimer's disease dementia (ADd) cases. K. TALBOT*; J. KVASIC; A. STUCKY; S. M. SHAH; K. LEE; K. P. BAKSHI; M. CHATTOPADHYAY; A. KHAN; P. L. MCCLEAN; C. HOLSCHER; A. J. SAMOYEDNY; J. Q. TROJANOWSKI; R. WILSON; D. A. BENNETT; R. D. DIMARCHI; H. WANG. *Cedars-Sinai Med. Ctr., City Univ. of new York Med. Sch., Univ. of Ulster, Lancaster Univ., Univ. of Pennsylvania Sch. of Med., Rush Univ. Med. Ctr., Indiana Univ.*

2:00 N11 **410.02** Unexpected retinal structure and changes in people with Down's syndrome, a high risk population for Alzheimer's disease. M. J. WALPERT*; E. M. NORMANDO; S. H. ZAMAN; F. M. CORDEIRO; A. J. HOLLAND. *Univ. of Cambridge, Univ. Col. London, Univ. of Cambridge.*

3:00 N12 **410.03** ● Combination dosing of the novel M1/M4-selective muscarinic agonist NSX-0527 and peripheral muscarinic antagonists for the treatment of Alzheimer's disease. S. A. HANSON; J. C. OCKULY; J. D. BECK; M. L. HENDRICKSON*. *NeuroSolis, Inc., BrainXell, Inc.*

4:00 N13 **410.04** Open label trial of Magnesium l-Threonate for adults with mild to moderate Alzheimer's disease. N. L. RASGON*; T. WROOLIE; K. WATSON LIN; A. KRAMER; D. BALZAFIORE. *Stanford Univ. Sch. of Med., Stanford Univ. Sch. of Med., Palo Alto Univ.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 N14 **410.05** ● SUVN-502, a pure 5-ht6 receptor antagonist - proof-of-concept study design in moderate Alzheimer's disease patients. R. V. NIROGI*; K. MUDIGONDA; K. PENTA; G. BHYRAPUNENI; V. BENADE; N. MUDDANA; V. PALACHARLA; D. AJJALA; V. GOYAL; S. PANDEY; R. ABRAHAM; R. KAMBHAMPATI; T. BANDYALA; V. BHATTA; A. SHINDE. *Suven Life Sci.*

2:00 N15 **410.06** *In vivo* assessment of the locus coeruleus in young and older adults using neuromelanin-sensitive MRI. M. BETTS*; A. CARDENAS-BLANCO; M. KANOWSKI; K. FLIEßBACH; S. TEIPEL; F. JESSEN; E. DÜZEL. *German Ctr. For Neurodegenerative Dis. (DZNE), Inst. of Cognitive Neurol. and Dementia Res., Dept. of Neurology, Univ. Hosp. of Magdeburg, German Ctr. For Neurodegenerative Dis. (DZNE), Dept. of Psychiatry, Univ. Hosp. Bonn, German Ctr. For Neurodegenerative Dis. (DZNE), Dept. of Psychosomatic Med., Dept. of Psychiatry.*

3:00 N16 **410.07** A translational program of AAV2-BDNF gene delivery into the entorhinal cortex for Alzheimer's disease: Development of MRI guidance for accurate gene targeting and distribution in non-human primates. A. H. NAGAHARA*; B. R. WILSON; I. IVASYK; I. KOVACS; S. RAWALJI; J. R. BRINGAS; P. J. PIVIROTTO; W. SAN SEBASTIAN; L. SAMARANCH; K. S. BANKIEWICZ; M. H. TUSZYNSKI. *UC San Diego, UC San Francisco, Veterans Affairs Med. Ctr.*

4:00 N17 **410.08** Relative incidence of seizures and myoclonus in Alzheimer's disease, dementia with Lewy bodies, and frontotemporal dementia. S. DARWISH*; A. J. BEAGLE; K. G. RANASINGHE; E. KARAGEORGIOU; K. A. VOSSEL. *Univ. of California, San Francisco.*

1:00 N18 **410.09** Localization of Peroxisome Proliferator Activated Receptor α in frontal cortex of Alzheimer's disease patients. A. FRACASSI*; S. MORENO; G. TAGLIALATELA. *Univ. of Texas Med. Br., Univ. Roma Tre.*

2:00 O1 **410.10** ▲ Predicting co-variation of Alzheimer's disease pathology from brain connectivity. L. DIGMA*; K. ARNEMANN; A. RAJ; W. JAGUST. *Helen Wills Neurosci. Inst., Weill Med. Col. of Cornell Univ.*

3:00 O2 **410.11** ● A P2Y6 receptor pro-drug modulates cerebrospinal fluid amyloid β1-42 in PS1/APP mice and in patients with mild Alzheimer's disease. J. DONG*; R. DOYLE; R. SCHREIBER; N. ROULEAUX; K. FLICK; P. HAYDON. *Tufts Univ. Sch. of Med., GliaCure, Inc., Suadeo Drug Discovery Consulting LLC, Maastricht Univ.*

4:00 O3 **410.12** The use of human-based methods to undertake new strategies for Alzheimer's disease research and define "pathways of disease". A. LAM*; F. PISTOLLATO; E. L. OHAYON. *Neurolinx Res. Inst., Physicians Committee for Responsible Med., Inst. for Hlth. and Consumer Protection (IHCP), European Commission – DG Joint Res. Ctr. (JRC).*

POSTER

411. Alzheimer's Disease: Secretases

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 O4 **411.01** ● β- and α-secretase processing of amyloid precursor protein in the human central nervous system. J. A. DOBROWOLSKA ZAKARIA*; R. J. BATEMAN; R. J. VASSAR. *Northwestern Univ. Feinberg Sch. of Med., Washington Univ. in St. Louis.*

2:00 O5 **411.02** *In vivo* spectral FRET assay for monitoring PS1/γ-secretase conformational changes. M. MAESAKO*; J. HORLACHER; O. BEREZOVSKA. *Massachusetts Gen. Hosp.*

3:00 O6 **411.03** ▲ Activity-driven PS1 phosphorylation is responsible for pathogenic conformational change of the PS1/γ-secretase. J. HORLACHER*; M. MAESAKO; O. BEREZOVSKA. *Massachusetts Gen. Hosp.*

4:00 O7 **411.04** Phosphatase activity during sleep/wake cycles regulates APP processing and brain ISF amyloid-β levels. C. E. WALLACE; H. M. EDWARDS; J. R. CIRRITO*. *Washington Univ.*

1:00 O8 **411.05** Retromer and Rab2-dependent trafficking are involved in PS1 degradation by proteasomes in endocytic disturbance. N. KIMURA*; N. UEDA; T. TOMITA; K. YANAGISAWA. *Natl. Ctr. For Geriatrics and Gerontology, The Univ. of Tokyo.*

2:00 O9 **411.06** Pen-2 plays a critical role in substrate binding. C. HU*; T. LI; J. XU; M. CUI; X. XU. *The Univ. of Tennessee, Tianjin Med. Univ., Jilin Med. Univ.*

3:00 O10 **411.07** Mechanism that BACE1 alternates the cleaving sites of human APP. T. SUZUKI*; A. KIMURA; S. HATA. *Hokkaido Univ.*

4:00 O11 **411.08** BACE1/BACE2 selectivity, the next frontier in β-secretase inhibition for Alzheimer's disease: A mouse model of depilation-induced pigmentation for *in vivo* screening. P. H. WEN*; J. BRADLEY; M. JOHNSON; M. SOTO; M. BOURBEAU; D. HICKMAN; S. WOOD. *Amgen Inc, Amgen Inc, Amgen Inc, Amgen Inc.*

1:00 O12 **411.09** Palmitate-enriched diet increases BACE1 expression and ensuing Amyloid-β genesis by evoking ER stress and subsequent CHOP activation. G. A. MARWARHA*; J. SCHOMMER; J. LILEK; O. GHRIBI. *Univ. of North Dakota.*

2:00 O13 **411.10** ● Loss of BACE1 - but not BACE2 - function in mice results in decreased body weight, protection against diet-induced obesity and reduced anxiety. T. W. ROSAHL*; L. A. HYDE; M. CHAMPY; H. MEZIANE; C. CANASTO-CHIBUQUE1; K. JUHL; Z. LI; B. PETIT-DEMOULIERE; T. SORG; J. SCOTT; G. J. EIERMANN; J. N. CUMMING; E. M. PARKER; M. E. KENNEDY. *Merck Res. Labs., Inst. Clinique de la Soris (ICS), Merck Res. Labs., Merck Res. Labs.*

3:00 O14 **411.11** Role of PSEN1 in neuronal differentiation and Alzheimer's disease - modeling human neurodegeneration in a dish. C. PIRES*; A. POON; B. SCHMID; T. T. NIELSEN; L. E. HJERMIND; J. NIELSEN; C. CLAUSEN; P. HYTTEL; B. HOLST; K. FREUDE. *Univ. of Copenhagen, Bioneer A/S, Danish Dementia Res. Center, Rigshospitalet, Copenhagen Univ. Hosp.*

4:00 O15 **411.12** Hif1α activates γ-secretase and increases production of amyloid-β in cells. C. CARROLL*; Y. LI. *Mem. Sloan-Kettering Cancer Ctr.*

1:00 O16 **411.13** A brain-derived Aβ42 surrogate marker in peripheral blood. S. TAGAMI*; K. YANAGIDA; T. TOMONAGA; T. IKEUCHI; M. WARAGAI; M. TAKEDA; M. IKEDA; M. OKOCHI. *Osaka Univ. Grad. Sch. of Med., Lab. of Proteome Research, Natl. Inst. of Biomed. Innovation, Dept. of Mol. Genetics, Brain Res. Institute, Niigata Univ., Higashi Matsudo Municipal Hosp., Aino Univ.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

412. Synaptic Pathology in Alzheimer's Disease

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 O17 **412.01** Impaired synaptic transmission in the CA1 area of hippocampal slices of APPSwDutIowa/Nos2$^{-/-}$ (CVN) mice. M. V. KOPANITSA; J. PUOLIVÄLI; O. KONTKANEN; R. HODGSON*; A. NURMI; P. J. SWEENEY. *Charles River Discovery.*

2:00 O18 **412.02** GSK-3β-mediated phosphorylation of PICK1 regulates the GluA2-PICK1 interaction. S. YAGISHITA*; M. MURAYAMA; T. EBIHARA; K. MARUYAMA; A. TAKASHIMA. *Saitama Med. Univ., Lab. for Alzheimer's disease, RIKEN Brain Sci. Inst., Dept. of Aging Neurobiology, Ctr. for Develop. of Advanced Med. for Dementia, Natl. Ctr. for Geriatrics and Gerontology.*

3:00 P1 **412.03** Early manifestation of synaptic failure in a transgenic model of AD. S. FORNER*; A. G. PRIETO; A. LIMON-RUIZ; D. KONG-LEE; A. C. MARTINI; C. DA CUNHA; L. TRUJILLO-ESTRADA; R. AGER; J. C. DAVILA; A. GUTIERREZ-PEREZ; C. W. COTMAN; D. BAGLIETTO-VARGAS; F. M. LAFERLA. *Univ. of California Irvine, Univ. of California, Irvine, Univ. de Málaga.*

4:00 P2 **412.04** Early changes in structure and function of gray matter axons in a mouse model of Alzheimer's disease. D. PEKALA; M. RAASTAD*. *Emory Univ. Sch. of Med.*

1:00 P3 **412.05** Genetic targeting of APP in hippocampus demonstrates that synapses postsynaptic to neurons expressing APP are the earliest sites of injury. E. VICARIO ORRI*; K. CHIANG; S. TYAN; S. LEUTGEB; E. H. KOO. *Univ. of California San Diego.*

2:00 P4 **412.06** Aβ-induced caspase activation and synaptic injury from APP C99 fragment is prevented in the APP D664A mutant that inhibits caspase-mediated cleavage. G. PARK; B. MIDTHUNE; M. NAVARRO; R. MALINOW; G. SALVESEN; E. H. KOO*. *UCSD, Sanford Burnham Prebys Med. Discovery Inst.*

3:00 P5 **412.07** Fingolimod modulates NMDA receptor properties in rat hippocampal slices. S. ATTIORI ESSIS*; M. LAURIER-LAURIN; É. PÉPIN; M. CYR; G. MASSICOTTE. *Univ. Du Québec À Trois-Rivières.*

4:00 P6 **412.08** Melanocortin 4 receptor activation ameliorates synaptic plasticity impairment in a mouse model of Alzheimer's disease. M. TIAN*; Y. SHEN; F. GONG; A. K. Y. FU; N. Y. IP. *The Hong Kong Univ. of Sci. and Technol., The Hong Kong Univ. of Sci. and Technol., The Hong Kong Univ. of Sci. and Technol.*

1:00 P7 **412.09** MC4R activation alleviates amyloid-β-induced synaptic dysfuntion. F. GONG*; Y. SHEN; M. TIAN; A. K. Y. FU; N. Y. IP. *The Hong Kong Univ. of Sci. and Technol., The Hong Kong Univ. of Sci. and Technol., The Hong Kong Univ. of Sci. and Technol.*

2:00 P8 **412.10** Understanding the melanocortin microcircuit in the mouse hippocampus. Y. SHEN*; M. TIAN; F. GONG; Y. ZHENG; A. K. FU; N. Y. IP. *The Hong Kong Univ. of Sci. and Technol., The Hong Kong Univ. of Sci. and Technol., The Hong Kong Univ. of Sci. and Technol.*

3:00 P9 **412.11** ● Dysregulation of microRNA188 expression causes cognitive impairments in Alzheimer's disease by inducing synaptic deficit. H. KIM*; K. LEE; K. AN; O. KWON; S. PARK; J. CHA; M. KIM; Y. LEE; J. KIM; K. CHO; H. KIM. *Seoul Natl. Univ., POSTECH, Univ. of Bristol.*

4:00 P10 **412.12** Synaptic alterations consistent with parvalbumin-expressing interneuron dysfunction in a novel mouse model of Alzheimer's disease. L. CHEN*; T. SAITO; T. C. SAIDO; I. MODY. *UCLA, RIKEN Brain Sci. Inst., UCLA.*

1:00 P11 **412.13** Synaptic zinc deficiency induces neuronal hyperexcitability and impairs adult neurogenesis in the hippocampus of ZnT3KO transgenic mice. E. VOGLER*; X. WANG; S. MICHALSKI; X. GAO; M. MAHAVONGTRAKUL; R. BOHANNAN; J. CHEN; J. A. BUSCIGLIO. *Univ. of California, Irvine, Indiana Univ., Indiana Univ. Sch. of Med., Univ. of California, Irvine.*

2:00 P12 **412.14** Abnormal increased basal EEG activity in the ZnT3KO mouse model of Alzheimer's disease. M. MAHAVONGTRAKUL*; E. VOGLER; J. YAO; A. TRAN; R. F. STEVENSON; D. TRAN; J. BUSCIGLIO. *Univ. of California, Irvine.*

3:00 Q1 **412.15** Modified synaptic transmission and short-term plasticity in Alzheimer's disease. N. SINGH*; S. NADKARNI. *Indian Inst. of Sci. Educ. and Res.*

4:00 Q2 **412.16** Biochemical and functional deficits in olfactory epithelium and olfactory bulb of 3-5 month old APP/PS1 mice. M. CHEN*. *South China Normal Univ.*

1:00 Q3 **412.17** Tumor necrosis factor-α mediates LTP impairment in APP/PS1 mice. A. SINGH*; O. D. JONES; W. C. ABRAHAM. *Univ. of Otago.*

2:00 Q4 **412.18** Stability of synaptic proteins in the frontal cortex in the preclinical phase of Alzheimer's disease. M. A. ANSARI*; S. W. SCHEFF. *Univ. of Kentucky Sanders-Brown Ctr. on Aging, Univ. of Kentucky Sanders-Brown Ctr. on Aging.*

3:00 Q5 **412.19** Formation and repair of DNA double-strand breaks in neurons: Implications for Alzheimer's disease and related disorders. M. D. EVANS*; D. CHENG; L. MUCKE. *Gladstone Inst. of Neurolog. Dis., Univ. of California, San Francisco.*

4:00 Q6 **412.20** The role of Drp1 in AMPAR trafficking and Alzheimer's disease. M. J. HEIMANN*; C. S. BINDA; E. BRAKSATOR; C. GUO; K. A. WILKINSON; J. M. HENLEY. *Univ. of Bristol, Univ. of Bristol.*

1:00 Q7 **412.21** Early life stress worsens cognitive performance, synaptic plasticity and Aβ levels in APP/PS1 mice. S. L. LESUIS*; B. A. C. E. VAN HOEK; P. J. LUCASSEN; H. J. KRUGERS. *Univ. Van Amsterdam.*

2:00 Q8 **412.22** Impact of EphA4 ablation on cognitive function and disease pathology in a mouse model of Alzheimer's disease. L. POPPE; L. RUÉ; Z. CALLAERTS-VEGH; R. D'HOOGE; R. LEMMENS; W. L. ROBBERECHT*. *KU Leuven - Univ. of Leuven, Dept. of Neurosciences, Exptl. Neurol. and Leuven Res. Inst. for Neurosci. and Dis. (LIND), VIB, Vesalius Res. Center, Lab. of Neurobio., KU Leuven - Univ. of Leuven, Fac. of Psychology and Educational Sciences, Lab. of Biol. Psychology, mINT animal behavior core facility, KULeuven, Fac. of Psychology, KU Leuven - Univ. of Leuven, Fac. of Psychology and Educational Sciences, Lab. of Biol. Psychology and Leuven Res. Inst. for Neurosciene and Dis. (LIND), Univ. Hosp Gasthuisberg.*

3:00 Q9 **412.23** Combining molecular profiling of differentially vulnerable synaptic populations with *in-vivo* phenotypic assessment identifies regulators of neuronal stability. M. LLAVERO HURTADO*; H. R. FULLER; S. L. EATON; G. PENNETTA; J. D. COOPER; T. M. WISHART. *The Univ. of Edinburgh, Keele Univ., The Univ. of Edinburgh, The Univ. of Edinburgh, Euan MacDonald Ctr. for Motor Neurone Dis. Research, Univ. of Edinburgh, King's Col. London.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
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* Indicates abstract's submitting author

4:00 Q10 **412.24** ● SUVN-G3031, a histamine 3 receptor inverse agonist potentiates the procognitive and neurochemical effects of donepezil and memantine. R. MEDAPATI; V. BENADE; S. DARIPELLI; G. AYYANKI; V. KAMUJU; R. ABRAHAM; P. JAYARAJAN; G. BHYRAPUNENI; K. BOJJA; A. K. SHINDE*; R. NIROGI. *Suven Life Sci., Suven Life Sci., Suven Life Sci., Suven Life Sci., Suven Life Sci.*

1:00 Q11 **412.25** Grx1 over-expression reverses spine loss in primary cortical neurons derived from Alzheimer's disease transgenic mice. D. DAS*; R. P. KOMMADDI; A. RAY; B. L. SCHNEIDER; P. AEBISCHER; V. RAVINDRANATH. *Indian Inst. of Sci., Brain Mind Institute, École Polytechnique Fédérale de Lausanne.*

2:00 Q12 **412.26** Activity and levels of calpain 2 but not calpain 1 is upregulated in synaptosomes early in the pathogenesis of Alzheimer's disease. F. AHMAD*; D. BENNETT; V. RAVINDRANATH. *Indian Inst. of Sci., Rush Univ. Med. Ctr.*

3:00 Q13 **412.27** Structural changes in CA1 hippocampal neurons in adolescent Alzheimer's disease transgenic (APP^{Swe}/PSEN1ΔE9) mice. S. KUMAR*; V. RAVINDRANATH. *Indian Inst. of Sci.*

4:00 Q14 **412.28** Histological evaluation of synaptic markers in animal models of Alzheimer's disease. J. NEDDENS*; M. ZHAN; E. AUER; B. HUTTER-PAIER. *QPS Austria GmbH, Univ. of Applied Sci.*

1:00 R1 **412.29** Changes in the synaptic proteome in Alzheimer's disease indicate a role for ApoE4 in synapse degeneration. R. J. JACKSON*; M. LLAVERO; A. G. HERRMANN; C. M. HENSTRIDGE; D. J. LAMONT; T. M. WISHART; T. L. SPIRES-JONES. *Univ. of Edinburgh, Univ. of Edinburgh, Univ. of Dundee.*

2:00 R2 **412.30** Processing bodies and oAB-induced synaptic mRNA dysregulation. C. WILLIAMS; S. MARQUEZ-VILENDRER; M. A. ROOF; S. SHETTY; C. A. MILLER*. *Keck Sch. of Med. of USC, Axogen Inc, USC.*

POSTER

413. Disease-Modifying Therapy for Parkinson's Disease

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 R3 **413.01** ● Identification of drug candidates that block the effects of α-synuclein oligomers on membrane trafficking. C. SILKY; R. YURKO*; K. MOZZONI; C. REHAK; N. IZZO; G. RISHTON; G. LOOK; H. SAFFERSTEIN; S. M. CATALANO. *Cognition Therapeut. Inc, Cognition Therapeutics, Inc.*

2:00 R4 **413.02** Structure of the N-terminal region of α-synuclein determines the rate of fibril growth. D. D. DHAVALE; C. TSAI; D. P. BAGCHI; L. A. ENGEL; J. SAREZKY; P. T. KOTZBAUER*. *Washington Univ.*

3:00 R5 **413.03** HA53T-α-syn accumulation and associated neurotoxicity is prevented by the inhibition of mitochondrial fission. S. BIDO*; R. FAN; K. TIEU; E. BEZARD. *Inst. des Maladies Neurodégénératives, Plymouth Univ.*

4:00 R6 **413.04** ● 14-3-3s reduce endogenous α-synuclein aggregation and toxicity induced by fibrillary α-synuclein. R. UNDERWOOD; B. WANG; T. A. YACOUBIAN*. *Univ. of Alabama at Birmingham, Univ. Alabama Birmingham.*

1:00 R7 **413.05** Structural elucidation of α-synuclein oligomers using a library of sequential antibodies. L. NILSSON*; T. ISLAM; A. OLOFSSON. *Dept. of Chem., Dept. of medical biochemistry and biophysics.*

2:00 R8 **413.06** Multimer-PAGE reveals shift from multimeric to monomeric α-synuclein in HEK293 cells overexpressing A53T mutant α-synuclein. B. A. KILLINGER*; D. YEDLAPUDI; A. MOSZCZYNSKA. *Wayne State Univ.*

3:00 R9 **413.07** A high throughput screening system for visualizing therapeutic drugs of neurodegenerative diseases. S. L. WALKER*; D. C. W. CHAN; V. C. T. MOK; W. H. YUNG; Y. KE. *The Chinese Univ. of Hong Kong, The Chinese Univ. of Hong Kong, The Chinese Univ. of Hong Kong.*

4:00 R10 **413.08** Novel reagents and assays indicate a role for NADPH oxidase 2 in Parkinson disease. J. T. GREENAMYRE*; E. K. HOFFMAN; M. T. KEENEY; J. MCCOY; P. J. PAGANO; R. DI MAIO. *Univ. of Pittsburgh.*

1:00 R11 **413.09** Inhibition of LRRK2 prevents rotenone induced reduction of glucocerebrosidase activity. E. N. ROCHA*; E. HOFFMAN; R. DI MAIO; P. J. BARRETT; J. T. GREENAMYRE. *Univ. of Pittsburgh.*

2:00 R12 **413.10** Glatiramir acetate (Copaxone) causes restoration of the nigrostriatal pathway in a progressive MPTP mouse model of Parkinson's disease. C. K. MESHUL*; M. J. CHURCHILL. *VA Med. Ctr., OHSU.*

3:00 R13 **413.11** N-acylethanolamine acid amidase (NAAA) as a therapeutic target for Parkinson's disease. S. PONTIS*; N. REALINI; F. PALESE; A. ARMIROTTI; M. LANFRANCO; D. PIOMELLI. *Inst. Italiano Di Tecnologia, Univ. of California, Irvine.*

4:00 R14 **413.12** The neurorestorative potential of cortical disinhibition in a progressive mouse model of Parkinson's disease. R. HOOD*; C. K. MESHULK. *Behavioral Neuroscience, Oregon Hlth. & Sci. U, Portland VA Med. Ctr.*

1:00 R15 **413.13** Neuroprotective effects of α7 nicotinic acetylcholine receptor through the Wnt/β-catenin signaling pathway in both *in vivo* and *in vitro* models of Parkinson's disease. H. JUN*; Y. FAN. *The First Affiliated Hosp. of Nanjing Med. Univ., Dept. of Pharmacol. of Nanjing Med. Univ.*

2:00 R16 **413.14** Neuroprotective effect of dimethyl fumarate in mptp-mouse model of Parkinson's disease. E. ESPOSITO*; F. BIUNDO; G. CASILI; M. CAMPOLO; R. CRUPI; M. CORDARO; S. CUZZOCREA. *Univ. of Messina.*

3:00 R17 **413.15** Recovery of motor functions in a Parkinson's disease rat model after releasing dopamine from titanium dioxide matrix implants. M. GÓMEZ-CHAVARÍN*; P. PADILLA; J. RAMIREZ-SANTOS; G. PRADO-PRONE; J. GARCÍA-MACEDO; G. GUTIERREZ-OSPINA. *UNAM-Biomedical Res. Institutute, UNAM-Medicine Fac., UNAM-Physics Inst.*

4:00 S1 **413.16** ● Long-term transgene expression in rat brain after intranasal administration of hGDNF DNA nanoparticles and enhancement by focused ultrasound (FUS). A. E. ALY*; T. SUN; Y. ZHANG; O. SESENOGLU-LAIRD; L. PADEGIMAS; M. J. COOPER; N. J. MCDANNOLD; B. L. WASZCZAK. *Northeastern Univ., Harvard Med. Sch. and Brigham & Women's Hosp., Copernicus Therapeut.*

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

1:00 S2 **413.17** Metabolic profiling and lipidomics of a potential canine model for a juvenile Parkison disease. T. L. KOZICZ*; T. EMMERZAAL; F. VAZ; G. S. JOHNSON; D. P. O'BRIEN; C. P. BAINES; E. MORAVA. *Radboud Univ. Nijmegen Med. Ctr., Tulane Univ., Academic Med. Ctr., Univ. of Missouri Col. of Vet. Med., Univ. of Missouri Col. of Vet. Med., Univ. of Missouri Col. of Vet. Med.*

2:00 S3 **413.18** Therapeutic repurposing of raloxifene as an immunomodulatory drug for the treatment of gut inflammation in a mouse model of Parkinson's disease. A. POIRIER*; M. CÔTÉ; M. BOURQUE; M. MORISSETTE; T. DI PAOLO; D. SOULET. *Ctr. De Recherche Du CHU De Québec (CHUL), Univ. Laval, Univ. Laval.*

3:00 S4 **413.19** ● Tolerability of siRNA-mediated α-synuclein suppression in the adult rhesus substantia nigra. R. GRONDIN*; Y. AI; P. HUETTL; H. MENG; F. POMERLEAU; J. E. QUINTERO; P. A. HARDY; M. T. BUTT; A. SEHGAL; D. A. BUMCROT; D. M. GASH; Z. ZHANG; G. A. GERHARDT. *Univ. of Kentucky Med. Ctr., Shandong Univ. Sch. of Med., Univ. of Kentucky Med. Ctr., Tox Path Specialists LLC, Alnylam Pharmaceuticals Inc.*

4:00 S5 **413.20** The Role of PAN nuclease in Parkinson's disease. H. PARK*; T. KAM; T. M. DAWSON; V. L. DAWSON. *Inst. For Cell Engineering, Johns Hopkins Univ., Inst. For Cell Engineering, Johns Hopkins Univ.*

1:00 S6 **413.21** The Michael J. Fox Foundation's strategy to generate, characterize, and distribute preclinical α-synuclein research tools for molecular biology. T. N. MARTINEZ*; P. H. JENSEN; K. C. LUK; L. GOTTLER; M. CHOU; B. MILLE-BAKER; F. VERKAAR; C. HABER; L. STEINBRUCK; H. A. LASHUEL; B. FAUVET; X. TONG; A. L. MORRIS; K. D. DAVE. *The Michael J. Fox Fndn. For Parkinson's Res., Aarhus Univ., Univ. of Pennsylvania Perelman Sch. of Med., Proteos, Inc, Abcam, Charles River, PEPperPRINT, PEPperPRINT, Ecole Polytechnique Fédérale de Lausanne (EPFL), CPC Scientific, Inc.*

POSTER

414. Neurodegeneration and Neuroprotection in Parkinson's Disease

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 S7 **414.01** Aldh1a1 is expressed by two dopamine neuron subtypes with distinct molecular and neuroanatomical properties. J. POULIN*; C. M. ESTEP; Q. CUI; B. HELM; C. S. CHAN; D. J. SURMEIER; R. AWATRAMANI. *Northwestern Univ. - Chicago, Northwestern Univ., Northwestern Univ.*

2:00 S8 **414.02** Base excision repair variants and pesticide exposure increase Parkinson's disease risk. L. H. SANDERS*; K. C. PAUL; E. H. HOWLETT; X. HU; J. M. BRONSTEIN; B. RITZ; J. GREENAMYRE. *Univ. Pittsburgh, UCLA, Univ. of Pittsburgh, UCLA.*

3:00 S9 **414.03** Multifunctional neuroprotection by astrocyte-specific DJ-1 expression in the rotenone model of Parkinson's disease. B. R. DE MIRANDA*; E. A. BURTON; J. T. GREENAMYRE. *Univ. of Pittsburgh.*

4:00 S10 **414.04** A longitudinal study of PINK1 and PARK7 KO rats. N. W. MILGRAM*; J. A. CASKANETTE; A. VAN NIEKERK; A. PATRICK; L. B. SILENIEKS; W. LAU; S. THEVARKUNNEL; J. A. ARAUJO; G. A. HIGGINS. *Cancog Technologies, U. Toronto, Vivocore, Intervivo Solutions Inc.*

1:00 S11 **414.05** Rab8A effects on α-synuclein toxicity in a rat model of Parkinsonism. N. R. MCFARLAND*; H. PARK; D. RYU; L. POWELL; R. FOELS; M. PARMAR. *Univ. of Florida, Univ. of Florida.*

2:00 S12 **414.06** Increase of τ protein levels in sporadic and experimental Parkinson's disease. Y. CHU*; Y. HE; J. H. KORDOWER. *Rush Univ. Med. Ctr., Rush Univ. Med. Ctr.*

3:00 S13 **414.07** The effect of N-methylsasolinol on α-synuclein transgenic PD model. Z. CHEN; H. MA*; F. SUN; Y. DENG. *Sch. of Life Science, Beijing Inst. of Technol.*

4:00 S14 **414.08** The effect of zinc administration in Atp13a2-deficient mice. N. A. SANTIAGO*; R. BLACKWOOD; S. HUBBARD; S. S. KARKARE; E. R. DIRR; G. E. SHULL; E. MASLIAH; B. LIOU; Y. SUN; P. FERNAGUT; E. BEZARD; B. DEHAY; S. M. FLEMING. *Northeast Ohio Med. Univ., Univ. of Cincinnati, Univ. of Cincinnati, Univ. of California San Diego, Cincinnati Children's Hosp. Med. Ctr., Univ. of Bordeaux.*

1:00 T1 **414.09** Nuclear translocation of SIRT2 induced by Cdk5 dependent phosphorylation promotes the dopaminergic neuron death in Parkinson's disease. J. YAN*; P. ZHANG; F. HE; F. JIAO; Q. WANG; L. CHEN; Q. ZHANG; B. TIAN. *Huazhong Univ. of Sci. and Technol.*

2:00 T2 **414.10** Dysregulation of protein phosphatase 2A in dementia with lewy bodies. H. PARK; K. LEE; E. PARK; S. OH; R. YAN; J. ZHANG; T. BEACH; C. ADLER; M. VORONKOV; S. BRAITHWAITE; J. STOCK; M. M. MOURADIAN*. *Rutgers-Robert Wood Johnson Med. Sch., Banner Sun Hlth. Res. Inst., Mayo Clin., Signum Biosci., Princeton Univ.*

3:00 T3 **414.11** Characterization of n370s gba1-PD ips cells derived human dopaminergic neurons. S. YUN*; H. KO. *Johns Hopkin Med.*

4:00 T4 **414.12** Alterations in ganglioside biosynthesis and content in Parkinson's disease and role in modulating vulnerability for neurodegeneration. M. VERMA*; S. JACKSON; T. N. SEYFRIED; H. CHOI; Z. AKGOC; A. LYNN; J. S. SCHNEIDER. *Thomas Jefferson Univ., Thermo Fisher Scientific, Boston Col.*

1:00 T5 **414.13** Differentiation of neuroepithelial stem cells into functional dopaminergic neurons in 3d microfluidic cell culture. E. LUCUMI MORENO*; S. HACHI; K. HEMMER; S. J. TRIETSCH; A. S. BAUMURATOV; T. HANKEMEIER; P. VULTO; J. C. SCHWAMBORN; R. M. T. FLEMING. *Univ. of Luxembourg, Campus Belval, Mimetas, Leiden Univ.*

2:00 T6 **414.14** Increased Kv2.1 channel expression contributes to nigrostriatal degeneration in MPTP induced Parkinson's disease model. R. CHAO; C. CHENG; P. CHEN*. *Natinal Cheng Kung Univ., Natl. Cheng Kung Univ.*

3:00 T7 **414.15** ▲ A possible involvement of TRPM7 in the 6-hydroxy-dopamine model of Parkinsons disease. L. M. DATI*; H. ULRICH; H. SUN; Z. FENG; L. BRITTO. *Univ. of Sao Paulo, Univ. of Toronto.*

4:00 T8 **414.16** Neuroplasticity induced by acrobatic exercise in a rat model of Parkinson's disease. R. S. PIRES*; N. R. SANTIAGO; Q. R. S. G. FERRAREZI; R. O. JACOB; C. C. REAL; L. R. G. BRITTO. *Univ. Cidade De São Paulo, Univ. of São Paulo.*

1:00 T9 **414.17** 6-hydroxydopamine- and L-DOPA-induced shifts in striatal monoamine transporter function in L-DOPA-primed, hemi-Parkinsonian rats. M. CONTI*; S. MEADOWS; J. GOLD; N. PALUMBO; J. HALLMARK; D. WERNER; C. BISHOP. *Binghamton Univ.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 T10 **414.18** Neuroprotective role of Osmotin in α-synuclein induced neuropathology via AMPK activated signaling cascade. M. JO*; M. KHAN; M. SOHAIL; M. KIM. *Neurobio. Lab.*

3:00 T11 **414.19** Behavioural effects of sodium benzoate, a cinnamon metabolite, on the 6-hydroxydopamine rat model of Parkinson's disease. M. K. SHAMMAS*; R. T. KENNEDY. *Univ. of Michigan, Univ. of Michigan.*

4:00 T12 **414.20** Distribution of β-synuclein in dementia with Lewy bodies brain tissues. T. EVANS; K. COWAN; O. ANICHTCHIK*. *Plymouth Univ.*

POSTER

415. Human and Non-Human Primate Therapies in Parkinson's Disease

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 T13 **415.01** Stimulation amplitude-dependent modulation of neuronal activity around chronically implanted thalamic deep brain stimulation arrays. M. D. JOHNSON*; Y. XIAO. *Univ. of Minnesota.*

1:00 DP03 **415.02** (Dynamic Poster) Effect of Parkinsonism and deep brain stimulation on neural oscillations and phase-amplitude coupling within the motor cortex, subthalamic nucleus and globus pallidus. D. ESCOBAR SANABRIA*; L. A. JOHNSON; J. ZHANG; S. NEBECK; M. D. JOHNSON; G. F. MOLNAR; K. B. BAKER; J. L. VITEK. *Univ. of Minnesota, Univ. of Minnesota.*

3:00 T14 **415.03** Neuro-pathophysiology of SMA-M1 single unit activity during visually guided reach in the progressive MPTP nonhuman primate model of Parkinson's disease. B. CAMPBELL*; C. M. HENDRIX; B. J. TITTLE; Y. ADIBI; Z. M. WEINSTOCK; G. F. MOLNAR; M. D. JOHNSON; K. B. BAKER; J. L. VITEK. *Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota.*

4:00 T15 **415.04** Improved spatial resolution of local field potentials with deep brain stimulation arrays in the globus pallidus and subthalamic nucleus. S. ZHANG*; M. D. JOHNSON. *Univ. of Minnesota.*

1:00 T16 **415.05** Low frequency modulations in the Supplementary Motor Area (SMA) and motor cortex (MC) in the MPTP nonhuman primate (NHP) model of Parkinson's disease. Y. ADIBI*; C. HENDRIX; B. CAMPBELL; K. BAKER; J. L. VITEK. *Univ. of Minnesota, Univ. of Minnesota.*

2:00 T17 **415.06** Evolution in the modulation of passive responses in primary motor cortex during prolonged STN DBS in the Parkinsonian monkey. J. WANG*; S. NEBECK; L. A. JOHNSON; J. ZHANG; M. D. JOHNSON; K. B. BAKER; G. F. MOLNAR; J. L. VITEK. *Univ. of Minnesota, Univ. of Minnesota.*

3:00 T18 **415.07** Effect of levodopa on neuronal activity in primary motor cortex in the MPTP non-human primate model of Parkinson's disease. S. D. NEBECK; L. A. JOHNSON*; J. ZHANG; D. ESCOBAR; M. D. JOHNSON; G. MOLNAR; K. B. BAKER; J. L. VITEK. *Univ. of Minnesota Dept. of Neurol., Univ. of Minnesota Dept. of Biomed. Engin.*

4:00 U1 **415.08** STriatal-Enriched protein tyrosine Phosphatase (STEP) inhibitor TC-2153 improves aspects of cognitive dysfunction in aged Parkinsonian monkeys. J. S. SCHNEIDER*; C. WILLIAMS; P. LOMBROSO. *Thomas Jefferson Univ., Yale Univ. Sch. of Med.*

1:00 U2 **415.09** ● Intracerebral delivery of induced pluripotent stem cell-derived neurons using real-time intraoperative MRI. S. C. VERMILYEA*; J. LU; M. E. OLSEN; Y. TAO; S. GUTHRIE; E. M. FEKETE; M. K. RIEDEL; K. BRUNNER; C. BOETTCHER; V. BONDARENKO; E. BRODSKY; W. F. BLOCK; A. ALEXANDER; S. ZHANG; M. E. EMBORG. *Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

2:00 U3 **415.10** Positron emission tomography imaging of cardiac neuroprotection induced by peroxisome proliferator-activated receptor γ (PPARγ) activation. J. SHULTZ*; H. RESNIKOFF; V. BONDARENKO; J. HOLDEN; T. BARNHART; P. LAO; B. CHRISTIAN; J. NICKLES; C. F. MOORE; M. EMBORG. *Univ. of Wisconsin - Madison, Univ. of Wisconsin - Madison, Univ. of Wisconsin - Madison, Univ. of Wisconsin - Madison.*

3:00 U4 **415.11** Early development of common marmoset vocalizations. C. A. JONES*; M. K. DUFFY; S. A. HOFFMAN; N. J. SCHULTZ-DARKEN; K. M. BRAUN; M. R. CIUCCI; M. E. EMBORG. *Univ. of Wisconsin - Madison, Univ. of Wisconsin - Madison, Univ. of Wisconsin - Madison, Wisconsin Natl. Primate Ctr., Univ. of Wisconsin - Madison.*

4:00 U5 **415.12** Wirelessly programmable module for custom deep brain stimulation. E. M. LEWIS*; C. KEMERE. *Rice Univ., Rice Univ.*

1:00 U6 **415.13** ● Toward an electrophysiologically defined "sweet spot" for deep brain stimulation within the subthalamic nucleus. A. HORN*; W. NEUMANN; K. DEGEN; G. SCHNEIDER; A. KÜHN. *Charité – Univ. Med., Charité – Univ. Med.*

2:00 U7 **415.14** Three-dimensional definition of two prominent deep brain stimulation targets based on a multimodal high-definition MNI template. S. EWERT*; A. HORN. *Charité – Univ. Medicine, (berlin, Germany), Berenson-Allen Ctr. for Noninvasive Brain Stimulation.*

3:00 U8 **415.15** Basal ganglia disinhibition in Tourette syndrome. I. BAR-GAD*; M. ISRAELASHVILI. *Bar-Ilan Univ.*

4:00 U9 **415.16** Patient-specific models of local field potentials recorded from deep brain stimulation electrodes. N. MALING; S. F. LEMPKA; Z. BLUMENFELD; H. BRONTE-STEWART; C. C. MCINTYRE*. *Case Western Reserve Univ., Cleveland Clin., Stanford Univ.*

1:00 U10 **415.17** Subthalamic nucleus oscillations as predictor of motor cortical excitability measured by transcranial magnetic stimulation. K. UDUPA*; A. GHAHREMANI; J. R. WESSEL; U. SAHA; T. HOQUE; A. R. ARON; R. CHEN. *Krembil Res. Institute, UHN, Krembil Res. Inst., Krembil Res. Inst., Univ. of Iowa, Univ. of California San Diego.*

2:00 U11 **415.18** Modulation of subthalamic γ oscillations by movement parameters in Parkinson's disease. R. LOFREDI*; A. BOCK; W. NEUMANN; J. HÜBL; S. SIEGERT; G. SCHNEIDER; J. KRAUSS; A. KÜHN. *Klinik Für Neurologie - Charité Campus Virchow-Kli, Medizinische Hochschule Hannover.*

3:00 U12 **415.19** Cortico-basal ganglia connectivity in non-human primates: Implications for the therapeutic effect of STN stimulation in PD patients. A. MATIS*; R. N. LEMON; D. C. ALEXANDER; A. KRASKOV. *UCL Inst. of Neurol., Ctr. for Med. Image Computing.*

Mon. PM

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 U13 **415.20** Phosphodiesterase 9 inhibition therapy for Parkinson's disease. S. M. PAPA*; A. SINGH; G. MASILAMONI; X. TANG; L. LEVENTHAL. *Emory Univ., Yerkes Natl. Primate Res. Center, Emory Univ., FORUM Pharmaceuticals, Inc.*

1:00 U14 **415.21** Striatal overexpression of ΔFosB leads to the development of dyskinesias in Parkinsonian non-human primates without chronic levodopa exposure. A. SINGH*; L. F. POTTS; M. MARTINEZ; J. M. YOO; E. S. PARK; J. ZHANG; E. JUNN; M. M. MOURADIAN; S. M. PAPA. *Yerkes Natl. Primate Res. Center, Emory University, Ctr. for Neurodegenerative and Neuroimmunologic Dis., Emory Univ. Sch. of Med.*

2:00 U15 **415.22** Effects of optogenetic activation of thalamostriatal terminals in monkeys. A. GALVAN*; X. HU; Y. SMITH; T. WICHMANN. *Emory Univ., Emory Univ.*

3:00 U16 **415.23** Altered functional connectivity associated with striatal dopamine depletion in Parkinson's disease. A. SHIMA*; N. SAWAMOTO; R. INANO; H. TABU; T. OKADA; K. TOGASHI; R. TAKAHASHI. *Kyoto Univ. Grad. Sch. of Med., Kyoto Univ. Grad. Sch. of Med., Kyoto Univ. Grad. Sch. of Med., Kyoto Univ. Grad. Sch. of Med.*

4:00 U17 **415.24** Morphological evidence supporting dopamine D1/D2 receptor heteromers in the striatum of the long-tailed macaque. Changes following dopaminergic manipulation. J. L. LANCIEGO*; A. J. RICO; I. G. DOPESO-REYES; E. MARTINEZ-PINILLA; D. SUCUNZA; D. PIGNATARO; E. RODA; D. MARIN-RAMOS; J. L. LABANDEIRA-GARCIA; S. R. GEORGE; R. FRANCO. *FIMA, CIBERNED, Univ. of Santiago de Compostela, CIBERNED, Campbell Family Mental Hlth. Institute, Ctr. for Addiction and Mental Health, Univ. of Toronto, Univ. of Barcelona, CIBERNED.*

1:00 U18 **415.25** Early loss of extra-striatal dopaminergic innervation in a progressive MPTP monkey model: A putative compensatory mechanism? I. TRIGO DAMAS*; A. VIAN-LAINS; H. IWAMURO; J. BLESA; M. SANCHEZ-GONZALEZ; C. CAVADA; J. OBESO. *CINAC-HM Puerta Del Sur, Facultad de Medicina, Univ. Autónoma de Madrid, Dept. of Neurosurgery. Tokyo Metropolitan Neurolog. Hosp.*

2:00 V1 **415.26** Dopaminergic neurons intrinsic to the striatum: A potential compensatory mechanism in Parkinson's disease? J. BLESA*; N. LOPEZ-GONZALEZ DEL REY; P. GARCIA-ESPARCIA; I. TRIGO-DAMAS; I. FERRER; C. CAVADA; J. OBESO. *HM Hosp. Puerta del Sur, Res. Ctr. of Neurodegenerative Dis. (CIBERNED), Bellvitge Biomed. Res. Inst. (IDIBELL), HM Puerta del Sur, Univ. Autonoma de Madrid.*

3:00 V2 **415.27** Dopamine and serotonin hyperinnervation of the globus pallidus in Parkinsonian monkeys. D. GAGNON*; L. EID; C. WHISSEL; A. BRAUN; T. DI PAOLO; M. PARENT. *CR-IUSMQ, CR-CHUQ.*

4:00 V3 **415.28** Aerobic exercise can induce dopamine release in Parkinson's disease: [^{11}C]Raclopride PET study. M. A. SACHELI*; B. LAKHANI; J. L. NEVA; D. K. MURRAY; N. VAFAI; J. MCKENZIE; N. NEILSON; K. DINELLE; I. S. KLYUZHIN; L. A. BOYD; V. SOSSI; A. J. STOESSL. *Pacific Parkinson's Res. Ctr., Dept. of Physical Therapy, Fac. of Medicine, Djavad Mowafaghian Ctr. for Brain Health, Univ. of British Columbia, Fac. of Medicine, Univ. of British Columbia, Dept. of Physics and Astronomy, Univ. of British Columbia.*

1:00 V4 **415.29** Plastic resting-state networks in MPTP-treated monkeys. J. A. AUTIO*; N. TANKI; T. OSE; J. TAKAHASHI; T. HAYASHI. *RIKEN, Ctr. For Life Sci. Technologies, Kyoto University, CiRA.*

2:00 V5 **415.30** Phase amplitude coupling of electrocorticogram signals in a progressive model of primate Parkinsonism. A. DEVERGNAS*; M. CAIOLA; D. PITTARD; T. WICHMANN. *Yerkes Natl. Primate Res. Ctr., Dept. of Neurology, Emory university, Udall Ctr. of Excellence in Parkinson's Dis. Reseach, EMory Univ., Dept. of Mathematical Sci.*

POSTER

416. Mitochondria, Alpha-Synuclein, and Inflammation in Parkinson's Disease

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 V6 **416.01** GPx4 protects against oxidative stress-induced deficits in mitochondrial import: Implications for Parkinson's disease. C. W. BARRETT*; P. J. BARRETT; A. D. MORTIMER; C. T. CHU; J. T. GREENAMYRE; T. G. HASTINGS, 15260. *Univ. of Pittsburgh.*

2:00 V7 **416.02** α synuclein binds tom20 and impairs mitochondrial protein import in Parkinson's disease. P. BARRETT*; R. DIMAIO; E. HOFFMAN; C. BARRETT; A. ZHARIKOV; C. CHU; E. BURTON; T. HASTINGS; J. GREENAMYRE. *Univ. of Pittsburgh, Univ. of Pittsburgh.*

3:00 V8 **416.03** Pathogenic α-synuclein mediates Parkinson's disease-related synaptic dysfunction and cognitive decline. C. GALLARDO*; A. COVELO; B. SINGH; H. A. MARTELL-MARTINEZ; M. A. BENNEYWORTH; A. ARAQUE`; M. K. LEE. *Univ. of Minnesota Syst., Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota.*

4:00 V9 **416.04** Assessing the maximum activity of the caspase 3 and 9 in a exerimental model of Parkinson's disease induced by mpp+ in rats. M. ISLAS*; M. RUBIO-OSORNIO; I. SANTANDER-RODEA; S. ZAMUDIO; C. RIOS; A. DIAZ-RUIZ. *Inst. Politècnico Nacional, Inst. Nacional de Neurología y Neurocirugía, "Manuel Velasco Suarez", Inst. Nacional de Neurología y Neurocirugía, "Manuel Velasco Suarez".*

1:00 V10 **416.05** Chronic psychological stress promotes PINK1/parkin-mediated mitophagy in mouse amygdala. K. DUAN*; X. LIU; Z. LI. *Natl. Inst. of Mental Hlth., Fudan Univ.*

2:00 V11 **416.06** Paraquat and stress interactions as pertains to Parkinson's disease motor deficits and co-morbid behaviors. K. FARMER*; C. RUDYK; Z. DWYER; J. MCNEILL; F. WAHBEH; N. PROWSE; S. HAYLEY. *Carleton Univ.*

3:00 V12 **416.07** GBA1 deficiency plays a role in the formation of physiological α-synuclein tetramer. S. KIM*; S. YUN; S. LEE; H. KO. *Johns Hopkins Univ.*

4:00 V13 **416.08** Effect of trans fatty acid on α synuclein channels and implications in Parkinson's disease. S. SRIDHAR*; A. K. BERA. *Indian Inst. of Technol. Madras.*

1:00 V14 **416.09** Self-defense responses against 6-hydroxydopamine-induced nitrosative cell death in C6 glioma cells. H. MOON; C. LEE; G. PARK; J. JANG*. *Kyungpook Natl. Univ., Keimyung University, Sch. of Med.*

2:00 V15 **416.10** Glial cells and mast cells signaling pathways in neuroinflammation. K. DURAISWAMY; R. THANGAVEL; S. ZAHEER; D. A. SANTILLAN; M. K. SANTILLAN; M. M. THAKKAR*; A. ZAHEER. *HSTMV Hospital/University of Missouri, Univ. of Iowa.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 V16 **416.11** Selective Toll-like receptor inhibition occludes α-synuclein-induced pro-inflammatory signaling & cytokine release. A. M. HABAS*; S. NATALA; J. WONG; W. WRASIDLO; M. GILL; D. BONHAUS. *Neuropore Therapies, Inc., Neuropore Therapies Inc., Neuropore Therpaies Inc.*

4:00 V17 **416.12** Glia maturation factor dependent activation of nod like receptor family pyrin domain containing 3 (NLRP3) inflammasome. H. JAVED; M. M. KHAN; R. THANGAVEL; K. DURAISAMY; S. ZAHEER; S. IYER; A. ZAHEER*. *Univ. of Iowa, Univ. of Missouri & Truman VA.*

1:00 V18 **416.13** ▲ Effect of chronic systemic inflammation in the cytokines profile in central nervous system and its implication in suceptibility to damage by neurotoxin MPTP in mice. P. UGALDE MUÑIZ*; A. CHAVARRÍA KRAUSER. *Hosp. Gen. De México, Hosp. Gen. De México.*

2:00 W1 **416.14** Differential gene expression profile between early and late stage disease model of Parkinson's disease. A. VERMA*; V. RAVINDRANATH. *Indian Inst. of Sci.*

3:00 W2 **416.15** Diamide induces selective and progressive dopaminergic neurodegeneration, α-synuclein pathology and Parkinsonism in mice: A model of Parkinson's disease. A. RAY*; A. VERMA; S. KUMAR; V. RAVINDRANATH. *Indian Inst. of Sci.*

4:00 W3 **416.16** Dopaminergic degeneration following viral mediated dysregulation of dopamine: Implications for Parkinson's disease. M. BUCHER*; C. W. BARRETT; T. G. HASTINGS. *Univ. of Pittsburgh.*

POSTER

417. Huntington's Disease Mechanisms II

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 W4 **417.01** Impaired autophagy in Huntington´s disease impacts on global microRNA-levels through Argonaute-2 accumulation. K. PIRCS*; R. PETRI; S. MADSEN; P. L. BRATTÅS; M. MATUSIAK-BRÜCKNER; R. VUONO; N. DÉGLON; R. A. BARKER; J. JAKOBSSON. *Lund Univ., Univ. of Cambridge, Lausanne Univ. Hosp.*

2:00 W5 **417.02** Respiration and Ca^{2+} handling by striatal mitochondria purified from brains of YAC128 mice, a model of Huntington's disease. J. HAMILTON*; T. BRUSTOVETSKY; N. BRUSTOVETSKY. *Indiana Univ. Sch. of Med., Stark Neurosci. Res. Inst.*

3:00 W6 **417.03** Redox changes and bioenergetic defects in striatum and cortex of pre-symptomatic and symptomatic Huntington's disease mice. A. C. REGO*; C. MARANGA; I. L. FERREIRA; M. LAÇO; S. MOTA; L. NAIA; J. SERENO; A. ABRUNHOSA; M. HAYDEN; M. CASTELO-BRANCO. *Fac. of Med. and CNC, CNC-Center for Neurosci. and Cell Biology, Univ. of Coimbra, ICNAS – Inst. for Nuclear Sci. Applied to Health, Univ. of Coimbra, IBILI - Inst. for Biomed. Imaging and Life Sciences, Fac. of Medicine, Univ. of Coimbra, Ctr. for Mol. Med. and Therapeutics, Child and Family Res. Institute, Dept. of Med. Genetics, Univ. of British Columbia.*

4:00 W7 **417.04** ▲ Mutant Huntington disrupts the nuclear pore complex. J. C. GLATZER*; J. C. GRIMA; K. ZHANG; J. DAIGLE; Q. PENG; C. GEATER; I. AHMED; C. ROSS; W. DUAN; L. THOMPSON; S. H. SNYDER; J. D. ROTHSTEIN. *Univ. of Rochester, Johns Hopkins Neurosci., Univ. of California, Irvine.*

1:00 W8 **417.05** Integrated mitochondrial function in human muscle biopsies of Huntington's disease patients and in different tissues of the HdhQ111 mouse model. K. S. LINDENBERG*; E. BARTH; T. MERZ; A. GUMPP; A. WITTING; P. WEYDT; M. ZUEGEL; J. STEINACKER; G. LANDWEHRMEYER; E. CALZIA. *Ulm Univ., Ulm Univ., Ulm Univ.*

2:00 W9 **417.06** Cortical mitochondria from R6/2 Huntington's disease mice have elevated iron and altered proteomic and functional markers. S. AGRAWAL*; J. H. FOX. *Univ. of Wyoming.*

3:00 W10 **417.07** Epigenetic and transcriptional dysregulation in prodromal Huntington's disease. F. YILDIRIM*; C. W. NG; J. CABOCHE; D. E. HOUSMAN; E. FRAENKEL. *Charité Med. Sch., MIT, Paris Seine INSERM, MIT.*

4:00 W11 **417.08** ● Aberrant CELF1 expression in Huntington's disease brain contributes to alternative splicing and changes in RNA stability. S. RAMACHANDRAN*; S. COFFIN; B. L. DAVIDSON. *Children's Hosp. of Philadelphia, The Children's Hosp. of Philadelphia.*

1:00 W12 **417.09** Disease-associated changes in huntingtin mRNA 3'UTR isoform abundance. L. ROMO*; E. PFISTER; A. ASHAR-PATEL; M. MOORE; N. ARONIN. *Umass Med. Sch., Umass Med. Sch.*

2:00 X1 **417.10** Recruitment of a transcriptional repressor to protein aggregates leads to de-repression of a pro-apoptotic gene activity and contributes to neuronal toxicity in polyglutamine diseases. Z. S. CHEN; S. PENG; Q. ZHANG; D. D. RUDNICKI; E. CHAN*. *The Chinese Univ. of Hong Kong, Johns Hopkins Univ. Sch. of Med.*

3:00 X2 **417.11** The implications of H3K9me3 in neuronal dysfunction underlying Huntington's disease. S. CHANDRASEKARAN*; Y. JIANG; E. LOH; R. H. MYERS; L. SHEN; S. AKBARIAN. *Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. At Mount Sinai, Boston Univ.*

4:00 X3 **417.12** Pias1 regulates mutant huntingtin accumulation and Huntington's disease-associated phenotypes *in vivo*. J. OCHABA*; A. MAS MONTEYS; E. L. MOROZKO; J. G. O'ROURKE; J. C. REIDLING; J. S. STEFFAN; B. L. DAVIDSON; L. M. THOMPSON. *Univ. of California Irvine, The Children's Hosp. of Philadelphia, Cedars-Sinai Med. Ctr., Univ. of California Irvine, The Univ. of Pennsylvania.*

1:00 X4 **417.13** Structural tissue changes and their effect on brain diffusion in the R6/2 mouse model of Huntington's disease. L. VARGOVA*; I. VORISEK; M. SYKA. *Charles University, 2nd Fac. of Med., Inst. of Exptl. Med.*

2:00 X5 **417.14** Age-related changes in cortical and striatal NADPH-diaphorase staining in the Q175 mouse model of Huntington's disease. F. E. PADOVAN NETO*; L. JURKOWSKI; C. MURRAY; A. WEST. *Rosalind Franklin Univ.*

3:00 X6 **417.15** Mechanisms underlying axonal transport deficits in Huntington's disease. M. KANG*; R. GATTO; C. WEISSMANN; N. MESNARD-HOAGLIN; S. T. BRADY; G. A. MORFINI. *Univ. of Illinois At Chicago, Marine Biol. Lab., Univ. of Illinois at Chicago.*

4:00 X7 **417.16** MID1-RNA interactions: Implications in Huntington's disease. J. SCHILLING*; A. DAGANE; I. ATANASSOV; E. WANKER; S. KRAUß. *DZNE, Max Delbrueck Ctr., MPI for Biol. of Aging.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 X8 **417.17** Yap and mst1 dysfunction: Implications for transcriptional dysregulation in Huntington's disease. A. DIOS*; K. MUELLER; K. GLAJCH; M. HUIZENGA; M. LAQUAGLIA; K. VAKILI; G. SADRI-VAKILI. *Massachusetts Gen. Hosp., Boston Children's Hosp.*

2:00 X9 **417.18** Huntingtin protein interactions evaluated in systems biology analyses among non-human animal models of Huntington's disease (HD) reveals the broad scope of neuronal functional protein networks potentially involved in HD. S. PODVIN*; V. HOOK. *UCSD, UCSD.*

3:00 X10 **417.19** Comparative study of HDL2 versus HD iPSC models. S. AKIMOV*; D. RUDNICKI; M. ENCARNACION; X. SUN; D. SAREEN; C. A. ROSS; R. L. MARGOLIS. *Johns Hopkins University, Sch. of Med., Johns Hopkins Univ. Krieger Sch. of Arts and Sci., GHM Inst. of CNS Regeneration, Jinan Univ., iPSC Core, Regenerative Med. Institute, Cedars-Sinai Med. Ctr.*

4:00 X11 **417.20** Uncovering mechanisms of gaba neuron degeneration using Huntington's disease ipscs. L. MA*; H. SAIYIN, 200433; X. WANG; L. GAO; J. LI; S. ZHANG; L. MA. *Fudan Univ., FUDAN UNIVERSITY, FUDAN UNIVERSITY, WISCONSIN UNIVERSITY.*

1:00 X12 **417.21** Inhibition of nonmuscle myosinIIB facilitates polyQ-aggregates and cellular toxicity in primary neurons and HD- iPSC-derived neurons. Y. LEE; W. JUNG; H. CHOI; M. JUN; Y. HUH; D. JANG; J. LEE*. *HANNAM Univ., Korea basic science institute, Kyungpook Natl. Univ., Hannam Univ.*

POSTER

418. Huntington's Disease Therapeutics

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 X13 **418.01** Exacerbated SIRT3 activity alters mitochondrial function and dynamics in Huntington's disease models. L. NAIA*; C. CARMO; A. M. OLIVEIRA; J. VALERO; C. LOPES; C. R. OLIVEIRA; T. R. ROSENSTOCK; A. C. REGO. *Center for Neuroscience and Cell Biology - CNC, Fac. of Medicine, Univ. of Coimbra, Inst. for Interdisciplinary Research, Univ. of Coimbra (IIIUC).*

2:00 X14 **418.02** Progress towards potent, selective and brain penetrant Rho kinase inhibitors suitable for a proof-of-concept study in HD models. G. MCALLISTER; O. AZIZ; C. LUCKHURST; I. ANGULO-HERRERA; W. BLACKABY; J. FRANCIS; A. HAUGHAN; H. KEARNEY; J. LIEBESCHUETZ; S. L. MARTIN; K. MATTHEWS; V. BEAUMONT; R. CACHOPE; M. MAILLARD; M. ROSE; I. MUNOZ-SANJUAN; C. DOMINGUEZ*. *Charles River, Charles River, CHDI Mgmt. Inc., CHDI Managment Inc.*

3:00 X15 **418.03** Potent, selective and brain penetrant ATM inhibitor suitable for a proof-of-concept study in HD models. O. LAZARI; P. BRECCIA; J. BATE; K. MATTHEWS; G. WISHART; H. VATER; S. L. MARTIN; H. COX; W. BLACKABY; G. MCALLISTER; D. YATES; D. F. FISCHER*; P. MILIANI DE MARVAL; L. TOLEDO-SHERMAN; R. CACHOPE; M. ROSE; I. MUNOZ-SANJUAN; C. DOMINGUEZ. *Charles River, Biofocus, Charles River, Charles River, CHDI Foundation/Management Inc.*

4:00 X16 **418.04** Therapeutic and disease-modifying effects of ganglioside GM1 in mouse models of Huntington's disease. M. ALPAUGH*; D. GALLEGUILLOS; L. C. MORALES; S. LACKEY; P. KAR; B. KERR; K. TODD; S. SIPIONE. *Univ. of Alberta.*

1:00 X17 **418.05** Chronic Class IIa HDAC inhibition only partially replicates the beneficial effects of HDAC4 genetic reduction in HD models. O. AZIZ; C. A. LUCKHURST; T. HEIKKINEN; O. KONTKANEN; G. TOMBAUGH; S. GELMAN; D. YATES; K. MATTHEWS; R. WILLIAMS; P. BRECCIA; M. LAMERS; R. JARVIS; A. HAUGHAN; D. FISCHER; G. MCALLISTER; W. BLACKABY; A. GHAVAMI; G. OSBORNE; D. GOODWIN; G. BATES; I. MUNOZ-SANJUAN; C. DOMINGUEZ; L. PARK; M. MAILLARD; V. BEAUMONT*. *Charles River, Charles River, Psychogenics Inc., Psychogenics Inc., Charles River, UCL Inst. of Neurol., CHDI Mgmt.*

2:00 X18 **418.06** Dual therapeutic benefits of selective-histone deacetylase 3 inhibition in Huntington's disease mice. N. SUELVES; L. KIRKHAM-MCCARTHY; R. S. LAHUE; S. GINES-PADROS*. *Med. School, Univ. of Barcelona, Inst. d' Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS), Ctr. de Investigación Biomédica en Red sobre Enfermedades Neurodegenerativas (CIBERNED), Inst. of Neurosciences, Univ. of Barcelona, Ctr. for Chromosome Biology, Natl. Univ. of Ireland Galway, NCBES Galway Neurosci. Centre, Natl. Univ. of Ireland Galway.*

3:00 Y1 **418.07** TRiC subunits enhance BDNF axonal transport and rescue striatal atrophy in Huntington's disease. X. ZHAO; X. CHEN; E. HAN; Y. HU; P. PAIK; Z. DING; J. OVERMAN; A. LAU; S. SHAHMORADIAN; W. CHIU; L. THOMPSON; W. C. MOBLEY*; C. WU. *UC San Diego, The Univ. of Texas MD Anderson Cancer Ctr., Univ. of California, Irvine, Baylor Col. of Med., Univ. of California San Diego Dept. of Neurosciences.*

4:00 Y2 **418.08** ▲ An efficient antibiotic inducible gene therapy system for Huntington's disease neurons. A. KOMARLA*; P. DENG; A. TORREST; J. APRILE; W. CARY; J. GUTIERREZ; W. GRUENLOH; G. ANNETT; T. TEMPKIN; V. WHEELOCK; D. J. SEGAL; J. NOLTA; K. FINK. *Univ. of California, Davis, Univ. of California, Davis, Univ. of California, Davis.*

1:00 Y3 **418.09** Behavioral and electrophysiological improvements following up-regulation of glt1 in the q175 Huntington's mouse model. K. D. BUNNER*; C. RANGEL-BARAJAS; B. M. MCCORMICK; S. J. BARTON; G. V. REBEC. *Indiana Univ.*

2:00 Y4 **418.10** Effect of GLT-1 up-regulation on striatal local field potential activity and motor performance. C. RANGEL BARAJAS*; K. D. BUNNER; S. J. BARTON; G. V. REBEC. *Indiana Univ.*

3:00 Y5 **418.11** Molecular mechanism underlying defective BDNF secretion from astrocytes expressingmutant huntingtin. Y. HONG*; T. ZHAO; X. LI; S. LI. *Emory Univ.*

4:00 Y6 **418.12** Immunoprecipitation and flow cytometry huntingtin lowering biomarkers. A. L. SOUTHWELL*; N. S. CARON; S. E. P. SMITH; Y. XIE; J. SONG; I. SEONG; B. R. LEAVITT; M. R. HAYDEN. *UBC-CMMT, Seattle Children's Res. Inst., KAIST, MGH.*

1:00 Y7 **418.13** Proteasome activator, PA28γ, improves motor coordination and proteasome function in Huntington's disease YAC128 mice. J. JANG*; J. JEON; W. KIM; O. ISACSON; H. SEO. *Hanyang Univ., McLean Hospital, Harvard Med. Sch.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 Y8 **418.14** Bexarotene activation of PPAR-δ ameliorates preclinical trial outcomes in Huntington's disease by promoting mitochondria metabolic function and autophagy. A. S. DICKEY*; D. SANCHEZ; N. LOMAS; K. R. SAMPAT; A. FLORES; W. FAN; N. ARBEZ; C. A. ROSS; R. M. EVANS; E. MASLIAH; A. R. LA SPADA. *Sanford Consortium - UCSD, Salk Inst., Johns Hopkins Univ. Sch. of Med.*

3:00 Y9 **418.15** ● Decreased of HSP 70, XIAP, ikbα, it15 genes expression and the CAG repeat expansion of animals treated with rnai in an experimental model of Huntington's disease. R. AVILES REYES*; G. SARMIENTO; P. PALACIOS; S. ANDRADE. *Univ. of Guayquil, Pontifical Catholic Univ.*

4:00 Y10 **418.16** Functional brain reorganization after exercise training in the CAG140 knock-in mouse model of Huntington's disease. D. P. HOLSCHNEIDER*; Z. WANG; D. P. STEFANKO; W. A. TOY; Y. GUO; G. M. PETZINGER; M. W. JAKOWEC. *USC, USC.*

1:00 Y11 **418.17** Pharmacological elevation of 2-arachidonoylglycerol brain levels rescues motivational dysfunction and accumbal correlates in a Q175 mouse model of Huntington's disease. H. M. DANTRASSY*; D. P. COVEY; N. E. ZLEBNIK; H. QADIR; E. COLE; M. A. ANAYA; I. GILDISH; J. F. CHEER. *Univ. of Maryland Sch. of Med., Univ. of Maryland Sch. of Med.*

2:00 Y12 **418.18** Exercise-enhanced neuroplasticity modifies disease progression in the CAG_{140} knock-in mouse model of Huntington's disease. M. W. JAKOWEC*; D. STEFANKO; Z. WANG; W. TOY; D. HOLSCHNEIDER; G. PETZINGER. *USC, USC.*

3:00 Y13 **418.19** L-theanine, a component of green tea spares striatal neurons from 3-NP induced neurotoxicity: Role of Nitric Oxide pathway. S. JAMWAL*, JR; P. KUMAR. *ISF Col. of Pharmacy, Moga.*

4:00 Y14 **418.20** Effect of amyloid precursor protein knock-down in the YAC128 mouse model of Huntington's disease. K. L. BERGGREN; S. AGRAWAL; J. A. FOX; R. NELSON; J. H. FOX*. *Univ. of Wyoming, Univ. of Wyoming.*

1:00 Y15 **418.21** Therapeutic delivery strategies for the apical domain of CCT1 in Huntington's disease. J. OVERMAN*; Z. CROOK; Z. TAN; A. LAU; L. JOACHIMIAK; E. SONTAG; A. TOMLINSON; J. REIDLING; B. DEVERMAN; C. GLABE; J. FRYDMAN; D. HOUSMAN; L. THOMPSON. *UC Irvine, Univ. of California, Irvine, MIT, Stanford Univ., Caltech.*

2:00 Y16 **418.22** Effects of PARP-1 inhibition on CREB-binding protein in the striatal neuronal subpopulations of the R6/2 mouse model of Huntington's disease. F. R. FUSCO*; E. PALDINO; A. CARDINALE; I. SAUVE; V. D'ANGELO; C. GIAMPÀ. *IRCCS Santa Lucia Fndn. Hosp., Univ. of Rome Tor Vergata, Catholic Univ. of Rome "Sacro Cuore".*

3:00 Y17 **418.23** Pridopidine treatment improves motor and psychiatric-like phenotypes in the YAC128 mouse model of Huntington disease. M. GARCIA-MIRALLES*; L. TAN; M. LIM; A. ORBACH; M. GEVA; M. HAYDEN; M. POULADI. *Translational Lab. In Genet. Med., Translational Lab. in Genet. Med., Res. and Development, Teva Pharmaceuticals, Ctr. for Mol. Med. and Therapeutics, Child and Family Res. Institute, Univ. of British Columbia.*

4:00 Y18 **418.24** Comparison of delivery modalities for *in vivo* administration of transcription activator like effectors in a Huntington's disease model. P. DENG*; A. E. KOMARLA; A. M. TORREST; J. A. APRILE; J. GUTIERREZ; G. M. ANNETT; D. J. SEGAL; J. A. NOLTA; K. D. FINK. *UC Davis, Stem Cell Program and Inst. for Regenerative Cures.*

1:00 Z1 **418.25** The effects of environmental enrichment on myelination and oligodendroglia in the YAC128 model of Huntington's disease. C. I. RADULESCU*; M. GARCIA-MIRALLES; C. FERRARI BARDILE; M. A. POULADI. *A*STAR Singapore.*

2:00 Z2 **418.26** Association between abnormal interhemispheric information transfer and corpus callosal structure in premanifest Huntington's disease. H. E. CRAWFORD*; A. MULICK CASSIDY; S. J. TABRIZI; R. I. SCAHILL. *Huntington's Dis. Res. Centre, UCL, London Sch. of Hyg. & Tropical Med.*

1:00 DP04 **418.27** (Dynamic Poster) Dynamic functional network connectivity differences between prodromal Huntington's disease & healthy control subjects. F. A. ESPINOZA; R. MILLER; E. MENNIGEN; V. M. VERGARA; J. A. TURNER; M. MISIURA; J. CIAROCHI; H. JOHNSON; J. D. LONG; J. BOCKHOLT; J. S. PAULSEN; V. CALHOUN*. *The Mind Res. Network, Georgia State Univ., Univ. of Iowa.*

POSTER

419. Apoptosis and Mitochondria

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 Z3 **419.01** Phosphorylation of respiratory chain components by mitochondrial c-Src is required for neuronal viability. M. OGURA*; J. YAMAKI; M. K. HOMMA; Y. HOMMA. *Fukushima Med. Univ. Sch. of Med.*

2:00 Z4 **419.02** Docosahexaenoic acid (DHA) protects Schwann cells against palmitic acid-induced lipotoxicity through P38 but not JNK MAPK. M. DESCORBETH*; M. DE LEON. *Loma Limda Univ., Loma Linda Univ.*

3:00 Z5 **419.03** Cysteine s-nitrosylation of neuroprotective protein prohibitin modulates mitochondrial dynamics in neurons. L. QIAN; Y. QU; G. MANFREDI; C. IADECOLA; P. ZHOU*. *Weill Med. Coll Cornell Univ.*

4:00 Z6 **419.04** Orexin A attenuates palmitic acid-induced hypothalamic cell death. C. M. DUFFY*; J. P. NIXON; T. A. BUTTERICK. *Univ. of Minnesota, Minneapolis Veterans Affairs Hlth. Care Syst., Minnesota Obesity Ctr.*

1:00 Z7 **419.05** A mitochondrial division inhibitor, Mdivi-1, inhibits mitochondrial fragmentation and attenuates kainic acid-induced hippocampal cell death. H. KIM*; J. LEE; K. PARK; W. KIM; G. ROH. *Gyeongsang Natl. Univ. Sch. of Med., Korea Natl. Inst. of Hlth.*

2:00 Z8 **419.06** Excessive D-serine mediates cell death in developing neuron. M. SUZUKI*; J. SASABE; S. AISO. *Keio Univ. Sch. of Med.*

3:00 Z9 **419.07** The adaptor protein p66shc regulates metabolism, ros production, and amyloid β sensitivity in cns cells. A. LONE*; R. C. CUMMING. *Western Univ., Western Univ.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 Z10 **419.08** Genetic manipulation of mTORC1 signaling in mouse cerebellar Purkinje cell. H. KASSAI*; Y. SAKAI; H. NAKAYAMA; T. MAEDA; K. HASHIMOTO; M. KANO; A. AIBA. *Univ. of Tokyo, Hiroshima Univ., Univ. of Tokyo, Univ. of Tokyo.*

1:00 Z11 **419.09** Bcl-XL knockout attenuates mitochondrial respiration and shifts cellular metabolism towards the pentose phosphate pathway. A. METHNER*; A. PFEIFFER; J. SCHNEIDER; A. DOLGA; T. VOSS; J. LEWERENZ. *Johannes Gutenberg Univ. Mainz, Johannes Gutenberg Univ., Univ. of Groningen, Univ. of Ulm.*

2:00 Z12 **419.10** Investigating the protective effects of mitochondrially targeted telomerase on neuronal metabolism and resistance to amyloid-β. O. S. SINGH*; R. C. CUMMING. *Western Univ.*

3:00 Z13 **419.11** Role of motochondrial oxidative stress and UCP2 in epilepsy experimental model induced by pilocarpine. M. B. NEJM*; M. MARQUES, 04034032; A. HAIDAR; F. SCORZA; E. CAVALHEIRO. *Federal Univ. of Sao Paulo, Federal Univ. of Sao Paulo.*

4:00 Z14 **419.12** Epigenetic regulation of endophilin-B1 promotes neuronal viability in response to disease and injury. R. S. MORRISON*; D. B. WANG; Y. KINOSHITA; C. KINOSHITA; R. LEE; S. P. MURPHY; B. L. SOPHER; G. A. GARDEN. *Univ. Washington, Univ. Washington.*

1:00 AA1 **419.13** Altered molecular processes of malignant peripheral nerve sheath tumors support the PTP closure state driving anti-apoptotic tumor progression. D. DANIELS*; B. C. PRUDNER; B. VAN TINE. *Washington Univ. In St. Louis, Washington Univ. in St. Louis.*

2:00 AA2 **419.14** Integrating systems biology and experimental neurology analysis to discover ovary-orientated protein ociad1 in alzheimer pathogenesis. X. LI*; T. LIU; L. WANG; Z. YIN; M. D. CYTOKOWISC; A. L. RIVERA; J. J. MANCUSO; H. ZHAO; S. POWELL; W. XIA; S. T. C. WONG. *Houston Methodist Res. Inst., Houston Methodist Res. Inst., Houston Methodist Hospital, Weill Cornell Med., Edith Nourse Rogers Mem. Veterans Hosp., Houston Methodist Hospital, Weill Cornell Med.*

3:00 AA3 **419.15** The highly electronegative low-density lipoprotein l5 impairs the neuritogenesis in ngf-induced pc12 cells. C. LEE*; C. LAI; J. WANG. *Hsin Sheng Junior Col. of Med. Care and Mana, Grad. Inst. of Medicine, Col. of Medicine,Kaohsiung Med. Univ.*

4:00 AA4 **419.16** PARP-1-dependent expression of pro-apoptotic factor bnip3 is mediated by hypoxia inducible factor-1α in hypoxic neurons. P. LU; S. ATOUI; C. M. ANDERSON*. *Univ. of Manitoba.*

1:00 AA5 **419.17** Rescue of visual function resulting from mitochondrial defects. G. CORTOPASSI*; S. DATTA; A. YU. *UC DAVIS, UC Davis.*

POSTER

420. Neurochemistry of Injury: Therapeutic Strategies

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 AA6 **420.01** Enhancing brain metabolism to restore functional connectivity and plasticity after TBI. G. KRISHNA*; Z. YING; L. F. F. ROYES; A. PAYDAR; N. G. HARRIS; F. GOMEZ-PINILLA. *Univ. of California, Federal Univ. of Santa Maria – UFSM, Univ. of California.*

2:00 AA7 **420.02** Perivascular macrophages mediate vascular oxidative stress and neurovascular dysfunction induced by amyloid-β through CD36 and NOX2. L. PARK*; L. GARCIA-BONILLA; K. UEKAWA; P. ZHOU; R. PITSTICK; L. YOUNKIN; S. YOUNKIN; G. CARLSON; C. IADECOLA. *Weill Cornell Med. Col., McLaughlin Res. Inst., Mayo Clin. Jacksonville.*

3:00 AA8 **420.03** Calpain 5, an overlooked calpain in CNS injuries. J. W. GEDDES*; V. BONDADA; C. MASHBURN; J. A. WANG; R. L. HILL; E. D. HALL; D. W. RODGERS. *Univ. Kentucky Med. Ctr.*

4:00 AA9 **420.04** Omega-3 fatty acids influence the onset and course of PTSD-like brain and behaviors following mild traumatic brain injury. A. OBENAUS; I. ALICEA-POLANCO; E. HADDAD; P. KALYAN-MASIH; J. D. VEGA-TORRES; E. KINNEY-LANG; M. DE LEON; J. D. FIGUEROA*. *Loma Linda Univ. Sch. of Med., Loma Linda Univ. Sch. of Med.*

1:00 AA10 **420.05** Interleukin-2 monoclonal antibody(JES6-1) attenuates cerebral ischemic injury via modulating T cell activation. Y. ZHOU*; P. LI; L. WANG; W. YU. *Renji Hosp., Renji Hospital, Shanghai Jiaotong Univ. Sch. of Med.*

2:00 AA11 **420.06** Acute upregulation of bone morphogenetic protein 4 regulates endogenous cell response and glial reactivity following spinal cord injury. C. HART*; S. M. DYCK; K. T. SANTHOSH; D. MILLER; S. KARIMI-ABDOLREZAEE. *Univ. of Manitoba, Univ. of Manitoba.*

3:00 AA12 **420.07** ● Conserved mechanisms underlying MultiStem® cell therapy across neurological injury and disease. B. T. LANG*; S. A. BUSCH; R. W. MAYS. *Athersys.*

4:00 AA13 **420.08** N-acetyl-l-cysteine reduces hypoglycemia-induced hippocampal neuronal death. A. KHO*; J. KIM; B. CHOI; M. SOHN; S. SUH. *Hallym Univ., Univ. of Manitoba, Inha Univ.*

1:00 AA14 **420.09** Effects of an acetylcholinesterase inhibitor, donepezil, on seizure-induced hippocampal neuronal death. J. JEONG*; B. CHOI; M. LEE; H. CHOI; H. SONG; S. SUH. *Hallym Univ., Kangdone Sacred Heart Hospital, Hallym Univ. Med. Ctr., Hallym University, Col. of Med.*

2:00 AA15 **420.10** Protocatechuic acid reduces traumatic brain injury-induced neuronal death. S. LEE*; B. CHOI; S. SUH. *Col. of Med.*

3:00 AA16 **420.11** Protective effects of potocatechuic acid on seizure-induced neuronal death. S. LEE*; B. CHOI; M. LEE; H. CHOI; H. SONG; M. SOHN; S. SUH. *Hallym Univ., Kangdone Sacred Heart Hospital, Hallym Univ. Med. Ctr., Hallym University, Col. of Med., Inha Univ.*

4:00 AA17 **420.12** Sphingosine 1-phosphate receptor 1 regulates retinal ganglion cell survival and axonal regeneration after optic nerve trauma. V. E. PERNET*; D. DALKARA; S. JOLY. *Ctr. De Recherche Chuq/Université Laval, Inserm UMR S968, Inst. de la vision- Sorbonne universités, UPMC université Paris 6, UMR S968-CNRS, UMR 7210.*

1:00 AA18 **420.13** Sirt1 regulates NG2 expressing progenitor proliferation after white matter injury. B. JABLONSKA*; M. GIERDALSKI; T. HAWLEY; M. CARTON; A. LICHAUCO; J. CABRERA-LUQUE; T. YUEN; D. ROWITCH; V. GALLO. *Children's Natl. Med. Ctr., Childrens Natl. Med. Ctr., George Washington Univ., Univ. of California, Univ. of California.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 BB1 **420.14** MMP inhibitor SB3CT reduces accumulation of chloride in injured neurons. V. I. DZHALA*; J. GLYKYS; K. STALEY. *Massachusetts Gen. Hosp.*

3:00 BB2 **420.15** An integral membrane phospholipid phosphate phosphatase, PLPPR1, overcomes chondroitin sulfate inhibition and promotes plasticity. C. AGBAEGBU*; H. KATAGIRI; H. GELLER; P. YU. *NIH\NHLBI, Jinan Univ.*

4:00 BB3 **420.16** Brain trauma disrupts peripheral metabolism and fructose potentiates these effects. Z. YING*; L. F. F. ROYES; G. KRISHNA; F. GOMEZ-PINILLA. *UCLA, Univ. Federal de Santa Maria, UCLA, UCLA.*

1:00 BB4 **420.17** ● Validation of lysophosphatidic acid as a target for patients with traumatic brain injury. J. WOJCIAK; N. SABBADINI; A. J. MORRIS; C. MORGANTI-KOSSMANN; A. PÉBAY; D. DEUTSCHMAN; R. A. SABBADINI*. *Lpath, Inc., San Diego State Univ., Lexington Veterans Affairs Med. Ctr., Monash Univ., Univ. of Melbourne.*

2:00 BB5 **420.18** Injury-induced alterations in amygdala e/i balance: Synaptic mechanisms. H. METHENY*; C. PALMER; A. COHEN. *Children's Hosp. of Philadelphia, Univ. of Pennsylvania.*

3:00 BB6 **420.19** Increased dentate gyrus net synaptic efficacy is not due to altered hilar evoked GABAergic transmission following mild traumatic brain injury. K. A. FOLWEILER*; H. METHENY; B. JOHNSON; A. COHEN. *Univ. of Pennsylvania, Children's Hosp. of Philadelphia.*

4:00 BB7 **420.20** Effects of traumatic brain injury and branched chain amino acid dietary therapy on spatial episodic-like memory. A. S. COHEN*; H. METHENY; G. XIONG; R. PATERNO. *Children's Hosp Philadelphia, Univ. of Pennsylvania, Children's Hosp Philadelphia.*

1:00 BB8 **420.21** Hyperglycemia increases basal and swelling-induced ROS production in C6 cells. A. K. EDUAFO; N. A. SEITZ; G. LI; C. A. WAKER; J. E. OLSON*. *Wright State Univ., Wright State Univ. Boonshoft Sch. Med.*

2:00 BB9 **420.22** Zinc chelation and Klf9 suppression additively promote long distance axon regeneration after optic nerve injury. E. F. TRAKHTENBERG*; Y. LI; Q. FENG; J. TSO; P. A. ROSENBERG; J. L. GOLDBERG; L. I. BENOWITZ. *Boston Children's Hospital, Harvard Med. Sch., Boston Children's Hospital, Harvard Med. Sch., Boston Children's Hospital, Harvard Med. Sch., Stanford Univ., Boston Children's Hospital, Harvard Med. Sch.*

3:00 BB10 **420.23** Adaptaquin is an inhibitor of oxygen-sensing prolyl-hydroxylases that abrogates ATF4-dependent death and improves outcomes from brain injury. S. S. KARUPPAGOUNDER*; I. ALIM; M. W. BOURASSA; C. C. THINNES; T. YEH; I. GAZARYAN; J. ZHONG; S. CHO; J. W. CAVE; C. J. SCHOFIELD; E. SHOHAMI; F. COLBOURNE; G. COPPOLA; R. R. RATAN. *Burke/Cornell Med. Res. Inst., Univ. of Oxford, The Hebrew University, Univ. of Alberta, Univ. of California at Los Angeles.*

4:00 BB11 **420.24** The mGluR2/3 receptor antagonist BCI-838 reverses anxiety-related behavioral traits in a rat model of blast-related mTBI. G. PEREZ-GARCIA*; R. DE GASPERI; M. GAMA SOSA; M. LASHOF-SULLIVAN; S. AHLERS; G. ELDER; S. GANDY. *Icahn Sch. of Med. At Mount Sinai, Icahn Sch. of Med. at Mount Sinai, Veterans Affairs Med. Ctr., Naval Med. Res. Ctr., Icahn Sch. of Med. at Mount Sinai, Icahn Sch. of Med. at Mount Sinai.*

1:00 BB12 **420.25** Changes in the pathology of head injury in mice with differing brain DHA levels. A. DESAI*; H. CHEN; K. KEVALA; H. KIM. *Natl. Inst. On Alcohol Abuse and Alcoholism, Natl. Inst. on Alcohol Abuse and Alcoholism, Natl. Inst. of Hlth.*

2:00 BB13 **420.26** ● Inhibition of cysteine proteases, especially cathepsin B, improves behavioral deficits, pathology and biomarkers in traumatic brain injury and trauma-related animal models. G. R. HOOK*; S. JACOBSEN; K. GRABSTEIN; M. KINDY; V. HOOK. *ALSP, Inc., AstraZeneca Neurosci., Univ. of Washington, Univ. of South Florida, UCSD.*

3:00 BB14 **420.27** Apathy following traumatic brain injury increases with damage to the dopamine system. P. O. JENKINS*; N. BOURKE; S. DE SIMONI; D. J. SHARP. *Imperial Col., Imperial Col.*

4:00 BB15 **420.28** Age-dependent effects of haptoglobin deletion in neurobehavioral and anatomical outcomes following traumatic brain injury. A. V. GLUSHAKOV*; R. A. ARIAS; E. TOLOSANO; S. DORE. *Univ. of Florida Col. of Med., Univ. of Florida, Univ. of Florida, Univ. of Torino, Univ. of Florida.*

1:00 BB16 **420.29** Myelin plasticity supports recovery of nerve conduction velocity after experimental traumatic brain injury. R. C. ARMSTRONG*; C. M. MARION; N. P. CRAMER; K. L. RADOMSKI; F. YU; Z. GALDZICKI. *Uniformed Services Univ. of the Hlth. Scienc.*

2:00 BB17 **420.30** New therapeutic treatment for traumatic brain injury: Targeting p75ntr as an immune-modulator after traumatic brain injury. S. LEE*; A. LIN; J. SACRAMENTO; N. SINGHAL; M. CASTEL; B. CANOLLE; S. DELBARY-GOSSART; B. FERZAZ; F. BONO-COLOMBIE; J. C. BRESNAHAN; M. S. BEATTIE. *UCSF, UCSF, Sanofi, Evotec.*

POSTER

421. Excitotoxicity and Calcium

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 BB18 **421.01** Identification of targetable steps to modulate nNOS/NOS1AP(CAPON)-dependent signalling mechanisms. L. LI*; M. JAAKKOLA; L. T. T. AN; L. L. ELO; M. J. COURTNEY. *Univ. of Eastern Finland, Neuronal Signalling Lab,Turku Ctr. for Biotechnology, Univ. of Turku and Abo Akademi Univ., Computat. Biomedicine Lab, Turku Ctr. for Biotechnology, Univ. of Turku and Abo Akademi Univ.*

2:00 CC1 **421.02** Endogenous extracellular zinc is neuroprotective against glutamate excitotoxicity mediated via NMDA receptors. R. F. KRALL*; K. HARTNETT; T. TZOUNOPOULOS; E. AIZENMAN. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

3:00 CC2 **421.03** Zn^{2+} triggered mitochondrial dysfunction depends upon entry via the mitochondrial Ca^{2+} uniporter. S. G. JI*; J. H. WEISS. *Univ. of California, Irvine, Univ. of California, Irvine.*

4:00 CC3 **421.04** Nicotinic receptors neuroprotect rat hypoglossal motoneurons from excitotoxicity evoked by glutamate uptake block. S. CORSINI; M. TORTORA; A. NISTRI*. *SISSA.*

1:00 CC4 **421.05** General anesthetics regulate autophagy and cell survival via modulating inositol 1,4,5 trisphosphate receptor. G. LIANG; G. REN; Y. ZHOU; D. J. JOSEPH*; B. YANG; S. INAN; M. YANG; A. KING; H. WEI. *Dept. of Anesthesiol. and Critical Care, Perelman Sch. of Medicine, Univ. of Pennsylvania, Children's Hosp. of Philadelphia.*

Mon. PM

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 CC5 **421.06** Trpc3 ion channel mediated calcium loading in mouse purkinje neurons. J. PARMAR*; A. J. CRAIG; M. KLUGMANN; G. VON JONQUIERES; L. BIRNBAUMER; A. J. MOORHOUSE; J. M. POWER; G. D. HOUSLEY. *UNSW Australia, UNSW Australia, Pontifical Catholic Univ. of Argentina (UCA), UNSW Australia.*

3:00 CC6 **421.07** ● Control of excitotoxic injury by mitochondrial glutamate oxidation. A. S. DIVAKARUNI; M. WALLACE; A. Y. ANDREYEV; I. J. REYNOLDS; C. M. METALLO; A. N. MURPHY*. *UCSD, UCSD, Teva Pharmaceuticals, UCSD.*

4:00 CC7 **421.08** ● Combined high throughput screening and high content analysis approaches to neuronal physiology/ pathology monitoring provide powerful tools for drug discovery. P. KITCHENER*; L. PAULHAC; F. SIMON. *Fluofarma.*

1:00 CC8 **421.09** Structural disassembly of ATP synthase and its role in mitochondrial permeability transition during glutamate induced neuronal death. N. MNATSAKANYAN*; H. PARK; J. WU; P. MIRANDA; E. A. JONAS. *Yale Univ.*

2:00 CC9 **421.10** Iron overload-induced calcum signals modulates mitochondrial fragmentation in mouse hippocampal neuron cells. D. LEE*; H. LEE; D. LEE. *Kyungpook Natl. Univ., Biomed. Res. Institute, Chung-Ang Univ. Col. of Med.*

3:00 CC10 **421.11** Intracellular calcium ($[Ca^{2+}]_i$) regulating proteins as targets for chemotherapy in neuroblastoma. D. BUSSELBERG*; J. E. MCCALLUM; E. VARGHESE; N. GOPINATH; S. VARGHESE; A. FLOREA. *Weill Cornell Med. Col. In Qatar, Univ. Düsseldorf.*

4:00 CC11 **421.12** Characterization of cross-resistance of cisplatin resistant neuroblastoma cells to other chemotherapeutic agents. A. M. FLOREA*; G. REIFENBERGER; D. BUSSELBERG. *Heinrich Heine Univ. Düsseldorf, Uniklinikum, Heinrich-Heine Univ. Dusseldorf, Weill Cornell Med. in Qatar.*

POSTER

422. Neuroprotective Mechanisms: Natural Products

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 DD1 **422.01** Cyto-protective and -toxic effects of Cordyceps militaris and cordycepin on rat CNS neurons and PC12 cells. K. TABATA; S. ITO; J. SONODA; K. TAKAKURA; K. NAGAI; M. SHIOZAKI; M. SHIBATA; M. KOIKE; Y. UCHIYAMA; T. GOTOW*. *Cell Biol., Col. Nutr., Koshien Univ., Cell. Biochem., Col. Nutr., Koshien Univ., Osaka Univ., Grad. Sch. of Med., Kagoshima Univ., Grad. Sch. of Med., Juntendo Univ., Grad. Sch. of Med., Juntendo Univ., Grad. Sch. of Med.*

2:00 DD2 **422.02** Korean red ginseng and ginsenoside-Rb1/-Rg1 alleviate experimental autoimmune encephalomyelitis by suppressing Th1 and Th17 cells and upregulating regulatory T cells. M. LEE*; M. JANG; J. CHOI; D. KIM; I. CHO. *Kyung Hee Uni., Col. of Korean Medicine, Kyung Hee Univ., Barrow Neurolog. Institute, St Joseph's Hosp. and Med. Ctr.*

3:00 DD3 **422.03** Involvement of activation of the Nrf2/ HO-1 signaling pathway in protection against amyloid $\beta_{25\text{-}35}$-induced neurotoxicity by sulfuretin. S. KWON*; S. LEE; C. JANG. *Sungkyunkwan Univ., Sungkyunkwan Univ.*

4:00 DD4 **422.04** ● Characterisation of dorsolateral prefrontal cortex microstructure following sodium azide induced Alzheimer's disease in rats: Kolaviron therapeutic mechanisms. O. J. OLAJIDE*; O. B. AKINOLA; S. R. PRICE; B. U. ENAIBE. *Univ. of Ilorin, Univ. Col. London.*

1:00 DD5 **422.05** The neuroprotective effects and possible mechanism of action of a methanol extract from Asparagus cochinchinensis: *In vitro* and *in vivo* studies. A. JALSRAI*; T. NUMAKAWA; H. KUNUGI; D. DIETERICH; A. BECKER. *Ctr. of Traditional Med., Natl. Inst. of Neuroscience, Natl. Ctr. of Neurol. and Psychiatry, Tokyo, Inst. of Pharmacol. and Toxicology.*

2:00 DD6 **422.06** Curcumin inhibits the activation and translocation of NF-kB in rat hippocampus after experimental exposure to ozone. S. D. NERY-FLORES*; M. L. MENDOZA-MAGAÑA; M. A. RAMÍREZ-HERRERA; J. J. RAMÍREZ-VÁZQUEZ; M. M. J. ROMERO-PRADO; A. A. RAMÍREZ-MENDOZA; L. HERNÁNDEZ-HERNÁNDEZ. *Univ. De Guadalajara.*

3:00 DD7 **422.07** Mitochondrial targets of nobiletin and dieckol in the regulation of neuronal cell survival and death. J. LEE; S. EUN*; J. WU; K. AMARSANAA; S. JEON; S. JUNG. *Cheju Natl. Univ. Coll Med.*

4:00 DD8 **422.08** Neuroprotective role of Thymoquinone in hippocampal cultures. S. M. SHAIKH*; M. S. RAO; S. SMITHA. *Dr. D.Y. PATIL BIOTECHNOLOGY & BIOINFORMATICS INST, Fac. of Medicine, Kuwait Univ.*

1:00 DD9 **422.09** Comparison of the neuroprotective effects of phenolic acid metabolites of berry anthocyanins in cerebellar granule neurons. E. IGNOWSKI*; A. WINTER; M. BRENNER; M. SNODGRASS; D. LINSEMAN. *Univ. of Denver.*

2:00 DD10 **422.10** ▲ Curcumin is able to reverse the inhibition of neurotransmitter release by β amyloid oligomers at choroidal synapses in the embryonic avian eye. J. QUINN; O. ANDERSON; M. RAJSOMBATH; D. GRAY*. *Simmons Col., Simmons Col., Simmons Col., Simmons Col.*

POSTER

423. Neurotoxic Agents

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 DD11 **423.01** Ceramide contributes to cognitive impairment and palmitate induced apoptosis in hippocampal cell culture. C. WANG*; T. A. BUTTERICK; V. MAVANJI; C. M. DUFFY; M. R. LITTLE; E. E. NOBLE; J. P. NIXON; C. J. BILLINGTON; C. M. KOTZ. *Minneapolis VA Hlth. Care Syst., Univ. of Minnesota, Minnesota Obesity Ctr., Univ. of Minnesota, Univ. of Minnesota, Univ. of Minnesota.*

2:00 DD12 **423.02** Understanding the effects of TDP43 C-terminal fragments. Y. T. KASU*; C. S. BROWER. *Texas Woman's Univ.*

3:00 DD13 **423.03** Chronic iron overload and deficiency in adult male c57b6 mice. D. G. PETERS*; J. R. CONNOR; Q. X. YANG; M. D. MEADOWCROFT. *The Pennsylvania State Univ. - Col. of Med., The Pennsylvania State Univ. - Col. of Med., The Pennsylvania State Univ. - Col. of Med.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 DD14 **423.04** Early exposure to general anesthesia impairs the presynaptic machine for neurotransmitter release. N. LUNARDI*; H. P. OSURU; A. OKLOPCIC; P. DIANA; C. DEFREITAS; V. JEVTOVIC-TODOROVIC. *Univ. of Virginia Hlth. Syst., Univ. of Colorado, Denver, Univ. of Virginia, Universita' degli Studi di Padova.*

1:00 DD15 **423.05** Inhaled anesthetic sevoflurane-induced up-regulation of pro-apoptosis proteins in infant monkey brains. Q. GU*; F. LIU; S. SARKAR; S. LIU; J. KANUNGO; C. WANG; W. SLIKKER, Jr.; M. G. PAULE. *FDA Natl. Ctr. for Toxicological Res.*

2:00 DD16 **423.06** Levetiracetam mitigates doxorubicin-induced DNA and synaptic damage in neurons. J. F. MORUNO MANCHON*; Y. DABAGHIAN; N. UZOR; S. R. KESLER; J. S. WEFEL; A. S. TSVETKOV. *Univ. of Texas Med. Sch., The Jan and Dan Duncan Neurolog. Res. Institute, Baylor Col. of Medecine, Rice Univ., The Univ. of Texas Grad. Sch. of Biomed. Sci., M.D. Anderson Cancer Ctr.*

3:00 DD17 **423.07** Mitochondrial complex 1 mutation causes anesthetic-induced mortality in fruit flies. M. PEROUANSKY*; C. LOEWEN; Z. OLUFS; B. GANETZKY. *Univ. of Wisconsin Madison Dept. of Anesthesiol., Univ. Wisconsin Madison, Univ. of Wisconsin, Univ. of Wisconsin.*

4:00 EE1 **423.08** Bortezomib induced apoptosis of adult neural stem cells and post-chemotherapy cognitive impairment in mice. P. HUEHNCHEN*; W. BOEHMERLE; M. ENDRES. *Charite Universitaetsmedizin Berlin, Berlin Inst. of Hlth., Cluster of Excellence NeuroCure, Ctr. for Stroke Res. Berlin, German Ctr. for Neurodegenerative Dis.*

1:00 EE2 **423.09** Effect of lead on the expression of metallothionein-3 in the brain of young rats. A. RAHMAN*; K. KHAN. *Kuwait Univ., Fac. of Medicine, Kuwait Univ.*

2:00 EE3 **423.10** Abnormal visual function in a mouse model of hemochromatosis with retinal iron loading. E. A. MILWARD*; A. SHAHANDEH; D. M. JOHNSTONE; A. BRANDLI. *The Univ. of Newcastle, Univ. of Sydney, Univ. of Melbourne.*

3:00 EE4 **423.11** The effect of an organophosphorus agent on human neuroblastoma cell line SK-N-SH. Y. YAMADA*; K. YAMADA; H. SHIRAISHI; A. NAMERA; Y. ARIMA; M. NAGAO. *Fac. of Engineering, Kindai.Univ., Daiyukai.First Hosp. Dept. of Gynecol. and Obstet., Inst. of Biomed. and Hlth. Sciences.*

4:00 EE5 **423.12** Propofol affects neurodegeneration and neurogenesis by regulation of autophagy via its effects on intracellular calcium homeostasis. H. QIAO; Y. LI; Z. XU; W. LI; Z. FU; G. LIANG; H. WEI*. *The Eye Ear Nose and Throat Hosp. of Fudan Univ., Univ. Pennsylvania, Provincial Hosp. Affiliated to Shandong Univ., First Maternity and Infant Hospital, Tongji Univ. Sch. of Med.*

1:00 EE6 **423.13** Aspartame causes dose dependent hippocampal injury in adult male mice. P. U. NWOHA*; A. Y. ONAOLAPO. *Obafemi Awolowo Univ., Ladoke Akintola Univ. of Technol.*

2:00 EE7 **423.14** The effects of silica nanoparticles on affective and cognitive behaviors, and on synapse *in vivo* and *in vitro*. R. YOU*; S. S. Y. CHENG; C. H. L. HUNG; Y. S. HO; R. C. C. CHANG. *Lab. of Neurodeg. Dis., Sch. Biomed. Sci., HKU, Inst. of Chinese Med. Sciences, Univ. of Macau, Sch. of Nursing, Fac. of Hlth. and Social Sciences, The Hong Kong Polytechnic Univ., Res. Ctr. of Heart, Brain, Hormone and Healthy Aging, LKS Fac. of Medicine, HKU, State Key Lab. of Brain and Cognitive Sciences, HKU.*

3:00 EE8 **423.15** The effect of arsenic exposure on behavior in rats of various age groups and on pups development. T. BIKASHVILI*; T. LORDKIPANIDZE; N. GOGICHAISHVILI; N. POCHKHIDZE. *I.Beritashvili Ctr. of Exptl. Biomedicine, Ilia State Univ.*

4:00 EE9 **423.16** β-N-Methylamino-L-alanine interferes with metabolic pathways related to neurotransmission in human SH-SY5Y neuroblastoma cells as determined by metabolic profiling. L. ERSSON*; M. K. R. ENGSKOG; J. HAGLÖF; T. ARVIDSSON; C. PETTERSSON; E. BRITTEBO. *Uppsala Univ., Uppsala Univ., Med. Product Agency, Uppsala Univ.*

1:00 EE10 **423.17** Depressive-like behavior in adult rats chronically exposed to a glyphosate-based herbicide: Involvement of glutamatergic excitotoxicity and oxidative stress. D. CATTANI*; P. A. DE OLIVEIRA; R. D. S. PREDIGER; E. B. PARISOTTO; D. WILHELM FILHO; A. Z. PACHECO DE SOUZA. *Federal Univ. of Santa Catarina, Federal Univ. of Santa Catarina.*

2:00 EE11 **423.18** ● Assessing drug neurotoxicity and functional mode of action using high-throughput MEA recording from human iPSC neurons combined with multivariate spike train analysis. K. JÜGELT*; A. STEDER; O. H. U. SCHROEDER; B. M. BADER. *NeuroProof GmbH.*

3:00 EE12 **423.19** A rat model of nerve agent exposure applicable to the pediatric population: The anticonvulsant efficacies of atropine and GluK1 antagonists. J. P. APLAND*; S. L. MILLER; V. ARONIADOU-ANDERJASKA; T. H. FIGUEIREDO; E. M. PRAGER; C. P. ALMEIDA-SUHETT; M. F. M. BRAGA. *USAMRICD, USUHS, USUHS, USUHS, USUHS.*

4:00 EE13 **423.20** Pupillary light response in guinea pigs and swine exposed to organophosphate agents. E. D. CLARKSON; M. C. MOFFETT*; J. E. MORGAN; K. H. SMITH; S. M. SCHULZ; J. K. CHANDLER; C. L. ROUSAYNE; C. KOLANKO. *USAMRICD, Eyemarker Systems, Inc.*

1:00 EE14 **423.21** Investigation of the resistance to glutamate-induced excitoxicity in mouse motor neuron-like NSC-34 cells on graphene oxide films. G. SENGUL*; S. TASDEMIR; P. CORUK; B. KAYHAN; A. SENDEMIR URKMEZ. *Ege Univ. Sch. Med., Ege University, Fac. of Engin., Ege University, Inst. of Hlth. Sci., Ege University, Fac. of Engin. and Ege University, Grad. Sch. of Natural and Applied Sci.*

2:00 EE15 **423.22** Inhibition of necroptosis by treatment with necrostatin-1 or RIP1 siRNA potentiates taxol-induced neuronal death via the activation of ERKs in mouse cortical cultures. J. KIM*; S. HWANG. *Chonnam Nat'l Univ. Med. Sch.*

3:00 EE16 **423.23** Sex differences in oxaliplatin induced neuropathic pain behaviors. L. CHEN*; M. SHEN. *Natl. Cheng Kung Univ., Natl. Cheng Kung Univ.*

4:00 EE17 **423.24** The neurocognitive effects of vanadium in young male rats. M. F. DE BUTTE*. *West Texas A&M Univ.*

1:00 EE18 **423.25** ▲ Impact of aflatoxin B1 on hypothalamic neuropeptides regulating feeding behavior. F. TREBAK*; A. ALAOUI; D. ALEXANDRE; S. ELOUEZZANI; Y. ANOUAR; N. CHARTREL; R. MAGOUL. *DC2N Inserm U982 Rouen Univ., Lab. of Neuroendocrinology & Nutritional and climatic Environment, Univ. Sidi Mohamed Ben Abdellah, Fac. of Sci. DM.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 FF1 **423.26** Parkin dependent mitophagy rescues retinal ganglion cell from ethambutol induced apoptosis. B. LEE*; H. JUN; J. KIM; J. KIM. *Seoul Natl. Univ., Seoul Natl. Univ. Hosp.*

3:00 FF2 **423.27** Additive deficits on egocentric and allocentric learning induced after developmental manganese overexposure combined with 6-hydroxydopamine striatal lesions. R. A. BAILEY*; A. GUTIERREZ; J. R. HUFGARD; T. L. KYSER; A. M. HEMMERLE; K. B. SEROOGY; C. V. VORHEES; M. T. WILLIAMS. *Cincinnati Children's Hosp. Med. Ctr., Univ. of Cincinnati, Univ. of Cincinnati Col. of Med.*

4:00 FF3 **423.28** Effects of testosterone on cell death and cognitive deficits following postnatal exposure to isoflurane. J. SASAKI RUSSELL*; J. LEONG; M. ROTMAN; J. CHAN; J. SALL. *Univ. of California, San Francisco.*

1:00 FF4 **423.29** Resting State fMRI of Gulf War Illness patients reveals abnormal connectivity within and between different brain function networks consistent with the multi-symptom illness. K. GOPINATH*; V. KRISHNAMURTHY; L. KRISHNAMURTHY; B. THAPA-CHETRY; L. OUYANG; A. GOYAL; P. GANDHI; Y. FANG; R. BRIGGS; R. HALEY. *Emory Univ., Univ. of Texas Southwestern Med. Ctr., Univ. of Florida.*

2:00 FF5 **423.30** Neurodevelopmental effects of organophosphate pesticide exposure. E. A. FRADINGER*; B. AHN; G. X. GARCIA; H. R. SCHMIDT; H. GARCIA; O. MAC; D. B. BOURGAIZE. *Whittier Col.*

POSTER

424. Neuroprotection in Models of Immune Mediated Demyelination

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 FF6 **424.01** ▲ Noggin inhibits bmp signaling in oligodendrocyte progenitor cells to repress transdifferentiation into astrocytes. H. STRASBURGER*; L. KIRBY; J. SCHOTT. *Johns Hopkins Hosp., Johns Hopkins Neuroimmunology.*

2:00 FF7 **424.02** Neuroprotective effect of melatonin in experimental optic neuritis in rats. M. L. ARANDA*; M. F. GONZALEZ FLEITAS; M. I. KELLER SARMIENTO; M. S. CHIANELLI; P. H. SANDE; D. DORFMAN; R. E. ROSENSTEIN. *CEFyBO - CONICET.*

3:00 FF8 **424.03** Serum factors as predictors of interferon-α (IFN-α)-induced depression. A. BORSINI*; P. ZUNSZAIN; C. PARIANTE; S. THURET. *King's Col. London.*

4:00 FF9 **424.04** Pivotal role of the macrophage colony stimulating factor (CSF1) in experimental allergic encephalomyelitis. N. BORJINI*; M. FERNANDEZ; L. GIARDINO; L. CALZÀ. *Chiesi Farmaceutici SpA, Univ. of Bologna, IRET Fndn., Univ. of Bologna, Univ. of Bologna.*

1:00 FF10 **424.05** Persistent cytokine production induced in the cerebral meninges in a rat model of MS gives rise to chronic cortical pathology. R. REYNOLDS*; R. JAMES; E. BROWNE; L. FUENTES; N. MAZARAKIS. *Imperial Col. London.*

2:00 FF11 **424.06** Beneficial effects of nimodipine in EAE. A. SCHAMPEL*; S. KUERTEN. *Univ. of Wuerzburg, Univ. of Wuerzburg.*

3:00 FF12 **424.07** Altered functional Connectivity of striatal subregions in patients with multiple sclerosis. F. CUI*; L. ZHOU; K. JORGENSON; Z. WANG; Y. YU; Y. GAO; J. KONG. *Massachusetts Gen. Hospital/Harvard Med. Sch., Dongzhimen Hosp.*

4:00 FF13 **424.08** ● The effect of ONO-2952, a novel translocator protein 18 kDa antagonist, in a mouse model of multiple sclerosis. M. ISHISAKA; T. KOMIYA; T. KITAJIMA; A. KISHI*; S. KATSUMATA. *ONO Pharmaceut. Co., Ltd.*

1:00 FF14 **424.09** Local administration of TH2 cells into the CNS ameliorates the inhibitory effects of IFNg on remyelination. L. A. KIRBY*; M. SMITH; J. SCHOTT; P. CALABRESI. *Johns Hopkins.*

2:00 FF15 **424.10** Astrocyte remodeling precedes extracellular matrix modifications in the glial lamina of mice with glaucomatous optic neuropathy. R. A. FISCHER*; H. L. MALLARO; E. S. BUYS; R. M. SAPPINGTON. *Vanderbilt Univ., Vanderbilt Univ., Vanderbilt Univ. Med. Ctr., Massachusetts Gen. Hosp. and Harvard Med. Sch., Massachusetts Gen. Hosp. and Harvard Med. Sch., Massachusetts Gen. Hosp. and Harvard Med. Sch., Massachusetts Gen. Hosp. and Harvard Med. Sch.*

3:00 FF16 **424.11** Cuprizone treatment, toxic demyelination, and the blood-brain barrier. J. SHELESTAK*; R. CUKELJ; N. SINGHAL; J. MCDONOUGH; E. FREEMAN; R. CLEMENTS. *Kent State Univ., Kent State Univ.*

4:00 FF17 **424.12** Increased expression of specific NKG2D ligand in a mouse model of multiple sclerosis. L. LEGROUX*; S. VERSTRAETEN; G. DEBLOIS; A. MOHEBIANY; D. BEAUSEIGLE; N. ARBOUR. *CRCHUM, Univ. De Montréal.*

1:00 FF18 **424.13** Increased gabaergic inhibition through α5-subunit containing $GABA_a$rs contributes to impaired hippocampal synaptic plasticity in eae. L. G. KAMMEL*; W. WEI; R. VOSKUHL; T. O'DELL. *David Geffen Sch. of Medicine, UCLA, David Geffen Sch. of Medicine, UCLA, David Geffen Sch. of Medicine, UCLA.*

2:00 GG1 **424.14** ▲ Molecular MRI reveals pselectin protein as a predictive marker in experimental autoimmune encephalomyelitis. R. M. MACREZ*; A. QUESNAULT; A. QUESNAULT. *GIP Cyceron Inserm U919, INSERM U919.*

3:00 GG2 **424.15** Estrogen receptor β (ERβ) on $CD11c^+$ cells is required for ERβ-ligand mediated neuroprotection during experimental autoimmune encephalomyelitis. R. KIM*; N. ITOH; A. HOFFMAN; R. KOVASH; R. VOSKUHL. *UCLA, UCLA, UCLA.*

4:00 GG3 **424.16** Oligodendrocyte lineage tracing in a multiple sclerosis mouse model—a cuprizone-fed mouse transferred with myelin-reactive th17 cells. J. JIN*; M. SMITH; D. HEO; M. POUDEL; D. TOSI; E. BAXI; D. BERGLES; P. A. CALABRESI. *Johns Hopkins Univ. Sch. of Med.*

1:00 GG4 **424.17** Role of RhoA in T cell adhesion and migration in an experimental model of multiple sclerosis. A. MANRESA ARRAUT*; H. HASSELDAM; F. F. JOHANSEN. *Biotech Res. & Innovation Ctr.*

2:00 GG5 **424.18** Strain differences in sensitivity to cuprizone induced demyelination. Q. YU*; R. HUI; Y. HUANG; A. KUSNECOV; C. F. DREYFUS; R. ZHOU. *Rutgers, Rutgers, Rutgers.*

3:00 GG6 **424.19** Interferon γ-stimulated human dendritic cells produce promyelinating exosomes and replicate rodent studies. K. M. PUSIC*; L. WON; A. D. PUSIC; R. P. KRAIG. *Univ. of Chicago, Univ. of Chicago.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 GG7 **424.20** Anti-neuroinflammatory effect of VB037 in experimental autoimmune encephalomyelitis model. H. LI*; Y. LO; K. CHANG. *Chang-Gung Mem. Hosp.*

1:00 GG8 **424.21** AdipoR agonist, AdipoRon, decreases lipid accumulation and ameliorates the functions of myelin-laden macrophages. X. SUN*; Q. ZHOU; H. XIANG; A. LI; C. QIN; X. CHEN; Y. REN. *Jinan Univ., Inst. of Inflammation and Diseases, the First Affiliated Hosp. of Wenzhou Med. Univ., Dept. of Biomed. Sciences, Florida State Univ. Col. of Med.*

2:00 GG9 **424.22** Interactions between stress-induced modifications of intestinal inflammation and the occurrence of EAE relapses. A. FOURNIER*; M. NEUNLIST; D. VIVIEN; R. MACREZ; F. DOCAGNE. *INSERM U919, INSERM U913.*

3:00 GG10 **424.23** Opposite functions of microglial and monocyte/macrophagial TNFR2 in EAE pathogenesis: The good versus the bad. H. GAO*; M. DANZI; C. S. CHOI; M. TAHERIAN; C. DALBY-HANSEN; D. G. ELLMAN; P. M. MADSEN; J. L. BIXBY; V. P. LEMMON; K. L. LAMBERTSEN; R. BRAMBILLA. *Univ. of Miami, Columbia Univ., Univ. of Southern Denmark.*

4:00 GG11 **424.24** Mitoxantrone prevents disease relapse in a rat model of multiple sclerosis. E. ANDRIAMBELOSON*; J. BINDLER; C. NEVEU; L. BOURGOIN; L. GORJ; B. HUYARD; N. KADOUCI; F. LAUGA; E. POIRAUD; S. WAGNER. *NEUROFIT.*

1:00 GG12 **424.25** Therapeutic estrogen receptor β (ERβ) ligands modulate peripheral cytokines and may be responsible for remyelination in a mouse model of multiple sclerosis. H. KARIM*; J. HASSELMANN; N. YASUI; J. KATZENELLENBOGEN; S. TIWARI-WOODRUFF. *Univ. of California, Riverside, Univ. of Illinois.*

2:00 GG13 **424.26** The contribution of dysfunctional hnRNP A1 and anti-hnRNP A1 antibodies to MS pathogenesis. H. SALAPA*; S. LEE; Y. SHIN; M. C. LEVIN. *Univ. of Tennessee Hlth. Sci. Ctr.*

3:00 GG14 **424.27** ● Temporal changes in the glial response mechanism in the Cuprizone/Rapamycin model of Multiple Sclerosis. M. MADDIE*; D. CHMURA; S. LUNN; H. BATTAPADY; S. MEDICETTY; B. TRAPP. *Renovo Neural, Cleveland Clin. Fndn.*

4:00 HH1 **424.28** Ketone body esters as a therapeutic strategy for canavan disease. A. P. APPU*; P. ARUN; J. R. MOFFETT; J. K. KRISHNAN; A. M. NAMBOODIRI. *Uniformed Services Univ. of Hlth. Sci.*

1:00 HH2 **424.29** Neuronal antigen specific T cells modulate CNS inflammation during autoimmunity. A. RAYASAM*; M. HSU; M. DALLMANN; J. KIJAK; N. ZINDL; M. SANDOR; Z. FABRY. *Univ. of Wisconsin - Madison, Univ. of Wisconsin-Madison, Univ. of Wisconsin-Madison.*

2:00 HH3 **424.30** Erythropoietin upregulates brain hemoglobin expression and levels of H3K4me3. N. K. SINGHAL*; K. ALKHAYER; J. SHELESTEK; R. CLEMENTS; E. FREEMAN; J. MCDONOUGH. *Kent State Univ.*

3:00 HH4 **424.31** Intrathecal delivery of primary progressive MS cerebrospinal fluid induces behavioral deficits and spinal cord pathology in mice. J. K. WONG*; M. ALAHIRI; S. S. SADIQ. *Tisch MS Res. Ctr. of New York.*

POSTER

425. Stroke Recovery Activity-Dependent Mechanisms

Theme C: Neurodegenerative Disorders and Injury

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 HH5 **425.01** Differences in audio and visual working memory during computerized cognitive rehabilitation in chronic stroke survivors. E. M. WALLACK*; L. P. KELLY; A. J. DEVASAHAYAM; T. CHATTERJEE; M. B. DOWNER; J. MCCARTHY; G. A. ESKES; B. ABRAHA; S. M. M. HASAN; A. R. CHAVES; H. D. WISEMAN; J. DAWE; M. PLOUGHMAN. *Mem. Univ., Dalhousie Univ.*

2:00 HH6 **425.02** Maximal exercise does not increase brain derived neurotropic factor (BDNF) in chronic stroke survivors: Association with resting energy metabolism and peak oxidative capacity. L. P. KELLY*; A. J. DEVASAHAYAM; E. M. WALLACK; B. ABRAHA; J. MCCARTHY; M. B. DOWNER; S. M. M. HASAN; F. A. BASSET; M. PLOUGHMAN. *Mem. Univ.*

3:00 HH7 **425.03** Can circulating BDNF levels discriminate high from low impairment in chronic stroke survivors? B. ABRAHA*; E. M. WALLACK; L. P. KELLY; A. J. DEVASAHAYAM; T. CHATTERJEE; S. GRANTER-BUTTON; J. MCCARTHY; M. PLOUGHMAN. *Mem. Univ.*

4:00 HH8 **425.04** ▲ Is BDNF response to maximal exercise associated with performance in cognitive rehabilitation training in chronic stroke survivors? H. D. WISEMAN*; M. B. DOWNER; B. ABRAHA; E. M. WALLACK; T. CHATTERJEE; L. P. KELLY; A. J. DEVASAHAYAM; A. R. CHAVES; J. MCCARTHY; M. PLOUGHMAN. *Mem. Univ.*

1:00 HH9 **425.05** Anti-inflammatory activity of adiponectin function on BBB after intracerebral hemorrhage. X. YANG*; H. JANG; Y. KIM; I. CHOI; S. LEE; B. YOON. *The Seoul Natl. Univ. Hosp., Seoul Natl. Univ., Seoul Natl. Univ., Seoul Natl. Univ.*

2:00 HH10 **425.06** Activity-dependent regulation of neurogenesis after stroke. H. LIANG*; S. T. CARMICHAEL, 90066. *Univ. of California Los Angeles Dept. of Neurol., UCLA.*

3:00 HH11 **425.07** Customary exercise prevents the poststroke memory dysfunction by constitutive elevation of hippocampal BDNF. N. HIMI*; N. OKABE; E. NAKAMURA-MARUYAMA; H. TAKAHASHI; T. KOGA; K. NARITA; O. MIYAMOTO. *Kawasaki Med. Sch., Kawasaki Univ. of Med. Welfare.*

4:00 HH12 **425.08** Kinect-based upper extremity training is effective for individuals with stroke: Outcomes and participants' perspective. W. LIAO*; S. MCCOMBE WALLER; R. FELDMAN; J. WHITALL. *Univ. of Maryland Baltimore, Univ. of Southampton.*

1:00 HH13 **425.09** Stroke induced brain morphological changes and the influence of physical exercise. S. GULL; S. SCHMIDT; K. HERRMANN; C. FRAHM; J. REICHENBACH; C. GASER; O. W. WITTE*. *Friedrich Schiller Univ. Jena, Friedrich Schiller Univ. Jena, Friedrich Schiller Univ. Jena, Friedrich Schiller Univ. Jena.*

2:00 HH14 **425.10** Short bouts of exercise before ischemic stroke ameliorate behavioral and histological outcomes by enhancing angiogenesis. S. PIANTA*; H. NGUYEN; S. MASHKOURI; D. AUM; X. KAYA; N. TAJIRI; S. ACOSTA; J. LEE; C. V. BORLONGAN. *Univ. of South Florida Col. of Med.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 HH15 **425.11** Effects of repetitive passive ankle stretch applied with a pneumatic robot on soleus h-reflex excitability. S. NOBLE*; G. E. P. PEARCEY; C. QUARTLY; P. E. ZEHR. *Univ. of Victoria, Rehabil. Neurosci. Lab., Intl. Collaboration On Repair Discoveries, Vancouver Island Hlth. Authority, Univ. of Victoria.*

4:00 HH16 **425.12** Dysfunctional Notch 3 signaling inhibits the mediation of beneficial effects of physical activity and enriched environment on adult neurogenesis in a transgenic CADASIL mouse model. C. KLEIN*; S. SCHREYER; F. E. KOHRS; P. EL HAMOURY; A. PFEFFER; T. MUNDER; F. EHRET; G. KEMPERMANN; B. STEINER. *Charité Neurol., Ctr. for Regenerative Therapies Dresden.*

1:00 HH17 **425.13** Post stroke bimanual performance relates to corpus callosum properties. A. M. AURIAT*; J. LAU; J. K. FERRIS; J. L. NEVA; L. A. BOYD. *Univ. of British Columbia, Univ. of British Columbia.*

2:00 II1 **425.14** Robot-assisted mechanical therapy protects against stroke-induced skeletal muscle injury. C. L. RINK*; M. BALCH; H. HARRIS; S. GNYAWALI; C. K. SEN; S. KHANNA. *The Ohio State Univ. Wexner Med. Ctr.*

3:00 II2 **425.15** Delayed administration of citalopram is associated with long-lasting motor improvements and promotes brain remodelling in an experimental model of stroke. S. CHEN; L. BENNET; A. L. MCGREGOR*. *Univ. of Auckland, Univ. of Auckland, Univ. of Otago.*

POSTER

426. Peripheral Neuropathy: Mechanisms and Interventions

Theme D: Sensory Systems

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 II3 **426.01** ● Long-term recovery from chemotherapy-induced neuropathy following paclitaxel, ixabepilone, eribulin and vinorelbine in mice. K. M. WOZNIAK*; Y. WU; Y. LIU; R. WEINBERG; V. CAROZZI; G. FUMAGALLI; P. ALBERTI; B. COOK; S. BENBOW; B. A. LITTLEFIELD; K. NOMOTO; L. WILSON; M. A. JORDAN; S. FEINSTEIN; S. ECKLEY; C. DEJARDINS; G. CAVALETTI; J. MANKOWSKI; M. POLYDEFKIS; B. S. SLUSHER. *Johns Hopkins Sch. of Med., Johns Hopkins Med. Sch. of Med., Johns Hopkins Med. Sch. of Med., Johns Hopkins Med. Sch. of Med., Univ. of Milano-Bicoca, Univ. of California, Santa Barbara, Univ. of California, Santa Barbara, Eisai Res. Insitute, Eisai Inc, Univ. of California, Santa Barbara, Eisai Res. Insitute, Johns Hopkins Med. Sch. of Med.*

2:00 II4 **426.02** ● PGN-503, a herpes simplex virus based vector expressing neurotrophin-3 for the prevention and treatment of chemotherapy induced peripheral neuropathy. J. R. GOSS*; D. KRISKY; K. BOUCH; M. O'MALLEY; S. COGHLAN; J. WECHUCK. *Periphagen Inc.*

3:00 II5 **426.03** ● Prevention of oxaliplatin-induced neurotoxicity involving decrease in peripheral blood flow by oral administration of Goshajinkigan. T. KONO; Y. OMIYA*; H. SEKINE; M. YAMAMOTO; K. MIYANO; Y. KASE; Y. UEZONO. *Hokkaido Univ., Sapporo Higashi Tokushukai Hosp., Tsumura & Co., Natl. Cancer Ctr. Res. Inst.*

4:00 II6 **426.04** ● TRPM8-mediated response to cold in human DRG neurons and its modulation by the chemotherapy agent oxaliplatin. A. GHETTI*; J. ZHANG; Y. MIRON; J. STRETTON; K. MORRISON; P. MURDOCK; K. PAGE; P. MILLER. *Anabios Corp., Asterand Biosci.*

1:00 II7 **426.05** Synergistic interaction of morphine plus clonidine in cisplatin-induced neuropathic pain in rat. A. ZUÑIGA*; J. REYES-GARCÍA; F. FLORES-MURRIETA; H. ROCHA-GONZÁLEZ. *INER, Escuela Superior de Medicina IPN.*

2:00 II8 **426.06** The therapeutic effect of Rho kinase inhibitor Y-27632 on protection from chemotherapy-induced peripheral neuropathy in a tumor-bearing mouse model. Y. ZHU*; G. A. HOWARD, IV; K. PITTMAN; C. BOYKIN; K. VERBANAC; Q. LU. *Brody Sch. Of Med., Brody Sch. Of Med.*

3:00 II9 **426.07** The role of TLR4 signaling pathway in oxaliplatin-induced peripheral neuropathy in rat. P. M. DOUGHERTY*; A. ILLIAS; Y. LI; H. ZHANG; K. YU; J. F. VELASQUEZ; J. P. CATA. *Univ. of Texas MD Anderson Cancer Ctr., MD Anderson, MD Anderson.org.*

4:00 II10 **426.08** Neuroprotectin D1 protects the chemotherapy-induced neuropathy by modulating the function of macrophages. S. BANG*; Z. XU; R. JI. *Pain Res. Div. ,Department of Anesthesiol. and Neurobiology, Duke Univ.*

1:00 II11 **426.09** Contribution of voltage-gated sodium channel 1.7 in rat in paclitaxel induced peripheral pain. Y. LI*; D. D. EDWARDS; R. M. CASSIDY; D. S. HARRISON; A. K. KOSTURAKIS; H. ZHANG; P. M. DOUGHERTY. *The Univ. of Texas MD Anderson Cancer Ctr., Philadelphia Col. of Osteo. Med., The Univ. of Texas Hlth. Sci. Ctr., Duke Univ. Sch. of Med., The Univ. of Texas Hlth. Sci. Ctr.*

2:00 II12 **426.10** Paclitaxel application leads to long-term changes of presynaptic TRPV1 receptors function in spinal cord dorsal horn. P. ADAMEK*; J. PALECEK. *Inst. of Physiology, Czech Acad. of Sci., Fac. of Science, Charles Univ.*

3:00 II13 **426.11** HKP-16 ameliorates chemotherapy-induced neuropathic pain in rats by oral administration. H. KIM*; S. HWANG; S. ABDI. *MD Anderson Cancer Ctr.*

4:00 II14 **426.12** Pentoxifylline decreases inflammatory cytokines in the dorsal root ganglia in chemotherapy-induced neuropathic pain in rats. S. H. KIM*; H. KIM; S. ABDI. *The Univ. of Texas MD Anderson Cancer Ctr.*

1:00 II15 **426.13** ▲ The Neuronal calcium sensor-1 knockout mouse model and its utility in better understanding chemotherapy-induced neuropathic pain. E. M. EDWARDS; A. FERRAR; D. GIUVELIS; K. LINDROS; I. M. BERGQUIST; O. PONGS; E. KAFTAN; B. EHRLICH; E. J. BILSKY*. *Univ. of New England, 2Institut für Physiologie, Univ. des Saarlandes, Yale Univ., Univ. of New England.*

2:00 II16 **426.14** Oxaliplatin impairs mechano-sensory encoding by slowly adapting cutaneous afferents. J. A. VINCENT; P. NARDELLI; T. C. COPE*. *Wright State Univ., Georgia Inst. of Technol.*

3:00 II17 **426.15** Fy-504, a potent and selective nav1.8 antagonist, blocked chemotherapy-induced peripheral neuropathy (CIPN). P. CHO*. *Physiol. Lab.*

4:00 JJ1 **426.16** The role of fscns1 in peripheral nerve regeneration. T. OMURA*; D. XU; T. BANNO; A. OKAMOTO; K. OMURA; Y. MATSUYAMA. *Hamamatsu Univ. Sch. of Med., Sakuradai Hosp.*

1:00 JJ2 **426.17** Axonal dysfunction in rab7-associated cmt2b peripheral sensory neuropathy. C. WU*; X. CHEN; X. ZHAO; W. YANG; C. JOLIVALT; L. BAO. *UCSD Sch. of Med., Univ. of California San Diego, Inst. of Biochem. and Cell Biol.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 JJ3 **426.18** Oral administration of Compound A, which presents anti-inflammatory properties, ameliorates diabetic neuropathy. F. H. P. MACEDO*; R. D. AIRES; R. C. M. FERREIRA; D. P. D. MACHADO; T. R. L. ROMERO; J. H. LEAL-CARDOSO; J. S. CRUZ. *Univ. Federal de Minas Gerais, Univ. Federal de Minas Gerais, Univ. Federal de Minas Gerais, Univ. Estadual do Ceará.*

3:00 JJ4 **426.19** Exosomes derived from schwann cells ameliorates periheral neuropathy in type II diabetic mice. A. SZALAD*; L. WANG; M. CHOPP; X. LU; L. JIA; M. LU; Y. ZHANG; R. ZHANG; X. LIU; Z. ZHANG. *Henry Ford Hosp., Henry Ford Hosp.*

4:00 JJ5 **426.20** Sensory weighting in elderly people and neuropathy patients. C. F. MAURER*. *Neurozentrum.*

1:00 JJ6 **426.21** ● Human iPSC-derived neurons to address peripheral concerns: Applications beyond neurotoxicity assessment. G. LUERMAN; D. HESS; B. MURPHY*; A. EHLICH; H. BOHLEN. *Axiogenesis, Axiogenesis AG.*

POSTER

427. Spinal Cord Processing: Pharmacology

Theme D: Sensory Systems

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 JJ7 **427.01** Latent pain sensitization is masked by spinal μ and κ, but not δ, opioid receptor analgesia in male and female mice. L. CUSTODIO-PATSEY*; R. R. DONAHUE; W. FU; B. K. TAYLOR. *Univ. of Kentucky.*

2:00 JJ8 **427.02** Agrins may inhibit diabetic neuropathic pain. J. CUI*; D. ERASSO; S. ABDI. *MD ANDERSON CANCER CENTER, Univ. of Miami, MD Anderson Cancer Ctr.*

3:00 JJ9 **427.03** ▲ Lack of effect of diazepam on the presynaptic depolarization of primary afferents in the undernourished rat. M. G. CARREON*; C. VELÁZQUEZ-DELGADO; B. SEGURA-ALEGRÍA; S. QUIROZ-GONZÁLEZ; I. JIMENEZ-ESTRADA. *CINVESTAV-IPN, Natl. Autonomous Univ. of Mexico, Univ. Estatal del Valle de Ecatepec.*

4:00 JJ10 **427.04** Calcium-permeable AMPA receptor signaling in dorsal horn contributes to latent pain sensitization after inflammation. R. R. DONAHUE; G. P. SINHA; J. A. MORON; B. K. TAYLOR; S. DOOLEN*. *Univ. of Kentucky, Washington Univ., Univ. of Kentucky.*

1:00 JJ11 **427.05** Effects of botulinum toxin on histamine-dependent and histamine-independent pruritus. T. L. YAKSH*; M. J. MARINO; S. PAUL; Z. WANG; N. MASCARENHAS; A. DINARDO; R. RAMACHANDRAN. *Univ. of California San Diego, UCSD.*

2:00 JJ12 **427.06** New botulinum conjugates targeting NK1 and opiate receptor expressing neurons for the control of chronic pain. S. M. GERANTON; M. MAIARU; A. S. MANGIONE; C. TASSORELLI; E. FERRARI; C. LEESE; B. DAVLETOV; S. P. HUNT*. *Univ. Col. London, "C. Mondino" Natl. Neurolog. Inst., Univ. of Lincoln, Univ. of Sheffield.*

3:00 JJ13 **427.07** Inhibition of transient receptor potential vanilloid type 1 (TRPV1) receptor by α2-adrenergic receptors in dorsal root ganglia neurons. M. PUOPOLO*; S. CHAKRABORTY; Y. LU; M. REBECCHI. *Stony Brook Med.*

4:00 JJ14 **427.08** Tonic inhibition of spinal PKA- and Epac-mediated latent pain sensitization by neuropeptide Y. W. FU*; N. YE; J. ZHOU; B. K. TAYLOR. *Univ. of Kentucky, Univ. of Texas Med. Br.*

1:00 JJ15 **427.09** Lidocaine metabolite, monoethylglycinexylidide, affects synaptic transmission in rat spinal dorsal horn. K. FURUTANI*; Y. KAMIYA; T. KOHNO; H. BABA. *Niigata university.*

2:00 JJ16 **427.10** Molecular and electrophysiological characterization of neuropeptide Y Y1 receptor-expressing neurons in the substantia gelatinosa of the spinal cord. G. P. SINHA*; W. FU; K. C. HALMOS; B. N. SMITH; S. DOOLEN; B. K. TAYLOR. *Univ. of Kentucky, Univ. of Kentucky.*

3:00 JJ17 **427.11** Underlying mechanisms of acetaminophen in the spinal dorsal horn neurons. N. OHASHI; M. SASAKI; M. OHASHI; Y. KAMIYA; H. BABA*; T. KOHNO. *Niigata Univ. Grad. Sch. of Med. and Dent. Sci., Uonuma institute of community medicine, Niigata Univ, Sch. Med.*

4:00 KK1 **427.12** Effect of voltage gated sodium channel toxins as therapeutic agents for chronic pain. N. R. MUNASINGHE; J. DEUIS; V. HERZIG; Z. DEKAN; W. L. IMLACH*; R. LEWIS; G. KING; P. ALEWOOD; J. KLINT; I. VETTER; M. J. CHRISTIE. *Univ. of Sydney, Univ. of Queensland, The Univ. of Sydney.*

1:00 KK2 **427.13** Peripheral nerve injury increases stimulation-induced neuropeptide Y release as measured by Y1 receptor internalization in the rat dorsal horn. B. K. TAYLOR*; W. FU; W. CHEN; J. G. MARVIZON. *Univ. of Kentucky, UC Los Angeles, VA Greater Los Angeles Healthcare Syst.*

2:00 KK3 **427.14** ● Inhibition of bone resorption does not contribute to the analgesic effects of Src antagonism in an animal model of cancer-induced bone pain. V. HURST*; D. LAMBERT; I. HOLEN; K. J. ESCOTT; D. ANDREW. *The Univ. of Sheffield, The Univ. of Sheffield, The Univ. of Sheffield, Astrazeneca.*

3:00 KK4 **427.15** ▲ Sex differences in pioglitazone analgesia for painful diabetic neuropathy. D. E. LAIRD*; R. R. DONAHUE; R. B. GRIGGS; B. K. TAYLOR. *Univ. of Kentucky.*

4:00 KK5 **427.16** Small molecule inhibitors of PSD95-nNOS protein-protein interactions suppress formalin-evoked Fos protein expression and nociceptive behavior in rats. L. M. CAREY*, IV; P. KULKARNI; G. A. THAKUR; Y. Y. LAI; A. G. HOHMANN. *Indiana Univ., Northeastern Univ.*

1:00 KK6 **427.17** ● Contribution of presynaptic HCN channels to excitatory inputs of spinal substantia gelatinosa neurons. T. LIU*; S. PENG; D. ZHANG; X. HU; L. LI; C. XIE. *The First Affiliated Hosp. of Nanchang Univ., the First Affiliated Hosp. of Nanchang Univ.*

2:00 KK7 **427.18** ● Spinal ς-1 receptor mediates dephosphorylation of astrocytic aromatase leading to nociceptive effect in mice formalin model. M. LEE; H. CHOI; A. J. BEITZ; J. LEE*. *Seoul Natl. Univ., Univ. of Minnesota.*

3:00 KK8 **427.19** Ifenprodil and agmatine inhibit C-fiber-mediated EPSCs in spinal cord slices from Nav1.8-ChR2 mice. J. J. WAATAJA; P. A. SÉGUÉLA; G. L. WILCOX; C. A. FAIRBANKS*. *Univ. Minnesota, McGill Univ., Univ. Minnesota.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

428. Pain: Thalamic and Cortical Processing

Theme D: Sensory Systems

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 KK9 **428.01** Repetitive motor cortex stimulation for the relief of neuropathic pain after nerve injury in rats. M. CHA*; B. LEE. *Yonsei Univ. Col. of Med.*

2:00 KK10 **428.02** Contribution of ascending serotonin facilitation to neuronal hyperactivity in the anterior cingulate cortex underlying the maintenance of neuropathic pain. C. BIAN; R. HU; M. LI; J. LIU; J. YANG; W. GUO; S. ZOU; K. REN; R. DUBNER; F. WEI*. *Univ. of Maryland Baltimore, Tongji Hospital, Huazhong Univ. of Sci. and Technol., Jinling hospital, Nanjing Univ. Sch. of Med.*

3:00 KK11 **428.03** Chronic pain disrupts the affective response to acute pain through altered neural activities in the anterior cingulate cortex (ACC). J. WANG*; Q. ZHANG; A. TONG; T. MANDERS; A. GARG; R. YANG; Z. CHEN. *New York Univ. Sch. of Med., New York Univ. Sch. of Med.*

4:00 KK12 **428.04** Reticular thalamic neuronal activity changes by formalin induced nociception of awake behaving mice. Y. HUH*; J. CHO. *Korea Inst. of Sci. and Technol.*

1:00 KK13 **428.05** Lateralized effects of neuropeptide S (NPS) on amygdala output neurons in an arthritis pain rat model. G. JI*; V. NEUGEBAUER. *Texas Tech. Univ. Hlth. Sci. Ctr., Texas Tech. Univ. Hlth. Sci. Ctr.*

2:00 KK14 **428.06** Affective components of chronic pain reflect circuit-specific changes in the anterior cingulate cortex. K. S. MEDA*; T. PATEL; J. M. BRAZ; A. I. BASBAUM; V. S. SOHAL. *UCSF, UCSF.*

3:00 KK15 **428.07** Characterizing the sensitivity of laser-evoked EEG potentials to stimulus intensity using signal detection analysis. B. BECK*; G. IANNETTI; P. HAGGARD. *Univ. Col. London, Univ. Col. London.*

4:00 KK16 **428.08** ● Neural signatures of pain in animal models. C. Y. SAAB*; B. LEBLANC. *Brown/RIH.*

1:00 KK17 **428.09** Anterior cingulate cortex (ACC) representation of aversive pain intensity. Q. ZHANG*; A. TONG; T. MANDERS; A. GARG; R. YANG; L. URIEN; Z. CHEN; J. WANG. *New York Univ., New York Univ.*

2:00 KK18 **428.10** Dorsal and ventral parts of the thalamic nucleus submedius provide two independent inputs to different areas of the rat orbitofrontal cortex: A single neuron-tracing study using virus vectors. E. KURAMOTO*; H. IWAI; A. YAMANAKA; S. OHNO; R. SENDO; K. KOYANAGI; S. TOYODOME; T. FURUTA; H. HIOKI; T. GOTO. *Kagoshima Univ., Kagoshima Univ., Kagoshima Univ., Kyoto Univ.*

3:00 LL1 **428.11** Dishabituation of central nervous system to tonic pain following chiropractic care - a standardized low resolution brain electromagnetic tomography (sLORETA) based study. M. NAVID*; D. LELIC; I. NIAZI; K. HOLT; E. B. MARK; A. M. DREWES; H. HAAVIK. *Aalborg Univ. Hosp., Aalborg Univ., New Zealand Col. of Chiropractic, Auckland Univ. of Technol., Aalborg Univ.*

4:00 LL2 **428.12** Effects of chronic pain on the cortical circuitry implicated in pain and endogenous analgesia. J. CHERIYAN*; P. L. SHEETS. *Indiana Univ. Scool of Med., Univ. of Notre Dame.*

1:00 LL3 **428.13** SK channel function in CRF-containing amygdala neurons in a neuropathic pain rat model. V. A. YAKHNITSA*; T. KIRITOSHI; V. NEUGEBAUER. *Texas Tech. Univ. Hlth. Sci. Ctr., Texas Tech. Univ. Hlth. Sci. Ctr.*

2:00 LL4 **428.14** Brain-network mechanisms underlying the analgesic effect of electrical stimulation of periaqueductal gray. N. WANG*; Y. SU; J. WANG; F. LUO. *Inst. of Psychology, Chinese Acad. of Sciences; Key Lab. of Mental H, Dept. of Applied Psychology, Wenzhou Med. Univ.*

3:00 LL5 **428.15** Prefrontal cortical feedforward inhibition of amygdala output neurons in arthritic and neuropathic pain rat models. V. NEUGEBAUER*; T. KIRITOSHI. *Texas Tech. Univ. Hlth. Sci. Ctr., Texas Tech. Univ. Hlth. Sci. Ctr.*

4:00 LL6 **428.16** Monomethyl fumarate (MMF) inhibits pain behaviors of arthritic rats: Involvement of the amygdala. H. KIM*; J. M. THOMPSON; V. GANAPATHY; V. NEUGEBAUER. *Texas Tech. Univ. Hlth. Sci. Ctr., Texas Tech. Univ. Hlth. Sci. Ctr., Texas Tech. Univ. Hlth. Sci. Ctr.*

1:00 LL7 **428.17** Vesicular Gamma-aminobutyric Acid transporter (VGAT) expression in the ventral posterior thalamus can modulate hypersensitivity following varicella zoster virus (VZV) infection of rat whisker pad. M. UMORIN*; C. STINSON; M. DENG; M. RAO; M. YEE; L. L. BELLINGER; P. KINCHINGTON; P. R. KRAMER. *Texas A&M Univ. Baylor Col. of Dent., Wuhan Univ. Sch. and Hosp. of Stomatology, Univ. of Pittsburgh.*

2:00 LL8 **428.18** Lateralized feedforward inhibition of amygdala output neurons in an arthritis pain rat model. T. KIRITOSHI*; V. NEUGEBAUER. *Texas Tech. Univ. Hlth. Sci. Ctr., Texas Tech. Univ. Hlth. Sci. Ctr.*

3:00 MM1 **428.19** Hyperexcitability of somatosensory cortical neurons in CK1d migraine mutant mice. P. S. SURYAVANSHI*; P. A. SAWANT-POKAM; K. C. BRENNAN. *Univ. of Utah, Univ. of Utah.*

4:00 MM2 **428.20** 5-HT_{2C}R blockade in the amygdala conveys analgesic efficacy to SSRIs in a neuropathic pain rat model. T. T. DANG*; G. JI; T. A. GREEN; V. NEUGEBAUER. *Texas Tech. Univ. Hlth. Sci. Ctr., The Univ. of Texas Med. Br., Texas Tech. Univ. Hlth. Sci. Ctr.*

1:00 MM3 **428.21** SK channel-mediated electrophysiological and behavioral effects of riluzole in the amygdala in a neuropathic pain rat model. J. M. THOMPSON*; V. YAKHNITSA; G. JI; V. NEUGEBAUER. *Texas Tech. Univ. Hlth. Sci. Ctr., Texas Tech. Univ. Hlth. Sci. Ctr.*

2:00 MM4 **428.22** Neuronal encoding of modality and intensity of somatosensory stimuli in the mouse S1 cortex. Y. KIM*; C. KIM; H. YOON; S. KIM; S. KIM. *Seoul Natl. Univ. Col. of Med., Kyunghee Univ. Col. of Korean medicine.*

3:00 MM5 **428.23** Short-term effect of transcranial direct current stimulation (tdcs) in healthy subjects: Somatosensory and pain threshold. M. HUNG*. *China Med. Univ. Hosp., China Med. Univ. Hosp.*

POSTER

429. Somatosensation: Thalamocortical Processes

Theme D: Sensory Systems

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 MM6 **429.01** The neurochemistry of thalamic reticular cells and its relationship with cell physiology and synaptic connectivity. R. MARTINEZ-GARCIA; B. VOELCKER; S. L. PATRICK; B. W. CONNORS; S. J. CRUIKSHANK*. *Brown Univ.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 MM7 **429.02** Infrabarrels: Ensembles of structurally and functionally distinct neurons in layer 6a of mouse somatosensory cortex. S. R. CRANDALL*; S. L. PATRICK; S. J. CRUIKSHANK; B. W. CONNORS. *Brown Univ.*

3:00 MM8 **429.03** Contextual modulation of spatial coding during active sensation. E. LYALL*; S. R. PLUTA; E. RYAPOLOVA-WEBB; G. I. TELIAN; D. E. TAYLOR; H. ADESNIK. *Univ. of California Berkeley, Univ. of California Berkeley, Univ. of California Berkeley.*

4:00 MM9 **429.04** Mapping cortical mesoscopic networks linked to the firing of single cortical and sub-cortical neurons. D. XIAO*; M. P. VANNI; C. MITELUT; A. CHAN; Y. XIE; A. CHEN; N. SWINDALE; T. H. MURPHY. *Kinsmen Lab, Dept. of Psychiatry, Capital Med. Univ., Dept. of Ophthalmology and Visual Sci.*

1:00 MM10 **429.05** Modeling the vibrotactile responses of excitatory and inhibitory neurons in the hindpaw representation of rat SI cortex. B. VARDAR*; B. GÜÇLÜ. *Bogazici Univ.*

2:00 MM11 **429.06** Pom thalamocortical input drives layer-specific response transformations. N. AUDETTE*; J. URBAN-CIECKO; M. MATSUSHITA; A. L. BARTH. *Carnegie Mellon Univ., Carnegie Mellon Univ.*

3:00 MM12 **429.07** Corticothalamic neurons target fast-spiking and somatostatin containing interneurons with different short-term dynamics. A. AGMON*; H. HU. *West Virginia Univ. Sch. of Med., West Virginia Univ. Sch. of Med.*

4:00 NN1 **429.08** Understanding optogenetic stimulation strategies: A study of opsin-neuron models and their spiking behaviors. A. WILLATS*. *Georgia Inst. of Technol. & Emory Univ.*

1:00 NN2 **429.09** Closed loop optogenetic control of neural circuits *in vivo*: Developing design principles for controlling patterns of neural firing rate. M. F. BOLUS*; A. A. WILLATS; C. J. WHITMIRE; Z. COSTELLO; M. B. EGERSTEDT; C. J. ROZELL; G. B. STANLEY. *Georgia Inst. of Technol. & Emory Univ., Georgia Inst. of Technol. & Emory Univ., Georgia Inst. of Technol.*

2:00 NN3 **429.10** Intracortical network effects preserve thalamocortical input efficacy in a cortex without layers. J. GUY*; A. SACHKOVA; M. MÖCK; M. WITTE; R. J. WAGENER; J. F. STAIGER. *Univ. Med. Ctr., Univ. of Geneva.*

3:00 NN4 **429.11** Neural dynamics of single units and local field potentials in mouse barrel cortex underlying detection at perceptual threshold. H. SHIN*; S. R. JONES; C. I. MOORE. *Brown Univ.*

4:00 NN5 **429.12** Human β rhythm modulation with perception and attention reflects the density of rhythmic transients across trials. S. R. JONES*; S. TSUTSUI; R. LAW; H. SHIN; C. I. MOORE. *Brown Univ., Brown Univ.*

1:00 NN6 **429.13** Mechanisms of sensory inhibition induced by neocortical β rhythms. R. LAW*; S. TSUTSUI; S. R. JONES. *Brown Univ., Brown Univ.*

POSTER

430. Second-Order Processing of Olfactory Inputs

Theme D: Sensory Systems

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 NN7 **430.01** Developing a bio-electronic nose by interfacing to the early olfactory system. E. SHOR; T. BOZZA; D. RINBERG*. *New York Univ., Northwestern Univesity.*

2:00 NN8 **430.02** Onset latency analysis of odor-evoked calcium response in the juxtaglomerular cells of mouse olfactory bulb. R. HOMMA*; X. LV; S. ZENG; S. NAGAYAMA. *Univ. of Texas Med. Sch. at Houston, Huazhong Univ. of Sci. and Technol., Huazhong Univ. of Sci. and Technol.*

3:00 NN9 **430.03** Control of mitral/tufted cell output by selective inhibition among olfactory bulb glomeruli. M. WACHOWIAK*; T. BOZZA; K. R. HANSEN; M. N. ECONOMO. *Univ. of Utah, Northwestern Univ., Univ. of Utah.*

4:00 NN10 **430.04** Structural basis for cholinergic regulation of neural circuits in the mouse olfactory bulb. M. HAMAMOTO; E. KIYOKAGE; K. TOIDA*. *Kawasaki Med. Sch.*

1:00 NN11 **430.05** ▲ Dynamics of neuronal ensembles in the main olfactory bulb. S. WADDLE; E. LYMAN; K. PADMANABHAN*. *Univ. of Delaware, Univ. of Rochester.*

2:00 NN12 **430.06** Increased olfactory bulb BDNF does not enhance the normal survival of new granule cells and does not prevent deprivation-induced cell death. K. M. GUTHRIE*; R. BERGER; B. MCDOLE. *Florida Atlantic Univ., Florida Atlantic Univ.*

3:00 NN13 **430.07** ●▲ Dynamic regulation of mitral cell spike synchronization and phase-locking by external tufted cells in a glomerular network model. C. RAPP*; F. FROHLICH; T. A. CLELAND; G. LI. *Univ. of North Carolina At Chapel Hill, Univ. of North Carolina At Chapel Hill, Cornell Univ.*

4:00 NN14 **430.08** ● Reconstruction of neuronal activity and connectivity patterns in the zebrafish olfactory bulb. A. A. WANNER*; C. GENOUD; R. W. FRIEDRICH. *Friedrich Miescher Inst. For Biol. Res.*

1:00 OO1 **430.09** Mechanisms and functions of the offset response in insect olfaction. S. HANEY*; D. SAHA; B. RAMAN; M. BAZHENOV. *UCSD, Washington Univ., Univ. of California.*

2:00 OO2 **430.10** Modulatory convergence of serotonin and dopamine in an olfactory network. K. M. LIZBINSKI*; A. M. DACKS. *West Virginia Univ.*

3:00 OO3 **430.11** Integration of olfactory and mechanosensory stimuli in the projection neurons of antennal lobe in the moth Manduca sexta. H. LEI*; J. KIM; J. G. HILDEBRAND. *Univ. Arizona, Univ. of Arizona.*

4:00 OO4 **430.12** The connectivity of the serotonergic input to the olfactory system of *Drosophila*. K. COATES*; A. AUDA; C. MICHAEL; S. MICHAELS; T. SIZEMORE; A. MAJOT; A. DACKS. *West Virginia Univ.*

1:00 OO5 **430.13** The role of connectivity patterns in a computational model of *Drosophila* antennal lobe. R. HAYNES*; M. SAMAVAT; D. LULI; S. CROOK. *Arizona State Univ., Arizona State Univ.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 OO6 **430.14** Serotonergic modulation of inhibitory input to lateral horn modifies olfactory attraction in *Drosophila*. A. H. AUDA*; K. COATES; T. SIZEMORE; A. DACKS. *West Virginia Univ.*

3:00 OO7 **430.15** Disorder and compressive sensing in the olfactory system. K. KRISHNAMURTHY*; A. HERMUNDSTAD; T. MORA; A. WALCZAK; V. BALASUBRAMANIAN. *Univ. of Pennsylvania, Univ. of Pennsylvania, Janelia Res. Campus, Ecole normale supérieure, Ecole normale supérieure.*

4:00 OO8 **430.16** Odor-evoked responses in both olfactory bulb and brain stem in a perfused preparation of the rat olfactory system. F. PEREZ DE LOS COBOS PALLARES; D. FARMER; D. STANIC; M. LUKAS; M. DUTSCHMANN; V. EGGER*. *Regensburg Univ., Ludwig-Maximilian Univ., Florey Inst. of Neurosci. and Mental Hlth.*

1:00 OO9 **430.17** Assaying the spatial and temporal structure of olfactory bulb inhibition using paired recordings. H. A. ARNSON*; B. W. STROWBRIDGE. *Case Western Reserve Univ. Sch. of Med.*

2:00 OO10 **430.18** Mimicking natural stimulation patterns to the olfactory bulb. C. E. VAAGA*; G. L. WESTBROOK. *Oregon Hlth. and Sci. Univ.*

3:00 OO11 **430.19** BDNF augmentation *in vivo* increases spine density in adult-born olfactory granule cells. B. MCDOLE*; C. ISGOR; K. GUTHRIE. *Florida Atlantic Univ., Florida Atlantic Univ.*

4:00 OO12 **430.20** The role of olfactory bulb adult neurogenesis in olfactory representation and behavior. W. L. LI*; I. IMAYOSHI; T. KOMIYAMA. *Univ. of California San Diego, Kyoto Univ., Japan Sci. and Technol. Agency, Univ. of California San Diego.*

1:00 OO13 **430.21** Synaptic distribution of individually labeled mitral cells in the external plexiform layer of the mouse olfactory bulb. T. MATSUNO; E. KIYOKAGE*; K. TOIDA. *Kawasaki Med. Sch.*

2:00 OO14 **430.22** Targeting dense reconstructions of an olfactory bulb circuit with X-ray and serial block-face electron microscopy. C. BOSCH PIÑOL*; K. L. BRIGGMAN; M. HELMSTAEDTER; T. W. MARGRIE; A. T. SCHAEFER. *The Francis Crick Inst., NINDS, Max Plank Inst. for Brain Res., UCL, Sainsbury Wellcome Ctr. for Neural Circuits and Behaviour.*

3:00 PP1 **430.23** Control of the granule cell-short axon cell local circuit in the olfactory bulb by direct feedforward and feedback axonal inputs. F. R. POUILLE*; N. E. SCHOPPA. *Univ. of Colorado, AMC.*

4:00 PP2 **430.24** A model of experience-dependent odor construction in the olfactory bulb. A. BORTHAKUR*; T. A. CLELAND. *Cornell Univ.*

1:00 PP3 **430.25** Electrical stimulation of the locus coeruleus enhances signal to noise ratio in the olfactory bulb of anesthetized rats. L. C. MANELLA*; N. PETERSEN; C. LINSTER. *Cornell Univ.*

2:00 PP4 **430.26** Middle tufted cell drive the mitral cell spatiotemporal firing patterns through glomerular and granule cell microcircuits. F. CAVARRETTA*; M. MIGLIORE; M. L. HINES; K. M. IGARASHI; G. M. SHEPHERD. *Yale University-School of Med., Univ. of Milan, Natl. Res. Council, Univ. of California.*

3:00 PP5 **430.27** Possible roles for dopamine and vasoactive intestinal polypeptide in the circadian rhythms of the mammalian olfactory bulb. K. S. KORSHUNOV*; L. J. BLAKEMORE; P. Q. TROMBLEY. *Florida State Univ., Florida State Univ.*

4:00 PP6 **430.28** Functional mapping of circuits mediating inhibition of olfactory bulb interneurons. A. SANZ DÍEZ*; N. BENITO; D. DE SAINT JAN. *INCI CNRS.*

1:00 PP7 **430.29** Reconstructing odor identity from olfactory bulb sequences using patterned optogenetics. J. V. GILL*; J. M. KAPPEL; E. CHONG; G. SERRANO; D. RINBERG. *New York Univ., New York Univ. Langone Med. Ctr., New York Langone Med. Ctr.*

2:00 PP8 **430.30** Physiological and molecular phenotyping of glomerular layer interneurons in the mouse olfactory bulb. O. R. BRAUBACH*; T. TOMBAZ; T. GEILLER; R. HOMMA; T. BOZZA; L. B. COHEN; Y. CHOI. *Korea Inst. of Sci. and Technol. (KIST), Yale Univ. Sch. of Med., Kavli Inst. for Systems Neurosci., Univ. of Texas Med. Sch. at Houston, Northwestern Univ.*

POSTER

431. Auditory Processing and Perception in Non-Humans

Theme D: Sensory Systems

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 PP9 **431.01** Independent attentional modulation of compound auditory feature integration and segregation. K. N. O'CONNOR*; A. J. PRABHU; J. S. JOHNSON; M. L. SUTTER. *UC Davis.*

2:00 PP10 **431.02** Prefrontal and sensory correlates of auditory spatial attention in the macaque. C. R. CAMALIER*; A. BROWN; J. JACOBS; M. MISHKIN; B. B. AVERBECK. *NIH.*

3:00 PP11 **431.03** Sensory coding properties predict selective attention effects on single units in primary auditory cortex. Z. P. SCHWARTZ; S. V. DAVID*. *Oregon Hlth. & Sci. Univ.*

4:00 PP12 **431.04** A gradient frequency neural network model of auditory scene analysis. J. C. KIM*; E. W. LARGE. *Univ. of Connecticut.*

1:00 PP13 **431.05** Reward cues direct auditory attention and modulate fMRI activations in monkey auditory cortex. P. WIKMAN; T. RINNE; C. I. PETKOV*. *Univ. of Helsinki, Newcastle Univ.*

2:00 PP14 **431.06** Using deep networks to generate naturalistic stimuli reveals shared higher-level perceptual space among wild-caught starlings. M. THIELK*; T. SHARPEE; T. GENTNER. *UCSD, Salk Inst.*

3:00 PP15 **431.07** Primate BOLD data demonstrating fundamental bases for auditory figure-ground analysis. P. DHEERENDRA*; F. BALEZEAU; S. KUMAR; A. BLAMIRE; A. THIELE; T. D. GRIFFITHS. *Newcastle Univ., Univ. Col. of London.*

4:00 PP16 **431.08** Dynamics of cortical activity during behavioral engagement and auditory perception. I. CARCEA*; M. N. INSANALLY; R. C. FROEMKE. *NYU Med. Ctr.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 QQ1 **431.09** Inactivation of primate dorsolateral prefrontal cortex during auditory working memory. L. M. ROMANSKI*; B. PLAKKE; T. LINCOLN; A. POREMBA; J. BIGELOW. *Univ. of Rochester Sch. of Med. and Dent., Univ. of Iowa, Univ. of California, San Francisco.*

2:00 QQ2 **431.10** The impact of parvalbumin deficiency on auditory function in aging mice. J. BURIANOVA*; R. TURECEK; B. SCHWALLER; J. SYKA. *Inst. of Exptl. Medicine, CAS, Univ. of Fribourg.*

3:00 QQ3 **431.11** DREADD-mediated silencing of projections from basolateral amygdala to nucleus accumbens disrupts pre-pulse inhibition in rats. B. L. AGUILAR*; E. WICKER; L. MALKOVA; P. A. FORCELLI. *Georgetown Univ., Georgetown Univ., Georgetown Univ.*

4:00 QQ4 **431.12** Attenuated responses to self-generated sounds in auditory cortex. B. RUMMELL; J. KLEE; T. SIGURDSSON*. *Goethe Univ. Frankfurt.*

1:00 QQ5 **431.13** Behavioral uncertainty in tone-in-noise and speech-in-noise detection tasks reflected in neuronal responses in ferret auditory and frontal cortices. J. B. FRITZ*; C. BIMBARD; D. D. DUQUE; D. DELGUEDA; S. V. DAVID; S. A. SHAMMA. *Inst. For Systems Res., Ecole Normale Superieure, Univ. of Maryland, Oregon Hlth. Sci. Univ.*

2:00 QQ6 **431.14** Higher age-related decline in behavior discrimination of amplitude modulation frequencies compared to auditory evoked potentials. J. LAI*; E. L. BARTLETT. *Purdue Univ., Purdue Univ.*

3:00 QQ7 **431.15** Parallel processing by cortical inhibition in auditory cortex enables flexible behavior and learning. K. KUCHIBHOTLA*; J. V. GILL; G. W. LINDSAY; E. PAPADOYANNIS; T. A. H. STEN; R. E. FIELD; K. D. MILLER; R. C. FROEMKE. *New York Univ. Sch. of Med., Columbia Unviersity, NYU Sch. of Med.*

4:00 QQ8 **431.16** Acoustic environmental enrichment prolonged natural lifespan of mice. Y. YAMASHITA*; N. KAWAI; O. UENO; T. OOHASHI; M. HONDA. *Natl. Inst. of Neuroscience, Natl. Ctr. of Neurol. and Psychiatry, Fndn. for Advancement of Intl. Sci.*

1:00 QQ9 **431.17** Shared mechanisms of mismatch activity in common marmosets and macaque monkeys. M. KOMATSU*; N. FUJII. *RIKEN Brain Sci. Inst.*

2:00 QQ10 **431.18** Task-related plasticity in the inferior colliculus of the marmoset monkey. S. J. SLEE*; S. V. DAVID. *Oregon Hlth. and Sci. Univ.*

3:00 QQ11 **431.19** Contribution of population activity in the auditory cortex to the cocktail-party problem. K. L. CHRISTISON-LAGAY*; S. BENNUR; Y. COHEN. *Perelman Sch. of Med. At the Univ. of Pennsylvania, Univ. of Pennsylvania.*

4:00 QQ12 **431.20** The role of auditory thalamo-striatal and cortico-striatal neurons in amplitude modulation frequency discrimination. N. D. PONVERT*; S. JARAMILLO. *Univ. of Oregon.*

1:00 QQ13 **431.21** Behavior-dependent gating and extraction of task-relevant auditory signals in ferret frontal cortex. J. LAWLOR BLONDEL*; B. ENGLITZ; A. MEYER; U. GÓRSKA; S. SHAMMA; Y. BOUBENEC. *Ecole Normale Superieure, Lab. des Systèmes Perceptifs, CNRS UMR 8248, Dept. of Neurophysiology, Donders Ctr. for Neuroscience, Radboud Univ. Nijmegen, Gatsby Computat. Neurosci. Unit, Sainsbury Wellcome Ctr.*

2:00 QQ14 **431.22** Contribution of correlated neural activity in the auditory cortex to the cocktail-party problem. F. RODRIGUEZ-CAMPOS; T. BANNO; Y. E. COHEN*; S. BENNUR. *Univ. of Pennsylvania, Univ. of Pennsylvania Dept. of Otorhinolaryngology.*

POSTER

432. Human Visual Cortex

Theme D: Sensory Systems

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 QQ15 **432.01** Decoding the white matter geometrical structure by encoding connectomes in multidimensional spaces. F. PESTILLI*; C. F. CAIAFA. *Indiana Univ., Indiana Univ. / CONICET.*

2:00 QQ16 **432.02** Towards a standard cortical observer model in human V1-V3. C. OLSSON, 10003; N. C. BENSON; J. WINAWER*. *New York Univ., New York Univ.*

3:00 QQ17 **432.03** A fully computable model of bottom-up and top-down processing in high-level visual cortex. K. N. KAY*; J. D. YEATMAN. *Univ. of Minnesota, Twin Cities, Univ. of Washington.*

4:00 QQ18 **432.04** Preserved information in multivoxel patterns despite significant decrease in mean signals following surgical removal of human inferior occipital cortex. K. S. WEINER*; J. JONAS; L. MAILLARD; G. HOSSU; S. COLNAT-COULBOIS; K. GRILL-SPECTOR; B. ROSSION. *Stanford Univ., Univ. Hosp. of Nancy, Univ. Hosp. of Nancy, Univ. of Louvain.*

1:00 QQ19 **432.05** Population receptive field attraction by spatial attention varies across cortical depth in human V1. B. P. KLEIN*; A. FRACASSO; S. O. DUMOULIN. *Helmholtz Inst., Spinoza Ctr. for Neuroimaging, Univ. Med. Ctr.*

2:00 QQ20 **432.06** Neural variability is an individual trait. A. ARAZI*; G. GONEN - YAACOVI; I. DINSTEIN. *Ben Gurion Univ., Ben Gurion Univ.*

3:00 RR1 **432.07** Contextual modulation in human visual cortex: Orientation tuning of surround suppression varies with the spatial extent of the surround. S. WARDLE*; K. SEYMOUR. *Macquarie Univ., ARC Ctr. of Excellence in Cognition and its Disorders.*

4:00 RR2 **432.08** The phase of ongoing ð oscillations predicts eye movements and visually evoked responses in striate cortex during visual search. N. N. THIGPEN*. *Univ. of Florida.*

1:00 RR3 **432.09** V1 & V2 receive high-level scene information via cortical feedback. A. T. MORGAN*; L. S. PETRO; L. MUCKLI. *Univ. of Glasgow.*

2:00 RR4 **432.10** ● Array coils for ultra-high resolution columnar imaging in visual cortex. A. BECKETT*; A. T. VU; S. SCHILLACK; D. A. FEINBERG. *Univ. of California, Advanced MRI Technologies, Virtumed.*

3:00 RR5 **432.11** Luminance modulates the contrast response in human visual cortex. L. VINKE*; S. LING. *Boston Univ., Boston Univ., Boston Univ., Radboud Univ.*

4:00 RR6 **432.12** Cortical depth dependent 7T BOLD responses to parametrically varied luminance contrast. I. MARQUARDT*; M. SCHNEIDER; O. GULBAN; D. IVANOV; K. ULUDAG. *Dept. of Cognitive Neurosci.*

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* Indicates abstract's submitting author

POSTER

433. Rodent Visual Cortex

Theme D: Sensory Systems

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 RR7 **433.01** Extra-classical receptive field effects on visual processing in the awake rodent. F. LUONGO*; L. LIU; D. TSAO. *Caltech.*

2:00 RR8 **433.02** Binocular integration in mouse using stereoscopic cues to guide behavior. V. CHOI*; S. JOO; J. M. SAMONDS; A. C. HUK; N. J. PRIEBE. *Univ. of Texas at Austin, Univ. of Texas at Austin.*

3:00 RR9 **433.03** Locomotion enhances information represented in mouse visual cortex both by increasing firing rates and decreasing correlations. M. C. DADARLAT*; M. P. STRYKER. *Univ. of California, San Francisco.*

4:00 RR10 **433.04** Thalamocortical and intracortical contributions to binocular matching of orientation preference in mouse visual cortex. Y. GU*; J. CANG. *Northwestern Univ.*

1:00 RR11 **433.05** Basal forebrain projections to different rat visual cortical areas. F. HUPPÉ-GOURGUES; K. JEGOUIC; S. BOUHABEL; E. H. VAUCHER*. *Univ. of Montreal.*

2:00 RR12 **433.06** The entropy of neural ensemble firing patterns in mouse primary visual cortex correlates with behavioural performance. M. TOLKIEHN*; A. BERDITCHEVSKAIA; S. R. SCHULTZ. *Imperial Col. London.*

3:00 RR13 **433.07** Sculpting the dynamics of neuronal networks in the mouse cortex with optogenetic tools. T. TSUBOTA; D. LYAMZIN; A. BENUCCI*. *RIKEN Brain Sci. Inst.*

4:00 RR14 **433.08** Morphologically-defined cell types in mouse primary visual cortex. S. A. SORENSEN*; T. DESTA; A. HENRY; R. DALLEY; D. SANDMAN; N. THATRA; G. WILLIAMS; J. BERG; X. LIU; K. GODFREY; D. FENG; N. GOUWENS; C. LEE; Z. ZHOU; H. PENG; Y. WANG; A. BERNARD; L. NG; J. HARRIS; H. ZENG. *Allen Inst.*

1:00 RR15 **433.09** Behavioral state modulates 3-5 Hz membrane potential oscillations in mouse visual cortex. M. EINSTEIN*; P. POLACK; P. GOLSHANI. *UCLA, Rutgers Univ., UCLA.*

2:00 RR16 **433.10** Invariant and abstract perceptual representations in mouse decision-making. R. AOKI*; D. LYAMZIN; M. ABDOLRAHMANI; M. J. MORAIS; A. BENUCCI. *RIKEN Brain Sci. Inst.*

3:00 RR17 **433.11** Identification of neuronal ensembles from primary visual cortex *in vivo* using probabilistic graphical models. S. HAN*; L. CARRILLO-REID; E. TARALOVA; T. JEBARA; R. YUSTE. *Columbia Univ., Columbia Univ.*

4:00 RR18 **433.12** Cholinergic modulation of an inhibitory microcircuit changes dendritic integration after the visual critical period. C. E. YAEGER*; K. L. KWAN; J. T. TRACHTENBERG. *UCLA.*

1:00 RR19 **433.13** PV interneurons in visual cortex control contrast sensitivity and spatial integration of pyramidal cells. M. FIORINI*; S. ERISKEN; A. VAICELIUNAITE; O. JURJUT; S. KATZNER; L. BUSSE. *Univ. of Tuebingen, Intl. Max Planck Res. Sch., LMU Munich.*

2:00 RR20 **433.14** 2-photon imaging of task-dependent cortical population dynamics during a visual discrimination. J. B. WEKSELBLATT*; R. D. DI RICCO; C. M. NIELL. *Univ. of Oregon.*

3:00 RR21 **433.15** Neuromodulatory axon activity in the visual cortex. R. S. LARSEN*; J. ZHUANG; D. OLLERENSHAW; T. DAIGLE; J. WATERS. *Allen Inst. For Brain Sci.*

4:00 RR22 **433.16** Robust electro-physiological type identification using co-clustering analysis of clustering tree. C. LEE*; N. GOUWENS; K. LEPAGE; V. MENON; T. BAKKEN; S. SUNKIN; A. ARKHIPOV; M. HAWRYLYCZ. *Allen Inst. For Brain Sci., Allen Inst. for Brain Sci., Allen Inst. for Brain Sci.*

1:00 SS1 **433.17** A modern approach to labelling and visualizing the central visual pathway. J. L. BALSOR*; K. M. MURPHY. *McMaster Univ.*

2:00 SS2 **433.18** Interneurons derived from the caudal ganglionic eminence are preferentially connected to callosal projecting pyramidal cells in deep cortical layers. J. C. WESTER*; C. J. MCBAIN. *NIH, NIH.*

3:00 SS3 **433.19** Learning changes the selectivity and interactions of GABAergic interneuron classes in visual cortex. J. POORT*; A. G. KHAN; A. BLOT; S. B. HOFER; T. D. MRSIC-FLOGEL. *Univ. Col. London, Biozentrum.*

4:00 SS4 **433.20** How does behavioral relevance affect neural responses in mouse primary visual cortex and thalamus? A. WAL*; A. VAICELIUNAITE; P. GEORGIEVA; L. BUSSE; S. KATZNER. *Univ. of Tuebingen, Intl. Max Planck Res. Sch., LMU Munich.*

1:00 SS5 **433.21** Generation of biophysically-detailed models that reflect diverse intrinsic properties of cortical neuron types. N. W. GOUWENS*; J. BERG; T. DESTA; D. FENG; T. FLISS; K. GODFREY; T. JARSKY; C. LEE; S. SORENSEN; S. SUNKIN; Z. ZHOU; A. BERNARD; C. DANG; L. NG; H. PENG; J. PHILLIPS; H. ZENG; M. HAWRYLYCZ; C. KOCH; A. ARKHIPOV. *Allen Inst. For Brain Sci.*

2:00 SS6 **433.22** Circuit models with multiple types of inhibitory neurons based on a brain-wide map of cell density. G. R. YANG*; L. C. GARCIA DEL MOLINO; Y. KIM; P. OSTEN; X. WANG. *New York Univ., Cold Spring Harbor Lab., Penn State Univ., NYU-ECNU Joint Inst. of Brain and Cognitive Sci.*

3:00 SS7 **433.23** Cortical microcircuit endowed with three interneuron subtypes exhibits a repertoire of multiple dynamical regimes. L. GARCIA DEL MOLINO*; G. R. YANG; X. WANG. *New York Univ.*

4:00 SS8 **433.24** Stimulus-specific response enhancement in mouse primary visual cortex depends on locomotion. M. KANEKO*; Y. FU; M. P. STRYKER. *Univ. of California, Singapore Bioimaging Consortium, Agency for Sci. Technol. and Res.*

POSTER

434. Striate Cortex Plasticity I

Theme D: Sensory Systems

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 SS9 **434.01** Role of CREB, SRF and MEF2 in ocular dominance plasticity. N. S. PULIMOOD*; A. E. MEDINA. *Univ. of Maryland Baltimore.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 SS10 **434.02** Orientation tuning curves and selectivity in V1: Influence of the past stimulus. F. ETINDELE SOSSO*; V. BHARMAURIA; L. BACHATENE; S. CATTAN; A. OUELHAZI; N. CHANAURIA; S. MOLOTCHNIKOFF. *Univ. of Montreal.*

3:00 SS11 **434.03** The role of Neuregulin1/ErbB4 signaling in transplant-induced cortical plasticity. X. ZHENG*; T. IKRAR; X. XU; S. P. GANDHI. *Univ. of California, Irvine, Univ. of California, Irvine, Univ. of California, Irvine.*

4:00 SS12 **434.04** Cholinergic enhancement accelerates recovery of vision after optic nerve damage. M. CHAMOUN*; E. SERGEEVA; P. HENRICH-NOACK; S. JIA; L. GRIGARTZIK; J. MA; Q. YOU; F. HUPPÉ-GOURGUES; B. A. SABEL; E. VAUCHER. *Univ. De Montreal, Otto-von-Guericke Univ.*

1:00 SS13 **434.05** Brain-wide analysis of parvalbumin, somatostatin and vasointestinal peptide levels in cortical interneurons of sighted and enucleated mice using a newly developed imaging tool. M. LARAMEE*; S. VREYSEN; L. ARCKENS. *KU Leuven.*

2:00 SS14 **434.06** Cortical representation of a myopic peripapillary crescent: Evidence against fill-in of retinal lesions. D. L. ADAMS*; J. R. ECONOMIDES; J. C. HORTON. *UCSF.*

3:00 SS15 **434.07** Short-term deprivation of the amblyopic eye, combined with physical exercise, promotes long-term visual recovery in adult anisometropic patients. C. LUNGHI*; A. SALE; A. LEPRI; A. SFRAMELI; A. DENDRAMIS; D. LISI; M. LEPRI; M. C. MORRONE. *Univ. of Pisa, Natl. Res. Council, Univ. of Pisa, Univ. of Pisa.*

4:00 SS16 **434.08** Intriguing! Auditory stimulus shifts orientation selectivity of visual neurons in cat V1. N. CHANAURIA*; V. BHARMAURIA; L. BACHATENE; S. CATTAN; F. A. ETINDELE-SOSSO; J. ROUAT; S. MOLOTCHNIKOFF. *Univ. of Montreal, Univ. of Sherbrooke.*

1:00 SS17 **434.09** Evidence for an intact retinotopic organization of early visual cortex but impaired extrastriate processing in sight recovery individuals. S. SOURAV*; D. BOTTARI; R. BALACHANDAR; R. KEKUNNAYA; B. RÖDER. *Univ. of Hamburg, LV Prasad Eye Inst.*

2:00 SS18 **434.10** Increasing Arc prolongs the critical period for juvenile plasticity in primary visual cortex. T. KIM*; E. D. PASTUZYN; K. R. JENKS; H. OKUNO; J. ICHIDA; H. BITO; M. F. BEAR; J. D. SHEPHERD. *MIT, Univ. of Utah, Kyoto Univ., Univ. of Tokyo, MIT.*

3:00 SS19 **434.11** Cortico-fugal output from visual cortex promotes plasticity of innate motor behavior. B. LIU*; A. HUBERMAN; M. SCANZIANI. *UCSD, UCSD/HHMI.*

4:00 SS20 **434.12** High-dimensional structure of inhibitory population activity in visual cortex. C. STRINGER*; M. PACHITARIU; M. DIPOPPA; M. OKUN; M. CARANDINI; K. HARRIS. *Univ. Col. London, Univ. Col. London.*

1:00 SS21 **434.13** Visual cortical activity during a virtual foraging task in mice. A. RESULAJ*; S. R. OLSEN; M. SCANZIANI. *Univ. of California San Francisco, Allen Inst. for Brain Sci.*

2:00 SS22 **434.14** Recordings from 10,000 neurons reveal high dimensionality in cortical activity. M. PACHITARIU*; C. STRINGER; S. SCHRODER; M. CARANDINI; K. HARRIS. *Univ. Col. London.*

3:00 SS23 **434.15** The recovery of ocular dominance and visual acuity in murine amblyopia are limited by NgR1 in distinct components of the visual circuitry. C. STEPHANY*; H. M. DORTON; A. W. MCGEE. *Children's Hosp. of Los Angeles, USC.*

4:00 SS24 **434.16** Reprograming of neuronal ensembles in primary visual cortex with two-photon optogenetics *in vivo*. L. CARRILLO-REID*; W. YANG; D. PETERKA; R. YUSTE. *Columbia Univ., Columbia Univ.*

1:00 SS25 **434.17** Rem2 is required for normal critical period ocular dominance plasticity of the visual cortex. S. E. RICHARDS*; A. R. MOORE; K. KENNY; S. PARADIS; S. D. VAN HOOSER. *Brandeis Univ.*

2:00 SS26 **434.18** A surprising transient period of synaptic imbalance exists in the rat visual cortex during postnatal development. H. ZHANG; M. T. WONG-RILEY*. *Med. Col. of Wisconsin, Med. Col. of Wisconsin.*

3:00 TT1 **434.19** Dichoptic perceptual training in juvenile amblyopes with or without patching history. J. ZHANG*; X. LIU; C. YU. *Peking Univ., Tengzhou Central People's Hosp.*

POSTER

435. Cortical Planning and Execution: EEG

Theme E: Motor Systems

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 TT2 **435.01** EEG/fNIRS as biomarkers for neural activation in humans during motor tasks. T. H. CRUZ*; T. BULEA; T. S. MOULTON; A. C. DE CAMPOS; A. SHARMA; T. HUPPERT; D. DAMIANO. *NICHD/NIH, NIH, Northwestern Univ. Feinberg Sch. of Med., Univ. Federal de Sao Carlos, Univ. of Pittsburgh.*

2:00 TT3 **435.02** EEG signals related to movement-related cortical potential by direction-cue and go-cue. A. FUNASE*; S. TAKAGI; I. TAKUMI. *Nagoya Inst. of Technol., RIKEN.*

3:00 TT4 **435.03** Children with cerebral palsy have uncharacteristic β cortical oscillations during a visuomotor target matching task. M. J. KURZ*; A. L. PROSKOVEC; J. E. GEHRINGER; E. HEINRICHS-GRAHAM; T. W. WILSON. *Univ. of Nebraska Med. Ctr., Univ. of Nebraska Med. Ctr.*

4:00 TT5 **435.04** Orthogonalising parameters of predictive coding within a visuomotor adaptation task. C. E. PALMER*; S. ONDOBAKA; J. M. KILNER. *Inst. of Neurology, Univ. Col. London, Wellcome Trust Ctr. for Neuroimaging.*

1:00 TT6 **435.05** Directionally tuned signals in human EEG during step-tracking wrist movement. H. KAMBARA*; H. TANAKA; M. MIYAKOSHI; N. YOSHIMURA; Y. KOIKE; S. MAKEIG. *Tokyo Inst. Technol., Japan Advanced Inst. of Sci. and Technol., Univsersity of California, San Diego, Tokyo Insittue of Technol.*

2:00 TT7 **435.06** Dynamics of directional tuning and reference frames in humans: A high-density EEG study. H. TANAKA*; M. MIYAKOSHI; S. MAKEIG. *Japan Advanced Inst. of Sci. and Technol., UCSD.*

3:00 TT8 **435.07** Altered sensorimotor cortical oscillations in individuals with multiple sclerosis suggests a faulty internal model. D. J. ARPIN*; E. HEINRICHS-GRAHAM; J. E. GEHRINGER; T. W. WILSON; M. J. KURZ. *Univ. of Nebraska Med. Ctr., Univ. of Nebraska Med. Ctr.*

Mon. PM

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 TT9 **435.08** Neuromechanical changes associated with learning an isometric ankle plantarflexion target matching task. J. GEHRINGER*; D. J. ARPIN; E. HEINRICHS-GRAHAM; T. W. WILSON; M. KURZ. *Univ. of Nebraska Med. Ctr., Univ. of Nebraska Med. Ctr.*

1:00 TT10 **435.09** ● Improving source localization of movement-related potentials with tri-polar electroencephalography. C. TOOLE*; P. STEELE; J. DICECCO; W. BESIO. *Univ. of Rhode Island, CREmedical, Univ. of Rhode Island, Naval Undersea Warfare Ctr.*

2:00 TT11 **435.10** Dynamic phase-amplitude coupling in the EEG during gait adaptation. J. WAGNER*; R. MARTINEZ CANCINO; C. NEUPER; G. MUELLER-PUTZ; S. MAKEIG. *Graz Univ. of Technol., Univ. of California San Diego, Univ. of Graz.*

POSTER

436. Cortical Planning and Execution: Human Physiology

Theme E: Motor Systems

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 TT12 **436.01** Changes associated with motor learning of TMS-evoked EEG responses. H. SEKIGUCHI*; S. TAKEUCHI; M. MIYAZAKI; K. YAMANAKA. *Jobu Univ., Shizuoka Univ., Showa Women's Univ.*

2:00 TT13 **436.02** Independent preparation of "what" and "when"in the cortico-spinal pathway. N. HAGURA*; Y. GOTO; M. MATSUMURA. *CiNet, Kyoto Univ.*

3:00 TT14 **436.03** The gradient level of inhibition in response preparation. L. LABRUNA*; C. TISCHLER; D. LEVITIN; M. J. DABIT; I. GREENHOUSE; F. LEBON; R. B. IVRY. *UC Berkeley, McGill Univ., Univ. Bourgogne Franche Comté.*

4:00 UU1 **436.04** Examining the influence of dorsolateral prefrontal cortex activity on ipsilateral primary motor cortex excitability with dual-site TMS. M. J. BROWN*; M. VESIA; C. GUNRAJ; R. CHEN. *Univ. Hlth. Network.*

1:00 UU2 **436.05** Cortical processes to predict timing of gait initiation through visual information. K. TAKEDA*; Y. NISHI; H. MANI; N. HASEGAWA; T. ISHIGAKI; Y. TAKAMURA; M. OSUMI; S. NOBUSAKO; H. MAEJIMA; S. MORIOKA; T. ASAKA. *Hokkaido Univ., Kio Univ., Hokkaido Univ., Kio Univ.*

2:00 UU3 **436.06** Gaze pattern differences inform hand posture to object shape during reach-to-grasp. A. YOUSEFI*; S. BILALOGLU; J. R. RIZZO; Y. LU; P. RAGHAVAN. *New York Univ. Sch. of Med., Steinhardt Sch. of Culture, Education, and Human Develop.*

3:00 UU4 **436.07** ● Determination of treatment algorithms for patient subgroups for post-stroke hand function rehabilitation. P. RAGHAVAN*; Y. LU; C. BAYONA; S. BILALOGLU; A. YOUSEFI; A. TANG; V. ALURU; A. RANGAN. *New York Univ. Langone Med. Ctr., New York Univ. Sch. of Med., New York Univ., New York Univ. Med. Ctr.*

4:00 UU5 **436.08** Plasticity in cortical control signals to muscles in pianists with overuse injury with peripheral behavioral intervention. S. BILALOGLU*; S. CHAKRABARTY; Y. LU; A. YOUSEFI; P. RAGHAVAN. *New York Univ. Sch. of Med., Univ. of Leeds, Steinhardt Sch. of Culture, Education, and Human Develop., Steinhardt Sch. of Culture, Education, and Human Develop.*

1:00 UU6 **436.09** Selective and global inhibition of interneuron circuits in human motor cortex during movement preparation. R. HANNAH*; S. TREMBLAY; J. C. ROTHWELL. *UCL Inst. of Neurol.*

2:00 UU7 **436.10** Differential effects of rTMS on motor cortex excitability, interhemispheric inhibition and performance in elderly people. M. WISCHNEWSKI; G. M. KOWALSKI; J. FREEMAN; S. R. BELAGAJE; G. HOBBS; C. M. BUETEFISCH*. *Emory Univ., West Virginia Univ.*

3:00 UU8 **436.11** Anticipatory corticospinal control of motoneurons during self-unloading of wrist muscles: Comparison with usual unloading. L. ZHANG*; A. FELDMAN. *Dept. of Neuroscience, Univ. of Montreal.*

4:00 UU9 **436.12** Cortical coherence during movement. A. O'KEEFFE*; N. POURATIAN. *UCLA Hlth. Syst.*

1:00 UU10 **436.13** A comparison of widespread motor inhibition during movement preparation and stopping. I. GREENHOUSE*; L. CAO; R. B. IVRY. *Univ. of California Berkeley.*

2:00 UU11 **436.14** Abnormal interhemispheric interactions are present in the chronic but not in the acute or subacute post-stroke periods. J. XU*; M. BRANSCHEIDT; H. SCHAMBRA; G. LIUZZI; L. STEINER; N. KIM; T. KITAGO; A. LUFT; J. W. KRAKAUER; P. A. CELNIK. *Johns Hopkins Univ., Univ. of Zurich, Johns Hopkins Univ., Columbia Univ.*

3:00 UU12 **436.15** Somatotopic specificity of motor cortex plasticity in response to visuo-proprioceptive realignment. J. L. MIRDAMADI*; A. K. LYNCH; Y. LIU; H. J. BLOCK. *Indiana Univ., Indiana Univ.*

4:00 UU13 **436.16** Investigating the temporal aspects of action observation: Evidence from soccer players. M. BOVE*; L. PEDULLÀ; E. GERVASONI; A. BISIO; M. BIGGIO; L. AVANZINO. *Univ. of Genoa.*

1:00 UU14 **436.17** The competitive effect of alternative movements with different probabilities on EEG during preparation period. A. FUJIKAWA*; Y. MATSUMOTO; T. URAKAWA; O. ARAKI. *Tokyo Univ. of Sci.*

2:00 VV1 **436.18** Electroencephalography based analysis of hemispheric activation asymmetry for goal- and non goal-oriented movements with virtual mirror feedback. M. ROHAFZA*; M. YAROSSI; E. TUNIK; S. ADAMOVICH. *New Jersey Inst. of Technol., Rutgers Biomed. Hlth. Sci., Northeastern Univ.*

3:00 VV2 **436.19** The influence of cerebellar transcranial direct current stimulation on motor skill acquisition and learning in a throwing task. B. J. POSTON*; L. L. ALBUQUERQUE; A. K. JACKSON; K. M. FISCHER; M. A. GUADAGNOLI; Z. A. RILEY. *Univ. of Nevada Las Vegas, Indiana-University-Purdue Univ. Indianapolis.*

4:00 VV3 **436.20** Diverse patterns of movement related potentials after EEG BMI intervention in severe chronic stroke patients. O. YILMAZ*; D. BROETZ; W. CHO; E. GARCIA COSSIO; G. LIBERATI; F. BRASIL; M. ROCHA CURADO; N. BIRBAUMER; A. RAMOS MURGUIALDAY. *Bahcesehir Univ., Univ. of Tuebingen, Inst. of Neuroscience, Univ. catholique de Louvain, Ospedale San-Camillo, Neurotechnology Laboratory, TECNALIA Hlth.*

1:00 VV4 **436.21** Minimizing the required number of surface EEG electrodes with focused positioning. M. B. BAYRAM*; H. ARGUNSAH BAYRAM. *Acibadem Univ., Kessler Fndn.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 VV5 **436.22** Visual perception threshold is inversely correlated with moment-to-moment changes in corticomuscular coherence during tonic isometric voluntary ankle dorsiflexion in humans. R. MATSUYA*; J. USHIYAMA; S. KASUGA; J. USHIBA. *Keio Univ. Grad. Sch. of Sci. and Technol., Keio Univ., Keio Univ. school of Med., Keio Univ.*

3:00 VV6 **436.23** The mirror neuron system discriminates action exemplar: A human fMRI study. S. FERRI*; A. PLATONOV; G. A. ORBAN. *Univ. of Parma.*

POSTER

437. Cortical Planning and Execution: MRI

Theme E: Motor Systems

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 VV7 **437.01** Neural correlates of performance time on a tool-use task in chimpanzees. L. D. REYES*; S. BIANCHI; W. D. HOPKINS; C. C. SHERWOOD. *George Washington Univ., Icahn Sch. of Med. at Mount Sinai, Georgia State Univ., Yerkes Natl. Primate Res. Ctr., George Washington Univ.*

2:00 VV8 **437.02** Task-dependent changes in α-band power during preparation for sensory-motor action. Y. MATSUMOTO*; A. FUJIKAWA; T. URAKAWA; O. ARAKI. *Tokyo Univ. of Sci.*

3:00 VV9 **437.03** Functional motor cortical connectivity in twins and non-related individuals. J. E. JOSEPH*; P. CHRISTOVA; A. GEORGOPOULOS. *Univ. of Minnesota.*

4:00 VV10 **437.04** Motor network dynamics when coordinating bimanual actions. S. VISWANATHAN*; R. ABDOLLAHI; B. A. WANG; S. DAUN; G. R. FINK; C. GREFKES. *Univ. Hosp. of Cologne, Res. Ctr. Juelich, Univ. of Cologne.*

1:00 VV11 **437.05** Increased locomotor demand is associated with decreased cortical α power. J. R. LUKOS*; J. C. BRADFORD; D. P. FERRIS. *Space and Naval Warfare Systems Center, Pacific, U.S. Army Res. Lab., Univ. of Michigan.*

2:00 VV12 **437.06** ▲ Degree of right-handedness mediates inter-hemispheric connectivity of the human motor cortex during inter-hemispheric transfer: fMRI evidence. P. PATEL*; M. BELLANI; K. RAMASESHAN; G. RAMBALDELLI; C. MARZI; P. BRAMBILLA; V. DIWADKAR. *Wayne State Univ., Azienda Ospedaliera Universitaria Integrata Verona, Wayne State Univ. Sch. of Med., Univ. degli Studi di Verona, Univ. of Verona, Univ. of Milan, Wayne State Univ. Sch. of Med.*

3:00 VV13 **437.07** ● Distribution of interhemispheric structural connections between motor regions on the corpus callosum in older adults. J. C. STEWART*; J. BAIRD; G. PATHAK; S. C. CRAMER. *Univ. of South Carolina, Univ. of California, Irvine.*

4:00 VV14 **437.08** Cortical and network reorganization after bilateral forearm transplantation: A longitudinal case study. C. R. HERNANDEZ-CASTILLO*; J. DIEDRICHSEN; E. AGUILAR-CASTANEDA; M. IGLESIAS. *Consejo Nacional De Ciencia Y Tecnología - Cátedra, Western Univ., Inst. Nacional de Neurologia y Neurocirugia, Inst. Nacional de Ciencias Medicas y Nutricion.*

1:00 VV15 **437.09** Intrinsic functional organization of the human motor cortex. P. S. CHRISTOVA*; A. P. GEORGOPOULOS. *Univ. Minnesota.*

2:00 VV16 **437.10** A general framework for quantitatively assessing neurocomputational models with functional neuroimaging data. A. DALIRI*; J. A. TOURVILLE; A. NIETO-CASTANON; F. H. GUENTHER. *Boston Univ., Boston Univ.*

3:00 VV17 **437.11** Functional neuroimaging of position matching at the elbow. J. M. KENZIE*; S. E. FINDLATER; D. J. PITTMAN; B. G. GOODYEAR; S. P. DUKELOW. *The Univ. of Calgary, The Univ. of Calgary.*

4:00 VV18 **437.12** Temporal evolution of visual and motor direction selectivity in human cortex during target representation, motor planning, and reach execution. D. C. CAPPADOCIA*; S. MONACO; Y. CHEN; G. BLOHM; J. CRAWFORD. *York Univ., Univ. of Trento, Queen's Univ.*

1:00 VV19 **437.13** Mirror symmetric movement encoding in the human motor system. S. HAAR*; O. DONCHIN; I. DINSTEIN. *Ben Gurion Univ., Ben Gurion Univ., Ben Gurion Univ.*

2:00 VV20 **437.14** The correlations of brain activations during self- and stimuli-triggered movements with personality traits. K. OMATA*; S. ITO; H. OKADA; Y. OUCHI. *Hamamatsu Univ. Sch. of Med., Hamamatsu Medicai Imaging Center, Hamamatsu Med. Photonics Fndn.*

3:00 VV21 **437.15** Cortical activation associated with automatic control of pelvic floor muscles in women. M. S. YANI*; J. GORDON; S. P. ECKEL; D. J. KIRAGES; S. ASAVASOPON; J. J. KUTCH. *USC, USC, Loma Linda Univ.*

4:00 VV22 **437.16** Neural correlates of multisensory action predictions investigated with a custom-made passive movement device. B. VAN KEMENADE*; E. ARIKAN; K. PODRANSKI; O. STEINSTRÄTER; B. STRAUBE; T. KIRCHER. *Philipps-University Marburg.*

1:00 DP05 **437.17** (Dynamic Poster) Neural and behavioral evaluation of face and hand video stimuli. E. KILROY*; L. HARRISON; S. GIMBEL; S. CERMAK; L. AZIZ-ZADEH. *USC.*

2:00 VV23 **437.18** Continuous decoding of movement from fMRI in a goal-directed manual tracking task. D. A. BARANY*; S. VISWANATHAN; S. T. GRAFTON. *UC Santa Barbara, Univ. Hosp. of Cologne.*

3:00 VV24 **437.19** Functional MRI activity patterns in the action observation network for chronic stroke patients. P. HEYDARI*; S. LIEW; H. DAMASIO; C. WINSTEIN; L. AZIZ-ZADEH. *USC, USC.*

POSTER

438. Neuroprosthetics: Electrodes and Tissue

Theme E: Motor Systems

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 VV25 **438.01** Neural dust: A wireless, mm-scale device platform for interfacing with the nervous system *in vivo*. R. NEELY*; D. SEO; K. SHEN; U. SINGHAL; E. ALON; J. M. RABAEY; J. M. CARMENA; M. M. MAHARBIZ. *UC Berkeley, UC Berkeley, UCB/UCSF Joint program.*

2:00 VV26 **438.02** ● Reducing power consumption of dbs device using platinum-iridium coating. A. PETROSSIANS*. *USC.*

3:00 WW1 **438.03** Soft, mechanically brain-like composite materials improve the long-term, electrical characteristics of the neural interface. A. SRIDHARAN*; V. VOZIYANOV; J. MUTHUSWAMY. *Arizona State Univ.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 WW2 **438.04** The influence of different impedance values in neuronal recording: A correlational study in marmoset. B. B. GARCIA*; J. H. SATO; M. F. P. ARAÚJO; H. S. G. PEREIRA. *Santos Dumont Inst., State Univ. of Rio Grande do Norte, Anita Garibaldi Ctr. for Hlth. Educ. and Res.*

1:00 WW3 **438.05** Functional evaluation of a superoxide dismutase mimic coating for chronically implanted neural electrodes. X. S. ZHENG*; X. T. CUI. *Univ. of Pittsburgh.*

2:00 WW4 **438.06** Neural and vascular morphological changes after chronic electrode implantation. Y. GAO*; M. YE; D. KIM; A. LOZZI; A. BORETSKY; C. G. WELLE; D. X. HAMMER. *US Food and Drug Admin., Univ. of Colorado Denver.*

3:00 WW5 **438.07** Evaluation of neural cell adhesion molecule L1 coating for improved chronic recordings. P. CODY*; N. SNYDER; J. DU; R. TIEN; J. WILLIAMS; S. SUWAY; J. ORELLANA; Y. INOUE; T. KOZAI; C. LEGENAUR; A. SCHWARTZ; X. CUI. *Univ. of Pittsburgh, Interphase Materials, Shenzhen Inst. of Advanced Technology, Chinese Acad. of Sci., Univ. of Pittsburgh, Univ. of Pittsburgh, Carnegie Mellon Univ., Univ. of Pittsburgh, Univ. of Pittsburgh.*

4:00 WW6 **438.08** Dexamethasone retrodialysis attenuates microglial response to implanted probes *in vivo*. T. D. KOZAI*; A. S. JAQUINS-GERSTL; A. L. VAZQUEZ; A. C. MICHAEL; X. CUI. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh Brain Inst., Univ. of Pittsburgh, Univ. of Pittsburgh.*

1:00 WW7 **438.09** Elucidating the role of macrophage lineage in the FBR to chronically implanted microelectrode arrays. B. VELAGAPUDI*; M. B. CHRISTENSEN; P. A. TRESCO. *The Univ. of Utah.*

2:00 WW8 **438.10** Extracellular matrix coatings minimize the FBR to high density microelectrode arrays. M. POLEI*; P. A. TRESCO. *Univ. of Utah.*

3:00 WW9 **438.11** Experimental study of invasive brain-computer interface for rodents using carbon nano-tube coated micro-electrodes. S. JAFARIZADEH*; V. AZIMIRAD; P. SHAHABI; J. MAHMOUDI; T. DEHGHAN HELAN. *Qazvin Branch, Islamic Azad University, Qazvin, Ir, Univ. of Tabriz, Tabriz Univ. of Med. Sci., Univ. of Tabriz.*

4:00 WW10 **438.12** How to get PEDOT on your neural electrodes: Reliable, functionalized and homogenously coated. L. ASPLUND*; C. BOEHLER; F. OBERUEBER; S. HEIZMANN; C. KLEBER; R. HASSARATI; A. SCHOPF. *Univ. of Freiburg.*

1:00 WW11 **438.13** ● Signal quality changes and histological tissue reactions during long-term micro-electrocorticographic recordings. C. A. GKOGKIDIS*; X. WANG; M. GIERTHMUEHLEN; S. DOOSTKAM; M. SCHUETTLER; J. RICKERT; J. HABERSTROH; T. STIEGLITZ; W. BURGARD; T. BALL. *Med. Center, Univ. of Freiburg, Fac. of Engineering, Univ. Freiburg, Med. Center, Univ. of Freiburg, Cortec GmbH, Med. Center, Univ. of Freiburg, Fac. of Engineering, Univ. Freiburg.*

2:00 WW12 **438.14** *In vivo* 2-photon imaging of neural implants: Surface modification with L1CAM camouflages devices from microglial encapsulation. J. R. ELES*; T. D. Y. KOZAI; N. R. SNYDER; C. F. LAGENAUR; A. VAZQUEZ; X. T. CUI. *Univ. of Pittsburgh.*

3:00 WW13 **438.15** Multicolor genetically-encoded calcium-sensitive bioluminescent reporters of neural activity for brain-machine interfaces. M. A. PENDER*; K. LIN; A. BARES; E. DING; M. G. KAPLITT; C. B. SCHAFFER; N. NISHIMURA. *Cornell Univ., Brain and Spine Center, Weill Cornell Med. Col.*

4:00 WW14 **438.16** Plasticity in the excitability of neurons surrounding implanted neuroprostheses. J. W. SALATINO*; D. R. MONCREASE; E. K. PURCELL. *Michigan State Univ., Michigan State Univ., Michigan State Univ., Michigan State Univ.*

1:00 WW15 **438.17** Chronic recording and stimulation of rodent peripheral nerves using implanted microelectrode arrays. S. VASUDEVAN*; K. PATEL; R. SHARMA; R. CALDWELL; L. RIETH; C. WELLE. *U.S. Food and Drug Admin., Univ. of Maryland, Univ. of Utah, Univ. of Utah, Univ. of Colorado.*

POSTER

439. Neuroprosthetics: Human Microelectrode-Based Control

Theme E: Motor Systems

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 WW16 **439.01** Native upper limb movement encoding by intracortical recordings in human sensorimotor cortex. D. A. ROYSTON*; S. T. FOLDES; J. E. DOWNEY; J. WEISS; S. N. FLESHER; E. TYLER-KABARA; M. BONINGER; R. GAUNT; J. L. COLLINGER. *Univ. of Pittsburgh, Univ. of Pittsburgh, Barrow Neurolog. Inst. at Phoenix Children's Hosp., Univ. of Pittsburgh, VA Pittsburgh Healthcare Syst., Univ. of Pittsburgh, Univ. of Pittsburgh.*

2:00 WW17 **439.02** Encoding of intended grasp force in primary motor cortex during brain-computer interface controlled robotic arm use. J. E. DOWNEY*; J. WEISS; A. B. SCHWARTZ; R. GAUNT; J. L. COLLINGER. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

3:00 WW18 **439.03** Bimanual representations in electrophysiology recordings from human posterior parietal cortex. S. KELLIS*; Y. NI; C. KLAES; T. AFLALO; B. LEE; K. PEJSA; K. SHANFIELD; S. HAYES-JACKSON; B. PHILLIPS; M. AISEN; C. HECK; C. LIU; R. ANDERSEN. *Caltech, Caltech, Keck Hosp. of USC, Rancho Los Amigos Natl. Rehabil. Ctr.*

4:00 WW19 **439.04** ● Detection of phonemes, short words and phrases from single units and 12-20 Hz frequency β band data during overt and covert speech recorded chronically from a speaking human. P. R. KENNEDY*; C. R. GAMBRELL, 30096; N. SHIH. *Neural Signals Inc, Neural Signals Inc.*

1:00 WW20 **439.05** Towards a multi-state click decoder in intracortical brain computer interfaces. J. G. CIANCIBELLO*; M. VILELA; T. HOSMAN; J. SAAB; D. LESENFANTS; D. M. BRANDMAN; B. FRANCO; L. R. HOCHBERG; J. D. SIMERAL. *Brown Univ., Brown Univ., VA Med. Ctr., Brown Univ., Massachusetts Gen. Hosp., Harvard Med. Sch.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 WW21 **439.06** Reducing electrical artifacts in microelectrode brain recordings during functional electrical stimulation. D. YOUNG*; W. D. MEMBERG; B. MURPHY; B. WALTER; J. SWEET; J. MILLER; L. R. HOCHBERG; R. F. KIRSCH; A. B. AJIBOYE. *Case Western Reserve Univ., FES Ctr. of Excellence, Rehab. R&D Service, Louis Stokes Cleveland Dept. of VA Med. Ctr., Neurol., UH Case Med. Ctr., Neurol., CWRU Sch. of Med., Neurosurg., UH Case Med. Ctr., Neurolog. Surgery, CWRU Sch. of Med., Sch. of Engin., Brown Univ., Neurol., Massachusetts Gen. Hosp., Neurol., Harvard Med. Sch., Inst. For Brain Sci., Brown Univ.*

3:00 WW22 **439.07** Idle state detection from motor cortical activity in a person with tetraplegia using an intracortical brain-computer interface. D. LESENFANTS*; J. SAAB; T. HOSMAN; M. VILELA; B. JAROSIEWICZ; B. FRANCO; S. S. CASH; E. N. ESKANDAR; J. D. SIMERAL; J. P. DONOGHUE; L. R. HOCHBERG. *Brown Univ., Dept. of VA Med. Ctr., Brown Univ., Brown Univ., Brown Univ., Massachusetts Gen. Hosp., Harvard Med. Sch., Massachusetts Gen. Hosp., Wyss Ctr.*

4:00 XX1 **439.08** Adaptive threshold for point-and-click applications using intracortical brain computer interface. M. VILELA*; J. CIANCIBELLO; T. HOSMAN; J. SAAB; D. LESENFANTS; B. FRANCO; B. JAROSIEWICZ; J. SIMERAL; L. R. HOCHBERG. *Brown Univ., Dept of VA Med. Ctr., Brown Univ., Massachusetts Gen. Hosp., Brown Univ., Harvard Med. Sch.*

1:00 XX2 **439.09** Using direction-independent, movement magnitude information from motor cortex to enhance intracortical brain-computer interface performance. F. WILLETT*; B. MURPHY; W. D. MEMBERG; C. H. BLABE; J. SAAB; B. JAROSIEWICZ; C. PANDARINATH; B. WALTER; J. SWEET; J. MILLER; J. M. HENDERSON; K. V. SHENOY; J. D. SIMERAL; L. R. HOCHBERG; R. F. KIRSCH; A. B. AJIBOYE. *Case Western Reserve Univ., Louis Stokes Cleveland Dept. of VA Med. Ctr., Stanford Univ., Brown Univ., Dept. of VA Med. Ctr., Brown Univ., Brown Univ., Stanford Univ., UH Case Med. Ctr., CWRU Sch. of Med., UH Case Med. Ctr., CWRU Sch. of Med., Stanford Univ., Stanford Univ., Stanford Univ., Stanford Univ., Massachusetts Gen. Hosp., Harvard Med. Sch.*

2:00 XX3 **439.10** Closed loop intracortical brain computer interface cursor control in people using a continuously updating Gaussian process decoder. D. BRANDMAN*; M. C. BURKHART; T. HOSMAN; J. SAAB; A. A. SARMA; D. J. MILSTEIN; C. VARGAS-IRWIN; B. FRANCO; J. P. DONOGHUE; M. T. HARRISON; L. R. HOCHBERG. *Brown Univ., Brown Univ., Brown Univ., Brown Univ., Dept. of VA Med. Ctr., Brown Univ., Brown Univ., Massachusetts Gen. Hosp.*

3:00 XX4 **439.11** Overcoming contextual differences in motor cortical neural firing patterns when controlling multiple end effector devices using an intracortical brain-computer interface (iBCI). V. CHAVAKULA*; S. E. FASOLI; D. M. BRANDMAN; J. SAAB; T. HOSMAN; B. FRANCO; J. D. SIMERAL; J. P. DONOGHUE; L. R. HOCHBERG. *Brown Univ., Brigham and Women's Hosp., Harvard Med. Sch., Dept. of VA Med. Ctr., Brown Univ., Brown Univ., MGH Inst. of Hlth. Professionals, Brown Univ., Brown Univ., Massachusetts Gen. Hosp., Wyss Ctr., Brown Univ., Harvard Med. Sch.*

4:00 XX5 **439.12** Retrospectively supervised point-and-click decoder calibration during practical use of an intracortical brain-computer interface. B. JAROSIEWICZ*; A. A. SARMA; J. SAAB; B. FRANCO; L. R. HOCHBERG. *Brown Univ., Dept. of VA Med. Ctr., Brown Univ., Brown Univ., Massachusetts Gen. Hosp., Harvard Med. Sch.*

1:00 XX6 **439.13** Evaluating force representation in motor cortex of intracortical BCI users with chronic tetraplegia. A. RASTOGI*; B. A. MURPHY, 44106; F. R. WILLETT; W. D. MEMBERG; B. L. WALTER, 44106; J. P. MILLER; J. A. SWEET; C. E. VARGAS-IRWIN; L. R. HOCHBERG; R. F. KIRSCH; A. B. AJIBOYE. *Case Western Reserve Univ., Univ. Hosp. Case Med. Ctr., Case Western Reserve Univ. Sch. of Med., Univ. Hosp. Case Med. Ctr., Case Western Reserve Univ. Sch. of Med., Brown Univ., Brown Univ., Brown Univ., Massachusetts Gen. Hosp., Harvard Med. Sch., Louis Stokes Cleveland Dept. of VA Med. Ctr.*

2:00 XX7 **439.14** Decoding articulation by neuronal spike frequency and power spectrum recorded from human face motor cortex. K. IBAYASHI*; T. MATSUO; N. KUNII; Y. ISHISHITA; S. SHIMADA; K. KAWAI; N. SAITO. *Univ. of Tokyo, Grad. Sch. of Med., NTT Med. Ctr. Tokyo, Univ. of Tokyo, Jichi Med. Univ.*

3:00 XX8 **439.15** Learning mechanisms in the posterior parietal cortex: A brain-machine interface study with a tetraplegic human. S. SAKELLARIDI*; V. N. CHRISTOPOULOS; T. AFLALO; K. W. PEJSA; E. R. ROSARIO; D. OUELLETTE; N. POURATIAN; R. A. ANDERSEN. *Caltech, Caltech, Casa Colina Hosp. Ctr., Univ. of California Los Angeles.*

4:00 XX9 **439.16** Closed-loop control of a sensorized virtual prosthetic hand by a human subject after amputation. D. T. KLUGER*; D. M. PAGE; S. M. WENDELKEN; T. S. DAVIS; D. T. HUTCHINSON; C. DUNCAN; D. J. WARREN; G. A. CLARK. *Univ. of Utah.*

1:00 XX10 **439.17** Decoding hand level prosthetic control signals from regenerative peripheral nerve interfaces in human subjects. P. VU*; Z. T. IRWIN; I. C. SANDO; P. T. HENNING; M. G. URBANCHEK; P. S. CEDERNA; C. A. CHESTEK. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

POSTER

440. Posture: Muscle Activity, Exercise, and Biomechanics

Theme E: Motor Systems

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 XX11 **440.01** ● Intersegmental coordination of bipedally standing rat. Y. SATO*; T. FUNATO; D. YANAGIHARA; Y. SATO; S. FUJIKI; S. AOI; K. TSUCHIYA. *The Univ. of Electro-Communications, The Univ. of Tokyo, Teikyo Heisei Univ., Kyoto Univ.*

2:00 XX12 **440.02** Effects of visual feedback training using center of gravity along with center of pressure for static postural balance. H. MANI*; K. TAKEDA; N. HASEGAWA; Y. SATO; S. TANAKA; Y. SUDA; H. MAEJIMA; T. ASAKA. *Hokkaido Univ., Hokkaido Univ.*

3:00 XX13 **440.03** Task performance during a modified Sørensen test in subjects with and without chronic low back pain. J. S. THOMAS*; R. D. KAYA; R. L. PUTHOFF; M. E. APPLEGATE; S. T. LEITKAM; D. W. RUSS. *Ohio Univ.*

4:00 XX14 **440.04** A new biomechanical interpretation of the ankle and hip strategies in balance control during human standing. S. SASAGAWA*; A. IMURA; K. NAKAZAWA. *Dept. of Human Sciences, Kanagawa Univ., Dept. of Human Sciences, Kanagawa Univ., Dept. of Life Sciences, Grad. Sch. of Arts and Sciences, The Univ. of Tokyo.*

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* Indicates abstract's submitting author

1:00 XX15 **440.05** ● Use of the Cleveland Clinic-Postural Stability Index to characterize postural instability in Parkinson's disease. S. J. OZINGA*; M. M. KOOP; S. M. LINDER; T. DEY; J. L. ALBERTS. *Cleveland Clin.*

2:00 XX16 **440.06** Development of a directional intervention protocol based-evidence for individuals with chronic low back pain. A. F. CARVALHO*; A. H. NOWOTNY; M. R. OLIVEIRA; L. A. STURION; N. A. SHIRABE; C. E. CARVALHO; F. K. S. BERALDO; F. K. S. BERALDO; L. C. L. CARVALHO; A. W. GIL; R. A. DA SILVA JR. *Univ. Norte Do Paraná - UNOPAR, Univ. Norte Do Paraná - UNOPAR.*

3:00 XX17 **440.07** Neuromuscular pattern of trunk during one-leg balance stance in individuals with and without chronic low back pain. R. A. DA SILVA JR*; A. F. CARVALHO; A. H. NOWOTNY; M. R. OLIVEIRA; L. A. STURION; N. SHIRABE; P. E. DE SOUZA; R. S. DA SILVA; K. P. FERNANDES; E. R. VIEIRA. *Univ. Norte Do Paraná (UNOPAR), Univ. Norte do Paraná (UNOPAR), Florida Intl. Univ. (FIU).*

4:00 XX18 **440.08** A novel characterization of human balance control during standing with visual sensory deprivation. W. BOEHM*; K. NICHOLS; K. GRUBEN. *Univ. of Wisconsin Madison.*

1:00 XX19 **440.09** 12 weeks of balance and mobility training with or without simultaneous cognitive training improves reaction time but does not improve posture in healthy older adults. D. A. JEHU*; N. PAQUET; Y. LAJOIE. *Univ. of Ottawa, Univ. of Ottawa.*

2:00 XX20 **440.10** Different leaning effects of dynamic postural control by visual or auditory feedback training. N. HASEGAWA*; M. SAKUMA; S. TANAKA; Y. SATO; K. TAKEDA; H. MANI; H. MAEJIMA; T. ASAKA. *Hokkaido Univ., Sapporo Yamanoue Hosp., Natl. Hosp. Organization East Saitama Natl. Hosp., Hokkaido Univ.*

3:00 XX21 **440.11** The effect of mental fatigue on postural stability. A. MORRIS*; A. CHRISTIE. *Univ. of Oregon.*

4:00 XX22 **440.12** Standing postural control while stepping over randomly moving virtual obstacles. H. IDA*; S. MOHAPATRA; A. S. ARUIN. *Jobu Univ., Univ. of Montana, Univ. of Illinois at Chicago.*

1:00 YY1 **440.13** Intermittent muscle activities occur according to joint state during human quiet standing. H. TANABE*; K. FUJII; M. KOUZAKI. *The Univ. of Tokyo, Nagoya Univ., Japan Society for the Promotion of Sci., Kyoto Univ.*

2:00 YY2 **440.14** Learning postural control with continuous visual feedback in healthy young adults and chronic stroke survivors. L. PELLEGRINO*; P. GIANNONI; L. MARINELLI; M. CASADIO. *Univ. of Genoa, Univ. of Genoa, Univ. of Genoa.*

3:00 YY3 **440.15** Increased postural threat influences the conscious perception of voluntary leaning. T. W. CLEWORTH*; T. INGLIS; M. G. CARPENTER. *Univ. of British Columbia, Intl. Collaboration On Repair Discoveries, Djavad Mowafaghian Ctr. for Brain Hlth.*

4:00 YY4 **440.16** ● Postural control as a function of sloped support surfaces. A. DUTT-MAZUMDER*. *Med. Univ. of South Carolina.*

1:00 YY5 **440.17** ● Influence of task-related and person-related variables on the impaired anticipatory postural adjustments of people with low back pain: Insight into heterogeneous results across studies. J. V. JACOBS*; J. R. HITT; S. M. HENRY. *Liberty Mutual Res. Inst. for Safety, Univ. of Vermont, Univ. of Vermont Med. Ctr.*

2:00 YY6 **440.18** Smartphone-based assessment of changes in postural stability in neurological patients after a therapeutic exercise intervention. B. L. TRACY*; A. A. SCHMID; D. M. MILLER; K. E. TIMROTH; B. E. HOLLAND; L. R. JANKOWSKI; M. F. FRITZ. *Colorado State Univ., Colorado State Univ., Colorado State Univ.*

POSTER

441. Motor Neuron-Muscle Interface

Theme E: Motor Systems

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 YY7 **441.01** Neuronal-specific cargo-delivery platform for post-botulism therapies. V. PATEL*; M. PIRES-ALVES; A. M. PATEL; M. HO; J. J. MCARDLE; B. A. WILSON. *Rutgers Univ., Univ. of Illinois.*

2:00 YY8 **441.02** ● Botulinum neurotoxin type A-cleaved SNAP25 is confined to primary motor neurons and expressed on the plasma membrane following intramuscular toxin injection. R. S. BROIDE*; J. FRANCIS; B. B. CAI. *Allergan PLC.*

3:00 YY9 **441.03** Pharmacological modulators of presynaptic calcium concentration reverse botulinum neurotoxin-induced silencing of synapses *in vitro* and delay paralysis in *ex vivo* muscle preparations. A. B. BRADFORD*; P. H. BESKE; J. B. MACHAMER; T. M. RUSSO; P. M. MCNUTT. *US Army Med. Res. Inst. of Chem. Def.*

4:00 YY10 **441.04** 3,4-DAP reverses botulinum-induced muscle paralysis by increasing neurotransmitter release probability at unintoxicated release sites. J. MACHAMER*; A. BRADFORD; T. RUSSO; P. MCNUTT. *US Army Med. Res. Inst. of Chem. Def.*

1:00 YY11 **441.05** Conditioning at the neuromuscular junction: Elucidating the eliciting conditions. M. M. STRAIN*; J. D. TURTLE; Y. HUANG; J. W. GRAU. *Texas A&M Univ. Dept. of Psychology.*

2:00 YY12 **441.06** Ighmbp2 deficiency corresponds to protein translation changes and leads to differentiation defects in motoneurons. V. SURREY*; M. MORADI; B. DOMBERT; H. VYAS; C. WINKLER; U. FISCHER; S. JABLONKA. *Univ. Hosp. Wuerzburg, Natl. Univ. of Singapore, Univ. Wuerzburg.*

3:00 YY13 **441.07** Effects of tamoxifen on single muscle fiber function and protein expression after spinal cord injury. I. K. SALGADO VILLANUEVA; A. E. RODRIGUEZ; A. I. TORRADO; M. E. SANTIAGO; W. R. FRONTERA; J. D. MIRANDA*. *Univ. Puerto Rico Sch. Med., Vanderbilt Univ. Sch. of Medicine.*

4:00 YY14 **441.08** Association of small ankyrin 1 with sarcolipin. A. LABUZA*; P. F. DESMOND; J. MURIEL; M. L. MARKWARDT; M. A. RIZZO; R. J. BLOCH. *Univ. of Maryland Baltimore.*

1:00 ZZ1 **441.09** Oxidative stress and reduced gsh:gssg ratio in ryr1-related myopathies. M. S. RAZAQYAR*; J. WITHERSPOON; J. ELLIOTT; I. ARVESON; K. MEILLEUR. *NINR.*

2:00 ZZ2 **441.10** Functional analysis of $Na_v1.4$ mutation in a case presenting with Schwartz-Jampel features, myotonic discharges, and herculean development. X. XIONG; D. H. FELDMAN; T. L. KLASSEN; C. G. SANCHEZ ACOSTA; L. PLAZA-BENHUMEA; R. MASELLI; C. LOSSIN*. *UC Davis, Sch. of Med., Univ. of British Columbia, Neurología Pediatrica, Hosp. Gen. de Mexico, UC Davis - Sch. of Med.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 ZZ3 **441.11** Chronic inflammatory demyelinating polyneuropathy weakness is associated with reduced muscle mass and motor unit loss. K. GILMORE*; K. KIMPINSKI; T. DOHERTY; C. RICE. *The Univ. of Western Ontario, The Univ. of Western Ontario, The Univ. of Western Ontario, The Univ. of Western Ontario, London.*

4:00 ZZ4 **441.12** Biophysical and structural properties that contribute to the special biomechanics of the octopus arm. L. ZULLO*; F. MAIOLE; S. M. FOSSATI; N. NESHER; B. HOCHNER. *Inst. Italiano Di Tecnologia, NSYN, Univ. of Genova and Inst. Italiano di Tecnologia, NSYN, Inst. Italiano di Tecnologia, The Ruppin Academic Ctr., The Hebrew Univ.*

1:00 ZZ5 **441.13** Light-activation of channelrhodopsin-2 expressed in chick embryo hindlimb muscle mimics neural activation of muscle. J. R. WHITAKER*; S. FROMHERZ; P. R. PATRYLO; A. A. SHARP. *Southern Illinois Univ. Carbondale, Saginaw Valley State Univ., Southern Illinois Univ. Sch. of Med.*

2:00 ZZ6 **441.14** Development of a separation method of neural component from spastic resistance. K. TAKEDA*; S. MIZUNO; H. MAEDA; K. OHNO; A. ORAND; G. TANINO; H. MIYASAKA; S. SONODA. *Nanakuri Inst, Fujita Hlth. Univ., Dept. of Rehabil. Med. II, Sch. of Medicine, Fujita Hlth. Univ.*

3:00 ZZ7 **441.15** ▲ Wireless innervation of neurons using electromagnetic fields in craw. B. KUTER*; E. C. GUSTAFSON; E. P. WIERTELAK, 55105. *Macalester Col., Univ. of Minnesota, Macalester Col.*

4:00 ZZ8 **441.16** A three-dimensionally engineered spinal cord-skeletal muscle bioactuator. C. S. LIU*; C. CVETKOVIC; G. NASERI KOUZEHGARANI; R. BASHIR; M. U. GILLETTE. *Univ. of Illinois, Univ. of Illinois, Univ. of Illinois.*

1:00 ZZ9 **441.17** The effect of an 8 week CrossFit type exercise program on inflammatory injury and balance. G. S. BAINS*; E. LOHMAN; L. BERK; N. DAHER; R. CHETTIAR; O. AMBODE; B. MIRANDA; R. SINGH; F. NUGENT. *Loma Linda Univ., Southern Utah Univ.*

2:00 ZZ10 **441.18** ● Intermittent leg cycling sprints induce fatigue-related suppression of human soleus Hoffmann reflexes. G. E. PEARCEY*; S. NOBLE; B. MUNRO; J. L. BISHOP; E. ZEHR. *Univ. of Victoria, Univ. of Victoria, Nike Sport Res. Lab.*

3:00 ZZ11 **441.19** ▲ Bladder and urethral function in female rabbit: A model of damage. R. LOPEZ JUAREZ*; R. ZEMPOALTECA; D. CORONA-QUINTANILLA; F. CASTELÁN; M. MARTÍNEZ-GÓMEZ. *Univ. Autonoma De Tlaxcala, Univ. Autónoma de Tlaxcala, Univ. Autónoma de Tlaxcala, Univ. Nacional Autónoma México, UNAM.*

4:00 ZZ12 **441.20** ▲ Identifying the function of tyramine in the mouse uterus. M. AGRE; B. OBAYOMI; L. TOWNLEY; D. P. BALUCH*. *Arizona State Univ.*

1:00 ZZ13 **441.21** New measurement system of human arm stiffness for clinical evaluation. T. YUKAKO*; K. IGARASHI; S. KATSURA; F. NAKAI; C. YAMADA; Y. ITAGUCHI; H. YOSHIZAWA; K. FUKUZAWA. *Keio Univ., Waseda Univ., Japan Society for the Promotion of Sci., Tokyo Women's Med. Univ.*

POSTER

442. Neuroethology of Sensory and Motor Systems: Vertebrates

Theme F: Integrative Physiology and Behavior

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 ZZ14 **442.01** Rat whiskers are used in airflow sensing. Y. S. YU*; M. M. GRAFF; C. S. BRESEE; Y. B. MAN; M. J. Z. HARTMANN. *Northwestern Univ. Dept. of Mechanical Engin., Northwestern Univ. Interdepartmental Neurosci. Program, Northwestern Univ. Dept. of Biomed. Engin.*

2:00 AAA1 **442.02** The three-dimensional morphology of vibrissal follicles and muscles: Implications for motor control. C. S. BRESEE*; J. L. ALADE'FA; L. A. HUET; H. BELLI; M. J. Z. HARTMANN. *Northwestern Univ., Northwestern Univ., Northwestern Univ., Northwestern Univ.*

3:00 AAA2 **442.03** The effect of social stress on the dopaminergic pathway of the escape circuit in zebrafish. K. CLEMENTS*; T. MILLER; E. JI; F. ISSA. *East Carolina Univ., UCLA.*

4:00 AAA3 **442.04** Social status-dependent molecular regulation of dopaminergic pathways in the brain of zebrafish (danio rerio). T. H. MILLER*; K. CLEMENTS; E. JI; F. ISSA. *East Carolina Univ., Univ. of California, East Carolina Univ.*

1:00 AAA4 **442.05** Trade-offs between speed and variability in responses to looming visual stimuli. K. D. BHATTACHARYYA*; D. L. MCLEAN; M. A. MACIVER. *Northwestern Univ., Northwestern Univ.*

2:00 AAA5 **442.06** The visual system of the northern elephant seal. E. C. TURNER*; E. K. SAWYER; J. H. KAAS. *Vanderbilt Univ.*

3:00 AAA6 **442.07** Predation behavior is based on background thermoregulation in a pit-viper Gloydius brevicaudus. Q. CHEN*; Y. TANG. *Chengdu Inst. of Biology, Chinese Acad. of Sci., Chengdu Inst. of Biology, Chinese Acad. of Sci.*

4:00 AAA7 **442.08** A three-dimensional stereotaxic mri brain atlas of house crows (corvus splendens). S. SEN*; S. PAUL; P. RAGHUNATHAN; S. S. KUMARAN; S. IYENGAR. *Natl. Brain Res. Ctr., All India Inst. of Med. Sci.*

1:00 AAA8 **442.09** Regressive evolution of the hagfish visual system: Blind but hopeful monsters. W. T. ALLISON*. *Univ. of Alberta.*

2:00 AAA9 **442.10** Modulation of locomotor behaviors by a dopaminergic population in the zebrafish hypothalamus. J. P. BARRIOS*; A. D. MCPHERSON; S. ANJEWIERDEN; J. B. NEWTON; S. J. LUKS-MORGAN; R. I. DORSKY; A. D. DOUGLASS. *Univ. of Utah, Univ. of California San Diego, Univ. of Utah.*

3:00 AAA10 **442.11** ▲ Lesions of the telencephalon and the application of a dopamine D1 receptor antagonist result in similar modifications of the acoustic startle response in goldfish. A. N. OPALKA*; N. FISCHER; R. F. WALDECK. *The Univ. of Scranton, The Univ. of Scranton.*

4:00 AAA11 **442.12** From drug discovery to neural mechanisms of nicotine-induced motor behavior in zebrafish. H. SCHNEIDER*. *Depauw Univ.*

1:00 AAA12 **442.13** Processing of sensory input by pyramidal neurons in the electrosensory lateral line lobe of the weakly electric fish Apteronotus albifrons. D. MARTINEZ*; M. CHACRON. *McGill Univ.*

Mon. PM

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

2:00 AAA13 **442.14** ▲ Dance complexity related to the volume of a sensorimotor region in manakins. W. HELMHOUT*; G. PANO; W. R. LINDSAY; L. B. DAY. *Univ. of Mississippi, Goteborg Univ.*

3:00 AAA14 **442.15** Olfactory navigation in realistic odor landscapes: Modeling and simulation of odor localization and path-following strategies in mice. J. HENGENIUS*; N. URBAN; B. ERMENTROUT. *Univ. of Pittsburgh, Univ. of Pittsburgh, Univ. of Pittsburgh.*

POSTER

443. Genetic Approaches in Songbirds

Theme F: Integrative Physiology and Behavior

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 AAA15 **443.01** Bidirectional manipulation of mTOR signaling reveals complicated contribution to sensory learning. S. AHMADIANTEHRANI*; S. E. LONDON. *Univ. of Chicago, Univ. of Chicago.*

2:00 AAA16 **443.02** An efficient and flexible gene manipulation strategy in zebra finch brain. S. E. LONDON*; S. AHMADIANTEHRANI. *Univ. of Chicago, Univ. of Chicago, Univ. of Chicago.*

3:00 AAA17 **443.03** Epigenetics of learning in zebra finch. D. CONDLIFFE*; J. GEORGE; C. BARTON; A. LEITAO; M. GAHR; P. HURD; D. CLAYTON. *Queen Mary Univ. of London, Max Planck Inst.*

4:00 AAA18 **443.04** CREB-mediated interplay of genes and environment in the postnatal song learning in songbirds. K. ABE*; D. WATANABE. *Kyoto Univ.*

1:00 AAA19 **443.05** A role for SLIT1 in regulating singing behavior in adult male zebra finches. M. CHAKRABORTY*; I. H. LEE; E. KOUNTOURIS; L. CHEN; R. NEVE; J. CHABOUT; G. L. GEDMAN; H. CHOE; E. D. JARVIS. *Howard Hughes Med. Inst., Duke Univ. Med. Ctr., MIT.*

2:00 AAA20 **443.06** A comprehensive profiling of differential gene expression specializations in the song system of a vocal learning songbird, Taeniopygia guttata. G. GEDMAN*; A. PFENNING; J. AUDET; J. PALPENT; E. D. JARVIS. *Duke Univ., Carnegie Mellon Univ., McGill Univ., Howard Hughes Med. Inst.*

3:00 AAA21 **443.07** Transcriptome profiling of the vocal nuclei in zebra finches (T. guttata) reveals molecular specializations of neural circuits for the production of learned song. S. FRIEDRICH*; P. V. LOVELL; C. V. MELLO. *Oregon Hlth. & Sci. Univ.*

4:00 AAA22 **443.08** Comparative transcriptomics of vocal nuclei of Anna's hummingbirds and zebra finches reveal convergent and group-specific molecular features of vocal learning circuits in hummingbirds and songbirds. P. V. LOVELL*; M. WIRTHLIN; C. V. MELLO. *Oregon Hlth. and Sci. Univ. Sch. of Med.*

1:00 AAA23 **443.09** Identification of candidate gene regulatory sequence elements associated with the emergence of vocal learning in songbirds. M. WIRTHLIN*; P. V. LOVELL; C. V. MELLO. *Oregon Hlth. & Sci. Univ.*

2:00 AAA24 **443.10** An update and new applications of the zebra finch expression brain atlas (www.zebrafinchatlas.org). C. V. MELLO*; P. V. LOVELL. *Oregon Hlth. and Sci. Univ. Sch. of Med.*

3:00 AAA25 **443.11** ▲ Egg laying male has androgynous song system. J. A. HOWELL*; N. WEBB; R. PEREZ; A. HRIBAR; L. DAY. *Univ. of Mississippi.*

4:00 AAA26 **443.12** Expression of lipoprotein receptor-related proteins (LRPs) in brain of zebra finches: Possible links to VSVg-pseudotyped viral infectivity. T. VELHO*; P. V. LOVELL; M. WIRTHLIN; C. LOIS; C. V. MELLO. *CALTECH, Federal Univ. of Rio Grande do Norte, Oregon Hlth. and Sci. Univ.*

1:00 BBB1 **443.13** Robust male-specific expression of the UTS2B gene emerges early in the development of a zebra finch forebrain vocal control nucleus. Z. W. BELL*; J. M. GEORGE; D. F. CLAYTON. *Queen Mary, Univ. of London.*

2:00 BBB2 **443.14** Reelin signaling in the basal ganglia: Striatal, pallidal, or both? E. FRALEY*; P. E. PHELPS; S. A. WHITE. *UCLA, UCLA.*

3:00 BBB3 **443.15** FoxP2 overexpression coupled with auditory deprivation in adult zebra finches disrupts molecular microcircuitry in a song-dedicated basal ganglia nucleus. N. F. DAY*; Z. D. BURKETT; A. T. HILLIARD; X. XIAO; S. A. WHITE. *Univ. of California Los Angeles, Stanford Univ.*

4:00 BBB4 **443.16** FoxP2 isoform-specific overexpression in juvenile zebra finches alters transcriptional networks underlying learned vocalization. Z. D. BURKETT*; N. F. DAY; A. T. HILLIARD; J. B. HESTON; X. XIAO; S. A. WHITE. *Univ. of California Los Angeles, Univ. of California Los Angeles, Stanford Univ., Univ. of California Los Angeles.*

1:00 BBB5 **443.17** Attenuated expression of contactin associated protein-like 2 in a primary motor nucleus of the song system impairs vocal imitation. S. A. WHITE*; Q. CHEN; Y. MAI; M. C. CONDRO; S. C. PANAITOF. *Univ. of California Los Angeles, Univ. of California, Univ. of Nebraska.*

2:00 BBB6 **443.18** Accumulation of singing experience regulates the critical period of vocal plasticity during birdsong active learning. S. HAYASE*; M. KOBAYASHI; E. OHGUSHI; K. WADA. *Hokkaido Univ.*

POSTER

444. Social Communication in Non-Avian Models

Theme F: Integrative Physiology and Behavior

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 BBB7 **444.01** Vocal combinatorial behavior in rats. T. RIEDE*; C. HERNANDEZ; M. SABIN; H. BORGARD. *Midwestern Univ.*

2:00 BBB8 **444.02** ▲ Male mice emit ultrasonic vocalizations during agonistic interactions. D. T. SANGIAMO; M. R. WARREN; X. ZHONG; J. P. NEUNUEBEL*. *Univ. of Delaware.*

3:00 BBB9 **444.03** ▲ Sex differences in the acoustic structure of mouse ultrasonic vocalizations. M. S. SPURRIER; E. ROTH*; M. R. WARREN; J. P. NEUNUEBEL. *Univ. of Delaware, Univ. of Delaware.*

4:00 BBB10 **444.04** Direct quantification of a social communication deficit in a mouse model of autism. M. R. WARREN*; J. P. NEUNUEBEL. *Univ. of Delaware.*

1:00 BBB11 **444.05** Dopaminergic mechanisms of vocal communication in prairie voles. M. L. GUSTISON*; N. NEVÁREZ; M. SEHRSWEENEY; M. WYBRECHT; I. K. WOHL; E. E. WRIGHT; B. J. ARAGONA. *Univ. of Michigan, Univ. of Michigan.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 BBB12 **444.06** Temporal dynamics of locus coeruleus activity during courtship in male mice. D. ECKMEIER; S. D. SHEA*. *Cold Spring Harbor Lab.*

3:00 BBB13 **444.07** Alterations in USV and cortical structure in KOR-1 KO mice. B. VILJETIC; M. ANSONOFF; S. WIJERANTE; M. PINTAR; M. RASIN; J. E. PINTAR*. *Rutgers Robert Wood Johnson Med. Sch., Rutgers Robert Wood Johnson Med. Sch.*

4:00 BBB14 **444.08** Movement and electric analysis of freely swimming pulse type weakly electric fish. R. D. PINTO*; A. C. FREIRES DE OLIVEIRA; R. T. GUARIENTO; L. O. B. ALMEIDA; I. H. Z. DE STEFANI; M. R. GONÇALVES. *Inst. Fisica De Sao Carlos - Univ. Sao Paulo.*

1:00 BBB15 **444.09** Dynamics of electrical behavior of Gymnotus carapo electric fish during dominance contest. R. TUMA GUARIENTO*; T. S. MOSQUEIRO; P. MATIAS; V. CESARINO; L. O. B. ALMEIDA; R. D. PINTO. *Univ. of Sao Paulo - Sao Carlos Inst. of, Univ. of California, Univ. of Sao Paulo - Sao Carlos Inst. of Physics.*

2:00 BBB16 **444.10** Non-invasive inference of neuronal refractory time in pulse type weakly electric fish communication. A. S. RIOS*; R. T. GUARIENTO; L. O. B. ALMEIDA; I. H. Z. DE STEFANI; R. D. PINTO. *Univ. of Sao Paulo.*

1:00 DP06 **444.11** (Dynamic Poster) Specification of male versus female acoustic communication behaviors in *Drosophila* virilis. C. A. BAKER*; X. GUAN; M. MURTHY. *Princeton Univ.*

4:00 BBB17 **444.12** A circuit screen for song production neurons in *Drosophila melanogaster*. A. HAMMONS*; D. PACHECO; M. MURTHY. *Princeton Univ., Princeton Univ.*

1:00 BBB18 **444.13** Characterizing neural activity in the song motor circuit of *Drosophila*. D. A. PACHECO PINEDO*; M. MURTHY. *Princeton Univ.*

2:00 BBB19 **444.14** Social consequences of interruptions during marmoset conversations. C. TOARMINO*; C. T. MILLER. *Univ. of California San Diego, UCSD.*

3:00 BBB20 **444.15** Primate frontal cortex neurons predict the outcome of natural conversations. V. JOVANOVIC*; S. NUMMELA; L. DE LA MOTHE; C. T. MILLER. *UCSD, Tennessee State Univ.*

4:00 BBB21 **444.16** Asymmetry in vocal communication in marmosets - influence of social context and gender differences. J. SHARMA*; R. LANDMAN; J. HYMAN; L. BRATTAIN; K. JOHNSON; T. QUATIERI; K. SRINIVASAN; A. WISLER; G. FENG; M. SUR; R. DESIMONE. *MIT and MGH, Broad Inst. and McGovern Inst., McGovern Inst. of Brain Res., MIT, McGovern Inst. of Brain Res. and Broad Inst., Picower Inst. for Learning and Memory and Simons Ctr. for Social Brain.*

1:00 BBB22 **444.17** A framework for studying the neuronal basis of interactive social behavior. K. HAROUSH*; Z. WILLIAMS. *Harvard Med. Sch., Harvard Med. Sch.*

2:00 BBB23 **444.18** Understanding language genetics: Establishing bats as a mammalian model of vocal learning. P. RODENAS-CUADRADO; J. MENGEDE; M. YARTSEV; U. FIRZLAFF; S. VERNES*. *Max Planck Inst. For Psycholinguistics, Helen Wills Neurosci. Inst., Lehrstuhl für Zoologie, Donders Ctr. for Cognitive Neuroimaging.*

3:00 BBB24 **444.19** Changes in EEG approximate entropy reflect auditory processing and functional complexity in frogs. G. FANG*; Y. LIU; Y. TANG. *Chengdu Inst. of Biology, CAS.*

4:00 BBB25 **444.20** Call initiation in African clawed frogs. A. YAMAGUCHI*. *Univ. of Utah.*

POSTER

445. Neuroimmunology: Regulating Systems

Theme F: Integrative Physiology and Behavior

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 BBB26 **445.01** Innate lymphoid cells: Novel mediators of gut-brain immune regulation? N. C. DERECKI*; G. ALEMAN-MUENCH; P. SOROOSH; H. BANIE; J. KARRAS; L. CHANG; M. HESSE; T. LOVENBERG; A. BHATTACHARYA. *Janssen Res. and Develop., Janssen Res. and Develop.*

2:00 CCC1 **445.02** Cholinergic signalling in forebrain regulates peripheral inflammation. V. A. PAVLOV*; K. R. LEHNER; H. A. SILVERMAN; M. ADDORISIO; T. TSAAVA; M. OCHANI; W. HANES; P. S. OLOFSSON; S. S. CHAVAN; N. M. NATHANSON; Y. AL-ABED; V. F. PRADO; M. A. M. PRADO; K. J. TRACEY. *The Feinstein Inst. For Med. Res., Hofstra Northwell Sch. of Med. at Hofstra Univ., The Feinstein Inst. for Med. Res., Univ. of Washington, The Feinstein Inst. for Med. Res., Robarts Res. Institute, The Univ. of Western Ontario.*

3:00 CCC2 **445.03** Antibody efflux from cerebrospinal fluid to systemic circulation. J. NESTOR*; C. KOWAL; B. VOLPE; B. DIAMOND. *Feinstein Inst. For Med. Res.*

4:00 CCC3 **445.04** The involvement of the brain's choroid plexus in stress response. A. KERTSER*; K. BARUCH; M. SCHWARTZ. *Weizmann Inst. of Sci.*

1:00 CCC4 **445.05** Investigating neuroimmune function throughout pregnancy and the postpartum period. M. L. SHERER*; C. K. POSILLICO; J. M. SCHWARZ. *Univ. of Delaware, Univ. of Delaware.*

2:00 CCC5 **445.06** Three-dimensional mapping of neural-immune interactions in the spleen of naïve mice. E. HAMMOND; I. BRUST-MASCHER; E. N. MILLER; C. REARDON*. *UC Davis.*

3:00 CCC6 **445.07** Increased oxytocin immunoreactivity in male and female germ-free Swiss-Webster mice. N. V. PETERS*; M. J. PAUL; B. CHASSAING; J. DUNN; A. T. GEWIRTZ; G. J. DE VRIES. *Georgia State Univ., Univ. at Buffalo, Georgia State Univ.*

4:00 CCC7 **445.08** Interleukin 18 reduces food intake modulating excitatory synaptic transmission in bed nucleus of the stria terminalis. F. BERTON*; W. FRANCESCONI; M. SANCHEZ-ALVAREZ; S. ALBONI; C. BENATTI; S. MORI; W. NGUYEN; E. ZORRILLA; G. MORONCINI; F. TASCEDDA; B. CONTI. *The Scripps Res. Inst., The Scripps Res. Inst., Univ. of Modena and Reggio Emilia, The Scripps Res. Inst., Universita' Politecnica delle Marche.*

1:00 CCC8 **445.09** Vagus nerve stimulation decreases activation of select $CD4^+$ T cell populations and NK cells in mice. J. ESTELIUS*; K. CHEMIN; E. LE MAÎTRE; J. LAMPA. *Karolinska Institutet, Karolinska Univ. Hosp.*

2:00 CCC9 **445.10** ▲ Delayed contribution of hematopoietically-derived central nervous system macrophages in mixed chimeric mice utilizing the myeloablative compound Busulfan. M. I. ROCHA; K. B. PRUNER; J. M. KURTZ; T. D. WILLIAMS*. *Emmanuel Col.*

Mon. PM

• Indicated a real or perceived conflict of interest, see page 155 for details.
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* Indicates abstract's submitting author

3:00 CCC10 **445.11** Molecular mechanisms of csf hypersecretion in intraventricular hemorrhage-associated hydrocephalus. J. K. KARIMY*; D. B. KURLAND; B. CARUSILLO; J. ZHANG; V. GERZANICH; J. SIMARD; K. T. KAHLE. *Univ. of Maryland Baltimore, Yale, Univ. of Dundee.*

4:00 CCC11 **445.12** Immune regulation and mesenchymal stromal cell-produced pain relief: 2. role of NFκB signaling and regulatory T cells. W. GUO*; S. IMAI; S. ZOU; F. WEI; R. DUBNER; K. REN. *Univ. of Maryland, Kyoto Univ. Hosp.*

1:00 CCC12 **445.13** Airway nociceptors: Allergen sensing and reflex responses. S. TALBOT*; S. L. FOSTER; M. A. PASCAL; R. B. CHANG; A. PARRIN; B. DOYLE; N. Y. LAI; C. LAEDERMANN; R. E. ABDULNOUR; A. LATREMOLIERE; L. BROWNE; S. D. LIBERLES; B. P. BEAN; B. D. LEVY; C. J. WOOLF. *Children's Hosp. Boston., Harvard Med. Sch., Brigham and Women's Hosp., Harvard Med. Sch.*

2:00 CCC13 **445.14** Murine cervical vagus nerve activity: Methodology of recording and analysis. H. A. SILVERMAN*; B. E. STEINBERG; T. TSAAVA; A. STIEGLER; E. A. BATTINELLI; J. NEWMAN; A. CARAVACA; S. ROBBIATI; P. T. HUERTA; S. S. CHAVAN; K. J. TRACEY. *Feinstein Inst. at Northwell Hlth., Hofstra Northwell Sch. of Med. at Hofstra Univ., Dept. of Anesthesia Univ. of Toronto, Circulatory Technology, Inc., Karolinska Instituetet, Lab. of Immune and Neural Networks, Feinstein Inst. at Northwell Hlth.*

3:00 CCC14 **445.15** Investigating the effects of inflammation and minocycline on central glutamate receptors and the metabolome. S. CHAN*; F. PROBERT; D. C. ANTHONY; P. W. J. BURNET. *Univ. of Oxford, Univ. of Oxford, Univ. of Oxford.*

4:00 CCC15 **445.16** Immune regulation and mesenchymal stromal cell-produced pain relief: 1. promotion of anti-inflammatory phenotype. S. IMAI; W. GUO; S. ZOU; F. WEI; R. DUBNER; K. REN*. *Univ. of Maryland Sch. of Dent., Kyoto Univ. Hosp.*

1:00 CCC16 **445.17** Neuronal regulatory RNAs and neuropsychiatric lupus. A. IACOANGELI*; I. MUSLIMOV; H. TIEDGE. *SUNY Downstate Med. Ctr., SUNY Downstate Med. Ctr.*

2:00 CCC17 **445.18** Age-associated circadian dysregulation in rats may sensitize neuroinflammatory responses. L. K. FONKEN*; M. M. KITT; A. D. GAUDET; R. M. BARRIENTOS; L. R. WATKINS; S. F. MAIER. *Univ. of Colorado.*

3:00 CCC18 **445.19** Involvement of hypothalamic CCL2/CCR2 chemokine system in the stimulatory effects of maternal exposure to low-dose ethanol on embryonic development of orexigenic peptide neurons in rats. S. F. LEIBOWITZ*; G. CHANG; O. KARATAYEV. *Rockefeller Univ.*

4:00 CCC19 **445.20** Nicotine mediated immunosuppression is compromised in lipopolysaccharide activated splenocytes from microsomal prostaglandin E synthase–1 knock–out mice. P. REVATHIKUMAR*; U. KARMAKAR; E. LE MAÎTRE; M. KOROTKOVA; P. JAKOBSSON; J. LAMPA. *Dept. of Medicine, Karolinska Institutet.*

1:00 CCC20 **445.21** Estradiol enhances microglial reactivity in the ventromedial hypothalamus of pubertal female mice. A. VELEZ*; S. FOUNTAIN; J. D. BLAUSTEIN. *Univ. of Massachusetts, Amherst, Univ. of Massachusetts, Med. Sch.*

POSTER

446. Neuroimmunology: Behavioral Effects

Theme F: Integrative Physiology and Behavior

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 CCC21 **446.01** Interleukin-13 receptor α 1 contributes to loss of dopaminergic neurons in a model of chronic stress. S. MORI*; S. SUGAMA; W. NGUYEN; G. MORONCINI; Y. KAKINUMA; P. MAHER; B. CONTI. *The Scripps Res. Inst., Nippon Med. Sch., Universita' Politecnica delle Marche, Salk Inst. for Biol. Studies.*

2:00 CCC22 **446.02** Altered experience-dependent interleukin-1 β signaling in juvenile rats exposed to ethanol as neonates. M. J. GOODFELLOW*; D. H. LINDQUIST. *Ohio State Univ. Dept. of Psychology.*

3:00 CCC23 **446.03** Chronic cocaine self-administration alters cognitive flexibility in male HIV transgenic rats. S. E. HEMBY*; S. MCINTOSH. *Fred Wilson Sch. of Pharmacy/ High Point Univ., Fred Wilson Sch. of Pharmacy/High Point Universi.*

4:00 CCC24 **446.04** Sex differences in the effects of dietary emulsifiers on physiology and behavior in mice. M. K. HOLDER*; B. CHASSAING; N. V. PETERS; J. WHYLINGS; A. T. GEWIRTZ; G. J. DE VRIES. *Georgia State Univ., Georgia State Univ., Georgia State Univ.*

1:00 CCC25 **446.05** The role of TRAIL in cancer-related fatigue following radiation therapy. S. D. DETERA-WADLEIGH*; L. R. FENG; L. N. SALIGAN. *NIH, NIH.*

2:00 CCC26 **446.06** Neuroimmune modulation of hippocampal synaptic signaling, neural circuit activity, and memory retrieval. T. E. WHITE; J. CZERNIAWSKI; G. LEWANDOWSKI; J. F. GUZOWSKI*. *Univ. of California, Univ. of California, Irvine, Univ. of California Irvine Dept. of Neurobio. and Behavior.*

3:00 DDD1 **446.07** Low grade colitis sensitizes sickness response to lipopolysaccharide in BALB/c mice. J. KONSMAN*; L. CHASKIEL; R. DANTZER. *CNRS UMR 5287 INCIA / Univ. Bordeaux, CNRS UMR 5226, CNRS UMR5226, MD Anderson Cancer Ctr.*

4:00 DDD2 **446.08** Behavioral and physiological sex-differences following cardiac arrest/ cardiopulmonary resuscitation. M. M. GAUDIER-DIAZ*; A. H. HAINES; W. H. WALKER, II; N. ZHANG; R. J. NELSON; A. DEVRIES. *The Ohio State Univ.*

1:00 DDD3 **446.09** Environmental mold exposure alters the relationships between microglial morphology and behavior. K. PAGE*; C. MCDERMOTT; S. UVAYDOV; D. ALEBDY; R. PANG; C. F. HARDING; C. L. PYTTE. *Grad. Center, CUNY, Queens College, CUNY, Hunter College, CUNY, Hunter College, CUNY, Hunter College, CUNY.*

2:00 DDD4 **446.10** Effect of neonatal immune activation on the developing immune system and learning in juveniles. B. OSBORNE*; S. SOLOMOTIS; J. M. SCHWARZ. *Univ. of Delaware.*

3:00 DDD5 **446.11** ▲ The effects of doxycycline and mold exposure on neurogenesis and contextual memory. N. C. ABREU*; A. EL-RAZI; I. VORONINA; K. PAGE; A. LOPEZ; S. UVAYDOV; C. F. HARDING; C. L. PYTTE. *Queens College, City Univ. of New York, Hunter College, City Univ. of New York, Hunter College, City Univ. of New York, Grad. Center, City Univ. of New York, Hunter College, City Univ. of New York.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
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* Indicates abstract's submitting author

4:00 DDD6 **446.12** ▲ Blockage of central interleukin 6 trans-signaling prevents predator stress in the mouse. I. GONZALEZ-NATERAS; F. MONTERO-AMEZCUA; R. CUEVAS-OLGUIN; E. ESQUIVEL-RENDON; J. VARGAS-MIRELES; C. GONZALEZ-DEL CARPIO; S. ROSE-JOHN; M. ATZORI*. *Univ. Autonoma de San Luis Potosi, Christian Albrechts Univ., Univ. Autónoma de San Luis Potosí.*

1:00 DDD7 **446.13** ▲ Psychomotor activation levels in mice are regulated by vasoactive intestinal peptide produced by bone marrow derived blood cells. R. PANJWANI*; C. R. GIVER; J. P. SCHRODER; J. FELGER; D. G. STEIN; E. K. WALLER. *Emory Univ. Col. of Arts and Sci., Emory Univ. Sch. of Med., Emory Univ. Sch. of Med., Emory Univ. Sch. of Med., Emory Univ. Sch. of Med.*

2:00 DDD8 **446.14** ● Targeted deletion of $P2X_7$ ion channels prevent Mycobacterium bovis, BCG induced depressive like behaviors in mice. J. C. O'CONNOR*; L. REDUS; N. DERECKI; A. BHATTACHARYA. *UTHSCSA, Audie L. Murphy VA Hosp., Janssen Res. & Development, LLC.*

3:00 DDD9 **446.15** Astrocyte modulation of stress-enhanced fear learning, an animal model of post-traumatic stress disorder. M. E. JONES*; L. B. COOPER; E. B. KELLY; J. E. PANICCIA; C. L. LEBONVILLE; D. T. LYSLE. *Univ. of North Carolina At Chapel Hill, Univ. of North Carolina at Chapel Hill.*

4:00 DDD10 **446.16** ● Sustained peripheral inflammation triggers anandamide hydrolysis to promote anxiety. H. A. VECCHIARELLI*; M. MORENA; M. STICHT; C. M. KEENAN; W. HO; K. A. SHARKEY; M. N. HILL. *Univ. of Calgary, Univ. of Calgary.*

1:00 DDD11 **446.17** Genipin attenuates LPS-induced persistent changes of emotional behaviors and neural activation in the hypothalamic paraventricular nucleus and the central amygdala nucleus. T. YABE*; Y. HIRAKI; S. NISHIDA; R. ARAKI. *Setsunan Univ.*

2:00 DDD12 **446.18** A history of juvenile malaria predisposes mice towards anxiety-like responses, neuroinflammation, and decreased neurogenesis in response to adult-onset stress. S. K. GUHA*; I. SARKAR; S. SHAH; M. PATGAONKAR; S. SHARMA; S. PATHAK; V. A. VAIDYA. *Tata Inst. of Fundamental Res.*

3:00 DDD13 **446.19** CX_3CR1 -expressing monocytes alter learning and learning-dependent dendritic spine plasticity during viral immune activation. J. M. GARRE*; H. MOURA-SILVA; J. J. LAFAILLE; G. YANG. *New York Univ., New York Univ.*

4:00 DDD14 **446.20** Toxoplasma gondii infection and blunted response to stimulant drug administration. R. MCFARLAND*; M. V. PLETNIKOV; R. H. YOLKEN. *Johns Hopkins Univ., Johns Hopkins Univ., Johns Hopkins Univ.*

1:00 EEE1 **446.21** ● Vium Digital Vivarium™ enables automated drug efficacy assessment in animal models of multiple sclerosis. L. SCHAEVITZ*; D. FORD; M. LIM. *Vium.*

2:00 EEE2 **446.22** Early life depletion of microglia programs lifelong mood-related behavior and brain development. L. H. NELSON*; S. WARDEN; K. M. LENZ. *Ohio State Univ., The Ohio State Univ., The Ohio State Univ.*

3:00 EEE3 **446.23** Attenuation of TLR4 signalling prevents behavioural alterations induced by a short alcohol binge during adolescence. J. W. JACOBSEN*; F. BUISMAN-PILJIMAN; D. BARRATT; S. MUSTAFA; M. R. HUTCHINSON. *Univ. of Adelaide, Univ. of Adelaide.*

POSTER

447. Autonomic Control: Cardiovascular Regulation II

Theme F: Integrative Physiology and Behavior

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 EEE4 **447.01** Robust continuous estimation of cardiac output and systolic time intervals using a moving ensemble method. M. CIESLAK*; W. S. RYAN; W. MEIRING; V. BABENKO; H. ERRO; Z. M. RATHBUN; J. BLASCOVICH, PhD.; S. T. GRAFTON. *UCSB, Univ. of California, Santa Barbara, Univ. of California, Santa Barbara, Univ. of California, Santa Barbara.*

2:00 EEE5 **447.02** The NeuroCorrelates of steady state blood pressure and heart rate in healthy humans. L. BARNDEN*; R. BURNET; P. DEL FANTE; R. KWIATEK; B. CROUCH; Z. SHAN. *Griffith Univ., Royal Adelaide Hosp., Healthfirst Network, Lyell McEwin Hosp., Royal Adelaide Hosp.*

3:00 EEE6 **447.03** Protective effects of training status on autonomic modulation and blood pressure during acute exercise in normotensive adults and elderly. A. S. ZAGO*; G. F. M. MARTINS; L. P. BARBOSA; L. L. CESAR; A. M. JACOMINI; R. F. SILVA; S. L. AMARAL. *Univ. Estadual Paulista.*

4:00 EEE7 **447.04** Cognitive and mood deficits and associations between symptoms and disease severity in early-diagnosed, treatment-naïve obstructive sleep apnea. L. EHLERT; B. ROY; D. KANG; M. WOO; R. AYSOLA; R. KUMAR*. *Univ. of California at Los Angeles, Univ. of California at Los Angeles, Univ. of California at Los Angeles, Univ. of California at Los Angeles, Univ. of California at Los Angeles, Univ. of California at Los Angeles, Univ. of California at Los Angeles, Univ. of California at Los Angeles.*

1:00 EEE8 **447.05** Sympathetic blockade markedly prolongs EEG coherence and delays the onset of cardiac arrest after asphyxia. F. TIAN*; T. LIU; G. XU; D. LI; T. GHAZI; T. SHICK; A. SAJJAD; M. WANG; P. FARREHI; J. BORJIGIN. *Univ. of Michigan, Veterans Admin. Ann Arbor Healthcare Syst.*

2:00 EEE9 **447.06** Alteration of cardiac autonomic function in patients with newly diagnosed epilepsy. R. K. GOIT*. *Nepalgunj Med. Col.*

3:00 EEE10 **447.07** ▲ Sex and hormonal status influence the redistribution of the AMPA GluA1 receptor subunit in estrogen receptor β containing paraventricular hypothalamic neurons following slow-pressor angiotensin II hypertension. A. C. OVALLES*; J. MARQUES-LOPES; T. A. VAN KEMPEN; M. J. GLASS; C. IADECOLA; E. M. WATERS; T. A. MILNER. *Weill Cornell Med., The Rockefeller Univ.*

4:00 EEE11 **447.08** Renalase expression and regulation in PC12 cells. C. R. WILLIAMSON*; S. KHURANA; T. C. TAI. *Laurentian Univ., Northern Ontario Sch. of Med., Laurentian Univ., Laurentian Univ.*

1:00 EEE12 **447.09** Chronic inhibition of catalase attenuates the overexpression of AT1 receptor and proinflammatory cytokine mRNA in the hypothalamus of hypertensive rats. M. R. LAUAR*; D. S. A. COLOMBARI; L. A. DE LUCA JR.; P. M. DE PAULA; E. COLOMBARI; C. A. F. ANDRADE; J. V. MENANI. *Dept Physiol. and Pathol., UNESP.*

2:00 EEE13 **447.10** Pharmacological evidence that NaHS inhibits the vasopressor responses induced by stimulation of the preganglionic sympathetic outflow in pithed rats. A. SACHEZ-LOPEZ*; S. HUERTA-DE LA CRUZ; E. J. GUTIÉRREZ-LARA; J. H. BELTRAN-ORNELAS; D. CENTURIÓN. *Cinvestav-Coapa.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 EEE14 **447.11** Intraneural interrogation of vagus nerve activity. A. KANNEGANTI; A. S. DESHMUKH; M. I. ROMERO-ORTEGA*. *Univ. of Texas at Dallas.*

4:00 FFF1 **447.12** Combined administration of insulin and leptin significantly increased Fos production in the arcuate nucleus and renal sympathetic nerve activity. H. HABEEBALLAH; N. ALSUHAYMI; M. STEBBING; T. JENKINS; E. A. BADOER*. *RMIT Univ.*

1:00 FFF2 **447.13** Cardiovascular control by neurons of the rostral ventrolateral medulla in conscious rats. I. C. WENKER*; C. ABE; R. L. STORNETTA; P. G. GUYENET. *Univ. of Virginia, Gifu Univ.*

2:00 FFF3 **447.14** Ventrolateral medullary pathways mediate cardiovascular responses to activation of the ventral tegmental area. J. CIRIELLO*. *Univ. Western Ontario.*

3:00 FFF4 **447.15** Ketamine and amphetamines inhibit neurogenic nitrergic vasodilation of porcine isolated basilar arteries. M. CHEN; S. LAI; P. KUNG; Y. LIN; H. YANG; P. CHEN; T. J. LEE*. *Buddhist Tzu Chi Gen. Hosp., Tzu Chi Univ. of Sci. and Technol., Inst. of Pharmacol. and toxicology, Tzu Chi Univ., Southern Illinois Univ. Med. Sch., Tzu Chi Univ.*

4:00 FFF5 **447.16** Assessing fear memory by modelling conditioned bradycardia and respiratory responses. G. CASTEGNETTI*; A. TZOVARA; M. STAIB; P. C. PAULUS; N. HOFER; D. R. BACH. *Univ. of Zurich, TU Dresden, Univ. Col. London.*

POSTER

448. Gastrointestinal: Reproductive Regulation

Theme F: Integrative Physiology and Behavior

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 FFF6 **448.01** Chronic stress is associated with augmented urinary bladder neuronal sprouting. B. M. MCDONNELL*; A. KULLMANN; A. WOLF-JOHNSON; A. KANAI; L. RODRIGUEZ; L. BIRDER. *Univ. of Pittsburgh, Inst. of Urology, Univ. of Southern California.*

2:00 FFF7 **448.02** Electrical stimulation to increase colonic activity. D. J. BOURBEAU*; K. AAMOTH; K. GUSTAFSON. *DVA, MetroHealth Med. Syst., Cleveland FES Ctr., Case Western Reserve Univ.*

3:00 FFF8 **448.03** Identifying brain networks controlling micturition and continence in mouse. A. M. VERSTEGEN*; L. GUO; J. C. MATHAI; V. VANDERHORST; M. L. ZEIDEL; J. C. GEERLING. *Beth Israel Deaconess Med. Center; Harvard Medi, Beth Israel Deaconess Med. Center; Harvard Med. Sch., Beth Israel Deaconess Med. Center; Harvard Med. Sch.*

4:00 FFF9 **448.04** Impact of decentralization on cholinergic transmission and neuronal excitability in mouse major pelvic ganglia. C. W. KYI*; D. J. SCHULZ. *Univ. of Missouri, Univ. of Missouri.*

1:00 FFF10 **448.05** Sensory innervation of the pancreatic islet. M. MAKHMUTOVA*; R. RODRIGUE-DIAZ; J. ALMACA; J. WEITZ; E. BERNAL-MIZRACHI; A. CAICEDO. *Univ. of Miami.*

2:00 FFF11 **448.06** Anxiogenic effect of probiotics, prebiotics and synbiotics on healthy juvenile rats. J. A. BRAVO*; C. BARRERA-BUGUEÑO; J. ESCOBAR-LUNA; O. REALINI; R. SOTOMAYOR-ZÁRATE; M. GOTTELAND; M. JULIO-PIEPER. *Pontificia Univ. Catolica de Valparaiso, Univ. de Valparaíso, Univ. de Chile.*

3:00 FFF12 **448.07** Differential effects of SSRIs on rat intestinal permeability and innate immune response markers. M. JULIO-PIEPER*; J. EYZAGUIRRE-VELASQUEZ; C. GONZALEZ-ARANCIBIA; L. OLAVARRIA-RAMIREZ; J. ESCOBAR-LUNA; C. BARRERA-BUGUEÑO; J. A. BRAVO. *PONTIFICIA UNIVERSIDAD CATOLICA DE VALPARAISO.*

4:00 FFF13 **448.08** Cisplatin causes up regulation of orexin R-1 receptor and serotonin in nodose ganglion of the least shrew (Cryptotis parva). M. S. AL-TIKRITI*; W. KHAMAS; S. CHEBOLU; N. DARMANI. *Western Univ. of Hlth. Sci.*

1:00 FFF14 **448.09** Progressive lower urinary tract dysfunction in mice with alkaline ceramidase 3 deficiency. J. SCHRANDT*; W. F. COLLINS, III; C. MAO. *Stony Brook Univ., Stony Brook Univ., Stony Brook Univ.*

2:00 FFF15 **448.10** Acute intermittent hypoxia-induced long-term facilitation of micturition-related external oblique muscle activity. M. CATEGE; N. P. PHAGU; I. C. SOLOMON; W. F. COLLINS*, III. *Stony Brook Univ., Stony Brook Univ.*

3:00 FFF16 **448.11** Histomorphometry of postganglionic and sensory neurons of the vagina of nulliparous and pregnant rats. N. MIRTO-AGUILAR; N. XELHUANTZI; J. PALACIOS; M. JUAREZ*; Y. CRUZ. *Univ. Veracruzana, Univ. Autonoma Tlaxcala, Univ. Autonoma Tlaxcala, Univ. Autonoma Tlaxcala, Univ. Autonoma Tlaxcala.*

4:00 FFF17 **448.12** Modulation of blood glucose by the dorsal vagal complex. C. R. BOYCHUK*; J. A. BOYCHUK; K. C. HALMOS-SMITH; B. N. SMITH. *Univ. of Kentucky.*

1:00 FFF18 **448.13** ● Spinal cord stimulation may improve the voiding function in rodent with dopaminergic brain lesion injury. J. YEH; J. MAO; H. H. CHANG*. *USC.*

2:00 FFF19 **448.14** Uncontrolled diabetic hyperglycemia is resolved by vertical sleeve gastrectomy in a murine model of type 1 diabetes. K. HALMOS*; C. R. BOYCHUK; B. N. SMITH. *Univ. of Kentucky.*

3:00 FFF20 **448.15** Sensory urethral innervation in male rats. R. JUAREZ MENDIETA*; I. JIMENEZ; Y. CRUZ. *Univ. Autonoma De Tlaxcala, Inst. Politécnico Nacional.*

4:00 FFF21 **448.16** Development of skull-mounted port for bladder infusion during cystometry in unanesthetized, freely-moving rats. J. S. CARP*; J. R. WOLPAW. *Natl. Ctr. For Adaptive Neurotechnologies.*

1:00 FFF22 **448.17** Effect of parasympathetic or sympathetic denervation on intestinal epithelial stem cell proliferation. E. A. DAVIS*; M. C. WASHINGTON; H. PHILLIPS; A. I. SAYEGH; M. J. DAILEY. *Univ. of Illinois at Urbana-Champaign, Tuskegee Univ., Univ. of Illinois at Urbana-Champaign.*

2:00 FFF23 **448.18** Network dynamics underlying the encoding of visceral sensorimotor information. A. MANOHAR*; A. CURTIS; S. ZDERIC; R. VALENTINO. *Children's Hosp. of Philadelphia, Children's Hosp. of Philadelphia.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

449. Gastrointestinal: Urinary and Renal Regulation

Theme F: Integrative Physiology and Behavior

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 FFF24 **449.01** ● Reflexive inhibition of bladder function via saphenous nerve stimulation in anesthetized rats. Z. MOAZZAM*; P. B. YOO. *Univ. of Toronto.*

2:00 FFF25 **449.02** Unilateral denervation of the genitourinary tract induces signs of sexual, urinary dysfunction and infertility in male rats. J. ARELLANO; F. CASTELÁN; J. CUATECONTZI; Y. CRUZ*. *Univ. Veracruzana, Univ. Autonoma Tlaxcala.*

3:00 FFF26 **449.03** Modulation of urine glucose by renal nerves stimulation in rat. A. A. JIMAN*; A. G. LEWIS; K. H. CHHABRA; P. S. CEDERNA; R. J. SEELEY; M. J. LOW; T. M. BRUNS. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

4:00 GGG1 **449.04** ● Prostaglandin E2 installation as an overactive bladder model in cats. C. L. LANGDALE*; J. A. HOKANSON; A. SRIDHAR; W. M. GRILL. *Duke Univ., GlaxoSmithKline, Duke Univ., Duke Univ., Duke Univ.*

1:00 GGG2 **449.05** Wireless monitoring and optogenetic modulation of bladder function. A. D. MICKLE*; J. YOON; S. M. WONG; S. PARK; K. N. NOH; K. MEACHAM; J. ROGERS; R. W. GEREAU, IV. *Washington Univ., Univ. of Illinois at Urbana-Champain.*

2:00 GGG3 **449.06** Autonomic control of bladder function is regulated by TREK-1, a two-pore domain potassium channel. R. H. PINEDA*; R. B. MEACHAM; A. P. MALYKHINA. *Univ. of Colorado Sch. of Med.*

3:00 GGG4 **449.07** OAB ithout an overactive bladder: Insights from an acute prostaglandin E2 rat model. J. A. HOKANSON*; C. LANGDALE; A. SRIDHAR; W. GRILL. *Duke Univ. Dept. of Biomed. Engin., GlaxoSmithKline.*

4:00 GGG5 **449.08** GABA, glycine and opioid neurotransmitter mechanisms underlying sacral neuromodulation of bladder overactivity in cats. X. JIANG*; U. BANSAL; T. FULLER; J. BANDARI; B. SHEN; Z. ZHANG; J. WANG; J. ROPPOLO; W. DE GROAT; C. TAI. *Univ. of Pittsburgh, Qilu Hosp. of Shandong Univ.*

1:00 GGG6 **449.09** Chronic monitoring and stimulation of the lower urinary tract during sedated and awake testing. S. E. ROSS*; A. OUYANG; A. KHURRAM; A. A. A. JIMAN; Z. J. SPERRY; C. J. STEPHEN; T. M. BRUNS. *Univ. of Michigan.*

2:00 GGG7 **449.10** ● Transient receptor potential vanilloid 4 channels modulate Ca^{2+} signals in interstitial cells of Cajal at urothelial-lamina propria junction of rat pups. M. A. VIZZARD*; M. T. NELSON; T. J. HEPPNER. *Univ. Vermont Col. Med., Univ. Vermont Col. Med.*

3:00 GGG8 **449.11** Connectome and putative function of MET-positive neurons in the vagal motor complex. A. K. KAMITAKAHARA*; H. WU; P. LEVITT. *Children's Hosp. Los Angeles, USC.*

4:00 GGG9 **449.12** Detection of nausea in rats using the monitoring of facial expression. K. YAMAMOTO*; S. TATSUTANI; T. ISHIDA. *Osaka Univ.*

1:00 GGG10 **449.13** ▲ Pudendal nerve stimulation elicits oscillations in vaginal blood flow. I. C. RICE*; L. L. ZIMMERMAN; S. E. ROSS; M. B. BERGER; T. M. BRUNS. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan Hlth. Syst.*

2:00 GGG11 **449.14** EMG analysis of external urethral sphincter in awake spinal cord injured rats during urodynamic assessment. M. P. SCHNEIDER*; A. K. ENGMANN; T. M. KESSLER; M. E. SCHWAB. *Univ. of Zürich.*

3:00 GGG12 **449.15** Evaluating sexual arousal in a female rat model with tibial nerve stimulation. L. ZIMMERMAN*; I. C. RICE; M. B. BERGER; T. M. BRUNS. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan Hlth. Syst.*

4:00 GGG13 **449.16** High-salt intake decreases intestinal Na^+/K^+-ATPase activity in normotensive rats but not in hypertensive Dahl salt-sensitive rats. M. TANDAI-HIRUMA*; T. KEMURIYAMA; Y. NISHIDA. *Natl. Def Med. Col.*

1:00 GGG14 **449.17** Estrus-cycle dependent variations regulate sensitivity of rat urinary bladder urothelial cells. A. S. WOLF-JOHNSTON*; F. A. KULLMANN; L. A. BIRDER. *Univ. Pittsburgh.*

2:00 GGG15 **449.18** A novel method to non-invasively determine the post-void residual in continuous serial cystometrograms. Z. C. DANZIGER*; W. M. GRILL. *Duke Univ.*

3:00 GGG16 **449.19** Kalman filter decoding of bladder pressure from dorsal root ganglia activity. A. OUYANG*; S. E. ROSS; T. M. BRUNS. *Univ. of Michigan.*

4:00 GGG17 **449.20** Central inhibition of initiation of swallowing by systemic administration of diazepam and baclofen in anaesthetized rats. T. TSUJIMURA*; S. SAKAI; T. SUZUKI; K. TSUJI; J. MAGARA; B. J. CANNING; M. INOUE. *Niigata Univ. Grad. Sch. of Med. and Dent. Sci., Johns Hopkins Asthma and Allergy Ctr.*

1:00 GGG18 **449.21** Intratesticular administration of p-chloroanfetamine (PCA) alters sperm quality. J. A. DIAZ-RAMOS; C. A. DON-LOPEZ; A. L. RODRÍGUEZ-GUTIERREZ; M. FLORES-FLORES; R. DOMINGUEZ*; M. E. AYALA-ESCOBAR; A. ARAGON-MARTINEZ. *FES Zaragoza UNAM, Inst. Tecnologico del Altiplano de Tlaxcala.*

2:00 GGG19 **449.22** Plasticity in trpv4 expression and function in micturition reflex pathways during postnatal rat development. B. M. GIRARD*; S. MALLEY; M. VIZZARD. *Univ. of Vermont Dept. of Neurolog. Sci.*

POSTER

450. Sleep Behavior in Humans and Non-Human Primates

Theme F: Integrative Physiology and Behavior

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 GGG20 **450.01** Polysomnographic characterization of nocturnal sleep in Cynomolgus macaques. A. V. GOONAWARDENA*; M. DI ZAMBOTTI; A. R. WILLOUGHBY; C. GLAVIS-BLOOM; I. M. COLRAIN; T. L. WALLACE; T. S. KILDUFF. *SRI Intl., SRI Intl.*

2:00 GGG21 **450.02** Statistical source separation of rhythmic LFP patterns during sharp wave ripples in the macaque hippocampus. J. F. RAMIREZ-VILLEGAS*; N. K. LOGOTHETIS; M. BESSERVE. *Max Planck Inst. For Biol. Cybernetics, Eberhard-Karls Univ. of Tübingen, The Univ. of Manchester, Max Planck Inst. for Intelligent Systems.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 GGG22 **450.03** The expression of dreams: Emotional facial expressions during REM sleep associated to dream mentation in depressed and healthy women. A. P. RIVERA*; I. RAMÍREZ SALADO; E. LÓPEZ RUIZ; J. GONZÁLEZ OLVERA; F. AYALA GUERRERO; J. PIÑA; A. SILVA CABALLERO; B. REYES ARANGUREN; D. CASTRO NIETO; A. JIMÉNEZ ANGUIANO. *Inst. Nacional De Psiquiatria Ramon De La Fuente, Univ. Autónoma Metropolitana, Inst. Nacional De Psiquiatria Ramon De La Fuente.*

4:00 GGG23 **450.04** Sleep amount is a potential biomarker for predicting behavioral responses in a mouse model of PTSD. C. L. GRAY*; L. PINCKNEY; E. N. OLIVER; K. N. PAUL; J. C. EHLEN. *Morehouse Sch. of Med.*

1:00 GGG24 **450.05** Sleep deprivation after trauma imparts resilience to post-traumatic stress disorder (PTSD). J. DEAN*; J. DELORME; G. POE; Y. ARIAS-DELPHI. *Univ. of Michigan Dept. of Mol. and Integrative Physiol., Univ. of Michigan, Univ. of Michigan, Univ. of Puerto Rico Ponce.*

2:00 GGG25 **450.06** Brief body-mind training improves sleep quality. Y. TANG*; X. DING; R. TANG. *Texas Tech. Univ., Dalian Nationalities Univ., Washington Univ. in St. Louis.*

3:00 GGG26 **450.07** ● Intensive practice during the day induces task-specific performance errors: The differential effects of nap and quiet rest. A. B. NELSON*; M. T. CHAN; J. LIN; P. PANDAY; J. BORKOWSKI; H. CHEN; M. GADALLA; B. O. THOMSON; G. TONONI; C. CIRELLI; M. F. GHILARDI. *CUNY Med. Sch., CUNY Med. Sch., UW Madison.*

4:00 HHH1 **450.08** Insufficient sleep time is associated with low thyroid stimulating hormone levels in a sample of young mexican population. B. PÉREZ; R. SAÑUDO-TORRES; A. PAVÓN-ROSADO; S. ABURTO; R. AYALA-MORENO; M. A. MELGAREJO*. *Univ. Veracruzana, Univ. La Salle.*

1:00 HHH2 **450.09** Aberrant brain functional network integrity in adolescents with insomnia. M. PARK*; S. PARK; B. PARK; B. KIM. *Dept. of Psychiatry, Seoul St. Mary's Hospi, Dept. of Psychiatry, Seoul Natl. Hosp., Dept. of Statistics, Hankuk Univ. of Foreign Studies Seoul, Dept. of Psychiatry and Behavioral Science, Seoul Natl. Univ. Col. of Med.*

2:00 HHH3 **450.10** Investigation of sleep quality and executive functioning in Hong Kong adolescents. J. Y. HO*; Y. T. CHAN; A. K. C. SUEN; E. Y. Y. LAU; R. L. T. LEE; P. H. LEE; R. C. C. CHANG. *The Hong Kong Polytechnic Univ., Po Leung Kuk Laws Fndn. Col., The Hong Kong Inst. of Educ., The Univ. of Hong Kong.*

3:00 HHH4 **450.11** Measures of cognition and sleep in infants, using dEEG: Frontal sleep spindle spectral frequency is negatively correlated with cognition in 3.5-month-old infants. S. PETERS*; A. A. BENASICH. *Rutgers Univ. - Newark.*

4:00 HHH5 **450.12** No entrainment of endogenous brain rhythms to 1Hz sinusoidal tACS in human intracranial EEG. B. LAFON; L. C. PARRA*; D. FRIEDMAN; S. HENIN; L. MELLONI; G. BUZSAKI; O. DEVINSKY; A. LIU. *City Col. of New York, City Col. of New York, New York Univ. Sch. of Med., NYU Comprehensive Epilepsy Ctr., NYU Neurosci. Inst.*

1:00 HHH6 **450.13** Prevalence of sleep disorders in a mexican children population. S. ABURTO*; E. VENTURA-ARIZMENDI; B. PÉREZ; E. AGUILAR; R. MENDOZA-AMARO; A. NAVARRETE-MUNGUÍA; M. MELGAREJO. *Univ. Veracruzana.*

2:00 HHH7 **450.14** ● Spectral analysis of EEG activity during weekend recovery sleep. S. J. MORTON*; C. M. DEPNER; E. L. MELANSON; J. R. GUZZETTI; K. P. WRIGHT, Jr. *Univ. of Colorado Boulder, Univ. of Colorado Boulder, Univ. of Colorado Anschutz Med. Campus, Univ. of Colorado Anschutz Med. Campus.*

3:00 HHH8 **450.15** Interaction of menstrual cycle and heart rate variability on sleep dependent memory consolidation. N. SATTARI*; L. WHITEHURST; M. NAJI; E. MCDEVITT; S. MEDNICK. *UCR.*

4:00 HHH9 **450.16** Neural correlates of sleep-dependent consolidation of visual perceptual learning: An ERP study. M. AHMADI*; E. A. MCDEVITT; M. A. SILVER; S. C. MEDNICK. *Univ. of California Riverside, Univ. of California Berkeley.*

1:00 HHH10 **450.17** Coupling of heart inter-beat intervals and slow oscillations during sleep. M. NAJI*; G. P. KRISHNAN; M. BAZHENOV; S. C. MEDNICK. *UC San Diego, UC Riverside.*

2:00 HHH11 **450.18** The impact of psychostimulants and hypnotics on cognitive performance in neurotypical adults. L. N. WHITEHURST*; L. BATELLI; S. AGOSTA; S. MEDNICK. *Univ. of California, Riverside, Italian Inst. of Technol.*

3:00 HHH12 **450.19** Modulating acetylcholine during sleep consolidation of episodic memory and perceptual learning. E. A. MCDEVITT*; M. AHMADI; M. A. SILVER; S. C. MEDNICK. *Sleep and Cognition Lab., Univ. of California, Helen Wills Neurosci. Inst., Sch. of Optometry, Vision Sci. Grad. Group.*

4:00 HHH13 **450.20** Medial prefrontal white matter changes associate with sleep quality in patients with Chronic Fatigue Syndrome. Z. SHAN*; R. KWIATEK; R. BURNET; P. DEL FANTE; D. R. STAINES; S. M. MARSHALL-GRADISNIK; L. R. BARNDEN. *Griffith Univ., Lyell McEwin Hosp., Royal Adelaide Hosp., Healthfirst Network.*

1:00 HHH14 **450.21** Sleep apnea symptoms and depression in young adults. R. WILLIAMSMORRIS*; F. BARRIENTOS; T. REYNOSO. *Southern Adventist Univ., Southern Adventist Univ., Southern Adventist Univ.*

2:00 HHH15 **450.22** ▲ Altered regional cortical thickness in children with obstructive sleep apnea syndrome. R. A. MA*; L. KHEIRANDISH-GOZAL; M. F. PHILBY; R. KUMAR; D. GOZAL; P. M. MACEY. *UCLA, The Univ. of Chicago, The Univ. of Chicago, UCLA, David Geffen Sch. of Med. at Univ. of California Los Angeles.*

3:00 HHH16 **450.23** ▲ Nucleus accumbens regional volume changes in newly-diagnosed obstructive sleep apnea patients vary by sex. J. PRASAD*; J. A. OGREN; R. KUMAR; R. AVSOLA; F. L. YAN-GO; M. A. WOO; M. THOMAS; R. M. HARPER; P. M. MACEY. *Univ. of California Los Angeles, UCLA, UCLA, UCLA, UCLA, UCLA, UCLA, UCLA, UCLA, UCLA.*

4:00 HHH17 **450.24** Obstructive sleep apnea is accompanied by altered neurochemical levels in the midbrain and hypothalamus. P. M. MACEY*; M. K. SARMA; R. NAGARAJAN; J. A. OGREN; R. AYSOLA; R. M. HARPER; M. A. THOMAS. *Univ. of California at Los Angeles, UCLA, UCLA, UCLA, UCLA.*

1:00 HHH18 **450.25** Wake high-density EEG spatiospectral signatures of insomnia. E. J. VAN SOMEREN*; M. COLOMBO; Y. WEI; J. RAMAUTAR. *Netherlands Inst. For Neurosci., Netherlands Inst. For Neurosci.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
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* Indicates abstract's submitting author

2:00 HHH19 **450.26** "Somnivore", a user-friendly platform for automated sleep scoring of animal and human polysomnography data. G. ALLOCCA*; L. A. JOHNSTON; D. R. FREESTONE; A. L. GUNDLACH. *The Univ. of Melbourne, The Univ. of Melbourne.*

3:00 HHH20 **450.27** Coordination of cortical and thalamic activity during non-REM human sleep. R. A. MAK-MCCULLY*; M. ROLLAND; A. SARGSYAN; J. TREES; P. CHAUVEL; H. BASTUJI; M. REY; E. HALGREN. *UCSD MMIL, UCSD, UCSD, Aix-Marseille Univ., INSERM, Inst. de Neurosciences des Systèmes UMR 1106, Assistance Publique-Hôpitaux de Marseille, Timone Hosp., Lyon Neurosci. Res. Center, INSERM, U1028; CNRS, UMR5292, Univ. Claude Bernard, Lyon 1, Service de Neurologie Fonctionnelle et d'Épileptologie, Hôpital Neurologique, Hospices Civils de Lyon, APHM, Timone Hosp.*

4:00 HHH21 **450.28** Repeating circular waves enable strengthening of large-scale neural assemblies during sleep spindles in human cortex. L. E. MULLER*; G. PIANTONI; D. KOLLER; S. S. CASH; E. HALGREN; T. J. SEJNOWSKI. *Salk Inst., Massachusetts Gen. Hosp. (MGH), UCSD.*

POSTER

451. Appetitive and Incentive Learning and Memory: Conditioning I

Theme G: Motivation and Emotion

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 HHH22 **451.01** The influence of intra-dorsolateral striatum injection of an NMDA receptor agonist or antagonist on extinction of response learning in the plus-maze. J. GOODMAN*; R. RESSLER; M. G. PACKARD. *Texas A&M Univ.*

2:00 HHH23 **451.02** Effectiveness of extinction protocols depends on the memory system engaged during acquisition. R. RESSLER*; J. GOODMAN; M. PACKARD. *Texas A&M.*

3:00 HHH24 **451.03** Selective effects of dorsal and ventral medial prefrontal cortex inactivation during instrumental reward seeking. J. P. CABALLERO*; D. E. MOORMAN. *Univ. of Massachusetts Amherst, Univ. of Massachusetts Amherst.*

4:00 HHH25 **451.04** When and where learning is taking place? Multisynaptic changes in strength during different behaviors related to the acquisition of an operant conditioning task by behaving rats. J. DELGADO-GARCIA*. *Pablo Olavide Univ.*

1:00 HHH26 **451.05** ▲ Early exposure to a high-fat diet negatively impacts learning and memory in female rats and is ameliorated by enriched environments. A. K. SUTER*; S. HUSSAIN; N. RAMIREZ; C. DAWSON; S. MOMI; S. VILLARREAL; L. FINK; A. HUSSAIN; M. CHAUDHRY; I. C. SUMAYA. *California State Univ. Bakersfield.*

2:00 HHH27 **451.06** The effect of extinction on the specific and general forms of the Pavlovian-instrumental transfer (PIT) effect. D. E. ALARCON*; A. R. DELAMATER. *Brooklyn Col. - CUNY.*

3:00 HHH28 **451.07** Model of dopamine neurons processing temporal difference errors. D. R. SCHUWEILER*; P. A. GARRIS. *Illinois State Univ.*

4:00 HHH29 **451.08** Altered metabolism but no change in working memory in rats subjected to a high-fat/high-sucrose diet. H. M. MURPHY*; C. H. WIDEMAN. *John Carroll Univ., John Carroll Univ.*

1:00 HHH30 **451.09** Neural correlates of decision making in the aversive-reward conflict task. A. AFZAL*; S. ZOROWITZ; K. K. ELLARD; A. S. WIDGE; A. GILMOUR; D. DOUGHERTY; E. ESKANDAR; T. DECKERSBACH. *Massachusetts Gen. Hosp., Massachusetts Gen. Hosp.*

2:00 HHH31 **451.10** ● Rewarding stimulation of the medial prefrontal cortex activates extensive brain regions: An optogenetics-fMRI study. Y. HU*; A. TALISHINSKY; H. LU; S. IKEMOTO; Y. YANG. *Natl. Inst. on Drug Abuse.*

3:00 HHH32 **451.11** Functional states of hippocampal and prefrontal circuits characterizing the acquisition of an operant conditioning tasks and related and unrelated behaviors in alert behaving rats. A. GRUART*. *Pablo de Olavide Univ.*

4:00 HHH33 **451.12** Methylphenidate shifts healthy volunteers towards a reward-sensitive strategy during learning-based decision-making. K. M. HARLE*; C. HYSEK; S. ZHANG; A. YU; M. PAULUS. *UCSD, UCSD, UCSD.*

1:00 HHH34 **451.13** The effects of chemogenetic inactivation of the medial prefrontal cortex during Pavlovian appetitive conditioning. S. E. KEEFER*; G. D. PETROVICH. *Boston Col.*

2:00 HHH35 **451.14** DREADD inactivation of medial prefrontal cortex neurons disrupts renewal of Pavlovian conditioned responding to food cues in male rats. L. C. ANDERSON*; G. D. PETROVICH. *Boston Col.*

3:00 HHH36 **451.15** The effect of intermittent versus continuous training on the incentive salience of a Pavlovian alcohol cue. F. R. VILLARUEL*; S. HEFFERNAN; M. CHAHINE; N. CHAUDHRI. *Concordia Univ.*

4:00 HHH37 **451.16** Simple paradigm for investigating the learning of cost-benefit associations in monkeys. T. VANDE CASTEELE; J. ARSENAULT; W. VANDUFFEL*. *K.U. Leuven, Mass. Gen. Hosp., Harvard Med. Sch.*

1:00 HHH38 **451.17** Lateral habenula plays a role in the process by which no association between two events is learned. D. KIM*; B. CHOI; J. HAN. *Konkuk Univ.*

2:00 HHH39 **451.18** Nicotine enhances Pavlovian conditioned responding in male and female rats. S. J. STRINGFIELD*; A. C. MADAYAG; J. XU; C. A. BOETTIGER; D. L. ROBINSON. *Univ. of North Carolina, Univ. of North Carolina, Univ. of North Carolina.*

POSTER

452. Fear and Aversive Learning and Memory: Acquisition

Theme G: Motivation and Emotion

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 HHH40 **452.01** Characterization of rapid reacquisition of contextual fear behavior following post-extinction reconditioning in C57BL/6J mice and Long Evans rats. A. WILLIAMS*; K. M. LATTAL, 97210. *Oregon Hlth. & Sci. Univ., Oregon Hlth. & Sci. Univ.*

2:00 III1 **452.02** ▲ δ and low θ band mediates tone fear conditioning under urethane anesthetized rats. E. F. OLIVEIRA*; M. B. REYES. *CMCC/UFABC, Univ. Federal do ABC.*

3:00 III2 **452.03** Basal ganglia output controls active avoidance behavior. S. HORMIGO; G. VEGA-FLORES; M. A. CASTRO-ALAMANCOS*. *Drexel Univ. Col. of Med.*

Mon. PM

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 III3 **452.04** Personality traits contribute to voluntary pain-related avoidance behavior. Y. NISHI*; M. OSUMI; S. NOBUSAKO; K. TAKEDA; S. MORIOKA. *Kio Univ., Hokkaido Univ.*

1:00 III4 **452.05** Sub-second fear discrimination in rats: Adult impairment in adolescent heavy alcohol drinkers. M. A. MCDANNALD*; K. M. WRIGHT; A. DILEO. *Boston Col.*

2:00 III5 **452.06** Optogenetic analysis of prefrontal contributions to contextual fear memories. A. ASOK*; D. V. GAGLIARDOTTO; A. M. HUGHES; J. SCHULKIN; J. B. ROSEN. *Columbia Univ., Univ. of Delaware, Georgetown Univ.*

3:00 III6 **452.07** The use of synthetic TMT as a psychological stressor in a rodent model of PTSD. B. C. MOUZON*; M. ALGAMAL; J. OJO; F. CRAWFORD. *The Roskamp Inst.*

4:00 III7 **452.08** Female rats acquire and recall a conditioned safety signal more rapidly than males. A. R. FOILB*; J. BALS; M. SARLITTO; J. P. CHRISTIANSON. *Boston Col.*

1:00 III8 **452.09** ▲ Inactivation of the obitofrontal cortex impairs fear discrimination. M. C. SARLITTO; A. R. FOILB; J. P. CHRISTIANSON*. *Boston Col.*

2:00 III9 **452.10** Brain-wide patterns of fos expression during fear learning correlate with emotional state rather than specific sensory stimuli. J. CHO*; S. RENDALL; J. GRAY. *Harvard Med. Sch., Harvard Med. Sch., Harvard Med. Sch.*

3:00 III10 **452.11** Diffuse traumatic brain injury enhances fear learning and dynamically alters processing within the auditory fear circuit. A. N. HOFFMAN*; J. LAM; Y. CAI; D. A. HOVDA; C. C. GIZA; M. S. FANSELOW. *UCLA, UCLA, UCLA, UCLA, UCLA, UCLA.*

4:00 III11 **452.12** Lesions of the ventromedial prefrontal cortex reduce stress enhanced fear learning in a stimulus specific manner. Z. T. PENNINGTON*; A. S. ANDERSON; M. S. FANSELOW. *UCLA, UCLA.*

1:00 III12 **452.13** Genetically encoding an *in vivo* tag of synaptic plasticity associated with memory. D. B. WEATHERILL*; R. TANNA; K. C. MARTIN; S. CHATTARJI; M. S. FANSELOW. *UCLA, UCLA, UCLA, Natl. Ctr. For Biol. Sci.*

2:00 III13 **452.14** Incubation of Pavlovian fear responding: Behavioral and neural correlates of recent and remote memory using between- and within-subject designs. N. ODYNOCKI*; P. R. ZAMBETTI; A. M. POULOS. *Univ. At Albany State Univ. of New York.*

3:00 III14 **452.15** Neural tract tracing-based modeling of contextual fear circuits across development in rats. A. J. SANTARELLI*; K. N. NEGISHI; A. M. KHAN; A. M. POULOS. *The State Univ. of New York At Albany, Univ. of Texas at El Paso.*

4:00 III15 **452.16** Mapping time - dependent contextual processing and immediate early gene expression in hippocampal and extra - hippocampal regions in C57Bl/6J mice. L. M. COLON*; T. WINSTON; A. POULOS. *Univ. At Albany State Univ. of New York.*

1:00 III16 **452.17** Hemodynamic changes in frontoparietal networks predict electrocortical population activity in visual cortex during aversive conditioning. N. M. PETRO*; L. F. GRUSS; S. YIN; H. HUANG; V. MISKOVIC; M. DING; A. KEIL. *Univ. of Florida, Univ. of Florida, Univ. of Florida, State Univ. of New York at Binghamton.*

2:00 III17 **452.18** ▲ Fear conditioning of social stimuli at proximal and distant locations in an immersive virtual reality environment. G. KASTRATI*; J. ROSÉN; S. HULTBERG; F. AHS. *Uppsala Univ.*

3:00 III18 **452.19** Remote but not recent pre-exposure increases generalization of fear learning in humans. B. D. YETTON*; D. J. CAI; S. C. MEDNICK. *Univ. Of California, Riverside, Univ. Of California, Los Angeles, Univ. Of California, Riverside.*

4:00 III19 **452.20** Role of the Neuropeptide Y Y1 receptor antagonist, BIBP 3226 on NPY induced resilience in socially defeated Syrian hamsters. K. KENNIEL*; T. LACEY; R. KINGSTON; C. M. MARKHAM. *Spelman Col., Morehouse Col., Spelman Col., Morehouse Col.*

1:00 III20 **452.21** The effects of exercise on resilience to social defeat stress in syrian hamsters. C. M. MARKHAM*; R. KINGSTON; J. BEST; M. EDWARDS. *Morehouse Col., Spelman Col., Morehouse Col.*

2:00 III21 **452.22** Fear conditioning increases GABA release from cerebellar stellate cells. C. DUBOIS*; S. LIU. *LSUHSC.*

3:00 III22 **452.23** Sex-specific modulation of trace fear acquisition by pituitary adenylate cyclase activating-polypeptide signaling in the medial prefrontal cortex. A. J. KIRRY*; M. R. HERBST; S. E. POIRIER; R. C. TWINING; M. R. GILMARTIN. *Marquette Univ.*

4:00 III23 **452.24** Neural dynamics of fear conditioning. S. YIN*; Y. LIU; A. KEIL; M. DING. *Univ. of Florida, Univ. of California, Davis, Univ. of Florida.*

1:00 III24 **452.25** ● Virtual burrow assay for measuring aversion to conditioned stimuli. C. E. SCHOONOVER*; A. J. P. FINK; R. AXEL. *Columbia Univ.*

2:00 III25 **452.26** Parametric characterization of a novel one way active avoidance learning on a treadmill using head fixed mice. H. JIE*; T. GEILLER; S. ROYER; J. CHOI. *Korea Univ., Korea Inst. of Sci. and Technol., Korea Univ.*

3:00 III26 **452.27** Behavioral correlates of neuronal allocation in auditory fear conditioning. J. L. STRAIGHT*; C. MCINTYRE. *Univ. of Texas At Dallas.*

4:00 III27 **452.28** The role of acid sensing ion channel 1A in Pavlovian reward learning. A. GHOBBEH*; S. ALAM; R. J. TAUGHER; R. FAN; R. T. LALUMIERE; J. A. WEMMIE. *The Univ. of Iowa, The Univ. of Iowa.*

POSTER

453. Motivation Neurocircuitry: Thalamus and Hypothalamus

Theme G: Motivation and Emotion

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 III28 **453.01** Lateral habenular-projecting hypothalamic neurons regulate food preference in rats. R. M. O'CONNOR*; P. J. KENNY. *Icahn Sch. of Medicine, Mount Sinai.*

2:00 III29 **453.02** Lateral habenula orexin receptor-2 signaling controls aggression reward. M. FLANIGAN*; H. ALEYASIN; A. TAKAHASHI; E. S. CALIPARI; C. MENARD; M. PFAU; S. J. RUSSO. *Icahn Sch. of Med. At Mount Sinai, Univ. of Tsukuba.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 III30 **453.03** Neuroanatomical and electrophysiological studies of Gad2-expressing neurons in the lateral habenula. A. W. WALKER*; L. A. QUINA; G. R. MORTON; Y. A. HSU; A. WEI; E. E. TURNER. *Seattle Children's Res. Inst.*

4:00 III31 **453.04** Hypothalamic and midbrain peptidergic-aminergic pathways modulate intrinsic GABAergic signaling in the lateral habenula: A study using *in vivo* juxtacellular labelling, retrograde tracing, IHC and confocal microscopy. L. ZHANG*; V. S. HERNANDEZ; L. E. EIDEN. *Natl. Autonomous Univ. of Mexico, NIMH-IRP, NIH.*

1:00 III32 **453.05** Stimulation-induced Fos-like immunoreactivity following electrolytic lesions of the dorsal diencephalic conduction system. M. FAKHOURY*; D. VOYER; D. LÉVESQUE; P. ROMPRÉ. *Univ. of Montreal.*

2:00 III33 **453.06** A hypothalamic circuit controlling aggressive motivation and action. A. L. FALKNER*; R. TREMBLAY; I. SCHMITT; B. RUDY; M. HALASSA; D. LIN. *NYU Sch. of Med., NYU Sch. of Med.*

3:00 III34 **453.07** Elaboration of hypothalamic chemoarchitecture of the adult male rat: A high spatial resolution mapping study of melanin-concentrating hormone, hypocretin/orexin, and calbindin immunoreactivities in multiple subjects. C. D'ARCY*; A. MARTINEZ; L. F. ARANDA; H. F. L. CERVANTES; L. E. CHACON; R. P. CORDERO; V. FERNANDEZ; G. A. GARCIA; S. HOLGUIN; A. JAQUEZ; T. G. MIRAMONTES; B. MONTAÑO; P. C. MUÑOZ; I. R. VALENZUELA; J. S. YU; A. M. KHAN. *Univ. Texas El Paso, Univ. of Texas at El Paso.*

4:00 III35 **453.08** Initial chemoarchitectural analysis of the infralimbic, prelimbic, and anterior cingulate areas of cerebral cortex in the adult male rat: Novel maps within a canonical atlas space. K. NEGISHI*; S. N. RODARTE; O. KOLENC; A. M. KHAN. *UNIVERSITY OF TEXAS AT EL PASO, Univ. of Texas at El Paso.*

1:00 III36 **453.09** Using multi-scale, mixed media methods to visualize and map electrophysiologically identified glucose-sensing neurons within canonical brain atlas space. E. PERU*; A. M. SANTIAGO; V. H. ROUTH; A. M. KHAN. *Univ. of Texas At Univ., Rutgers New Jersey Med. Sch., Univ. of Texas at El Paso.*

2:00 III37 **453.10** Further elaboration of forebrain and midbrain neuronal populations projecting to the ventral tegmental area, with an emphasis on the lateral hypothalamic area. E. M. WALKER*; B. DE HARO; J. SCHUELER; R. H. THOMPSON; A. M. KHAN. *Univ. of Texas El Paso, Univ. of Texas El Paso, Univ. of Texas El Paso, Univ. of Texas El Paso, USC, Univ. of Texas El Paso.*

3:00 III38 **453.11** Further elaboration of arcuate hypothalamic nucleus circuitry based on retrograde studies in the adult male rat. A. MARTINEZ*; B. E. PINALES; A. M. KHAN. *Univ. of Texas At El Paso.*

4:00 III39 **453.12** Migration, spatial alignment, and registration of multi-scale neuroscientific datasets related to the control of motivated behaviors within canonically defined maps of the lateral hypothalamic area. A. E. HERNANDEZ*; A. M. KHAN. *Univ. of Texas At El Paso, Univ. of Texas At El Paso.*

1:00 III40 **453.13** High spatial resolution mapping of Agouti-Related Peptide-immunoreactive axons to a canonical rat brain atlas. B. E. PINALES*; J. D. HAHN; A. M. KHAN. *Univ. of Texas At El Paso, USC, Univ. of Texas at El Paso.*

2:00 III41 **453.14** Involvement of lateral hypothalamus orexin circuits in cocaine demand. C. PANTAZIS*; E. M. MCGLINCHEY; G. ASTON-JONES. *Rutgers Univ., Med. Univ. of South Carolina.*

3:00 III42 **453.15** Methylphenidate reverses attention deficits induced by chemogenetic stimulation of the locus coeruleus in rats performing a 2-alternative forced-choice task. M. A. PRESKER*, JR; E. M. VAZEY; J. ZHANG; A. SNYDER; G. ASTON-JONES. *Rutgers - The State Univ. of New Jersey, Univ. of Massachusetts.*

4:00 III43 **453.16** Intermittent access to cocaine increases demand for cocaine in an orexin/hypocretin-dependent manner. M. H. JAMES*; C. M. STOPPER; N. E. KOLL; B. A. ZIMMER; G. ASTON-JONES. *Brain Hlth. Inst.*

1:00 III44 **453.17** Attenuating noradrenergic or serotonergic signaling in hippocampus during initial abstinence from cocaine persistently decreases later relapse to cocaine seeking in a sex-dependent manner. A. S. KOHTZ*; G. ASTON-JONES. *Brain Hlth. Inst.*

2:00 III45 **453.18** The role of oxytocin neuron activity in drug-seeking during initial abstinence from cocaine self-administration. B. LIN*; A. KOHTZ; M. SMITH; G. ASTON-JONES. *Rutgers Univ., Rutgers Univ., Med. Univ. of South Carolina.*

3:00 III46 **453.19** A critical role for melanopsin in light deprivation-induced depression. H. E. BOWREY*; M. H. JAMES; G. ASTON-JONES. *Rutgers Univ.*

4:00 III47 **453.20** Collateralization of projections from neurons in the PVT to the nucleus accumbens, bed nucleus of the stria terminalis, and central nucleus of the amygdala. X. DONG*; S. LI; G. J. KIROUAC. *Univ. of Manitoba, Univ. of Manitoba.*

1:00 III48 **453.21** Differential activity in the circuitry of the paraventricular nucleus of the thalamus following presentation of an incentive vs. a reward-predictive stimulus. J. L. HAIGHT*; Z. L. FULLER; K. M. FRASER; S. B. FLAGEL. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

2:00 III49 **453.22** Lateral hypothalamus glutamatergic projections to VTA mediate escape responses and aversion in mice. M. F. BARBANO*; H. WANG; M. MORALES. *Johns Hopkins Univ., Natl. Inst. on Drug Abuse.*

3:00 III50 **453.23** Comparison of stimulations of the lateral preoptic area and ventral pallidum using measures of reward, anxiety and ingestion. R. A. REICHARD*; K. P. PARSLEY; S. SUBRAMANIAN; D. S. ZAHM. *St. Louis Univ. Med. Sch.*

4:00 III51 **453.24** Chemogenetic activation of the lateral hypothalamus reverses early life stress-induced anhedonia. E. J. CAMPBELL*; C. D. ADAMS; C. S. MITCHELL; D. M. HODGSON; C. V. DAYAS. *Univ. of Newcastle.*

POSTER

454. Neurocircuitry of Emotion: Brain Stimulation and Synchronization

Theme G: Motivation and Emotion

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 DP07 **454.01** (Dynamic Poster) A multi-modality visualization tool. N. PELED*; O. FELSENSTEIN; R. LAPLANTE; T. SITNIKOVA; S. ZOROWITZ; A. AFZAL; A. GILMOUR; K. K. ELLARD; D. L. VALLEJO; A. C. PAULK; K. FARNES; T. DECKERSBACH; S. STUFFLEBEAM; M. HAMALAINEN; A. S. WIDGE; S. S. CASH; D. D. DOUGHERTY; E. N. ESKANDAR. *MGH/HST Martinos Ctr. For Biomed. Imaging, Harvard, Bar-Ilan university, Mass Gen. Hosp., Mass Gen. Hosp., Mass Gen. Hosp.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 III52 **454.02** Representations of aversive risk and decision conflict in the human subthalamic nucleus and globus pallidus internus. T. HERRINGTON*; S. PATEL; K. KANOFF; S. TSAI; S. ZOROWITZ; T. SITNIKOVA; K. ELLARD; T. DECKERSBACH; A. WIDGE; D. DOUGHERTY; E. ESKANDAR. *Massachusetts Gen. Hosp. Dept. of Neurol., Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., Massachusetts Gen. Hosp.*

3:00 JJJ1 **454.03** Bayesian state-space modeling of reversal learning in fmri. S. ZOROWITZ*; A. AFZAL; T. DECKERSBACH; K. K. ELLARD; A. L. GILMOUR; D. D. DOUGHERTY; E. N. ESKANDAR; A. S. WIDGE. *Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., Massachusetts Gen. Hosp.*

4:00 JJJ2 **454.04** Neural stimulation induces changes in behavior and neural responsiveness in the Emotion Conflict Resolution (ECR) task. A. C. PAULK; D. I. VALLEJO-LOPEZ; A. DOMINGUEZ; N. NOSSENSON; N. PELED; A. YOUSEFI; K. K. ELLARD; S. ZOROWITZ; A. AFZAL; B. CROCKER; I. BASU; T. SITNIKOVA; T. DECKERSBACH; D. D. DOUGHERTY; E. N. ESKANDAR; S. S. CASH; A. S. WIDGE*. *Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., Massachusetts Gen. Hosp.*

1:00 JJJ3 **454.05** A biophysical model of electrical stimulation evoked responses in cortical and subcortical brain regions of the human and non human primate. I. BASU*; A. C. PAULK; K. FARNES; M. M. ROBERTSON; B. CROCKER; D. I. VALLEJO-LOPEZ; D. D. DOUGHERTY; S. S. CASH; E. N. ESKANDAR; M. KRAMER; A. S. WIDGE. *Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., Boston Univ.*

2:00 JJJ4 **454.06** Functional inference distinguishes task and stimulation states across cortical and subcortical networks. N. R. PROVENZA*; K. FARNES; N. NOSSENSON; M. M. ROBERTSON; D. VALLEJO-LOPEZ; A. C. PAULK; N. PELED; M. W. MCCONLEY; S. H. CHIN; P. D. PARKS, II; D. DOUGHERTY; S. S. CASH; E. N. ESKANDAR; A. S. WIDGE; D. A. BORTON. *Brown Univ., Draper, Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., MGH/HST Martinos Ctr. for Biomed. Imaging, Boston Univ., Massachusetts Gen. Hosp., Brown Univ.*

3:00 JJJ5 **454.07** An exploration of stimulation effects in the non-human primate brain. M. M. ROBERTSON; A. C. PAULK; I. BASU; J. CHENG; C. MARTINEZ-RUBIO; J. EICHENLAUB*; D. DOUGHERTY; S. S. CASH; A. S. WIDGE; E. N. ESKANDAR. *Massachusetts Gen. Hosp., Johns Hopkins Hosp., Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., Massachusetts Gen. Hosp.*

4:00 JJJ6 **454.08** Characterizing stimulation-evoked synchrony in brain networks. A. YOUSEFI*; A. C. PAULK; I. BASU; B. NAZARI; K. B. FARNES; M. M. ROBERTSON; B. CROCKER; S. S. CASH; D. D. DOUGHERTY; A. S. WIDGE; E. N. ESKANDAR; U. T. EDEN. *MGH, Isfahan Univ. of Technol., MGH, MGH, Boston Univ.*

1:00 JJJ7 **454.09** Multimodal exploration of decision-making in the human subthalamic nucleus. S. R. PATEL*; T. HERRINGTON; S. SHETH; M. MIAN; S. BOURNE; S. ZOROWITZ; A. AFZAL; T. DECKERSBACH; A. WIDGE; D. DOUGHERTY; E. ESKANDAR. *Massachusetts Gen. Hosp.*

2:00 JJJ8 **454.10** Oscillatory synchronization enables dynamic information processing to resolve reward seeking vs. risk avoidance conflict. T. A. SITNIKOVA*; S. ZOROWITZ; A. AFZAL; A. L. GILMOUR; K. K. ELLARD; T. M. HERRINGTON; S. PATEL; A. C. PAULK; M. HAMALAINEN; S. STUFFLEBEAM; A. S. WIDGE; D. D. DOUGHERTY; E. N. ESKANDAR; T. DECKERSBACH. *Massachusetts Gen. Hosp. & Harvard Med. Sch., Massachusetts Gen. Hosp., Massachusetts Gen. Hosp. & Harvard Med. Sch.*

3:00 JJJ9 **454.11** Behavioral and neurophysiological dynamics during resolution of cognitive or emotional conflict. K. B. FARNES; A. C. PAULK*; D. VALLEJO-LOPEZ; M. M. ROBERTSON; N. NOSSENSON; N. PELED; K. K. ELLARD; S. ZOROWITZ; A. AFZAL; T. SITNIKOVA; T. DECKERSBACH; D. DOUGHERTY; E. N. ESKANDAR; A. S. WIDGE; S. S. CASH. *Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., Massachusetts Gen. Hosp., MGH/HST Martinos Ctr. for Biomed. Imaging, Massachusetts Gen. Hosp., MGH/HST Martinos Ctr. for Biomed. Imaging.*

4:00 JJJ10 **454.12** The control of firing patterns of midbrain periaqueductal gray neurons *in vivo*. H. H. SUBRAMANIAN*; P. A. SILBURN. *The Univ. of Queensland.*

1:00 JJJ11 **454.13** Optogenetic stimulation of the excitatory parabrachial projections to central amygdala induces anxiety- and depression-like behaviors in rats. Y. CAI; Z. Z. PAN*. *UT-MD Anderson Cancer Ctr.*

2:00 JJJ12 **454.14** Pathway-specific optogenetic manipulations to induce long-lasting changes in anxiety-related behavior. A. C. FELIX-ORTIZ*; G. G. CALHOON; A. BURGOS-ROBLES; P. NAMBURI; K. ANANDALINGAM; N. D. BHAGAT; K. M. TYE. *Picower Inst. for Learning and Memory, MIT, Harvard-MIT Hlth. Sci. and Technol. Program, Northeastern Univ.*

3:00 JJJ13 **454.15** Negative over positive: Unidirectional inhibitory interaction among amygdala projection neurons. G. G. CALHOON*; A. BEYELER; P. NAMBURI; G. GLOBER; K. M. TYE. *MIT.*

4:00 JJJ14 **454.16** A cortico-amygdala circuit encodes observational fear learning. S. A. ALLSOP*; A. C. FELIX-ORTIZ; R. WICHMANN; A. VIENNE; A. BEYELER; E. H. NIEH; D. BA; A. C. SMITH; A. EDMONDS; A. MAGZOUB; E. BROWN; K. M. TYE. *M.I.T., M.I.T., Harvard Univ.*

1:00 JJJ15 **454.17** Transcranial alternating current stimulation reduced negative emotions and functional integration of anterior cingulate cortex. K. ONODA*; T. KAWAGOE; H. ZHENG; S. YAMAGUCHI. *Shimane Univ.*

2:00 JJJ16 **454.18** The neural basis of the human affective startle modulation - evidence from two independent studies using parallel EMG-fMRI. M. KUHN*; J. WENDT; R. SJOUWERMAN; M. MÖLLER; C. BÜCHEL; T. B. LONSDORF. *Univ. Med. Ctr. Hamburg-Eppendorf, Univ. of Greifswald.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

455. Circuitry and Substrates of Fear

Theme G: Motivation and Emotion

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 JJJ17 **455.01** β noradrenergic blockade in the basolateral amygdala, but not the medial prefrontal cortex, rescues the immediate extinction deficit. T. F. GIUSTINO*; J. R. SEEMANN; G. M. ACCA; T. D. GOODE; P. J. FITZGERALD; S. MAREN. *Inst. For Neurosci., Texas A&M Inst. for Neurosci.*

2:00 JJJ18 **455.02** Single neurons in the medial prefrontal cortex of freely moving rats signal fear renewal. P. J. FITZGERALD*; T. F. GIUSTINO; S. MAREN. *Texas A&M Univ.*

3:00 JJJ19 **455.03** Opposing inhibition in prelimbic prefrontal neurons impairs active avoidance. M. M. DIEHL*; G. J. QUIRK. *Univ. of Puerto Rico, Sch. of Med.*

4:00 JJJ20 **455.04** Hippocampal-prefrontal projection mediates contextual fear memory retrieval. J. JIN*; T. GOODE; Q. WANG; S. MAREN. *Texas A&M Univ., Dept. of Biology, Texas A&M Univ.*

1:00 JJJ21 **455.05** Reversible inactivation of the bed nucleus of the stria terminalis disrupts the expression of fear to unpredictable threats. T. D. GOODE*; G. M. ACCA; S. MAREN. *Texas A&M Univ.*

2:00 JJJ22 **455.06** Nucleus reuniens mediates the encoding of extinction memories. K. R. RAMANATHAN*; J. JIN; S. MAREN. *Texas A&M Univ., Texas A&M Univ., Texas A&M Univ.*

3:00 JJJ23 **455.07** TRPV1 receptors modulate aversive responses and social behavior in rodentes. A. B. TERZIAN*; L. RESSTEL. *Univ. of São Paulo.*

4:00 JJJ24 **455.08** TRPV1 receptor of the ventral portion of medial prefrontal cortex modulates conditioned emotional response: Involvement of local glutamatergic and nitrergic system. D. L. ULIANA*; L. S. ANTERO; S. F. LISBOA; L. B. M. RESSTEL. *Sch. of Med. of Ribeirão Preto - USP.*

1:00 JJJ25 **455.09** The expression of contextual fear conditioning involves ACh release and activation of M1-M3 muscarinic receptors/NO/cGMP pathway in the dorsal hippocampus of rats. L. ANTERO*; D. L. ULIANA; L. B. RESSTEL. *Ribeirão Preto Med. Sch. - USP.*

2:00 JJJ26 **455.10** Subcortical projection-specific control of innate anxiety and learned fear by the ventral hippocampus. J. C. JIMENEZ*; A. GOLDBERG; G. ORDEK; V. M. LUNA; K. SU; S. PENA; L. ZWEIFEL; R. HEN; M. KHEIRBEK. *Columbia Univ., Univ. of California, San Francisco, Columbia Univ., Univ. of Washington.*

3:00 JJJ27 **455.11** Differential role of the hippocampal & basolateral amygdalar endocannabinoid neurotransmission in the modulation of fear memory retrieval in rats. B. RUBINO; M. CARLUCCI; E. SANTI; P. RATANO; P. CAMPOLONGO*. *Sapienza Univ. of Rome.*

4:00 JJJ28 **455.12** ▲ Effects of intra-amygdaloid injection of the D1 antagonist SCH23390 on the fear/anxiety induced by the exposure to a living cat in rats. E. N. LEVARIO RAMÍREZ*; M. CRESPO RAMÍREZ; M. PÉREZ DE LA MORA. *UNAM.*

1:00 JJJ29 **455.13** A central amygdala to BNST circuit that regulates anxiety. S. AHRENS*; B. LI. *Cold Spring Harbor Lab.*

2:00 JJJ30 **455.14** Netrin-G1 regulates fear and anxiety in dissociable neural circuits. Q. ZHANG*; S. ITOHARA. *Riken.*

3:00 JJJ31 **455.15** Social buffering during fear memory extinction involves medial prefrontal cortex. T. GORKIEWICZ*; K. ROKOSZ; K. MEYZA; E. KNAPSKA. *Nencki Inst.*

4:00 JJJ32 **455.16** Role of dopaminergic D2 receptors of globus pallidus in anxiety response in rat. G. AVILA; E. CHUC-MEZA; O. PICAZO; M. GARCIA-RAMIREZ*. *ENCB-IPN, ENCB-IPN, ESM-IPN, ENCB-IPN.*

1:00 JJJ33 **455.17** Histamine in the basolateral amygdala promotes inhibitory avoidance learning independently of hippocampus. F. BENETTI*; C. R. G. FURINI, Furini, CR; J. C. MISKYW, Miskyw, JC; I. IZQUIERDO; E. BALDI; G. PROVENSI; C. BUCHERELLI; M. B. PASSANI; P. BLANDINA. *Univ. Federal Do Rio Grande Do Sul, Pontifical Catholic Univ. of Rio Grande do Sul, Pontifical Catholic Univ. of Rio Grande do Sul, Univ. di Firenze.*

2:00 JJJ34 **455.18** Cortical drive to the extended amygdala modulates stress-induced behavior in mice. K. S. GIRVEN*; D. SPARTA. *Univ. of Maryland, Baltimore.*

3:00 JJJ35 **455.19** Neuronal correlates for neuroendocrine adaptation to repeated stress. S. MATOVIC*; E. W. SALTER; X. WANG; W. INOUE. *Robarts Res. Inst., Robarts Res. Inst.*

4:00 JJJ36 **455.20** C-Fos activation mapping of the bed nucleus of the stria terminalis in response to multimodal stress-inducing stimuli. X. LIN*; K. SAMI; M. LI; F. BERTON; W. FRANCESCONI; X. XU. *Univ. of California Irvine, The Scripps Res. Inst.*

1:00 JJJ37 **455.21** Distinct neural projections from the anteroventral bed nuclei of the stria terminalis modulate the endocrine and behavioral stress responses. S. B. JOHNSON*; R. M. ANDERSON; E. B. EMMONS; S. A. ROMIG-MARTIN; N. S. NARAYANAN; R. T. LALUMIERE; J. J. RADLEY. *Univ. of Iowa, Univ. of Iowa.*

2:00 JJJ38 **455.22** Topographic gene expression analysis of the nucleus accumbens shell and ventral tegmental area yields novel therapeutic target possibilities for anxiety, depression, and drug addiction. E. J. CROFTON*; Y. ZHANG; S. KOSHY; T. A. GREEN. *Univ. of Texas Med. Br.*

3:00 JJJ39 **455.23** ▲ Modulation of the endocannabinoid system within the nucleus accumbens shell elicits anxiolytic-like effects in rats. T. PARDO*; N. YUSIF; C. S. MALDONADO. *Univ. of Puerto Rico - Rio Piedras Campus.*

4:00 JJJ40 **455.24** ▲ The anxiolytic effect of elevated 2-Arachidonoylglycerol signalling in the basolateral amygdala is mitigated by heightened levels of emotional arousal. K. LEITL*; M. MORENA; H. VECCHIARELLI; M. GRAY; P. CAMPOLONGO; M. HILL. *Univ. of Calgary, Sapienza.*

1:00 JJJ41 **455.25** ASIC1a in ASIC4-positive neurons is important for innate fear and anxiety phenotypes. Y. CHIEN*; S. LIN; C. CHEN. *Academia Sinica/Institute of Biomed. Sci., Inst. of Biomed. Sciences, Academia Sinica, Taiwan Mouse Clinic, Natl. Comprehensive Mouse Phenotyping and Drug Testing Center, Academia Sinica.*

2:00 JJJ42 **455.26** Circuit-specific plasticity of inhibitory synapses on VTA dopamine neurons. K. BARCOMB*; A. M. POLTER; A. C. TSUDA; J. A. KAUER. *Brown Univ.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

456. Post-Traumatic Stress Disorder: Models

Theme G: Motivation and Emotion

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 JJJ43 **456.01** Sex-specific phenotypes in a rat model of post-traumatic stress disorder (PTSD). A. POOLEY*; A. J. ROBISON; M. S. MAZEI-ROBISON; A. L. EAGLE; S. M. BREEDLOVE; C. L. JORDAN. *Michigan State Univ.*

2:00 JJJ44 **456.02** Vagus nerve stimulation reverses extinction impairments and alters PTSD symptoms in the SPS animal model. L. J. NOBLE*; I. J. GONZALEZ; V. B. MERUVA; A. K. HUTCHINSON; T. DAM; S. K. THOMAS; E. MEYERS; M. P. KILGARD; C. K. MCINTYRE. *Univ. of Texas At Dallas.*

3:00 JJJ45 **456.03** A preclinical mouse model of traumatic memory storage- implications for PTSD. S. SILLIVAN*; N. JOSEPH; C. MILLER. *The Scripps Res. Institute-Florida.*

4:00 JJJ46 **456.04** PTSD-like behavioral profile of mice with full 5-HT2C receptor editing: Response to paroxetine treatment. M. RÈGUE; C. POILBOUT; L. LANFUMEY*; R. MONGEAU. *INSERM 894 Ctr. of Psychiatry and Neurosciences, Univ. Paris Descartes.*

1:00 JJJ47 **456.05** Alternations in fear behavior following acute stress in adrenalectomized rats: Involvement of kynurenic acid and implications for PTSD. D. J. BUCCI*; N. E. DEANGELI; K. S. HERRINGTON; H. WU; R. SCHWARCZ. *Dartmouth Col., Maryland Psych Res. Ctr.*

2:00 JJJ48 **456.06** ▲ Influence of estrous stage on the behavioral response of female rats to a predator-based psychosocial stress model of PTSD. E. D. EISENMANN*; R. M. ROSE; M. E. FRY; B. L. JOHNSON; M. R. HUNTLEY; M. E. HEIKKILA; B. A. KOHLS; P. R. ZOLADZ. *Ohio Northern Univ.*

3:00 JJJ49 **456.07** ▲ Clonidine prevents the anxiogenic, but not cardiovascular, consequences of a predator-based psychosocial stress model of PTSD. M. E. FRY*; E. D. EISENMANN; R. M. ROSE; B. L. JOHNSON; M. R. HUNTLEY; M. E. HEIKKILA; K. L. ROBINSON; B. R. RORABAUGH; P. R. ZOLADZ. *Ohio Northern Univ., Ohio Northern Univ.*

4:00 JJJ50 **456.08** ▲ Decreased voluntary ethanol consumption in a predator-based psychosocial stress model of PTSD. R. M. ROSE*; E. D. EISENMANN; B. L. JOHNSON; M. E. FRY; M. E. HEIKKILA; M. R. HUNTLEY; P. R. ZOLADZ. *Ohio Northern Univ.*

1:00 JJJ51 **456.09** Adolescent trauma results in distinct behavioral covariates and neural activation patterns in habenula associated brain regions. G. I. ELMER*; J. R. SCHANK; J. MITCHELL; R. DAMAZDIC; C. L. MAYO; D. BRADY; A. PINCUS; C. KING; M. HEILIG; J. D. TAPOCIK. *Maryland Psychiatric Res. Ctr., NIAAA, NIH, Colby.*

2:00 JJJ52 **456.10** ● Susceptibility to traumatic stress predicts elevations in cocaine self-administration and the dopaminergic response to cocaine. Z. D. BRODNIK*; M. CLARK; K. KORNSEY; R. A. ESPAÑA, 19129. *Drexel Univ., Drexel Univ. Col. of Med.*

3:00 JJJ53 **456.11** Awake resting-state fMRI in a post-traumatic stress disorder rat model. P. D. PEREZ*; D. DOPFEL; L. ANTINORI; J. RUDDY; N. ZHANG. *Pennsylvania State Univ.*

4:00 JJJ54 **456.12** Do opiate and hypothalamus-pituitary-adrenal gland systems affect fear, depression, and movement behaviors for posttraumatic stress disorder in rats? C. CHIU*; A. C. W. HUANG. *Fo Guang Univ., Psychology, Fo Guang Univ.*

1:00 JJJ55 **456.13** Oxytocin attenuates stress-induced reinstatement of alcohol seeking in mice with a history of trauma. C. KING*; W. C. GRIFFIN; J. F. MCGINTY; H. C. BECKER. *Med. Univ. of South Carolina.*

2:00 JJJ56 **456.14** Effects of acute immobilization stress on brain network functional connectivity and its use as a PTSD model. D. DOPFEL*; N. ZHANG. *Pennsylvania State Univ., Pennsylvania State Univ.*

3:00 JJJ57 **456.15** Role of α2-adrenergic receptors in modulating post-traumatic stress disorder-like behaviors in a novel fearful DxH congenic recombinant inbred mouse strain with a DBA/2J background. R. WICKRAMASEKARA; Y. FARHAT; S. AKKOSEOGLU; D. M. YILMAZER-HANKE*. *Creighton Univ.*

4:00 JJJ58 **456.16** Single prolonged stress-induced deficits in fear extinction recall are affected by exposure to functional modulators of astrocytic glutamate transport. T. S. COTRONE; B. S. JORTNER*; M. F. EHRICH; B. G. KLEIN. *Virginia Tech, Col. of Vet. Med., VA-MD Regional Col. Vet Med.*

1:00 JJJ59 **456.17** Animal models of post traumatic stress disorder: Behavioral characterization and pharmacological validation. I. MORGANSTERN*; Q. CHANG; A. CHOO; L. THIEDE; K. HOMA; E. SABATH; W. ALVINS; J. SUTPHEN; M. LANG; S. DAVIS; T. HANANIA. *Psychogenics.*

2:00 JJJ60 **456.18** Acetylcholinesterase (AChE) heterozygous mice present with a postraumatic stress disorder-like phenotype. K. SMITH*; R. M. RODRIGUIZ; J. S. COLVIN; M. W. PEASE; N. NGUYEN; C. KIM; J. J. WILKINS; D. E. WILLIAMSON; W. C. WETSEL. *UT Hlth. Sci. Ctr. San Antonio, Duke Univ., Duke Univ., Duke Univ., Duke Univ.*

3:00 JJJ61 **456.19** Acute nicotine enhances spontaneous recovery of contextual fear and changes c-fos early gene expression in infralimbic cortex, hippocampus, and amygdala. J. TUMOLO*; B. GARRETT; M. G. KUTLU; E. HOLLIDAY; T. J. GOULD. *Temple Univ., Temple Univ.*

4:00 KKK1 **456.20** mGluR5 mediates both resilience to traumatic stress and relapse to cocaine seeking. J. SHALLCROSS*; L. KNACKSTEDT; M. SCHWENDT. *Univ. of Florida.*

1:00 KKK2 **456.21** Effects of single prolonged stress, a PTSD model, on adult hippocampal neurogenesis and extinction-retention. E. RODRIGUEZ*; I. LIBERZON. *Univ. of Michigan, Univ. of Michigan.*

2:00 KKK3 **456.22** Exploring novelty-seeking behaviours and amphetamine sensitization in rats exposed to single prolonged stress. K. THIRUMAL*; P. KENT; C. CAYER; J. JAMES; H. ANISMAN; Z. MERALI. *Carleton Univ., Royal Ottawa Inst. of Mental Hlth. Res., Carleton Univ.*

3:00 KKK4 **456.23** Post-stress glucose eliminates PTSD-like symptoms following traumatic stress in rats: Temporal constraints. N. SMITH*; M. A. CONOSCENTI; T. R. MINOR. *UCLA.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

4:00 KKK5 **456.24** ● IGFBP2 induces resilience to stress in rats via a novel non-IGF1 or AMPA receptor dependent mechanism. J. S. BURGDORF*; E. M. COLECHIO; N. GHOREISHI-HAACK; A. L. GROSS; X. ZHANG; P. L. STANTON; R. L. KROES; J. R. MOSKAL. *Northwestern Univ., Aptinyx Inc., New York Med. Col., New York Med. Col.*

1:00 KKK6 **456.25** The role of Akt signaling in persistent fear expression in a rodent model of post traumatic stress disorder. D. K. KNOX*; T. DEPIETRO; J. STAIB; M. CHAMNESS; E. MOULTON. *Univ. of Delaware.*

2:00 KKK7 **456.26** ▲ Effects of glucose on learned helplessness behavior with a novel control condition. N. C. CHRISTIE*; M. A. CONOSCENTI; T. R. MINOR. *UCLA, UCLA.*

3:00 KKK8 **456.27** ▲ Establishing a modified model of PTSD in adolescent rats. A. L. GARRISON*; E. N. WALSH; J. M. SMITH; T. E. KOELTZOW. *Bradley Univ.*

4:00 KKK9 **456.28** Combined single prolonged stress (SPS) and CO_2 inhalation as a novel model of comorbid post-traumatic stress disorder (PTSD) and panic disorder associated behaviors in mice. K. M. MCMURRAY*; J. D. SCHURDAK; L. L. VOLLMER; R. SAH. *Univ. of Cincinnati-Reading Campus, Univ. of Cincinnati, Cincinnati VA.*

1:00 KKK10 **456.29** Chronic 'PTSD-like' effects (after 6 months) in a mouse model of comorbid traumatic stress and repetitive mTBI. M. ALGAMAL*; J. O. OJO; M. OWENS; M. MULLAN; D. DIAMOND; F. CRAWFORD. *Roskamp Inst., The Open Univ., James A. Haley Veterans' Hosp., Univ. of South Florida.*

POSTER

457. Amphetamines: Behavioral Studies

Theme G: Motivation and Emotion

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 KKK11 **457.01** Relationship between methamphetamine use, reinforcement and seeking in mice with high genotype-dependent methamphetamine intake. S. SHABANI*; E. I. MOJICA; L. HELLMUTH; S. HOULTON; T. J. PHILLIPS. *Minot State Univ., Methamphetamine Abuse Res. Center, Oregon Hlth. & Sci. Univ., Veterans Affairs Portland Hlth. Care Syst.*

2:00 KKK12 **457.02** Context-independent effects of footshock on drug-seeking. C. PIZZIMENTI*; T. NAVIS; K. M. LATTAL. *Oregon Hlth. and Sci. Univ., Oregon Hlth. & Sci. Univ.*

3:00 KKK13 **457.03** Examination of sex dependent neural substrates correlated with meth triggered reinstatement in rats. S. T. PITTENGER*; S. CHOU; S. T. BARRETT; O. D. LOH; R. A. BEVINS. *Univ. of Nebraska-Lincoln, Univ. of Nebraska Med. Ctr.*

4:00 KKK14 **457.04** ● Cue-induced relapse to methamphetamine seeking in compulsive methamphetamine takers and abstinent rats. I. N. KRASNOVA*; N. TERRY; M. MCCOY; B. LADENHEIM; J. CADET. *NIDA, NIH, DHHS.*

1:00 KKK15 **457.05** Effects of Ro5-4864 on methamphetamine self-administration in male and female rats. G. F. GUERIN*; S. M. HAROLD; S. R. PORTER; C. D. SCHMOUTZ; G. LI; J. M. COOK; N. E. GOEDERS. *LSUHSC-S, Univ. of Wisconsin-Milwaukee.*

2:00 KKK16 **457.06** Differential effects of ratio requirement on reinforcing efficacy of synthetic cathinone analogs of MDMA. S. B. DOLAN*; M. GATCH. *Univ. of North Texas Hlth. Sci. Ctr.*

3:00 KKK17 **457.07** Effects of oxytocin following traumatic stress on methamphetamine seeking in female rats. C. E. O'NEILL*; R. J. NEWSOM; J. F. MCGINTY. *Med. Univ. of South Carolina.*

4:00 KKK18 **457.08** Rearing condition alters the ability of ceftriaxone to attenuate cue and amphetamine reinstatement. E. J. GARCIA*; D. L. ARNDT; M. E. CAIN. *Kansas State Univ.*

1:00 KKK19 **457.09** ● Self-administration of psychstimulants via vapor inhalation in rats. M. A. TAFFE*; J. D. NGUYEN; S. A. VANDEWATER; M. COLE. *The Scripps Res. Inst., The Scripps Res. Inst., La Jolla Alcohol Research, Inc.*

2:00 KKK20 **457.10** Sufficiency of dopamine receptor stimulation in the reinstatement of methamphetamine seeking. T. A. LARSON; M. C. WINKLER; R. K. BACHTELL*. *Univ. of Colorado, Univ. of Colorado.*

3:00 KKK21 **457.11** The 5-HT_{1B} receptor agonists, CP 94,253 and zolmitriptan, attenuate the reinforcing and motivational effects of methamphetamine. R. GARCIA*; A. R. COTTER; K. LESLIE; K. ENNIS; T. BENSON; M. F. OLIVE; J. L. NEISEWANDER. *Arizona State Univ., Arizona State Univ., Arizona State Univ.*

4:00 KKK22 **457.12** Rewarding effects of a methamphetamine and morphine speedball as assessed by ultrasonic vocalizations in rats. T. T. TOWNER*; A. ROCHA; K. A. TRUJILLO. *California State Univ. San Marcos.*

1:00 KKK23 **457.13** Complex behavioral interactions between dissociative drugs and methamphetamine. A. ESCOBEDO*; K. A. TRUJILLO. *California State Univ. San Marcos.*

2:00 KKK24 **457.14** Altered effort expenditure and intact reward sensitivity for non-drug rewards in protracted drug withdrawal. A. B. THOMPSON*; J. GERSON; A. STOLYAROVA; A. BUGARIN; Z. GUTTMAN; J. JENTSCH; A. IZQUIERDO. *UCLA, Binghamton Univ.*

3:00 KKK25 **457.15** Recovery effects on behavior and development during abstinence after chronic methylphenidate treatment. D. FRICKE*; A. VIJAYASHANTHAR; C. F. LOWINGER; L. B. JERMYN; L. S. ROBISON; M. HADJIARGYROU; D. E. KOMATSU; P. K. THANOS. *Univ. At Buffalo, Stony Brook Univ., New York Inst. of Technol., Stony Brook Univ.*

4:00 KKK26 **457.16** Separating the agony from ecstasy: Prosocial effects and neurotoxicity of R(-)-3,4-methylenedioxymethamphetamine in mice. D. W. CURRY*; L. L. HOWELL. *Emory Univ., Emory Univ.*

1:00 KKK27 **457.17** Effect of ς 1 receptor antagonist PD 144418 on methamphetamine self administration in rats. M. TAPIA*; J. LEE; G. GEREAU; D. MILLER; M. WILL. *Univ. of Missouri.*

2:00 KKK28 **457.18** ▲ The effects of enriched environment on the response to methamphetamine in adolescent and adult mice. A. M. DAHLY; E. P. BAKER; E. C. MAGNUSON; J. H. WEISS*; J. A. SIEGEL*. *The Univ. of St. Thomas.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 KKK29 **457.19** Systemic administration of the GABAA receptor antagonist bicuculline prevents the effects of the administration of the 5-HT1A receptor agonist 8-OH-DPAT on the discriminative signal of amphetamine in a conditioned taste aversion procedure. F. MIRANDA-HERRERA*; A. SANDOVAL-SÁNCHEZ; L. N. CEDILLO; J. C. JIMENEZ; A. I. BARRIENTOS-NORIEGA; R. I. RUIZ-GARCIA. *Univ. Nacional Autonoma De Mexico.*

4:00 KKK30 **457.20** ● Apomorphine induced post-trial increases or decreases in dopaminergic activation can reverse or enhance catalepsy conditioning induced by haloperidol. M. P. CARRERA*; R. J. CAREY; F. R. C. DIAS; L. R. OLIVEIRA; B. G. SANTOS; J. L. L. SILVA. *State Univ. of North Fluminense, SUNY Upstate Med. Univ.*

POSTER

458. Attention and Frontal Cortex

Theme H: Cognition

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 KKK31 **458.01** Attentional effects on network dynamics in local field potentials of primate lateral prefrontal cortex. M. ABBASS*; L. DUONG; A. SACHS; J. MARTINEZ-TRUJILLO. *Univ. of Western Ontario, The Ottawa Hosp.*

2:00 KKK32 **458.02** Partially-segregated neuronal populations in the lateral prefrontal cortex encode attended and memorized visual features. D. MENDOZA-HALLIDAY*; J. MARTINEZ-TRUJILLO. *MIT, Western Univ.*

3:00 KKK33 **458.03** Chemogenetic inhibition of prefrontal projection neurons and attentional capacities in forebrain trkA-suppressed rats. V. V. PARIKH*; M. G. KUTLU; S. JOSHI; B. YEGLA. *Temple Univ.*

4:00 KKK34 **458.04** Real-time tagging of visual, saccadic, spatial memory and attention prefrontal representations. S. BEN HAMED*; C. WARDAK; E. ASTRAND. *Inst. des Sci. Cognitives Marc Jeannerod, Inst. des Sci. Cognitives Marc Jeannerod, Mälardalen Univ.*

1:00 KKK35 **458.05** Reward strengthens the representation of task-relevant information in the prefrontal cortex during learning. B. MASSI*; C. H. DONAHUE; D. LEE. *Yale Univ., UCSF.*

2:00 KKK36 **458.06** Micro- and macro-circuit components of a putative attention filter. M. G. WHITE*; M. PANICKER; B. M. ROBERTS; B. N. MATHUR. *Univ. of Maryland, Sch. of Med.*

3:00 KKK37 **458.07** Prefrontal neurons fulfill criteria for solving the credit assignment problem. W. F. ASAAD*; J. PERGE; E. N. ESKANDAR. *Brown Univ., Brown Univ., Massachusetts Gen. Hosp. / Harvard Med. Sch.*

4:00 KKK38 **458.08** Distractor suppression and distractor interference in the light of direct real-time access to the covert attentional spotlight from the frontal eye fields. F. DI BELLO*; S. BEN HADJ HASSEN; E. ASTRAND; S. BEN HAMED. *Inst. Des Sci. Cognitives Marc Jeannerod, Mälardalens Univ.*

1:00 KKK39 **458.09** Mapping connections of prefrontal cortex using electrical microstimulation and fMRI in the macaque. R. XU*; N. P. BICHOT; P. K. WEIGAND; A. TAKAHASHI; R. DESIMONE. *MIT.*

2:00 KKK40 **458.10** Effects of attention on neural activity of orbitofrontal cortex. Y. XIE*; C. NIE; T. YANG. *Inst. of Neurosci.*

3:00 KKK41 **458.11** Neuronal modulations in prefrontal cortex are associated with multiple components of visuospatial attention. T. Z. LUO*; J. H. R. MAUNSELL. *The Univ. of Chicago.*

4:00 KKK42 **458.12** Circuit mechanisms of prefrontal contribution to visual behavior. R. HUDA*; G. PHO; L. GUNTER; I. WICKERSHAM; M. SUR. *Picower Inst. for Learning and Memory, MIT, MIT.*

1:00 KKK43 **458.13** Comparison of the contribution from superior colliculus and frontal eye field to covert spatial attention. A. BOLLIMUNTA*; A. R. BOGADHI; R. J. KRAUZLIS. *Natl. Eye Inst.*

2:00 KKK44 **458.14** Prefrontal inter- and intra-hemispheric neuronal noise correlations depend on the ongoing behavior. S. BEN HADJHASSEN*; E. ASTRAND; C. WARDAK; S. BEN HAMED. *Inst. Des Sci. Cognitives Marc Jeannerod.*

3:00 KKK45 **458.15** Neural network properties are dynamically modulated by attention in primate lateral prefrontal cortex. L. DUONG*; M. ABASS; A. SACHS; J. MARTINEZ-TRUJILLO. *Robarts Res. Inst., Western Univ., The Ottawa Hosp., Robarts Res. Inst.*

4:00 KKK46 **458.16** Responses of frontal eye field neurons in a visual foraging task. K. MIRPOUR*; Z. BOLANDNAZAR; J. W. BISLEY. *UCLA, UCLA, UCLA.*

1:00 KKK47 **458.17** Animal model of spatial neglect in macaque monkeys. K. TSUJIMOTO*; M. SAWADA; M. FUKUNAGA; M. YOSHIDA. *Natl. Inst. For Physiological Sci., SOKENDA,Graduate Univ. for Advanced studies, Natl. Inst. For Physiological Sci.*

POSTER

459. Attention in Visual Cortical Areas

Theme H: Cognition

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 KKK48 **459.01** Methylphenidate enhances early stage sensory signal processing within the rat during performance of a visual signal detection task. R. L. NAVARRA*; B. D. CLARK; B. D. WATERHOUSE. *Drexel Univ. Col. of Med., Drexel Univ. Col. of Med., Rowan Univ. Sch. of Med.*

2:00 KKK49 **459.02** Indvidual rats choose alternate, sub-optimal strategies in a (flawed) signal detection task. An observational study, with a moral. B. D. CLARK*; J. S. SHUMSKY; B. D. WATERHOUSE. *Drexel Univ. Col. of Med., Rowan Univ. Sch. of Med.*

3:00 KKK50 **459.03** Population encoding of attentional states in the absence of visual stimulation. A. C. SNYDER*; B. M. YU.; M. A. SMITH. *Univ. of Pittsburgh, Carnegie Mellon Univ., Ctr. for the Neural Basis of Cognition, Carnegie Mellon Univ., Univ. of Pittsburgh, Fox Ctr. for Vision Restoration.*

4:00 KKK51 **459.04** Neuronal correlates of attentional selectivity in area V4 is independent of motivational context. S. GHOSH*; J. H. R. MAUNSELL. *Univ. of Chicago.*

1:00 KKK52 **459.05** Dual-task interference in macaque early visual cortex. J. POSSEL*; M. W. SELF; P. R. ROELFSEMA. *Netherlands Inst. For Neurosci., Ctr. for Neurogenomics and Cognitive Res., Academic Med. Ctr.*

2:00 KKK53 **459.06** Spatial summation sub-compartments in the orientation column. X. SONG*; M. LI; T. XU; D. W. HU; A. W. ROE; C. Y. LI. *Zhejiang Univ. Interdisciplinary Inst. of, The Col. of Mechatronics and Automation, Univ. of Electronic Sci. and Technol. of China.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 KKK54 **459.07** Communication between the pulvinar and the layers of Area V4 during selective visual attention. R. LY*; S. KASTNER. *Princeton Univ., Princeton Univ.*

4:00 KKK55 **459.08** The attentional bias for novelty fluctuates across time. D. VATTEROTT*; J. GOTTLIEB. *Columbia Univ.*

1:00 KKK56 **459.09** Superior colliculus inactivation with functional imaging reveals novel nodes in the control of spatial attention. A. R. BOGADHI*; A. BOLLIMUNTA; D. A. LEOPOLD; R. J. KRAUZLIS. *Natl. Eye Inst., Natl. Inst. of Mental Hlth.*

2:00 KKK57 **459.10** How configural is the configural superiority effect? a neuroimaging investigation of configurality in visual cortex. O. M. FOX; A. HAREL*; K. B. BENNETT. *Wright State Univ.*

POSTER

460. Executive Function: Models of Disorders

Theme H: Cognition

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 KKK58 **460.01** The role of cacna1c in cognitive functioning. Z. R. DARUWALLA*; D. FISCHER; A. RAJADHYAKSHA. *Pediatric Neurology, Weill Cornell Med. Col.*

2:00 KKK59 **460.02** Altered markers of synaptic development and learning and memory deficits in the cereblon knockout mouse model of intellectual disability. D. K. FISCHER; C. C. BAVLEY; A. M. RAJADHYAKSHA*. *Joan and Sanford I Weill Med. Col. of Cornell Univ.*

3:00 KKK60 **460.03** Loss of MeCP2 in cholinergic neurons causes part of RTT-like phenotypes via the α7 receptor in hippocampus. Y. ZHANG*; S. CAO; P. SUN; H. HE; C. YANG; X. CHEN; C. SHEN; X. WANG; Z. CHEN; D. K. BERG; S. DUAN; X. LI. *Zhejiang Univ. Sch. of Med., Neurobio. Section, Div. of Biol. Sci. and Ctr. for Neural Circuits and Behavior, Univ. of California, San Diego.*

4:00 KKK61 **460.04** Effect of the ς-1 receptor selective compound LS-1-137 on the DOI-induced head twitch response in mice. R. R. LUEDTKE*, Ph.D.; M. MALIK; C. RANGEL-BARAJAS; R. H. MACH. *Univ. North Texas Hlth. Sci. Cter, Univ. of North Texas Hlth. Sci. Ctr., Indiana Univ. Bloomington, Univ. of Pennsylvania Sch. of Med.*

1:00 KKK62 **460.05** Male-specific deficits in natural reward learning in a mouse model of 16p11.2 hemideletion. N. M. GRISSOM*; S. MCKEE; H. SCHOCH; N. BOWMAN; R. HAVEKES; W. O'BRIEN; E. MAHRT; K. COMMONS; C. PORTFORS; T. NICKL-JOCKSCHAT; T. REYES; T. ABEL. *Univ. of Pennsylvania, Univ. of Cincinnati, Univ. of California Irvine, Univ. of Groningen, Washington State Univ., Boston Children's Hosp., Aachen Univ.*

2:00 KKK63 **460.06** Cortical GluN2B contribution to reversal learning in Prenatal Alcohol Exposure. K. L. MARQUARDT*; J. CAVANAGH; K. CALDWELL; J. BRIGMAN. *Univ. of New Mexico, Univ. of New Mexico, UNM Hlth. Sci. Ctr.*

3:00 KKK64 **460.07** Alcohol induced mGluR2 deficit in the prefrontal cortex leads to behavioral inflexibility in rats. S. PFARR*; M. L. KLEE; M. W. MEINHARDT; N. MEIER; O. VON BOHLEN UND HALBACH; M. SCHNEIDER; R. L. BELL; K. SCHÖNIG; W. H. SOMMER. *Central Inst. of Mental Hlth., Inst. für Anatomie und Zellbiologie, Universitätsmedizin, Indiana Univ. Sch. of Med., Central Inst. of Mental Hlth.*

4:00 KKK65 **460.08** ● Modeling exposure therapy in rats: Fear extinction-induced infralimbic protein synthesis underlies reversal of chronic stress-induced cognitive inflexibility. E. A. FUCICH*; D. PAREDES; D. A. MORILAK. *Univ. of Texas Hlth. Sci. Ctr., Univ. of Texas Hlth. Sci. Ctr. at San Antonio.*

1:00 KKK66 **460.09** ● Modeling exposure therapy in rats: Fear extinction-induced infralimbic activity underlies reversal of chronic stress-induced shift towards passive coping. D. A. MORILAK*; E. FUCICH; M. SAUNDERS. *Univ. of Texas Hlth. Sci. Ctr. at San Antonio.*

2:00 KKK67 **460.10** Alter neuronal ensembles in a neuronal overproduction mouse model of autism. W. FANG*; R. YUSTE. *Columbia Univ.*

3:00 KKK68 **460.11** ● Methamphetamine rescues latency of reward collection in TAT transgenic mice while not affecting probabilistic learning, motivation, or exploratory behavior compared to controls. M. B. MILIENNE-PETIOT*; D. S. DEBEN; J. W. YOUNG; A. MINASSIAN; T. TMARC. *UCSD, Utrecht Univ., UCSD.*

4:00 KKK69 **460.12** Pavlovian and dopaminergic influences on the development and escalation of 'compulsive' checking behaviour in rats: Implications for models of obsessive compulsive disorder (OCD). D. M. EAGLE*; C. SCHEPISI; S. CHUGH; S. DESAI; S. HAN; T. HUANG; J. LEE; C. SOBALA; W. YE; T. W. ROBBINS. *Univ. Cambridge, Univ. Bristol.*

1:00 KKK70 **460.13** Cortico-striatal regions of the rat and checking-like behaviour: Dissociable effects of lesions to the orbitofrontal cortex, medial prefrontal cortex, nucleus accumbens core and dorsal striatum in an operant observing response task. L. D'ANGELO*; D. M. EAGLE; C. M. COMAN; T. W. ROBBINS. *Univ. of Cambridge, Behavioural and Clin. Neurosci. Inst., Univ. Paris-Saclay.*

2:00 LLL1 **460.14** Effects of cola nitida acetone extract on brain sodium-potassium adenosine triphosphatase activity, spatial memory in healthy and streptozotocine induced diabetic female wistar rats. A. O. IMAMFULANI*; K. O. SANUSI; B. V. OWOYELE. *Univ. of Ilorin.*

3:00 LLL2 **460.15** Behavioral and physiological effects of excitatory DREADD expression in the rat medial prefrontal cortex: Lack of evidence for neuronal activation with clozapine-N-oxide. K. ISHIWARI*; A. M. GEORGE; C. D. MARTIN; K. A. HAUSKNECHT; R. SHEN; S. HAJ-DAHMANE; J. B. RICHARDS. *Univ. at Buffalo, Univ. at Buffalo.*

4:00 LLL3 **460.16** Timing and temporal discounting in a model of aging-related parkinsonism. M. BUHUSI*; A. MANJUNATH; A. R. MATTHEWS; K. OLSEN; J. CARLSON; J. YANG; C. V. BUHUSI. *Utah State Univ., Utah State Univ., Med. Univ. of South Carolina.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

POSTER

461. Adult Hippocampal Neurogenesis: Consequences of Altering Neuronal Production

Theme H: Cognition

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 LLL4 **461.01** Increased hippocampal neurogenesis is associated with worse contextual memory. J. JORDAN*; S. SCHWARTZ; I. VORONINA; K. LIN; C. HARDING; C. PYTTE; A. WINTER. *Grad. Center, The City Univ. of New York, Queens College, The City Univ. of New York, Hunter College, The City Univ. of New York, Hunter College, The City Univ. of New York, Grad. Center, The City Univ. of New York, Paul D Schreiber High Sch.*

2:00 LLL5 **461.02** Depletion of adult neurogenesis compromises hippocampal feedback inhibition. C. L. HOLLANDS*; S. KERNIE; O. LAZAROV. *The Univ. of Illinois at Chicago, Columbia Univ.*

3:00 LLL6 **461.03** Analysis of gender and strain differences in basal hippocampal neurogenesis in adult rats. A. M. FORMICA; F. E. GRIFFEY; A. R. DIXON; D. M. HAYES*. *Radford Univ.*

4:00 LLL7 **461.04** Lentiviral overexpression of interleukin-1β in the hippocampus induces neurogenesis-associated cognitive deficits in touchscreen learning paradigms. C. M. HUESTON*; J. F. CRYAN; Y. M. NOLAN. *Univ. Col. Cork.*

1:00 LLL8 **461.05** Exercise-induced changes in NGF are critical for the rescue of spatial working memory and septohippocampal functioning. J. M. HALL*; F. GOMEZ-PINILLA; L. Z. YING; L. M. SAVAGE. *Binghamton Univ., UCLA.*

2:00 LLL9 **461.06** Seizures originating in different brain regions have differential effects on fear memory and the functional integration of seizure-generated granule neurons. N. NOGOVITSYN*; J. J. BOTTERILL; H. J. CARUNCHO; L. E. KALYNCHUK. *Univ. of Saskatchewan, Univ. of Saskatchewan, Univ. of Saskatchewan, Univ. of Saskatchewan.*

3:00 LLL10 **461.07** Could changes in hippocampal neuron cytoarchitecture explain the depressive behavior of CB1 knockout mice? H. A. BRUSCO*; D. SORIANO; F. CONDE; L. CALTANA. *IBCN (UBA-CONICET) Facultad De Medicina UBA.*

4:00 LLL11 **461.08** Imaging the functional integration of adult-born hippocampal granule cells into the dentate gyrus network. S. N. TUNCDEMIR*; G. TURI; G. ORDEK; A. LOSONCZY; R. HEN, 10016. *RFMH Columbia Univ., Columbia Univ., Columbia Univ.*

1:00 LLL12 **461.09** The role of adult neurogenesis in visuo-spatial learning and memory is dependent on stress during training and sex. T. P. O'LEARY*; D. ESPINUEVA; D. R. M. SEIB; J. S. SNYDER. *Univ. of British Columbia.*

2:00 LLL13 **461.10** Inhibition of adult neurogenesis impairs learning of spatiotemporal regularities. R. YU*; J. ZHAO; J. S. SNYDER. *The Univ. of British Columbia.*

3:00 LLL14 **461.11** The effects of amygdala kindling on hippocampal neurogenesis and pattern separation. J. K. CARR*; H. LEHMANN; N. M. FOURNIER. *Trent Univ.*

POSTER

462. Learning and Memory: Gamma and Theta Rhythms

Theme H: Cognition

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 LLL15 **462.01** Modulation of glutamatergic neurons in the medial septum in the freely moving mouse. J. ROBINSON*; F. MANSEAU; S. WILLIAMS. *Inst. Universitaire En Santé Mentale Douglas, McGill Univ.*

2:00 LLL16 **462.02** Calcium imaging of medial septal neurons in freely-behaving mice. J. BOTT*; S. WILLIAMS. *Dept of Pyschiatry, McGill University, Douglas Ins.*

3:00 LLL17 **462.03** Spatial reference memory impairments are associated with abolished CA1 θ-γ cross-frequency coupling in freely behaving J20 APP mice. G. ETTER*; S. WILLIAMS. *Douglas Mental Hlth. Inst., McGill Univ.*

4:00 LLL18 **462.04** Deep Brain Stimulation to improve memory function in an animal model of Alzheimer Disease. E. VICO VARELA*; S. WILLIAMS. *McGill Univ. -Douglas Mental Hlth. Uni. Inst.*

1:00 LLL19 **462.05** Altered prefronto-hippocampal neural network dynamics in a murine model of Down syndrome during memory processing. M. ALEMANY; T. GENER; M. PUIG*. *IMIM -Hospital del Mar Med. Res. Inst.*

2:00 LLL20 **462.06** Serotonin 5-HT1A and 5-HT2A receptors and antipsychotics modulate γ and θ rhythms and prefronto-hippocampal connectivity in behaving mice. T. A. GENER*; M. ALEMANY; M. PUIG. *IMIM -Hospital Del Mar Med. Res. Inst.*

3:00 LLL21 **462.07** ● Quantitative EEG as a tool for monitoring efficacy of putative cognitive enhancers: Preclinical investigation. S. DARIPELLI*; V. BENADE; G. AYYANKI; V. KAMUJU; G. BHYRAPUNENI; R. NIROGI. *Suven Life Sci. Ltd.*

4:00 LLL22 **462.08** Impairments in spatial memory representations in freely moving 3xTg mice. A. J. MABLY*; D. T. JONES; B. J. GEREKE; L. L. COLGIN. *Univ. of Texas at Austin.*

1:00 LLL23 **462.09** Experience-dependent trends in the CA1 cross spectrum revealed by a generalized additive mixed model. B. J. GEREKE*; A. J. MABLY; L. L. COLGIN. *The Univ. of Texas at Austin, Univ. of Texas at Austin.*

2:00 LLL24 **462.10** The correlation between γ frequency and running speed in the dentate gyrus and CA2 of freely behaving rats. C. ZHENG*; Y. HSIAO; L. L. COLGIN. *Univ. of Texas At Austin, Univ. of Texas At Austin.*

3:00 LLL25 **462.11** Social investigation of conspecifics and robots: Oscillatory neural dynamics. E. J. LEONARDIS*; S. HEATH; J. WILES; A. A. CHIBA; L. K. QUINN. *UC San Diego, Univ. of Queensland.*

4:00 LLL26 **462.12** Transformation of independent oscillatory inputs into temporally precise rate codes. D. A. NITZ*; D. TINGLEY; A. ALEXANDER; L. QUINN; A. CHIBA. *Univ. of California San Diego, New York Univ., UCSD.*

1:00 LLL27 **462.13** Small conduction delays induce global synchrony in sparsely but strongly connected inhibitory networks. C. C. CANAVIER*; R. A. TIKIDJI-HAMBURYAN. *Louisiana State Univ. Hlth. Sci. Ctr., George Washington Univ.*

2:00 LLL28 **462.14** Mechanisms of spike timing in a detailed computer model of a medial entorhinal cortical stellate cell. M. J. BEZAIRE*; M. E. HASSELMO. *Boston Univ.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 LLL29 **462.15** State dependence of directional interactions between basal forebrain and visual cortex in θ and γ band local field potentials. A. KLAASSEN*; J. NAIR; J. POIROT; A. VYSSOTSKI; B. RASCH; G. RAINER. *Univ. of Fribourg, Univ. of Zurich.*

4:00 LLL30 **462.16** Decoding recalled color imagery using ECoG signals in the macaque inferior temporal and prefrontal cortices. H. TANIGAWA*; K. MAJIMA; R. TAKEI; K. KAWASAKI; H. SAWAHATA; K. NAKAHARA; A. IIJIMA; T. SUZUKI; Y. KAMITANI; I. HASEGAWA. *Niigata Univ., Kyoto University, Grad. Sch. of Informatics, Niigata University, Grad. Sch. of Sci. and Technol., Niigata University, Grad. Sch. of Med. and Dent. Sci., Toyohashi Univ. of Technol., Kochi Univ. of Technology, Res. Ctr. for Brain Communication, Ctr. for Information and Neural Networks, Natl. Inst. of Information and Communications Technol.*

1:00 LLL31 **462.17** Fimbria fornix stimulation parameters determine oscillations coupling of the prefrontal cortex and hippocampus. V. LUO*; M. L. SHAPIRO. *Icahn Sch. of Med. At Mount Sinai.*

2:00 LLL32 **462.18** Learning stages in a rule switching task affects θ-γ couplings in rat hippocampus. T. NAKAZONO*; S. TAKAHASHI; Y. SAKURAI. *Grad. Sch. of Brain Science, Doshisha Univers, Kyoto Univ., Grad. Sch. of Brain Science, Doshisha Univers.*

3:00 LLL33 **462.19** Hippocampal θ across its areal axis: Predicting, preparing or manipulating future locomotor speed? L. L. LONG*; I. H. STEVENSON; M. A. ESCABI; J. J. CHROBAK. *Univ. of Connecticut, Univ. of Connecticut, Univ. of Connecticut.*

4:00 LLL34 **462.20** Diffusion-mapped delay coordinates characterize attractor clustering in hippocampal network dynamics during spatial navigation. D. G. MCHAIL*; T. BERRY; J. R. CRESSMAN; T. C. DUMAS. *George Mason Univ., George Mason Univ., George Mason Univ., George Mason Univ.*

POSTER

463. Medial Temporal Lobe: Normal and Pathological Memory Through the Lifespan

Theme H: Cognition

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 LLL35 **463.01** Memory-guided drawing training increases Granger causal influences from the perirhinal cortex to V1 in the blind. L. CACCIAMANI*; L. T. LIKOVA. *Smith-Kettlewell Eye Res. Inst.*

2:00 LLL36 **463.02** Aerobic fitness and hippocampal subfield volume in young adults. M. F. DUNNE*; R. K. NAUER; K. SCHON. *Boston Univ. Sch. of Med., Boston Univ., Boston Univ.*

3:00 LLL37 **463.03** The influence of adolescent hippocampal volume and functional connectivity on memory performance: A cross-sectional investigation from the Dev-CoG project. D. E. WARREN*; A. RANGEL; J. M. STEPHEN; V. D. CALHOUN; Y. WANG; T. W. WILSON. *Univ. of Nebraska Med. Ctr., Creighton Univ., The Mind Res. Network, Tulane Univ.*

4:00 LLL38 **463.04** 3T hippocampal metabolites reflect verbal memory decline in aging. S. NIKOLOVA; S. STARK; C. E. STARK*. *Univ. of California, Irvine, Univ. of California Irvine.*

1:00 LLL39 **463.05** A longitudinal lifespan study of diffusivity changes in limbic tracts and decline of episodic memory in normal aging. Z. SONG*; D. C. PARK. *Univ. of Texas at Dallas.*

2:00 LLL40 **463.06** Hippocampal viscoelasticity mediates the benefits of aerobic fitness on memory in healthy young adults. H. SCHWARB*; C. L. JOHNSON; A. M. DAUGHERTY; C. H. HILLMAN; A. F. KRAMER; N. J. COHEN; A. K. BARBEY. *Univ. of Illinois, Univ. of Delaware.*

3:00 LLL41 **463.07** Functional MRI of language and memory lateralisation for presurgical evaluation of paediatric epilepsy. S. M. BUCK*; T. BALDEWEG; D. W. CARMICHAEL; R. ELWARD; F. VARGHA-KHADEM. *Inst. of Child Hlth., Inst. of Child Hlth., Inst. of Child Hlth.*

4:00 LLL42 **463.08** KIBRA polymorphism and hippocampus-associated integrity in middle age: A multi-modal neuroimaging investigation. L. E. KORTHAUER*; N. T. NOWAK; H. SCHERKENBACH; E. A. AWE; M. FRAHMAND; I. DRISCOLL. *Univ. of Wisconsin-Milwaukee, Winona State Univ.*

1:00 LLL43 **463.09** Using eye movements to dissociate memory performance in normal and pathological aging. J. K. BLUJUS*; C. M. KAIVER; E. I. GRACIAN; K. J. JENNETTE; D. E. HANNULA; I. DRISCOLL. *Univ. of Wisconsin Milwaukee.*

2:00 LLL44 **463.10** Healthy ageing and memory consolidation. A. WEARN*; S. DILLON; H. K. ISOTALUS; D. TSIVOS; M. J. KNIGHT; B. MCCANN; R. A. KAUPPINEN; E. J. COULTHARD. *Univ. of Bristol.*

POSTER

464. Social Behaviors and Pharmacology

Theme H: Cognition

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 LLL45 **464.01** ● Does the social cognition enhancing effect of acute oxytocin persist with chronic administration? D. FEIFEL*; P. D. SHILLING; G. MELENDEZ; J. TRAN; B. ROBERTS; A. AVALOS; W. THUY-UYEN; A. SRIVASTAVA; P. KISHORE; I. DAMANI. *UCSD.*

2:00 LLL46 **464.02** Facial responses to experienced and observed affective touch. L. M. MAYO*; I. MORRISON; J. LINDÉ; H. OLAUSSON; M. HEILIG. *Linköping Univ.*

1:00 DP08 **464.03** (Dynamic Poster) Intermediate neurodynamic representations: A pathway towards quantitative measurements of teamwork. R. STEVENS*; T. L. GALLOWAY; A. WILLEMSEN-DUNLAP. *IMMEX/UCLA, JUMP Simulation and Educ. Ctr.*

4:00 LLL47 **464.04** Preventive effect of suvorexant on night time falls in patients with cognitive impairment. S. YAKOU; T. SHIMAZU*; K. TAKAHASHI. *Saitama Neuropsychiatric Inst., 2-33-28, Saitama Neuropsychiatrc Inst., Saitama Med. Univ.*

1:00 LLL48 **464.05** Exploring the potential of oxytocin for enhancing interpersonal motor resonance upon direct eye gaze: A transcranial magnetic stimulation study. J. PRINSEN*; S. BRAMS; K. ALAERTS. *KU Leuven.*

2:00 LLL49 **464.06** Hedonic responses to touch from strangers depend on the perceived attractiveness of the caresser. G. NOVEMBRE*; R. ETZI; I. MORRISON. *Linkoeping Univ., Univ. of Milan-Bicocca.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 LLL50 **464.07** Associative learning of what is yours and mine. P. L. LOCKWOOD*; M. WITTMANN; M. APPS; G. HUMPHREYS; M. RUSHWORTH. *Univ. of Oxford.*

4:00 LLL51 **464.08** Oxytocin biases men but not women to restore social connections with individuals who socially exclude them. X. XU*; S. YAO; L. XU; Y. GENG; W. ZHAO; X. MA; J. KOU; R. LUO; K. KENDRICK. *UESTC.*

1:00 LLL52 **464.09** Is it me moving this? Embodiment over the virtual body is improved by active control. V. BRUGADA-RAMENTOL*; I. CLEMENS; Á. ROMÁN; G. G DE POLAVIEJA. *Fundaçao Champalimaud, Champalimaud Res.*

2:00 LLL53 **464.10** Oxytocin increases tolerance of infidelity in males but decreases it in females. L. XU*; R. LUO; X. ZHENG; X. XU; Z. GAO; K. KENDRICK. *UESTC.*

3:00 LLL54 **464.11** Sensory and metacognitive processing is modulated by the mere inferred presence of another individual. S. EREIRA*; Z. KURTH-NELSON; S. FLEMING; R. DOLAN. *Univ. Col. London, Univ. Col. London.*

4:00 LLL55 **464.12** How social coordination emerges and changes among multiple heterogeneous agents: An experimental 'human firefly' study. M. ZHANG*; J. A. S. KELSO; E. TOGNOLI. *Florida Atlantic Univ., Ulster Univ.*

1:00 LLL56 **464.13** Oxytocin transiently and selectively facilitates acceptance of social advice from others but without increasing their trustworthiness. R. LUO*; L. XU; W. ZHAO; X. MA; X. XU; J. KOU; Z. GAO; B. BECKER; K. KENDRICK. *UESTC.*

2:00 LLL57 **464.14** Oxytocin facilitates emotional empathy for individuals expressing negative emotions in males and females. Y. GENG*; W. ZHAO; F. ZHOU; B. BECKER; K. KENDRICK. *UESTC.*

3:00 LLL58 **464.15** Behavioral and molecular individuality in zebrafish is controlled by a YY1/HDAC1/p300 pathway. A. C. ROMAN*; J. VICENTE-PAGE; G. GARCIA DE POLAVIEJA. *Fundaçao Champalimaud, Fundaçao Champalimaud.*

4:00 LLL59 **464.16** Using development in zebrafish larvae to extract the rules of collective behavior. R. C. HINZ*; G. DE POLAVIEJA. *Champalimaud Fndn.*

1:00 LLL60 **464.17** Optimal group size in collective decision making. J. VICENTE-PAGE*; C. IOANNOU; A. PEREZ-ESCUDERO; G. DE POLAVIEJA. *Fundaçao Champalimaud, Sch. of Biol. Sciences, Univ. of Bristol, MIT.*

2:00 LLL61 **464.18** Early life social isolation in larval zebrafish alters behavior in social and non-social contexts. A. H. GRONEBERG*; J. C. MARQUES; M. B. ORGER; G. G. DE POLAVIEJA. *Champalimaud Res., Champalimaud Res.*

1:00 DP09 **464.19** (Dynamic Poster) The role of the serotonin 2A receptor system in self and other initiated social interaction in LSD-induced states. K. H. PRELLER*; L. SCHILBACH; T. POKORNY; J. FLEMMING; R. KRAEHENMANN; P. STÄMPFLI; M. LIECHTI; E. SEIFRITZ; F. X. VOLLENWEIDER. *Psychiatric Univ. Hosp. Zürich, Max Planck Inst. of Psychiatry, Univ. of Zurich, Univ. Hosp. Basel.*

4:00 LLL62 **464.20** Negative gender-related information reduces social cognition in breast cancer patients. A. N. SOKOLOV*; M. A. PAVLOVA; S. Y. BRUCKER; D. WALLWIENER; E. SIMOES. *Eberhard Karls Univ. Hosp. Tübingen, Eberhard Karls Univ. of Tuebingen, Eberhard Karls Univ. Hosp. Tübingen.*

1:00 LLL63 **464.21** ▲ Long-term treatment with methylphenidate for mental fatigue and pain after traumatic brain injury. L. 0. RONNBACK*; B. JOHANSSON. *Inst. of Neurosci. and Physiol., Inst. Neurosci and Physiol.*

2:00 LLL64 **464.22** Can everyone see the target? Cross-cultural differences in bottom-up and top-down attention: A computational modelling study. E. MAVRITSAKI*; P. RENTZELAS. *Birmingham City Univ., Birmingham City Univ.*

POSTER

465. Neural Processes and Disorders of Social Cognition

Theme H: Cognition

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 LLL65 **465.01** Emergence of distinct dynamical states in the brain network for self-other processing. Y. CHEN*; T. HUANG. *Natl. Taiwan Univ., Natl. Taiwan Univ.*

2:00 LLL66 **465.02** Brain networks associated with neuroticism, social networks, and loneliness in Traumatic Brain Injury. J. N. BEADLE*; A. RIGON; M. VOSS; M. DUFF. *Univ. of Nebraska at Omaha, Univ. of Iowa, Univ. of Iowa, Univ. of Iowa.*

3:00 LLL67 **465.03** Perceived social isolation is associated with altered functional connectivity in neural networks associated with tonic alertness and executive control. E. LAYDEN*; J. T. CACIOPPO; S. CACIOPPO; S. F. CAPPA; A. DODICH; A. FALINI; N. CANESSA. *The Univ. of Chicago, The Univ. of Chicago, Inst. Universitario di Studi Superiori, San Raffaele Scientific Inst.*

4:00 LLL68 **465.04** All Together Now: The neural basis of social development associated with music training. M. SACHS*; B. ILARI; J. KAPLAN; H. DAMASIO; A. DAMASIO; A. HABIBI. *Brain and Creativity Inst., USC.*

1:00 LLL69 **465.05** Social Disorganisation links autism and schizophrenia spectrum disorders through excitation-inhibition neurotransmitter imbalance. T. C. FORD*; R. NIBBS; D. P. CREWTHER. *Swinburne Univ. of Technol., Swinburne Univ. of Technol.*

2:00 LLL70 **465.06** Psychotherapists show significant differences in perspective taking, emotional regulation and brain network connectivity. V. E. OLALDE*; S. ALCAUTER, 76230; F. BARRIOS, 76230; R. MERCADILLO; S. FEDERICA; E. PASAYE. *UNAM, Inst. De Neurobiología, Univ. Autonoma de Mexico, Univ. Autónoma Metropolitana Unidad Iztapalapa.*

3:00 MMM1 **465.07** Shared cortical alterations in anorexia nervosa and autism spectrum disorder. M. BJORNSDOTTER*; M. DAVIDOVIC; L. KARJALAINEN; G. STARCK; H. OLAUSSON; E. WENTZ. *Univ. of Gothenburg, Linköping Univ., Univ. of Gothenburg, Sahlgrenska Univ. Hosp.*

4:00 MMM2 **465.08** Divergent facial scanning patterns in behavioural-variant frontotemporal dementia and semantic dementia. R. HUTCHINGS*; R. PALERMO; J. BRUGGEMANN; J. R. HODGES; O. PIGUET; F. KUMFOR. *Neurosci. Res. Australia, Univ. of New South Wales, ARC Ctr. of Excellence in Cognition and its Disorders, Univ. of Western Australia.*

1:00 MMM3 **465.09** Neural and computational processes underlying dynamic changes in self-esteem. G. WILL*; R. B. RUTLEDGE; M. MOUTOUSSIS; R. J. DOLAN. *Univ. Col. London, Max Planck Univ. Col. London Ctr. for Computat. Psychiatry and Ageing Res.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

2:00 MMM4 **465.10** A neural correlate of math anxiety in the ventromedial prefrontal cortex. K. CHOE*; A. MATTARELLA-MICKE; M. G. BERMAN; S. L. BEILOCK. *Univ. of Chicago, Stanford Univ.*

3:00 MMM5 **465.11** When cultures mix: Neurobehavioral responses to the visual mixing of cultural symbols. G. CHRISTOPOULOS*; W. YAP; B. CHEON; Y. HONG. *Nanyang Business Sch., Nanyang Technological Univ., Nanyang Technological Univ., Chinese Univ. of Hong Kong.*

4:00 MMM6 **465.12** Excessive association between negative intentionality and immorality is diminished in autism spectrum disorder. K. IIJIMA*; Y. YOMOGIDA; K. ASADA; K. ABE; A. SUGIURA; S. KUMAGAYA; K. MATSUMOTO. *Brain Sci. Institute, Tamagawa Univ., Japan Society for the Promotion of Sci., Res. Ctr. for Advanced Sci. and Technology, The Univ. of Tokyo, Dept. of Life Sciences, GSAS, Univ. of Tokyo, Tokyo, Japan.*

1:00 MMM7 **465.13** Neural responses to moral violations do not support a division between individualizing and binding categories. E. HANNA*; V. IYENGAR; S. CLIFFORD; F. DE BRIGARD; R. CABEZA; W. SINNOTT-ARMSTRONG. *Duke Univ., Univ. of Houston.*

2:00 MMM8 **465.14** A neuroimaging account of accountability in allocentric decision making. S. FITZGERALD*; G. CHRISTOPOULOS. *Nanyang Business Sch., Culture Sci. Inst., Decision and Organizational Neruoscience Lab., Nanyang Business Sch.*

3:00 MMM9 **465.15** Over-entrainment to the partner's eye-blinks during eye contact in autistic spectrum disorders. T. KOIKE*; H. K. TAKAHASHI; E. NAKAGAWA; S. OKAZAKI; H. C. TANABE; H. KOSAKA; H. OKAZAWA; N. SADATO. *Natl. Inst. for Physiological Sci., Nagoya Univ., Univ. of Fukui.*

4:00 MMM10 **465.16** Connectivity between auditory and visual cortices mediates the impact of argument strength on the efficacy of anti-smoking videos among low-sensation-seeking smokers. Z. SHI*; V. FAIRCHILD; A. WANG; C. ARONOWITZ; J. N. CAPPELLA; D. ROMER; D. D. LANGLEBEN. *Univ. of Pennsylvania, Univ. of Pennsylvania, Univ. of Pennsylvania.*

1:00 MMM11 **465.17** ● Affective bias is sensitive to acute electrical stimulation of two limbic regions: Subcallosal cingulate white matter and amygdala. K. C. ROWE*; H. S. MAYBERG; C. K. KOVACH; C. S. INMAN; A. L. CROWELL; R. E. GROSS; D. L. DRANE; J. T. WILLIE. *Emory Univ. Sch. of Med., Emory Univ., Univ. of Iowa, Emory Univ., Emory Univ.*

POSTER

466. Schizophrenia: Biochemistry and Neuropathology

Theme H: Cognition

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 MMM12 **466.01** Neural complexity as a potential translational biomarker for psychosis. A. YANG*; B. HAGER; R. BRADY; B. CLEMENTZ; G. PEARLSON; J. SWEENEY; C. TAMMINGA; M. KESHAVAN. *Beth Israel Deaconess Med. Ctr., Div. of Publ. Psychiatry, Departments of Psychology and Neuroscience, Bio-Imaging Res. Center, Univ. of Georgia, Athens. USA, Departments of Psychiatry and Neuroscience, Yale Univ. Sch. of Med., Dept. of Psychiatry and Behavioral Neuroscience, Univ. of Cincinnati Sch. of Med., Dept. of Psychiatry, Univ. of Texas Southwestern Med. Ctr.*

2:00 MMM13 **466.02** Perineuronal net-associated extracellular matrix clusters in the normal human amygdala: Relevance to SZ. K. T. PILOBELLO*; H. PANTAZOPOULOS; S. BERRETTA; R. MCCULLUMSMITH; S. ODONOVAN; R. KOENE; P. W. TILLBERG; E. S. BOYDEN. *McLean Hosp., McLean Hosp., Univ. of Cincinnati, MIT.*

3:00 MMM14 **466.03** Proteomic signatures associated with cognitive deficits in schizophrenia. J. LAVOIE*; C. NA; L. SHAFFER; R. WARD; D. SCHRETLEN; K. ISHIZUKA; A. PANDEY; A. SAWA. *Johns Hopkins Univ. Sch. of Med.*

4:00 MMM15 **466.04** ● Abnormal trajectory of intracortical myelination in schizophrenia implicates white matter in disease pathophysiology and the therapeutic mechanism of action of antipsychotics. T. A. TISHLER*; G. BARTZOKIS; P. H. LU; E. P. RAVEN; M. KHANOYAN; C. KIRKPATRICK; M. PYLE; P. VILLABLANCA; L. L. ALTSHULER; J. MINTZ; J. VENTURA; L. CASAUS; K. L. SUBOTNIK; K. H. NUECHTERLEIN; B. M. ELLINGSON. *UCLA, Georgetown Univ., Univ. of Texas Hlth. Sci. Ctr.*

1:00 MMM16 **466.05** Causal relationship between the antioxidant glutathione, kynurenic acid and glutamate in rat prefrontal cortex. H. WU*; R. SCHWARCZ. *Maryland Psychiatric Res. Ctr.*

2:00 MMM17 **466.06** Characterization of cellular localization of OTX2 in human prefrontal cortex and its alterations in schizophrenia. K. M. ATHANAS*; M. I. ARDELT; S. BERRETTA; W. T. WOO. *McLean Hosp., McLean Hosp., Harvard Med. Sch., Beth Israel Deaconess Med. Ctr., Harvard Univ.*

3:00 MMM18 **466.07** ▲ Glutamatergic signaling is disrupted in the PSD of the amygdala and the nucleus accumbens in schizophrenia. J. CESARE; A. BANERJEE; S. WILLARD; N. BOWMAN; C. HAHN; K. BORGMANN-WINTER*. *Univ. of Pennsylvania, Univ. Pennsylvania, Children's Hosp. of Philadelphia.*

4:00 MMM19 **466.08** Emerging roles of Disrupted-In-Schizophrenia 1 in microglia. F. OGAWA*; A. NOMURA; K. MATSUZAKI; S. MIYAKE. *Juntendo Univ. Sch. of Med.*

1:00 MMM20 **466.09** ● Changed cortical BQCA modulation of [^{3}H]NMS binding in schizophrenia. B. DEAN*; S. HOPPER; J. CONN; E. SCARR. *Mol. Psychiatry Lab., Vanderbilt Univ. Sch. of Med.*

2:00 MMM21 **466.10** Neurons expressing parvalbumin in the thalamic reticular nucleus and their potential role in the pathophysiology of schizophrenia. S. A. BUKHARI*; H. PANTAZOPOULOS; S. BERRETTA. *McLean Hosp., Harvard Med. Sch., Harvard Med. Sch.*

3:00 MMM22 **466.11** Modeling heterochromatin: Method for determining epigenetic effects of antipsychotics at immune promoters. B. M. FEINER*; J. K. MELBOURNE; K. A. CHASE; R. P. SHARMA. *UIC Psychiatry, Univ. of California.*

4:00 MMM23 **466.12** Inhibition of the schizophrenia associated microRNA miR-137 disrupts neuregulin-induced protein synthesis. K. THOMAS*; B. ANDERSON; N. SHAH; Q. GU; G. J. BASSELL. *Emory Univ., Emory Univ.*

1:00 MMM24 **466.13** Activated pSTAT1 levels as a biologically relevant immune signal in schizophrenia. J. K. MELBOURNE*; B. FEINER; C. ROSEN; K. A. CHASE; R. P. SHARMA. *Univ. of Illinois At Chicago, Univ. of California, Jesse Brown Veterans Affairs Med. Ctr.*

2:00 MMM25 **466.14** Effects of selective attention on γ activity in auditory steady-state response (ASSR): An EEG study. A. TOYOMAKI*; A. MIYAZAKI; N. HASHIMOTO; I. KUSUMI. *Hokkaido univ, Hokkaido Univ.*

Mon. PM

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 MMM26 **466.15** The acute and chronic effects of ketamine on cross-frequency couplings and alterations in locomotive speed in the rat hippocampus: Implications for translational models of schizophrenia. T. I. MICHAELS*; L. L. LONG; I. H. STEVENSON; J. J. CHROBAK; C. A. CHEN. *Univ. of Connecticut.*

4:00 MMM27 **466.16** Over-expression of CNRIP in the ventral hippocampus of rodents produces a schizophrenia-like phenotype. A. M. BOLEY*; S. M. PEREZ; J. J. DONEGAN; D. D. AGUILAR; A. GIUFFRIDA; D. J. LODGE. *UTHSCSA, UTHSCSA.*

1:00 MMM28 **466.17** Links between auditory hallucination and regional functional dysconnectivity in schizophrenia. D. K. SHUKLA*; J. CHIAPPELLI; P. KOCHUNOV; L. M. ROWLAND; L. HONG. *Univ. of Maryland.*

2:00 MMM29 **466.18** Three-dimensional analysis of dendritic spines and mitochondria in dentate gyrus granule cells in Schnurri-2 knockout mice, an animal model for schizophrenia. A. NAKAO*; K. TAKAO; K. OHIRA; N. MIYAZAKI; K. MURATA; T. MIYAKAWA. *Fujita Hlth. Univ., Natl. Inst. for Physiological Sci., Univ. of Toyama, Mukogawa Women's Univ., Natl. Inst. for Physiological Sci.*

3:00 MMM30 **466.19** ● Dysbindin regulates mitochondrial fission in hippocampal excitatory neurons through the Dynamin-Like-Protein DLP1. J. ZHAO*; Z. LI. *NIMH/NIH.*

4:00 MMM31 **466.20** GSK3β modulates NR2A subunit expression by regulating β-catenin abundance in the prefrontal cortex. S. MONACO*; W. GAO, 19107. *Drexel Univ. Col. of Med., Drexel Univ.*

1:00 MMM32 **466.21** Dysregulation of schizophrenia-associated genes by elevation of microRNA biogenesis machinery. M. GEAGHAN*; M. CAIRNS; A. BRICHTA. *Univ. of Newcastle, Australia, Hunter Med. Res. Inst., Schizophrenia Res. Institue.*

2:00 MMM33 **466.22** dopamine D_3 receptor blockade rescues hyperdopamine activity-induced deficit in novel object recognition memory. P. CHANG*; J. CHEN. *Chang-Gung University/ Grad. Insititute of Biomed. Sci.*

3:00 MMM34 **466.23** Parkinsonism predicts personality traits related to genetic risk and treatment outcomes in schizophrenia. J. MOLINA*; M. CALVO; M. BALDA; G. GUERRERO; E. PADILLA; C. CLONINGER; G. DE ERAUSQUIN. *UCSD, Fundación de Lucha contra los Trastornos Neurológicos y Psiquiátricos en Minorías, Morsani Col. of Medicine, Univ. of South Florida, Departments of Psychiatry and Genetics, Washington Univ. Sch. of Med., Div. of Neurosciences and Dept. of Psychiatry and Neurology, UTRGV Sch. of Med.*

4:00 MMM35 **466.24** Delusions of influence correlate with reduced temporal binding in patients with schizophrenia. M. J. ROTH; M. J. BUEHNER; K. HESSE; D. WILDGRUBER; H. WONG; A. LINDNER*. *Hertie Inst., Intl. Max Planck Res. Sch. for Cognitive and Systems Neurosci., Cardiff Univ., Univ. of Tuebingen, Werner Reichardt Ctr. for Integrative Neurosci.*

1:00 MMM36 **466.25** Decreased lactate dehydrogenase activity and abnormal expression of lactate shuttle transporters in schizophrenia. C. R. SULLIVAN*; K. CLICK; R. KOENE; A. RAMSEY; C. MIELNIK; R. MCCULLUMSMITH. *Univ. of Cincinnati, Univ. of Cincinnati, Univ. of Toronto.*

POSTER

467. Bioinformatics

Theme I: Techniques

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 MMM37 **467.01** Systematizing the construction of connectomes using an interactive Excel-based platform to facilitate data entry and collation. J. D. HAHN*; L. W. SWANSON. *USC.*

2:00 MMM38 **467.02** 'What does this gene do': Data presentation in Mouse Genome Informatics for the scientific community including neuroscientists. L. NI*; &. ON BEHALF OF MOUSE GENOME INFORMATICS GROUP. *The Jackson Lab.*

3:00 MMM39 **467.03** Three dimensional digital template atlas of the macaque brain. C. REVELEY; A. GRUSLYS; F. YE; J. SAMAHA; D. GLEN; B. RUSS; Z. SAAD; A. SETH; D. A. LEOPOLD; K. S. SALEEM*. *Sackler Ctr. for Consciousness Science, Univ. of Sussex, Univ. of Cambridge, Natl. Inst. of Mental Health, Natl. Inst. of Neurolog. Disorders and Stroke, and Natl. Eye Institute, Natl. Inst. of Hlth., Natl. Inst. of Mental Hlth. (NIMH/NIH), Natl. Inst. of Mental Hlth. (NIMH/NIH), Natl. Inst. of Mental Health, Natl. Inst. of Neurolog. Disorders and Stroke, and Natl. Eye Institute, Natl. Inst. of Health; Natl. Inst. of Mental Hlth. (NIMH/NIH).*

4:00 MMM40 **467.04** ▲ Neuroimaging phenome-wide association study of mathematical disability. S. YARED*; C. GONZALEZ-ZACARIAS; F. SEPEHRBAND; L. ZHAO; K. LYNCH; I. MACPHEE; S. SALUJA; A. W. TOGA; K. A. CLARK. *USC, USC.*

1:00 MMM41 **467.05** Optimal trajectories for brain state transitions. S. GU*; R. F. BETZEL; M. CIESLAK; S. T. GRAFTON; F. PASQUALETTI; D. S. BASSETT. *Univ. of Pennsylvania, Univ. of Pennsylvania, The Univ. of California, Santa Barbara, The Univ. of California, Riverside.*

2:00 MMM42 **467.06** A bioinformatic pipeline for the discovery of translational targets relevant to cocaine abuse. R. J. ELLIS*; J. L. GOMEZ; L. A. RODRIGUEZ; M. MICHAELIDES. *Natl. Inst. On Drug Abuse.*

3:00 MMM43 **467.07** Finding neuronal cre-expressing mutant mice using www.creportal.org. H. ONDA*; S. A. MURRAY; M. KNOWLTON; C. L. SMITH; J. T. EPPIG. *The Jackson Lab., The Jackson Lab.*

4:00 MMM44 **467.08** An inter-region model of the mouse brain mesoscale connectome. N. S. GRADDIS*; K. D. HARRIS; N. CAIN; J. D. WHITESELL; K. E. HIROKAWA; E. T. SHEA-BROWN; J. A. HARRIS; S. MIHALAS. *Allen Inst. For Brain Sci., Univ. of Washington.*

1:00 MMM45 **467.09** Keeping track of your data with tools for comprehensive data organization. C. J. KELLNER; A. STOEWER; M. SONNTAG; A. KOUTSOU; A. SOBOLEV; J. BENDA; T. WACHTLER*; J. GREWE. *Ludwig-Maximilians-Univ Munich, Eberhard Karls Univ.*

2:00 MMM46 **467.10** Inferring "driver" transcription factors from RNA-Seq data. M. DANZI*; J. L. BIXBY; V. P. LEMMON; S. WUCHTY. *Univ. of Miami, Univ. of Miami, Univ. of Miami.*

3:00 MMM47 **467.11** ●▲ Structural analysis of membrane myelin zero and mannose binding proteins from neurons, that modulate immune response against Mycobacterium leprae infection. M. CORREDOR*; V. CARDONA; A. MUÑOZ-GOMEZ. *Univ. of Antioquia, Univ. of Antioquia, Biol. Inst., Univ. of Antioquia.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 DP10 **467.12** (Dynamic Poster) BigNeuron algorithm porting and bench testing for automatic, massive-scale neuron reconstruction. Z. ZHOU*; X. LIU; A. RAMANATHAN; H. CHEN; Y. LI; M. PRABHAT; K. BOUCHARD; L. GU; L. CHENG; Z. WAN; J. YANG; N. ZHONG; L. QU; J. YANG; S. LIU; W. CAI; H. ZHOU; S. ZENG; C. WANG; A. SIRONI; P. GŁOWACKI; P. FUA; M. RADOJEVIC; D. JIN; T. ZHAO; J. ZHOU; Z. ZHENG; P. HONG; T. ZENG; R. LI; S. JI; H. IKENO; Y. CHING; T. LIU; E. BAS; B. ROYSAM; S. SORENSEN; A. NERN; G. TOURASSI; J. WELLS; R. KANZAKI; K. ITO; J. KIM; G. JEFFERIS; Y. WANG; E. RUBEL; P. T. GONZALEZ-BELLIDO; R. WONG; B. YE; H. ZENG; E. LEIN; H. CLINE; A. CHIANG; G. M. RUBIN; S. HILL; M. HAWRYLYCZ; A. JONES; C. KOCH; E. MEIJERING; G. A. ASCOLI; H. PENG. *Allen Inst. For Brain Sci., Oak Ridge Natl. Lab., Univ. of Georgia, Lawrence Berkeley Natl. Lab., Bioinformatics institute, A*STAR, Beijing Univ. of Technol., Maebashi Inst. of Technol., Anhui Univ., Northeastern Univ., The Univ. of Sydney, Huazhong Univ. of Sci. & Technology, Natl. Taiwan Univ. of Sci. and Technol., École Polytechnique Fédérale de Lausanne (EPFL), Erasmus Univ. Med. Ctr. Rotterdam, Pennsylvania State Univ., Janelia Res. Campus, Northern Illinois Univ., Brandeis Univ., Washington State Univ., Univ. of Hyogo, Natl. Chiao Tung Univ., Univ. of Houston, Univ. of Tokyo, Korea Inst. of Sci. and Technol., MRC Lab. of Mol. Biol., Univ. of Washington, Florida State Univ., Univ. of Cambridge, Univ. of Michigan, The Scripps Res. Inst., Natl. Tsing Hua Univ., Blue Brain Project, EPFL, Krasnow Inst. for Advanced Study, George Mason University.*

1:00 MMM48 **467.13** Bigneuron data analysis for massive-scale, automated neuron reconstructions. X. LIU*; Z. ZHOU; T. GILLETTE; G. ASCOLI; M. HAWRYLYCZ; S. HILL; C. KOCH; E. MEIJERING; H. PENG. *Allen Inst. For Brain Sci., George Mason Univ., Ecole polytechnique fédérale de Lausanne (EPFL), Erasmus Univ. Med. Ctr.*

2:00 MMM49 **467.14** Bioinformatic analysis of phenotypic data of ASD rodent models. W. PEREANU*; M. A. ESTEVEZ; I. DAS; S. B. BASU. *Mindspec, Mindspec.*

3:00 MMM50 **467.15** Comparison of single cell and pooled cell expression data from mouse and human brain. O. MANCARCI*; L. TOKER; P. PAVLIDIS. *Univ. of British Columbia.*

4:00 MMM51 **467.16** SciCrunch: A cooperative and collaborative data, information and resource discovery portal for scientific communities. J. S. GRETHE*; A. E. BANDROWSKI; M. CHIU; T. H. GILLESPIE; J. GO; Y. LI; I. B. OZYURT; L. MARENCO; P. L. MILLER; R. WANG; G. M. SHEPHERD; M. E. MARTONE. *Univ. of California San Diego, Yale Univ. Sch. of Med.*

1:00 MMM52 **467.17** Mouse Phenome Database: A curated and integrated resource for studying sex differences and sex x genotype interactions. M. BOGUE*; S. C. GRUBB; V. PHILIP; E. J. CHESLER. *The Jackson Lab.*

POSTER

468. Optical Methods: Probe Development and Applications

Theme I: Techniques

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 MMM53 **468.01** Sparse, strong and large area targeting of genetically encoded voltage indicators. S. ANTIC; C. SONG; T. KNOPFEL*. *UConn Hlth., Imperial Col. London.*

2:00 MMM54 **468.02** Engineering and characterization of genetically encoded red and far-red voltage indicators for imaging neuronal activity. M. KANNAN*; G. VASAN; A. YANG; V. A. PIERIBONE. *The John B Pierce Lab., Yale Univ.*

3:00 MMM55 **468.03** Genetically encodable hybrid optical voltage sensing with high temporal resolution in neurons using a novel quencher. M. PABST*; T. ALICH; B. SZALONTAI; P. TRAN; G. C. FAAS; I. MODY. *Univ. of Bonn Med. Ctr., The David Geffen Sch. of Med. at UCLA.*

4:00 MMM56 **468.04** Characterization of the neural activity integrator CaMPARI for all-optical functional connectivity mapping in acute brain slices. T. A. ZOLNIK*; E. SCHREITER; F. JOHENNING; L. LOOGER; M. LARKUM; R. SACHDEV. *Charité Universitätsmedizin, Janelia Res. Campus, Humboldt Univ.*

1:00 MMM57 **468.05** Development of fast-GCaMP indicators for neuronal spike counting. M. C. APPLEGATE*; N. A. REBOLA; K. A. COUCHMAN; M. KISLIN; D. BAKSHINSKAYA; L. A. LYNCH; D. A. DIGREGORIO; S. S. WANG. *Princeton Univ., Princeton Univ., Inst. Pasteur, Ctr. Natl. de la Recherche Scientifique 3157, Princeton Univ.*

2:00 MMM58 **468.06** Two-photon *in vivo* imaging of neuronal membrane potential with VoltageFluor. M. VANDENBERGHE*; H. UHLIROVA; M. THUNEMANN; K. KILIC; C. R. WOODFORD; P. TIAN; P. A. SAISAN; C. G. L. FERRI; M. YANG; M. ABASHIN; Q. CHENG; K. L. WELDY; Y. FAINMAN; G. T. EINEVOLL; S. DJUROVIC; O. A. ANDREASSEN; A. M. DALE; E. W. MILLER; R. Y. TSIEN; A. DEVOR. *UCSD, Univ. of Olso, Brno Univ. of Technol., UCSD, UCSD, John Carroll Univ., UCSD, Norwegian Univ. of Life Sci., Univ. of Olso, Univ. of Olso, KG Jebsen centre for Psychosis Research, Univ. of Bergen, UC Berkeley, UCSD, UCSD, Harvard Med. Sch.*

3:00 MMM59 **468.07** Stabilizing proteins with a novel chemical technique to preserve function in unphysiological conditions. M. G. MCCUE*; Y. PARK; H. CHOI; R. CHEN; J. YOON; W. TRIEU; K. CHUNG. *MIT, MIT, Broad Inst. of Harvard Univ.*

4:00 MMM60 **468.08** ● Simple, scalable proteomic imaging for high-dimensional profiling of intact systems. J. SWANEY*; E. MURRAY; J. H. CHO; D. GOODWIN; T. KU; S. KIM; H. CHOI; Y. PARK; J. PARK; A. HUBBERT; M. MCCUE; S. VASSALLO; N. BAKH; M. P. FROSCH; V. J. WEDEEDN; H. SEUNG; K. CHUNG. *MIT, MIT, MIT, Simons Ctr. for Data Analysis, MIT, MIT, C.S. Kubik Lab. of Neuropathology, Massachusetts Gen. Hosp. and Harvard Med. Sch., Princeton Univ.*

1:00 MMM61 **468.09** Rapid and scalable molecular phenotyping of intact biological systems using eTANGO. J. H. CHO*; K. CHUNG. *MIT, MIT, MIT, MIT, Broad Inst. of Harvard Univ. and Massachusetts Inst. of Technol.*

2:00 MMM62 **468.10** Integrated imaging of the magnified three-dimensional proteome library of intact systems. T. KU*; J. SWANEY; J. PARK; A. ALBANESE; E. MURRAY; J. H. CHO; Y. PARK; V. MANGENA; J. CHEN; K. CHUNG. *MIT, MIT, MIT, Yonsei Univ. Col. of Med., MIT, MIT, MIT, Broad Inst. of Harvard Univ. and MIT.*

3:00 NNN1 **468.11** Cell-MAP for super-resolution proteomic imaging of cultured cells. A. ALBANESE*; J. SWANEY; T. KU; J. PARK; K. CHUNG. *MIT, MIT, MIT, MIT, MIT.*

4:00 NNN2 **468.12** A photoconvertible genetically encoded glutamate indicator for neuronal imaging. S. PAPADOPOULOS; J. DONG; J. LAMBERT; K. ZITO; L. TIAN*. *Univ. of California, Davis, Univ. of California, Davis.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 NNN3 **468.13** A novel optical probe, FFN270, enables *in vivo* multiphoton imaging of presynaptic noradrenergic synapses in mouse sensory cortex. S. CLARK*; M. DUNN; A. HENKE; Y. KOVALYOVA; R. KARPOWICZ; K. KEMPADOO; D. SULZER; D. SAMES. *Columbia Univ., Columbia Univ., Columbia Univ.*

2:00 NNN4 **468.14** Anatomical and functional characterization of wake-promoting dopamine neurons in the dorsal raphe nucleus. J. CHO*; J. TREWEEK; M. ALTERMATT; A. GREENBAUM; V. GRADINARU. *Caltech, Caltech.*

3:00 NNN5 **468.15** Progression of Parkinson's-like pathology following inoculation of α-synuclein preformed fibrils in the gut. C. CHALLIS*; T. R. SAMPSON; B. YOO; S. K. MAZMANIAN; L. A. VOLPICELLI-DALEY; V. GRADINARU. *Caltech, Univ. of Alabama at Birmingham.*

4:00 NNN6 **468.16** Engineering novel adeno-associated viruses for enhanced transduction and target specificity across the CNS by adopting high-throughput *in vivo* and in silico methods. T. DOBREVA*; D. BROWN; S. KUMAR; Y. LUO; R. HURT; B. E. DEVERMAN; V. GRADINARU. *Caltech.*

1:00 NNN7 **468.17** Long-term tracking and automated image analysis reveals that the upside-down jellyfish has a sleep-like state. C. N. BEDBROOK; R. D. NATH; M. J. ABRAMS; J. S. BOIS; L. A. GOENTORO; P. W. STERNBERG; V. GRADINARU*. *CALTECH, CALTECH.*

2:00 NNN8 **468.18** Optical and viral vector strategies for mapping the structure and function of the cardiac autonomic nervous system. P. S. RAJENDRAN*; R. C. CHALLIS; K. Y. CHAN; B. E. DEVERMAN; A. GREENBAUM; K. SHIVKUMAR; V. GRADINARU. *Univ. of California - Los Angeles, Caltech.*

3:00 NNN9 **468.19** Tissue clearing of bones for enhanced optical and molecular access to osseous neuro-immune environments using PACT-deCAL. A. GREENBAUM*; K. CHAN; T. DOBREVA; D. BROWN; D. H. BALANI; C. CHALLIS; A. LIGNELL; L. CAI; H. M. KRONENBERG; V. GRADINARU. *Caltech, Massachusetts Gen. Hosp. and Harvard Med. Sch., Caltech.*

4:00 NNN10 **468.20** Retinal characterization of the Thy1-GCaMP3 mouse after optic nerve transection. S. N. BLANDFORD*; S. R. FARRELL; M. L. HOOPER; B. C. CHAUHAN; W. H. BALDRIDGE. *Dalhousie Univ., Dalhousie Univ., Nova Scotia Hlth. Authority, Dalhousie Univ.*

1:00 NNN11 **468.21** ● Recording neuronal networks with BeRST 1, a photostable far red/near-infrared voltage sensitive dye. A. WALKER*; Y. HUANG; E. W. MILLER. *UC Berkeley, UC Berkeley.*

2:00 NNN12 **468.22** High-speed recording of neural activity in awake mice and flies using a fluorescent voltage indicator. Y. GONG*; C. HUANG, 94305; J. MARSHALL; J. LI; B. GREWE; Y. ZHANG; S. EISMANN; M. SCHNITZER. *Duke Univ., Stanford Univ.*

3:00 NNN13 **468.23** Subcellular localization of algal light-sensitive anion channelrhodopsin ACR2 and cation channelrhodopsin ChR2 in mammalian neurons. E. M. RODARTE; F. RIVERA-MILIAN; R. JANZ*. *Univ. of Texas Hlth. Sci. Ctr. Houston, UT-Houston Med. Schl.*

4:00 NNN14 **468.24** Cell-type specific optical recording of membrane voltage dynamics in freely moving mice. J. D. MARSHALL*; J. LI; Y. GONG; F. ST PIERRE; M. Z. LIN; M. J. SCHNITZER. *Stanford Univ., Stanford Univ.*

1:00 NNN15 **468.25** Automated functional, mesoscopic, cortical imaging, self-initiated by gcamp6 transgenic mice in their home-cage. J. LEDUE*; F. BOLANOS; M. VANNI; G. SILASI; J. BOYD; D. HAUPT; T. H. MURPHY. *Univ. of British Columbia.*

POSTER

469. Electrode Arrays I

Theme I: Techniques

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 NNN16 **469.01** Neuronal activity depending on zinc concentration on multi-electrode array. H. JEONG*; S. HWANG; S. JUN. *Ewha Womans Univ., Ewha Womans Univ.*

2:00 NNN17 **469.02** From lab-to-marketplace: Commercialization of a stretchable microelectrode array. O. GRAUDEJUS*; R. PONCE WONG; S. AHUJA; S. WAGNER; B. MORRISON, III. *BMSEED Llc/Arizona State Univ., BMSEED Llc, Columbia Univ., Princeton Univ.*

3:00 NNN18 **469.03** Immobilization induces a sleep-like state in *C. elegans*. D. L. GONZALES*; K. N. BADHIWALA; J. T. ROBINSON. *Rice Univ., Rice Univ., Rice Univ., Baylor Col. of Med.*

4:00 NNN19 **469.04** A novel electrodiffusive scheme for modeling ion dynamics in neural tissue. A. V. SOLBRÅ*; A. MALTHE-SØRENSSEN; G. T. EINEVOLL; G. HALNES. *Univ. of Oslo, Norwegian Univ. Life Sci.*

1:00 NNN20 **469.05** Local versus global effects of isoflurane anesthesia on visual processing in the fly brain. D. COHEN*; O. H. ZALUCKI; B. VAN SWINDEREN; N. TSUCHIYA. *Monash, Queensland Brain Inst.*

2:00 NNN21 **469.06** Cognitive and symptom correlates of EEG time-frequency domain decomposition during a flanker task in subjects with PTSD. G. MAY*; H. WAHBEH; S. NELSON. *VA VISN 17 Ctr. of Excellence, Univ. of Texas at Dallas, Texas A & M Univ., Oregon Hlth. & Sci. Univ., Baylor Univ.*

3:00 NNN22 **469.07** Biophysical modeling of single-neuron contributions to EEG and ECoG signals. S. NAESS*; T. V. NESS; G. HALNES; E. HALGREN; A. M. DALE; G. T. EINEVOLL. *Univ. of Oslo, Norwegian Univ. of Life Sci., UCSD.*

4:00 NNN23 **469.08** A library of human electrocorticographic data and analyses. K. J. MILLER*; J. OJEMANN. *Stanford, Univ. of Washington.*

1:00 NNN24 **469.09** High-density opto-electrical neural probe based on silicon nitride photonics for single neuron recording and stimulation. L. HOFFMAN*; S. LIBBRECHT; M. WELKENHUYSEN; A. ANDREI; V. BAEKELANDT; S. HAESLER; D. BRAEKEN. *IMEC, NERF, KULeuven, marleen.welkenhuysen@imec.be.*

2:00 NNN25 **469.10** Spatial correlation in a 400 micron pitch electrocorticography grid. N. ROGERS*; J. HERMIZ; E. KAESTNER; M. GANJI; B. S. CARTER; S. S. CASH; D. BARBA; S. DAYEH; E. HALGREN; V. GILJA. *Univ. of California San Diego, Univ. of California San Diego, Univ. of California San Diego, Massachusetts Gen. Hospital, Harvard Med. Sch.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

3:00 NNN26 **469.11** ● Ear-EEG as a novel technology for wearable brain wave monitoring. C. GRAVERSEN*; E. B. PETERSEN; A. FAVRE-FELIX; L. FIEDLER; J. OBLESER; T. LUNNER. *Oticon Eriksholm Res. Ctr., Linköbing Univ., Tech. Univ. of Denmark, Univ. of Lübeck.*

4:00 NNN27 **469.12** An attention model of binocular rivalry. H. LI*; J. RANKIN; J. RINZEL; M. CARRASCO; D. J. HEEGER. *New York Univ., New York Univ., New York Univ., New York Univ.*

1:00 NNN28 **469.13** A new 3D *in-vitro* model for studying human sensory neurons. E. GRAS LAVIGNE*; N. PY; D. BUTTIGIEG; L. L'HOMME; F. MAGDINIER; R. STEINSCHNEIDER. *Neuronexperts, Equipe "Epigénétique, Chromatine & Maladies" Lab. INSERM UMR S_910.*

2:00 NNN29 **469.14** Tunnel culture systems on microelectrode arrays to measure electrical conduction in a controlled-network system. S. GEISSLER*; A. HIERLEMANN. *ETH Zurich.*

3:00 NNN30 **469.15** Laser and oxygen plasma treated carbon fiber electrode array for the detection of electrophysiological and dopaminergic activity. P. R. PATEL*; P. POPOV; A. MOHEBI; D. G. D. EGERT; A. A. HAMID; K. NAJAFI; J. D. BERKE; B. J. ARAGONA; C. A. CHESTEK. *Univ. of Michigan, Univ. of Michigan, Univ. of Michigan.*

4:00 NNN31 **469.16** Validation of high density flexible ECoG arrays: Monkey somatosensory evoked potential analysis. T. KAIJU*; K. DOI; M. YOKOTA; K. WATANABE; M. INOUE; H. ANDO; K. TAKAHASHI; F. YOSHIDA; M. HIRATA; T. SUZUKI. *Osaka Univ., Ctr. for Information and Neural Networks (CiNet), Univ. of Chicago, Osaka Univ.*

1:00 NNN32 **469.17** Potential of optogenetic neuromodulation and ecog electrodes for bi-directional brain machine interface. F. YOSHIDA*; T. ARAKI; S. YOSHIMOTO; T. UEMURA; T. KAIJU; T. SUZUKI; T. SEKITANI; M. HIRATA. *Osaka Univ. Med. Sch., Osaka Univ., Osaka Univ., Ctr. for Information and Neural Networks, Natl. Inst. of Information and Communications Technol., Osaka Univ.*

2:00 NNN33 **469.18** Measurement and characterization of low frequency extracellular potential from cultured neuronal networks. S. JOO; Y. NAM*. *KAIST.*

3:00 NNN34 **469.19** Assessing very high density intraoperative ECoG grids using a 7x8 grid with 400 um pitch. J. HERMIZ*; N. ROGERS; E. KAESTNER; M. GANJI; B. CARTER; S. CASH; D. BARBA; S. DAYEH; E. HALGREN; V. GILJA. *UCSD, MGH, Harvard Med. Sch.*

4:00 NNN35 **469.20** A 512-channels, whole array readout, CMOS implantable probe for acute recordings in the brain. M. MALERBA*; G. ANGOTZI; G. MANDELBAUM; B. SABATINI; L. BERDONDINI. *Italian Inst. of Technol., Harvard Med. Sch.*

1:00 NNN36 **469.21** Validating silicon polytrodes with paired juxtacellular recordings. J. P. NETO*; G. LOPES; J. FRAZÃO; J. NOGUEIRA; P. LACERDA; E. FORTUNATO; P. BAIÃO; A. AARTS; S. MUSA; A. ANDREI; P. BARQUINHA; A. KAMPFF. *Sainsbury Wellcome Ctr., Champalimaud Neurosci. Programme, Champalimaud Ctr. for the Unknown, CENIMAT I3N, Atlas Neuroengineering, IMEC.*

2:00 NNN37 **469.22** Cognitive responses recorded during neurosurgery using microarray pedot:pss electrodes. E. KAESTNER*; J. HERMIZ; N. ROGERS; M. GANJI; R. CARTER; S. CASH; D. BARBA; S. DAYEH; V. GILJA; E. HALGREN. *Univ. of California San Diego, UCSD, Massachutsetts Gen. Hosp.*

3:00 NNN38 **469.23** A long-term feasibility study for neural recording with carbon-fiber based microelectrode array. Y. LEE*; Y. LIM; S. HWANG; S. JUN. *Ewha Womans Univ., Korea Inst. of Sci. and Technol., Ewha Womans University, Seodaemun-Gu.*

4:00 NNN39 **469.24** Persistence of dysfunctional auditory information processing following pharmacotherapy in Internet gaming disorder: An event-related potential study. M. PARK*; Y. KIM; J. LEE; D. KIM; J. CHOI. *SMG-SNU Boramae Med. Ctr., Seoul St. Mary's Hosp., Seoul Natl. Univ. Col. of Med.*

1:00 NNN40 **469.25** Trial for drug-induced epileptogenic phenotype classification in primary rodent neurons and human induced pluripotent stem cell-derived neurons. N. MIYAMOTO*; T. KADOWAKI; K. SAWADA. *EISAI Co., Ltd., Eisai Co., Ltd.*

2:00 NNN41 **469.26** Low intensity low frequency ultrasound neuromodulation in cultured rat hippocampal neuron. S. HWANG*; H. JEONG; S. KIM; Y. LEE; T. KIM; S. JUN. *Ewha Womans Univ., Kyung Hee Univ., Ewha Womans Univ.*

3:00 NNN42 **469.27** *In vivo* testing of the neural sewing machine: A method for inserting fine, flexible neural probes. T. L. HANSON*; C. DIAZ-BOTIA; S. JUNG; M. M. MAHARBIZ; P. N. SABES. *UCSF, Univ. of California, Berkeley, Univ. of California, Berkeley.*

4:00 NNN43 **469.28** Opto-EEG constructs mesoscopic and stimulant-dependent functional connectome in mice. S. LEE*; E. HWANG; D. LEE; W. JUNG; J. CHOI. *KIST, KIST, Inst. of Basic science, POSTECH.*

1:00 NNN44 **469.29** Withdrawn.

2:00 NNN45 **469.30** ▲ Mapping and modeling EEG signals before and after a craniotomy procedure. D. ISSAR*; A. SNYDER; M. SMITH. *Univ. of Pittsburgh, Carnegie Mellon Univ., Univ. of Pittsburgh.*

POSTER

470. Computational Tools for Circuit Mapping

Theme I: Techniques

Mon. 1:00 PM – *San Diego Convention Center*, Halls B-H

1:00 NNN46 **470.01** Computational infrastructure to enable whole-brain mesoscale circuit mapping for Marmoset. M. LIN*; Y. S. TAKAHASHI; K. WEBER; K. HOSSAIN; B. HUO; A. S. TOLPYGO2; D. D. FERRANTE; S. BAI; M. G. ROSA; H. OKANO; P. P. MITRA. *Riken, Japan, Cold Spring Harbor Lab., Monash Univ., Keio Univ. Sch. of Med.*

2:00 NNN47 **470.02** Computational topology algorithms for skeletonizing whole mouse brain tracer-injection data using discrete Morse theory. D. D. FERRANTE*; S. WANG; Y. WANG; P. P. MITRA. *Cold Spring Harbor Labs., Ohio State Univ.*

3:00 NNN48 **470.03** ▲ Automated segmentation of Nissl-stained somata from whole-brain histological image data. A. SINGH*; T. PARAG; D. FERRANTE; P. MITRA. *IIT Madras, HHMI Janelia Res. Campus, Cold Spring Harbor Lab.*

4:00 NNN49 **470.04** Automated detection of GFP labelled nuclei in whole-brain light-microscopic data sets for mouse with high precision and recall. S. DAS*; V. V. GOPAL; G. PAHARIYA; D. D. FERRANTE; P. P. MITRA. *Indian Inst. of Technol. Madras, Cold Spring Harbor Lab.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
▲ Indicates a high school or undergraduate student presenter.
* Indicates abstract's submitting author

1:00 NNN50 **470.05** Methods from computational topology for comparing neuronal shapes. Y. WANG*; Y. LI; G. A. ASCOLI; P. P. MITRA. *The Ohio State Univ., George Mason Univ., Cold Spring Harbor Lab.*

2:00 NNN51 **470.06** A comprehensive data set for whole-brain mesoscale connectivity mapping in mouse using injections of a viral anterograde tracer (AAV) on a brain-wide grid. A. S. TOLPYGO*; D. D. FERRANTE; F. MECHLER; S. SAVOIA; N. FRANCIOTTI; P. P. MITRA. *Cold Spring Harbor Lab.*

3:00 NNN52 **470.07** A novel method for extracting brain connectivity information from neuroscience text articles. A. NAIDU; J. JAYAKUMAR*; S. CHAKRABORTI; A. SHARMA; P. SREENIVASA KUMAR; D. DEODHARE; P. P. MITRA. *Indian Insitute of Technology-Madras, Ctr. for Artificial Intelligence & Robotics (CAIR), DRDO, Cold Spring Harbor Labs.*

4:00 OOO1 **470.08** Precision mapping of structural connectomes in individual brains. B. MCPHERSON*; C. CAIAFA; A. AVENA-KOENIGSBERGER; J. CONTRERAS; L. SHEN; Y. WU; J. GONI; A. SAYKIN; O. SPORNS; F. PESTILLI. *Indiana Univ. Bloomington, Indiana Univ. Purdue Univ. Indianapolis, Indiana Univ. Purdue Univ. Indianapolis.*

1:00 OOO2 **470.09** New methods for obtaining sparse brain connectivity networks. G. RANGARAJAN*; S. MODY. *Indian Inst. of Sci., Indian Inst. of Sci.*

2:00 OOO3 **470.10** Path ensembles and a tradeoff between communication efficiency and resilience in the human connectome. A. I. AVENA KOENIGSBERGER*; B. MISIC; R. X. D. HAWKINS; A. GRIFFA; P. HAGMANN; J. GOÑI; O. SPORNS. *Indiana Univ., Indiana Univ., Stanford Univ., Ecole Polytechnique Federale de Lausanne, Purdue Univ.*

3:00 OOO4 **470.11** Modeling of large-scale functional brain networks based on structural connectivity from DTI: Comparison with EEG derived phase coupling networks and evaluation of alternative methods along the modeling path. M. BÖNSTRUP*; H. FINGER; B. CHENG; A. MESSÉ; C. HILGETAG; G. THOMALLA; C. GERLOFF; P. KÖNIG. *Univ. Med. Ctr. Hamburg-Eppendorf, Univ. of Osnabrück, Univ. Med. Ctr. Hamburg-Eppendorf.*

4:00 OOO5 **470.12** Synthetic connectomics: Analyzing evolved neural networks for simple reaching with a tool. Y. CHOE*; Q. LI; J. YOO. *Texas A&M Univ.*

1:00 OOO6 **470.13** ● N2A: A language and software tool for large-scale modeling. F. ROTHGANGER*. *Sandia Natl. Labs.*

2:00 OOO7 **470.14** Identifying interactions in neural circuit simulations and other data using non-linear multi-dimensional hidden-state models. L. G. GIBB*; A. FRIEDMAN; J. F. SLOCUM; D. TYULMANKOV; A. ALTSHULER; S. RUANGWISES; Q. SHI; S. E. TORO ARANA; D. W. BECK; J. E. C. SHOLES; A. M. GRAYBIEL. *MIT, Harvard Univ., Boston Univ.*

3:00 OOO8 **470.15** Non-linear multi-dimensional hidden state models for the analysis of neural circuits. A. FRIEDMAN*; J. F. SLOCUM; D. TYULMANKOV; L. G. GIBB; A. ALTSHULER; S. RUANGWISES; Q. SHI; S. E. TORO ARANA; D. W. BECK; J. E. C. SHOLES; A. M. GRAYBIEL. *MIT, Harvard Univ., Boston Univ.*

4:00 OOO9 **470.16** What do neurons do? A similarity matching perspective. C. PEHLEVAN*; D. B. CHKLOVSKII. *Simons Fndn.*

1:00 OOO10 **470.17** Development of Functional Connectome DB within SenseLab to incorporate and mine functional connectomics data. L. MARENCO*; R. WANG; R. A. MCDOUGAL; T. M. MORSE; N. T. CARNEVALE; P. L. MILLER; G. M. SHEPHERD. *Yale Univ. Sch. of Med., Yale Univ. Sch. of Med., VA Connecticut Healthcare Syst., Yale Univ. Sch. of Med.*

2:00 OOO11 **470.18** Neural decoding of motor responses with Bayesian graphical models. B. BARIBAULT*; J. VANDEKERCKHOVE. *Univ. of California, Irvine.*

3:00 OOO12 **470.19** Towards optimal information storage in hierarchical neural circuits. A. ALEMI*. *Ecole Normale Supérieure.*

4:00 OOO13 **470.20** Replicating neurophysiological data with spiking neural networks utilizing an evolutionary framework. E. ROUNDS*; A. ALEXANDER; E. SCOTT; K. DE JONG; D. NITZ; J. KRICHMAR. *Univ. of California, Irvine, UCSD, George Mason Univ.*

1:00 OOO14 **470.21** Multiscale interactions predict stress in adult zebrafish (*Danio rerio*). K. M. KHAN*; E. M. CARAMILLO; A. D. COLLIER; J. K. DOYON; J. D. CLARK; T. SURBER; A. HAJNAL; D. J. ECHEVARRIA. *Univ. of Southern Mississippi.*

2:00 OOO15 **470.22** Future-proof digital representation of neuronal morphologies. B. TORBEN-NIELSEN*; E. BAS; W. CHEN; H. CUNTZ; J. KIM; Y. KUBOTA; A. M. MOORE; C. SHIH; G. TAVOSANIS; H. PENG; G. A. ASCOLI; E. DE SCHUTTER. *Univ. of Hertfordshire, Howard Hughes Med. Inst., Okinawa Inst. of Sci. and Technol., Ernst Strüngmann Inst. (ESI) for Neurosci. in Cooperation with Max Planck Society, Frankfurt Inst. for Advanced Studies, Korea Inst. of Sci. & Technol. (KIST), Div. of Cerebral Circuitry, Natl. Inst. for Physiological Sci., RIKEN Brain Sci. Inst., Tunghai Univ., Deutsches Zentrum für Neurodegenerative Erkrankungen e. V. (DZNE) in der Helmholtz-Gemeinschaft German Ctr. for Neurodegenerative Dis. (DZNE) within the Helmholtz Assn. c/o Life & Med. Sci. (LiMeS), Allen Inst. for Brain Sci., Krasnow Inst. for Advanced Study, George Mason Univ.*

3:00 OOO16 **470.23** Generating and predicting long-range neural connectivity using the reverse geometric principle. P. H. TIESINGA*; M. BAKKER; R. BAKKER. *Radboud Univ. Nijmegen, Radboud Univ. Nijmegen, Radboud Univ. Nijmegen.*

• Indicated a real or perceived conflict of interest, see page 155 for details.
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Conflict of Interest Statements

The following presenters, signified by a dot (•) in the program, indicated a real or perceived conflict of interest. Presenters listed without a dot in the program had no financial relationships to disclose.

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290.06	**A.E. Hoban:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Science Foundation Ireland. **R. Stilling:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Science Foundation Ireland. **F. Shanahan:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Science Foundation Ireland. **T.G. Dinan:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Science Foundation Ireland. **J.F. Cryan:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Science Foundation Ireland. **G. Clarke:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Science Foundation Ireland.
290.07	**J.A. Foster:** A. Employment/Salary (full or part-time); University Health Network, McMaster 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; Ontario Brain Institute. **S.L. Thompson:** A. Employment/Salary (full or part-time); Ontario Graduate Scholarship.
291.01	**H. Okano:** F. Consulting Fees (e.g., advisory boards); SanBio Co. Ltd..
291.10	**Y. Yamazaki:** Other; Rikaenalysis. **H. Okano:** F. Consulting Fees (e.g., advisory boards); San Bio, Inc., Daiichi Sankyo Co., Ltd. **A. Iriki:** Other; Rikaenalysis.
292.01	**M.A. Patwary:** A. Employment/Salary (full or part-time); Intel Corporation. **T.L. Willke:** A. Employment/Salary (full or part-time); Intel Corporation.
294.01	**P. Dhar:** A. Employment/Salary (full or part-time); AIIMS. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a

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	drug study, report that research relationship even if those funds come to an institution; AIIMS, ICMR. **P. Kumar:** A. Employment/Salary (full or part-time); AIIMS. **P. Kaushal:** A. Employment/Salary (full or part-time); AIIMS.
297.04	**A.E. Anderson:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Baylor College of Medicine.
301.11	**L. Danober:** A. Employment/Salary (full or part-time); Laboratoire Servier. **T. Schaer:** A. Employment/Salary (full or part-time); HiQScreen. **K. Kambarat:** A. Employment/Salary (full or part-time); HiQScreen. **F. Marger:** A. Employment/Salary (full or part-time); HiQScreen. **S. Bretin:** A. Employment/Salary (full or part-time); Laboratoire Servier. **D. Bertrand:** A. Employment/Salary (full or part-time); HiQScreen.
302.04	**R. Matsumoto:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; KAKENHI 26282218, 15H01664, 15H05874. Other; Endowed department by UCB, GSK, NihonKoden, Otsuka. **T. Kunieda:** Other; Otsuka Pharmaceutical. **A. Ikeda:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; KAKENHI 26282218, 15H01664, 15H05874. Other; Endowed department by UCB, GSK, NihonKoden, Otsuka. **S. Miyamoto:** Other; Otsuka Pharmaceutical.
304.06	**A. Pantovic:** Other; The study was supported by the Ministry of Science and Technological Development of the Republic of Serbia (grant number 173053 and 41025). Ljubica Harhaji-Trajkovic is a recipient of the UNESCO L'ORE. **A. Pantovic:** Other; The study was supported by the Ministry of Science and Technological Development of the Republic of Serbia (grant number 173053 and 41025). Ljubica Harhaji-Trajkovic is a recipient of the UNESCO L'ORE.
304.09	**N. Stella:** A. Employment/Salary (full or part-time); Stella Therapeutics.
305.01	**K. Harada:** A. Employment/Salary (full or part-time); Cyfuse Biomedical K.K. **D. Song:** A. Employment/Salary (full or part-time); Cyfuse Biomedical K.K. **N. Kita:** A. Employment/Salary (full or part-time); Cyfuse Biomedical K.K..
305.14	**A.P. Nicholas:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Cynapus, Michael J Fox Foundation, Adamas. F. Consulting Fees (e.g., advisory boards); UCB, US WorldMeds, Ipsen, Acadia, Lundbeck.
306.09	**I. Zarco de Coronado:** A. Employment/Salary (full or part-time); A. **S. Mosso-Mendoza:** Other; voluntary.
306.26	**C. Messier:** A. Employment/Salary (full or part-time); University of Ottawa.
307.09	**K. Krajnak:** F. Consulting Fees (e.g., advisory boards); Celladon. **F. Wang:** A. Employment/Salary (full or part-time); Purdue University. **R. Dahl:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neurodon, CEO.
308.01	**A. Pascual-Leone:** F. Consulting Fees (e.g., advisory boards); Nexstim, Neuronix, Starlab Neuroscience, Neuroelectrics, Axilum Robotics, Magstim, Neosync.
308.16	**H. Borghys:** A. Employment/Salary (full or part-time); Janssen R&D. **P. Buijnsters:** A. Employment/Salary (full or part-time); Janssen R&D. **D. Dhuyvetter:** A. Employment/Salary (full or part-time); Janssen R&D. **M. Somers:** A. Employment/Salary (full or part-time); Janssen R&D. **R. Vreeken:** A. Employment/Salary (full or part-time); Janssen R&D.
309.04	**D. Brocker:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Equity holder in Deep Brain Innovations, LLC. Inventor on licensed patents. **W. Grill:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Equity holder in Deep Brain Innovations, LLC. Inventor on licensed patents..
309.07	**M.F. Ghilardi:** F. Consulting Fees (e.g., advisory boards); New York University.
309.09	**J. Vesper:** F. Consulting Fees (e.g., advisory boards); Medtronic Inc, Boston Scientific, St. Jude Medical. **A. Schnitzler:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Theva Pharma. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); Medtronic Inc, Boston Scientific, St. Jude Medical, UCB, MEDA Pharma, TEVA Pharma, GlaxoSmithKline. F. Consulting Fees (e.g., advisory boards); Medtronic Inc, Boston Scientific, St. Jude Medical.
309.12	**T.A. Jerde:** F. Consulting Fees (e.g., advisory boards); Medtronic. **N. Reinking:** A. Employment/Salary (full or part-time); Medtronic. **M. Kelly:** A. Employment/Salary (full or part-time); Medtronic. **T. Billstrom:** A. Employment/Salary (full or part-time); Medtronic. **L. Lentz:** A. Employment/Salary (full or part-time); Medtronic. **R.S. Raike:** A. Employment/Salary (full or part-time); Medtronic.
310.08	**V. Anantharam:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); PK Biosciences Corp. Ames, IA. **A.G. Kanthasamy:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); PK Biosciences Corp. Ames, IA.
310.17	**S. Kikuta:** A. Employment/Salary (full or part-time); JSPS.
310.18	**P. Halje:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Neurolixis Inc (receipt of drugs).
310.27	**G. Petzinger:** F. Consulting Fees (e.g., advisory boards); US World Meds.
311.08	**K. Seki:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Intramural Research Grant (23-9) for Neurological and Psychiatric Disorders from the National Center of Neurology and Psychiatry, Health Labour Sciences Research Grant for Research on Development of N.
311.17	**J.W. Mink:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Abeona Therapeutics, Inc.. F. Consulting Fees (e.g., advisory boards); Medtronic, Inc., Biomarin, Inc..
312.03	**R.P. Bowser:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Iron Horse Diagnostics, Inc.. F. Consulting Fees (e.g., advisory boards); Above & Beyond, LLC..
312.20	**Y. Xu:** A. Employment/Salary (full or part-time); Michigan State University.
313.17	**D. Bhatia:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Department of Science and Technology, Government of India.

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315.12	**B.A. Hooker:** A. Employment/Salary (full or part-time); AbbVie. **R. Rajagovindan:** A. Employment/Salary (full or part-time); AbbVie. **M.J. Voorbach:** A. Employment/Salary (full or part-time); AbbVie. **C.H. Schroeder:** A. Employment/Salary (full or part-time); AbbVie. **J.D. Beaver:** A. Employment/Salary (full or part-time); AbbVie.
317.06	**F. Kamme:** A. Employment/Salary (full or part-time); Ionis Pharmaceuticals. **B. Powers:** A. Employment/Salary (full or part-time); Ionis Pharmaceuticals. **C. Mazur:** A. Employment/Salary (full or part-time); Ionis Pharmaceuticals. **D.A. Wolf:** A. Employment/Salary (full or part-time); Biogen Inc. **J.M. Sullivan:** A. Employment/Salary (full or part-time); inviCRO LLC. **D.A. Norris:** A. Employment/Salary (full or part-time); Ionis Pharmaceuticals. **A. Verma:** A. Employment/Salary (full or part-time); Biogen Inc. **E. Swayze:** A. Employment/Salary (full or part-time); Ionis Pharmaceuticals.
317.09	**B.T. Staahl:** A. Employment/Salary (full or part-time); University of California, Berkeley. **M. Benekareddy:** A. Employment/Salary (full or part-time); Roche Pharma Research and Early Development, Basel, Switzerland. **C. Coulon-Bainier:** A. Employment/Salary (full or part-time); Roche Pharma Research and Early Development, Basel, Switzerland. **A. Ghosh:** A. Employment/Salary (full or part-time); E-Scape Bio, San Francisco, California, USA. **J.A. Doudna:** A. Employment/Salary (full or part-time); University of California, Berkeley, California, USA., Innovative Genomics Initiative, University of California, Berkeley, California, USA.., Howard Hughes Medical Institute, University of California, Berkeley, California, USA., Physical Biosciences Division, Lawrence Berkeley National Laboratory, Berkeley, California, USA., Department of Chemistry, University of California, Berkeley, California, USA..
318.13	**U. Joshi:** A. Employment/Salary (full or part-time); Roskamp Institute.
319.05	**M. Ito:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; SENSHIN Medical Research Foundation, Japan Society for the Promotion of Science.
319.06	**J. Hinman:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 2015 K08 NS.
320.12	**B. Lang:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); inventors of the intellectual property covering ISP. **J. Silver:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); inventors of the intellectual property covering ISP.
320.18	**S.D. Miller:** A. Employment/Salary (full or part-time); Head of Scientific Advisory Board, Cour Pharmaceuticals.
320.20	**A. Brown:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Names on patents related to Sox9 inhibition.
321.08	**M.P. Hefferan:** A. Employment/Salary (full or part-time); Neuralstem Inc. **K. Johe:** A. Employment/Salary (full or part-time); Neuralstem Inc. **T.G. Hazel:** A. Employment/Salary (full or part-time); Neuralstem Inc.
321.10	**L. Ramos-Languren:** A. Employment/Salary (full or part-time); Maestría en Ciencias Farmacéuticas.
321.14	**J.S. Meabon:** A. Employment/Salary (full or part-time); Neurogenix Pharmaceuticals.
322.11	**J. Spiess:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Cortrop Ins., Encinitas, CA.
324.08	**J. Kim:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Basic Research Program(2015R1D1A1A01059014). **J. Hyun:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Research Grant; Mid-career Researcher Program (R-2015-01266), Basic Research Program (R-2015-01133).
325.05	**N. Tahirova:** A. Employment/Salary (full or part-time); Full-time student at Columbia University. **E. Poivet:** A. Employment/Salary (full or part-time); NYU medical center. **L. Xu:** A. Employment/Salary (full or part-time); Full time student at Columbia University. **S. Firestein:** A. Employment/Salary (full or part-time); Full time professor at Columbia University.
327.05	**V. Adenis:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Neurelec/Oticon Medical. **P. Stahl:** A. Employment/Salary (full or part-time); Neurelec / Oticon Medical. **D. Gnasia:** A. Employment/Salary (full or part-time); Neurelec / Oticon Medical.
330.04	**H. Lau:** A. Employment/Salary (full or part-time); University of California, Los Angeles. **M.A. Basso:** A. Employment/Salary (full or part-time); University of California, Los Angeles.
331.13	**S.S. McAfee:** A. Employment/Salary (full or part-time); University of Tennessee Health Science Center. **Y. Liu:** A. Employment/Salary (full or part-time); UniVersity of Tennessee Health Science Center. **D.H. Heck:** A. Employment/Salary (full or part-time); University of Tennessee Health Science Center.
331.25	**R.H. Gifford:** Other; Dr. Gifford is a member of the Audiology Advisory Board for Advanced Bionics and Cochlear Americas.
332.14	**G.N. Olivier:** A. Employment/Salary (full or part-time); Rehab Without Walls.
334.15	**S. Zanos:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Cyberonics/Livanova. **S. Moorjani:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Cyberonics/Livanova. **S. Sabesan:** A. Employment/Salary (full or part-time); Cyberonics/Livanova. **E.E. Fetz:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Cyberonics/Livanova.
335.13	**W. Cusack:** A. Employment/Salary (full or part-time); St. Jude Medical.
335.21	**D. Phillips:** A. Employment/Salary (full or part-time); University Of Oregon. **A. Karduna:** A. Employment/Salary (full or part-time); University of Oregon.
342.24	**L.E. Guerriero:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Signal Solutions. **C. Wang:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Signal Solutions. **T.C. Brooks:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Signal Solutions. **S. Sunderam:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Signal Solutions. **B.F. O'Hara:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Signal Solutions. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Signal Solutions.

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342.25	**C. Wang:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Signal Solution Inc. **T.C. Brooks:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Signal Solution Inc. **L.E. Guerriero:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Signal Solution Inc. **A.A. Ajwad:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Signal Solution Inc. **S. Sunderam:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Signal Solution Inc. **A.W. Seifert:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Signal Solution Inc. **B.F. O'Hara:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Signal Solution Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Signal Solution Inc..
343.07	**O.O. Sunday:** A. Employment/Salary (full or part-time); Full. **L.D. Ior:** A. Employment/Salary (full or part-time); Full.
343.11	**A. Ozur:** Other; CIHR MOP-136969, CIHR MOP-136967, NSERC 298475.
343.17	**M.C. Hoener:** A. Employment/Salary (full or part-time); F. Hoffmann-LaRoche, Ltd..
344.06	**E. Shokri-Kojori:** A. Employment/Salary (full or part-time); National Institutes of Health. **D. Tomasi:** A. Employment/ Salary (full or part-time); National Institutes of Health. **N. Volkow:** A. Employment/Salary (full or part-time); National Institutes of Health.
345.01	**D.A. Lewis:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; investigator-initiated research support from Pfizer, and in 2012-2014 served as a consultant in the areas of target identification and validation and new compound development to Autifony, Bristol-Myer.
347.06	**M.E. Sloan:** A. Employment/Salary (full or part-time); National Institute on Alcohol Abuse and Alcoholism, Bethesda, MD, United States.
347.09	**C.E. McGonigle:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; NIAAA R15 AA022506. **J.E. Grisel:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; NIAAA R15 AA022506.
347.18	**A. Agarwal:** A. Employment/Salary (full or part-time); Signal Solutions LLC. **K. Donohue:** A. Employment/Salary (full or part-time); Signal Solutions LLC. **B.F. O'Hara:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Signal Solutions LLC.
349.27	**G.A. Gerhardt:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Greg A. Gerhardt.
352.14	**B.L. Eggan:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Pfizer. **S.E. McCallum:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Pfizer.
352.15	**E.S. Burstein:** A. Employment/Salary (full or part-time); ACADIA Pharmaceuticals. **C.P. Ward:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); ACADIA Pharmaceuticals. **D.H. Malin:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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.
352.26	**H. Zhang:** A. Employment/Salary (full or part-time); Pfizer Inc. **M.D. Ehlers:** A. Employment/Salary (full or part-time); Pfizer, Inc.
353.25	**S. Meisenhelter:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); NeuroPace, Inc. **N.R. Hasulak:** A. Employment/Salary (full or part-time); NeuroPace, Inc. **T.K. Tcheng:** A. Employment/Salary (full or part-time); NeuroPace, Inc. **B.C. Jobst:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); NeuroPace, Inc..
355.13	**J.R. Gaunt:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Takeda Pharmaceutical Company. **S. Sheardown:** A. Employment/ Salary (full or part-time); Takeda Pharmaceutical Company.
355.17	**K. Rosenblum:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Dr. Jean Boutin, Laboratoires Servier, France.
356.01	**K. Tahon:** A. Employment/Salary (full or part-time); Department of Neuroscience, Janssen Research & Development, a Division of Janssen Pharmaceutica NV Beerse, Belgium. **D.A. Jackson:** A. Employment/ Salary (full or part-time); Janssen Pharmaceuticals. **W.H. Drinkenburg:** A. Employment/Salary (full or part-time); Janssen Pharmaceuticals.
356.23	**M. Schnitzer:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Inscopix. F. Consulting Fees (e.g., advisory boards); Inscopix.
357.13	**T.K. Alshammari:** A. Employment/Salary (full or part-time); Department of Pharmacology and Toxicology , College of Pharmacy, King Saud University , Riyadh , Kingdom of Saudi Arabia.
363.07	**M. Lei:** A. Employment/Salary (full or part-time); Hitachi, Ltd. **T. Miyoshi:** A. Employment/Salary (full or part-time); Hitachi, Ltd. **Y. Niwa:** A. Employment/Salary (full or part-time); Hitachi, Ltd. **H. Sato:** A. Employment/Salary (full or part-time); Hitachi, Ltd..
363.28	**N. Tandon:** A. Employment/Salary (full or part-time); Memorial Hermann Hospital.
364.01	**T.R. Patel:** A. Employment/Salary (full or part-time); Takeda Cambridge Ltd. **S. Bechar:** A. Employment/Salary (full or part-time); Takeda Cambridge ltd. **S. Stafford:** A. Employment/Salary (full or part-time); Takeda Cambridge Ltd. **R. Fosbeary:** A. Employment/Salary (full or part-time); Takeda Cambridge Ltd. **L. Walsh:** A. Employment/Salary (full or part-time); Takeda Cambridge Ltd. **J. Reeves:** A. Employment/Salary (full or part-time); Takeda Cambridge Ltd. **P. Ruprah:** A. Employment/Salary (full or part-time); Takeda Cambrdige Ltd. **M. Barnes:** A. Employment/Salary (full or part-time); Takeda Cambridge Ltd..
364.06	**E. Cayre:** A. Employment/Salary (full or part-time); Biotrial Pharmacology. **D. Parachou:** A. Employment/Salary (full or part-time); Biotrial Pharmacology. **B. Méot:** A. Employment/ Salary (full or part-time); Biotrial Pharmacology. **B. Rion:** A. Employment/Salary (full or part-time); Biotrial Pharmacology. **C. Drieu La Rochelle:** A. Employment/ Salary (full or part-time); Biotrial Pharmacology. **M. Sheardown:** A. Employment/Salary (full or part-time); Takeda Cambridge Ltd. **P. Ruprah:** A. Employment/Salary (full or part-time); Takeda Cambridge Ltd. **L. Walsh:** A. Employment/Salary (full or part-time); Takeda Cambridge Ltd. **J. Reeves:** A. Employment/Salary (full or part-time); Takeda Cambridge Ltd. **R. Fosbeary:** A. Employment/ Salary (full or part-time); Takeda Cambridge Ltd. **M. Barnes:** A. Employment/Salary (full or part-time); Takeda Cambridge Ltd. **T. Patel:** A. Employment/Salary (full or part-time); Takeda Cambridge Ltd..
364.08	**E.P. Lebois:** A. Employment/Salary (full or part-time); Pfizer, Inc. **D. Volfson:** A. Employment/Salary (full or part-time); Pfizer, Inc. **D. Buhl:** A. Employment/Salary (full or part-time); Pfizer, Inc. **S. Grimwood:** A. Employment/Salary (full or part-time); Pfizer, Inc. **J. Edgerton:** A. Employment/ Salary (full or part-time); Pfizer, Inc.

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364.12	**H.Y. Meltzer:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Research grant. F. Consulting Fees (e.g., advisory boards); Consulting fees.
364.16	**D. Feifel:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); DF is a named inventor on a patent application for the therapeutic use of oxytocin, filed on his behalf by UCSD..
364.19	**L. Asatryan:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Liana Asatryan is on a patent for the use of IVM for treatment of alcohol use disorders. **D.L. Davies:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Daryl L. Davies is an inventor on a patent for the use of IVM for treatment of alcohol use disorders.
364.20	**W.C. Wetsel:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Rugen, Research study. **M.G. Caron:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Acadia Pharmaceutical -- own stock. F. Consulting Fees (e.g., advisory boards); Omeros Corporation; Lundbeck, Consultant; Psychopharmacology Advisory Board.
365.01	**J.N. Rauch:** A. Employment/Salary (full or part-time); Essen BioScience. **M.L. Bowe:** A. Employment/Salary (full or part-time); Essen BioScience. **L. Oupicka:** A. Employment/Salary (full or part-time); Essen BioScience. **D.M. Appledorn:** A. Employment/Salary (full or part-time); Essen BioScience. **D.M. Rock:** A. Employment/Salary (full or part-time); Essen BioScience.
365.03	**H. Xie:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Synatom Research.
365.11	**A.I. Geller:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Alkermes Inc..
365.15	**K. Skold:** A. Employment/Salary (full or part-time); Head of Research. **M. Borén:** A. Employment/Salary (full or part-time); Head of Development.
367.13	**L.M. Erben:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Probes were provided by ACD. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ACD holds the patent. **M. He:** A. Employment/Salary (full or part-time); Employed by ACD. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Probes were provided in kind by ACD. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ACD hold the patent. **M. Xiao-Ming:** A. Employment/Salary (full or part-time); Employed by ACD. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Probes were provided in kind by ACD. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ACD holds the patent. **E. Park:** A. Employment/Salary (full or part-time); employed by ACD. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Probes were provided in kind by ACD. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ACD holds the patent. **A. Buonanno:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Probes were provided in kind by ACD. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); ACD holds the patent.
368.23	**R. Farhoudi:** A. Employment/Salary (full or part-time); Sharif unversity.
368.24	**C.H. Lubba:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; GSK.
369.14	**M. Abolfath-Beygi:** A. Employment/Salary (full or part-time); University of Southern California. **T.D. Sanger:** A. Employment/Salary (full or part-time); University of Southern California. **S.F. Giszter:** A. Employment/Salary (full or part-time); Drexel University College of Medicine.
372	**V. Edgerton:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroRecovery Technologies.
372.02	**Y. Gerasimenko:** F. Consulting Fees (e.g., advisory boards); NeuroRecovery Technologies.
372.04	**J. Burdick:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroRecovery Technologies.
372.05	**P. Gad:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroRecovery Technologies.
373	**C. Goddard:** A. Employment/Salary (full or part-time); Tal Medical, Inc (full time employment). E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Tal Medical, stock options.
373.02	**S.H. Lisanby:** A. Employment/Salary (full or part-time); National Institute of Mental Health. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Equipment support from Magstim and MagVenture. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); none. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Co-inventor on TMS technology, no royalties. F. Consulting Fees (e.g., advisory boards); none.
373.03	**A. Peterchev:** A. Employment/Salary (full or part-time); none. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); MagVenture (TMS equipment loan unrelated to this presentation), Tal Medical (TMS equipment loan unrelated to this presentation).. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); Rogue Research (travel support related to cTMS technology discussed in this presentation), Tal Medical (travel support unrelated to this presentation).. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Rogue Research (royalty related to cTMS technology discussed in this presentation); Magstim (support for patent application filings).. F. Consulting Fees (e.g., advisory boards); None..
373.04	**F. Frohlich:** A. Employment/Salary (full or part-time); University of North Carolina at Chapel Hill (full-time). C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Travel support from Tal Medical.. D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); None. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); UNC has filed several provisional patents on the non-invasive brain stimulation research in the Frohlich Lab., None of it is licensed and Dr. Frohlich does not financially benefit from these filings at this point. Flavio Frohlich is the

PRESENTATION NUMBER	STATEMENT
	majority owner of Pulvinar Neuro, a brain stimulation start up company.. F. Consulting Fees (e.g., advisory boards); StrataSolar. Other; The clinical studies performed in the Frohlich Lab have received a label of conflict of interest with administrative considerations, since they allow for the use of a brain stimulation device developed in the Frohlich Lab which is covered by provisional patent filings from UNC..
373.05	**A. Rotenberg:** A. Employment/Salary (full or part-time); Boston Children's Hospital, Harvard Medical School (full time). B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Sage Pharceuticals (contracted research, unrelated to proposed topic). C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Biscayne Pharmaceuticals: In-kind support (drugs, supplies). D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); None. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Neuro'motion Inc.: co-founder, advisor, equity, NeuroRex Inc.: Medical advisory board, equity. F. Consulting Fees (e.g., advisory boards); as above – consulting fees waived. Other; None of the above-mentioned relationships conflict with the planned presentation..
374.02	**J.W. Fawcett:** F. Consulting Fees (e.g., advisory boards); Acorda Therapeutics.
377	**D.J. Julius:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent royalty from Univ. of California. F. Consulting Fees (e.g., advisory boards); Scientific Advisory Bd member for Genentech, Inc. and Hydra, Inc..
381.01	**B. Balachandran Krishnamma:** A. Employment/Salary (full or part-time); NIH. **S. skuntz:** A. Employment/Salary (full or part-time); NIH. **N. Amin:** A. Employment/Salary (full or part-time); NIH. **M. Bhaskar:** A. Employment/Salary (full or part-time); NIH. **P. Grant:** A. Employment/Salary (full or part-time); NIH. **H. Pant:** A. Employment/Salary (full or part-time); NIH.
382.14	**B. Liu:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Receipt of GE180 TSPO ligand cassettes from General Electric. **V. Reiser:** A. Employment/Salary (full or part-time); GE Healthcare. **W. Trigg:** A. Employment/Salary (full or part-time); GE Healthcare.
383.06	**S.W. Moore:** A. Employment/Salary (full or part-time); InVivo Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); InVivo Therapeutics. **R.T. Layer:** A. Employment/Salary (full or part-time); InVivo Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); InVivo Therapeutics. **A.B. Kutikov:** A. Employment/Salary (full or part-time); InVivo Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); InVivo Therapeutics. **P. Podell:** A. Employment/ Salary (full or part-time); InVivo Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); InVivo Therapeutics. **A.A. Aimetti:** A. Employment/ Salary (full or part-time); InVivo Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); InVivo Therapeutics. **T.R. Ulich:** A. Employment/ Salary (full or part-time); InVivo Therapeutics. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); InVivo Therapeutics. **J.D. Guest:** F. Consulting Fees (e.g., advisory boards); InVivo Therapeutics.
383.08	**A.R. Martin:** A. Employment/Salary (full or part-time); Ministry of Health Clinician Investigator Program.
383.11	**B. Conner:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; East Carolina University Undergraduate Research and Creative Activities Award.
386.03	**B. Chih:** A. Employment/Salary (full or part-time); Genentech Inc. **J.J. Zuchero:** A. Employment/Salary (full or part-time); Genentech. **X. Chen:** A. Employment/Salary (full or part-time); Genentech. **N. Bien-Ly:** A. Employment/ Salary (full or part-time); Genentech. **D. Bumbaca:** A. Employment/Salary (full or part-time); Genentech. **R.K. Tong:** A. Employment/Salary (full or part-time); Genentech. **X. Gao:** A. Employment/Salary (full or part-time); Genentech. **S. Zhang:** A. Employment/Salary (full or part-time); Genentech. **K. Hoyte:** A. Employment/Salary (full or part-time); Genentech. **W. Luk:** A. Employment/ Salary (full or part-time); Genentech. **M.A. Huntley:** A. Employment/Salary (full or part-time); Genentech. **L. Phu:** A. Employment/Salary (full or part-time); Genentech. **C. Tan:** A. Employment/Salary (full or part-time); Genentech. **D. Kallop:** A. Employment/Salary (full or part-time); Genentech. **R.M. Weimer:** A. Employment/Salary (full or part-time); Genentech. **Y. Lu:** A. Employment/Salary (full or part-time); Genentech. **D.S. Kirkpatrick:** A. Employment/Salary (full or part-time); Genentech. **J. Ernst:** A. Employment/Salary (full or part-time); Genentech. **M.S. Dennis:** A. Employment/Salary (full or part-time); Genentech. **R.J. Watts:** A. Employment/Salary (full or part-time); Genentech.
386.08	**B.R. Obermeier:** A. Employment/Salary (full or part-time); Biogen. **G. Marsh:** A. Employment/Salary (full or part-time); Biogen. **A. Huang:** A. Employment/Salary (full or part-time); Biogen. **M. Koller:** A. Employment/Salary (full or part-time); Nortis, Inc. **K. Fisher:** A. Employment/Salary (full or part-time); Nortis, Inc. **A.C. Cotleur:** A. Employment/Salary (full or part-time); Biogen. **F. Shimizu:** A. Employment/Salary (full or part-time); Biogen. **J. Duffield:** A. Employment/ Salary (full or part-time); Biogen. **R.M. Ransohoff:** A. Employment/Salary (full or part-time); Biogen.
388.08	**P. Kulkarni:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Animal Imaging Research. **C.F. Ferris:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Animal Imaging Research, Ekam Solutions.
391.01	**E. Yang:** A. Employment/Salary (full or part-time); BK 21 plus. **H. Kim:** Other; he Korea Healthcare Technolog y R&D Project (HI3C1451) of Ministry for Health,, Science and Technology (NRF-2011-0021866).
391.16	**M.J. Weiser:** A. Employment/Salary (full or part-time); DSM.
391.29	**M. Benekareddy:** A. Employment/Salary (full or part-time); F. Hoffman-La Roche. **T.J. Stachniak:** A. Employment/ Salary (full or part-time); F. Hoffman-La Roche. **M. von Kienlin:** A. Employment/Salary (full or part-time); F. Hoffman-La Roche. **B. Kuennecke:** A. Employment/Salary (full or part-time); F. Hoffman-La Roche. **A. Ghosh:** A. Employment/Salary (full or part-time); E-Scape Bio.
395.01	**I. Battonyai:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); OTKA GRANT No. 111990; RFBR GRANT No. 12-04-01510.
396.05	**L. Addis:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Contractor for Eli LIlly. **J.K. Virdee:** A. Employment/Salary (full or part-time); Contractor for Eli Lilly. **L.R. Vidler:** A. Employment/Salary (full or part-time); Employed by Eli Lilly. **D.A. Collier:** A. Employment/Salary (full or part-time); Employed by Eli Lilly. **D.K. Pal:** F. Consulting Fees (e.g., advisory boards); Amplexa Genetics. **D. Ursu:** A. Employment/Salary (full or part-time); Employee of Eli Lilly.

PRESENTATION NUMBER	STATEMENT
396.09	**D.R. Lynch:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); patent for testing anti-NMDAR antibodies with royalties paid to Eurimmune.
396.12	**M. Jessen:** A. Employment/Salary (full or part-time); H. Lundbeck A/S. **K. Frederiksen:** A. Employment/Salary (full or part-time); H. Lundbeck A/S. **P. Kilburn:** A. Employment/Salary (full or part-time); H. Lundbeck A/S. **A. Damholt:** A. Employment/Salary (full or part-time); H. Lundbeck A/S.
397.01	**M. Gosling:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Enterprise Therapeutics.
397.07	**S. Haering:** Other; Department of Biochemistry I - Receptor Biochemistry, Ruhr University Bochum, Bochum, 44780, Germany. **T. Strasdeit:** Other; RUB Research SchoolPlus, Ruhr University Bochum, 44780 Bochum, Germany, Graduate School of Chemistry and Biochemistry, Ruhr University Bochum, 44780 Bochum, Germany.
398.02	**K.S. Ratliff:** A. Employment/Salary (full or part-time); Eli Lilly & Co. **K. Knopp:** A. Employment/Salary (full or part-time); Eli Lilly & Co. **J. Schkeryantz:** A. Employment/Salary (full or part-time); Eli Lilly & Co. **B.T. Priest:** A. Employment/Salary (full or part-time); Eli Lilly & Co. **M. Clark:** A. Employment/Salary (full or part-time); Eli Lilly & Co. **R. Cerne:** A. Employment/Salary (full or part-time); Eli Lilly & Co. **M. Wakulchik:** A. Employment/Salary (full or part-time); Eli Lilly & Co. **B. Heinz:** A. Employment/Salary (full or part-time); Eli Lilly & Co. **M. Walker:** A. Employment/Salary (full or part-time); Eli Lilly & Co. **A. Vandergriff:** A. Employment/Salary (full or part-time); Eli Lilly & Co. **X. Huang:** A. Employment/Salary (full or part-time); Eli Lilly & Co. **M.J. Valli:** A. Employment/Salary (full or part-time); Eli Lilly & Co. **W.J. Porter:** A. Employment/Salary (full or part-time); Eli Lilly & Co. **J.K. Reel:** A. Employment/Salary (full or part-time); Eli Lilly & Co. **D. Luffer-Atlas:** A. Employment/Salary (full or part-time); Eli Lilly & Co. **T. Jones:** A. Employment/Salary (full or part-time); Eli Lilly & Co. **R.M.A. Simmons:** A. Employment/Salary (full or part-time); Eli Lilly & Co. **B. Forster:** A. Employment/Salary (full or part-time); Eli Lilly & Co. **W. Guo:** A. Employment/Salary (full or part-time); Eli Lilly & Co. **B. Adams:** A. Employment/Salary (full or part-time); Eli Lilly & Co. **L. Yang:** A. Employment/Salary (full or part-time); Eli Lilly & Co. **J.S. McDermott:** A. Employment/Salary (full or part-time); Eli Lilly & Co..
402.26	**L. Westrich:** A. Employment/Salary (full or part-time); Lundbeck Research (part-time). **J. Waller:** A. Employment/Salary (full or part-time); Lundbeck Research (full-time). **B. Case-Whiteside:** A. Employment/Salary (full or part-time); Lundbeck Research (part-time). **M. Gulinello:** F. Consulting Fees (e.g., advisory boards); Lundbeck Research. **C. Sanchez:** A. Employment/Salary (full or part-time); Lundbeck Research (full-time). **Y. Li:** A. Employment/Salary (full or part-time); Lundbeck Research (full-time).
405.04	**E.N. Brown:** F. Consulting Fees (e.g., advisory boards); Masimo. **P.L. Purdon:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Dr. Purdon is an inventor on patents pending on anesthetic brain monitoring that have been licensed by Massachusetts General Hospital to Masimo Corporation.. F. Consulting Fees (e.g., advisory boards); Masimo Corporation.
406.05	**P.P. Irazoqui:** Other; co-founder Bionode LLC.
407.01	**T. Berdyyeva:** A. Employment/Salary (full or part-time); Janssen LLC. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Janssen LLC. **Y. Hsieh:** A. Employment/Salary (full or part-time); Janssen. **S. Yun:** A. Employment/Salary (full or part-time); Janssen LLC. **J. Shelton:** A. Employment/Salary (full or part-time); Janssen LLC. **C. Dugovic:** A. Employment/Salary (full or part-time); Janssen. **H. Kolb:** A. Employment/Salary (full or part-time); Janssen. **A. Szardenings:** A. Employment/Salary (full or part-time); Janssen.
407.08	**M.S. Saporito:** A. Employment/Salary (full or part-time); Marinus Pharmaceuticals, Inc. **J.A. Gruner:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Melior Discovery, Inc. **J. Tsai:** A. Employment/Salary (full or part-time); Marinus Pharmaceuticals, Inc. **A. Patroneva:** A. Employment/Salary (full or part-time); Marinus Pharmaceuticals, Inc..
407.11	**M.A. Ackley:** A. Employment/Salary (full or part-time); SAGE Therapeutics. **G.M. Belfort:** A. Employment/Salary (full or part-time); SAGE Therapeutics. **R.S. Hammond:** A. Employment/Salary (full or part-time); SAGE Therapeutics. **M.C. Quirk:** A. Employment/Salary (full or part-time); SAGE Therapeutics. **G. Martinez-Botella:** A. Employment/Salary (full or part-time); SAGE Therapeutics. **F.G. Salituro:** A. Employment/Salary (full or part-time); SAGE Therapeutics. **A.J. Robichaud:** A. Employment/Salary (full or part-time); SAGE Therapeutics. **J.J. Doherty:** A. Employment/Salary (full or part-time); SAGE Therapeutics.
408.05	**J.L. Gerrard:** F. Consulting Fees (e.g., advisory boards); Medtronic.
408.11	**S.R. Irani:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Royalty for antibody assays. **P. Waters:** D. Fees for Non-CME Services Received Directly from Commercial Interest or their Agents (e.g., speakers' bureaus); Received speaker honoraria from Biogen Idec and Euroimmun AG, Royalties for antibody assays. **A. Vincent:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); AV receives royalties and payments for antibody assays and AV is the named inventor on patent application WO/2010/046716 WO/2010/046716 entitled 'Neurological Autoimmune Disorders'. **B. Lang:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Royalties for antibody assays.
409.02	**L. Di Canio:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; GSK. **G.J. Wayne:** A. Employment/Salary (full or part-time); GSK.
410.01	**R.D. DiMarchi:** A. Employment/Salary (full or part-time); Consultant for Novo Nordisk U.S.A..
410.03	**S.A. Hanson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroSolis, Inc. **J.C. Ockuly:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroSolis, Inc. **J.D. Beck:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroSolis, Inc. **M.L. Hendrickson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroSolis, Inc..
410.05	**R.V. Nirogi:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **K. Mudigonda:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **K. Penta:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **G. Bhyrapuneni:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **V. Benade:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **N. Muddana:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **V. Palacharla:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **D. Ajjala:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **V. Goyal:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **S. Pandey:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **R. Abraham:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **R. Kambhampati:** A.

PRESENTATION NUMBER	STATEMENT
	Employment/Salary (full or part-time); Suven Life Sciences Ltd. **T. Bandyala:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **V. Bhatta:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd. **A. Shinde:** A. Employment/Salary (full or part-time); Suven Life Sciences Ltd.
410.11	**J. Dong:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 study is supported by GliaCure, Inc. and The Alzheimer's Drug Discovery Foundation. **R. Schreiber:** A. Employment/Salary (full or part-time); Suadeo Drug Discovery Consulting LLC. **P. Haydon:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; GliaCure, Inc.
411.01	**J.A. Dobrowolska Zakaria:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Antibody support from Merck & Co.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent publication #20110294138. **R.J. Bateman:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Director, Dominantly Inherited Alzheimer's Network Trials Unit (DIAN-TU). E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent publications #20110294138, 20130115716, 20140302520. Other; co-founder, C2N Diagnostics.
411.10	**T.W. Rosahl:** A. Employment/Salary (full or part-time); Merck Research Laboratories. **L.A. Hyde:** A. Employment/Salary (full or part-time); Merck Research Laboratories. **C. Canasto-Chibuque1:** A. Employment/Salary (full or part-time); Merck Research Laboratories. **K. Juhl:** A. Employment/Salary (full or part-time); Merck Research Laboratories. **Z. Li:** A. Employment/Salary (full or part-time); Merck Research Laboratories. **J. Scott:** A. Employment/Salary (full or part-time); Merck Research Laboratories. **G.J. Eiermann:** A. Employment/Salary (full or part-time); Merck Research Laboratories. **J.N. Cumming:** A. Employment/Salary (full or part-time); Merck Research Laboratories. **E.M. Parker:** A. Employment/Salary (full or part-time); Merck Research Laboratories. **M.E. Kennedy:** A. Employment/Salary (full or part-time); Merck Research Laboratories.
412.11	**H. Kim:** A. Employment/Salary (full or part-time); BK21 PLUS, SNU.
412.24	**R. Medapati:** A. Employment/Salary (full or part-time); Suven Life Sciences. **V. Benade:** A. Employment/Salary (full or part-time); Suven Life Sciences. **S. Daripelli:** A. Employment/Salary (full or part-time); Suven Life Sciences. **G. Ayyanki:** A. Employment/Salary (full or part-time); Suven Life Sciences. **V. Kamuju:** A. Employment/Salary (full or part-time); Suven Life Sciences. **R. Abraham:** A. Employment/Salary (full or part-time); Suven Life Sciences. **P. Jayarajan:** A. Employment/Salary (full or part-time); Suven Life Sciences. **G. Bhyrapuneni:** A. Employment/Salary (full or part-time); Suven Life Sciences. **K. Bojja:** A. Employment/Salary (full or part-time); Suven Life Sciences. **A.K. Shinde:** A. Employment/Salary (full or part-time); Suven Life Sciences. **R. Nirogi:** A. Employment/Salary (full or part-time); Suven Life Sciences.
413.01	**C. Silky:** A. Employment/Salary (full or part-time); Salary. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stock. **R. Yurko:** A. Employment/Salary (full or part-time); CogRx. **K. Mozzoni:** A. Employment/Salary (full or part-time); Salary. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stock. **C. Rehak:** A. Employment/Salary (full or part-time); Salary. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stock. **N. Izzo:** A. Employment/Salary (full or part-time); Salary. **G. Rishton:** A. Employment/Salary (full or part-time); Salary. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stock. **G. Look:** A. Employment/Salary (full or part-time); Cognition Therapeutics Inc. **H. Safferstein:** A. Employment/Salary (full or part-time); Salary. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stock. **S.M. Catalano:** A. Employment/Salary (full or part-time); Salary. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Stock.
413.04	**T.A. Yacoubian:** Other; Talene Yacoubian declares that she has a US Patent #7,919,262 on the use of 14-3-3s in neurodegeneration..
413.16	**O. Sesenoglu-Laird:** A. Employment/Salary (full or part-time); Copernicus Therapeutics, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Copernicus Therapeutics, Inc. **L. Padegimas:** A. Employment/Salary (full or part-time); Copernicus Therapeutics, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Copernicus Therapeutics, Inc. **M.J. Cooper:** A. Employment/Salary (full or part-time); Copernicus Therapeutics, Inc. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Copernicus Therapeutics, Inc.
413.19	**R. Grondin:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Financial support for this study was provided to the University of Kentucky by Alnylam Pharmaceuticals Inc. (Cambridge, MA) with funding received from the Michael J. Fox Foundation for Parkinson's Res. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); The hardware and software associated with the delivery system was provided by Medtronic Inc. (Minneapolis, MN). **A. Sehgal:** A. Employment/Salary (full or part-time); Dr. Sehgal is a current employee of Alnylam Pharmaceuticals. **D.A. Bumcrot:** A. Employment/Salary (full or part-time); Dr. Bumcrot was an employee of Alnylam Pharmaceuticals at the time the work was completed..
415.09	**W.F. Block:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); inseRT MRI. **A. Alexander:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); inseRT MRI.
415.13	**W. Neumann:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Medtronic. **G. Schneider:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Medtronic, St. Jude Medical, Boston Scientific. **A. Kühn:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); St. Jude Medical, Medtronic, Ipsen Pharma, Boston Scientific.
417.08	**B.L. Davidson:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Co-founder Spark Therapeutics.
418.15	**R. Aviles Reyes:** A. Employment/Salary (full or part-time); University of Guayaquil. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a

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	PI for a drug study, report that research relationship even if those funds come to an institution; Pontifical Catholic University, Quito Ecuador.
420.07	**B.T. Lang:** A. Employment/Salary (full or part-time); Athersys. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Athersys. **S.A. Busch:** A. Employment/Salary (full or part-time); Athesys. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Athersys. **R.W. Mays:** A. Employment/Salary (full or part-time); Athersys. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Athersys.
420.17	**J. Wojciak:** A. Employment/Salary (full or part-time); Lpath, Inc. **R.A. Sabbadini:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Lpath, Inc.. F. Consulting Fees (e.g., advisory boards); Lpath, Inc.. Other; Inventor.
420.26	**G.R. Hook:** A. Employment/Salary (full or part-time); American Life Science Pharmaceuticals. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); American Life Science Pharmaceuticals. **S. Jacobsen:** A. Employment/Salary (full or part-time); AstraZeneca. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); American Life Science Pharmaceuticals. **K. Grabstein:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); American Life Science Pharmaceuticals. **V. Hook:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); American Life Science Pharmaceuticals.
421.07	**A.S. Divakaruni:** F. Consulting Fees (e.g., advisory boards); Seahorse Bioscience. **A.N. Murphy:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Teva Pharmaceuticals. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Seahorse Bioscience.
421.08	**P. Kitchener:** A. Employment/Salary (full or part-time); Fluofarma. **L. Paulhac:** A. Employment/Salary (full or part-time); Fluofarma. **F. Simon:** A. Employment/Salary (full or part-time); Fluofarma.
422.04	**O.J. Olajide:** A. Employment/Salary (full or part-time); University of Ilorin. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; International Society for Neurochemistry.
423.18	**K. Jügelt:** A. Employment/Salary (full or part-time); NeuroProof GmbH. **A. Steder:** A. Employment/Salary (full or part-time); NeuroProof GmbH. **O.H.U. Schroeder:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); NeuroProof GmbH. **B.M. Bader:** A. Employment/Salary (full or part-time); NeuroProof GmbH.
424.08	**M. Ishisaka:** A. Employment/Salary (full or part-time); ONO Pharmaceutical Co., LTD. **T. Komiya:** A. Employment/Salary (full or part-time); ONO Pharmaceutical Co., LTD. **T. Kitajima:** A. Employment/Salary (full or part-time); ONO Pharmaceutical Co., LTD. **A. Kishi:** A. Employment/Salary (full or part-time); ONO Pharmaceutical Co., LTD. **S. Katsumata:** A. Employment/Salary (full or part-time); ONO Pharmaceutical Co., LTD..
424.27	**M. Maddie:** A. Employment/Salary (full or part-time); Renovo Neural. **D. Chmura:** A. Employment/Salary (full or part-time); Renovo Neural. **S. Lunn:** A. Employment/Salary (full or part-time); Renovo Neural. **H. Battapady:** A. Employment/Salary (full or part-time); Renovo Neural. **S. Medicetty:** A. Employment/Salary (full or part-time); Renovo Neural. **B. Trapp:** A. Employment/Salary (full or part-time); Cleveland Clinic Foundation. F. Consulting Fees (e.g., advisory boards); Renovo Neural.
426.01	**B.A. Littlefield:** A. Employment/Salary (full or part-time); Eisai Inc. **K. Nomoto:** A. Employment/Salary (full or part-time); Eisai Inc. **S. Eckley:** A. Employment/Salary (full or part-time); Eisai Inc. **C. DeJardins:** A. Employment/Salary (full or part-time); Eisai Inc. **B.S. Slusher:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Eisai Inc.
426.02	**J.R. Goss:** A. Employment/Salary (full or part-time); Periphagen. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Periphagen. **D. Krisky:** A. Employment/Salary (full or part-time); Periphagen. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Periphagen. **K. Bouch:** A. Employment/Salary (full or part-time); Periphagen. **M. O'Malley:** A. Employment/Salary (full or part-time); Periphagen. **S. Coghlan:** A. Employment/Salary (full or part-time); Periphagen. **J. Wechuck:** A. Employment/Salary (full or part-time); Periphagen. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Periphagen.
426.03	**T. Kono:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Tsumura&Co. **Y. Omiya:** A. Employment/Salary (full or part-time); Tsumura&Co. **H. Sekine:** A. Employment/Salary (full or part-time); Tsumura&Co. **M. Yamamoto:** A. Employment/Salary (full or part-time); Tsumura&Co. **K. Miyano:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Tsumura&Co. **Y. Kase:** A. Employment/Salary (full or part-time); Tsumura&Co. **Y. Uezono:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Tsumura&Co..
426.04	**A. Ghetti:** A. Employment/Salary (full or part-time); AnaBios Corporation, Asterand. **J. Zhang:** A. Employment/Salary (full or part-time); AnaBios Corp. **Y. Miron:** A. Employment/Salary (full or part-time); AnaBios Corp. **J. Stretton:** A. Employment/Salary (full or part-time); Asterand Biosciences. **K. Morrison:** A. Employment/Salary (full or part-time); Asterand Biosciences. **P. Murdock:** A. Employment/Salary (full or part-time); Asterand Biosciences. **K. Page:** A. Employment/Salary (full or part-time); Asterand Biosciences. **P. Miller:** A. Employment/Salary (full or part-time); AnaBios Corp..
426.21	**G. Luerman:** A. Employment/Salary (full or part-time); Axiogenesis AG. **D. Hess:** A. Employment/Salary (full or part-time); Axiogenesis AG. **B. Murphy:** A. Employment/Salary (full or part-time); Axiogenesis AG. **A. Ehlich:** A. Employment/Salary (full or part-time); Axiogenesis AG. **H. Bohlen:** A. Employment/Salary (full or part-time); Axiogenesis AG. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Axiogenesis AG.

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427.14	**K.J. Escott:** A. Employment/Salary (full or part-time); employee of Astrazeneca.
427.17	**T. Liu:** A. Employment/Salary (full or part-time); full-time. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; the National Natural Science Foundation of China.
427.18	**J. Lee:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; This research was supported by the National Research Foundation (NRF) Grant 2014R1A2A2A01007695 funded by the Korean Government (MSIP).
428.08	**C.Y. Saab:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Research grant from Asahi Kasei Pharma and Boston Scientific. **B. LeBlanc:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Research grants from Asahi Kasei Pharma & Boston Scientific.
430.07	**F. Frohlich:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Funding from Tal Medical. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Majority stock holder of Pulvinar Neuro, LLC. F. Consulting Fees (e.g., advisory boards); Strata Solar.
430.08	**A.A. Wanner:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); European patent application EP14736451, US patent application US14897514, ariadne-service gmbh.
432.10	**A. Beckett:** A. Employment/Salary (full or part-time); Advanced MRI Technologies. **A.T. Vu:** A. Employment/Salary (full or part-time); Advanced MRI Technologies. **S. Schillack:** A. Employment/Salary (full or part-time); Virtumed LLC. **D.A. Feinberg:** A. Employment/Salary (full or part-time); Advanced MRI Technologies.
435.09	**P. Steele:** A. Employment/Salary (full or part-time); CREmedical. **W. Besio:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); CREmedical.
436.07	**P. Raghavan:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent holder.
437.07	**S.C. Cramer:** F. Consulting Fees (e.g., advisory boards); Roche, MicroTransponder, Dart Neuroscience, RAND coporation, personalRN.
438.02	**A. Petrossians:** A. Employment/Salary (full or part-time); Platinum Group Coatings. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Platinum Group Coatings.
438.13	**M. Schuettler:** A. Employment/Salary (full or part-time); Cortec GmbH. **J. Rickert:** A. Employment/Salary (full or part-time); Cortec GmbH.
439.04	**P.R. Kennedy:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); 98% of Neural Signals Inc..
440.01	**T. Funato:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; JSPS. **D. Yanagihara:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; JSPS. **S. Fujiki:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; JSPS. **S. Aoi:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; JSPS.
440.05	**J.L. Alberts:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Intellectual property is in place related to the methods described in this abstract..
440.16	**A. Dutt-Mazumder:** A. Employment/Salary (full or part-time); Medical University of South Carolina.
440.17	**J.V. Jacobs:** A. Employment/Salary (full or part-time); Liberty Mutual Insurance.
441.02	**R.S. Broide:** A. Employment/Salary (full or part-time); Allergan PLC. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Allergan PLC. **J. Francis:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Allergan PLC. **B.B. Cai:** A. Employment/Salary (full or part-time); Allergan PLC.
441.18	**B. Munro:** A. Employment/Salary (full or part-time); NIKE Inc. **J.L. Bishop:** A. Employment/Salary (full or part-time); NIKE Inc. **E. Zehr:** F. Consulting Fees (e.g., advisory boards); NIKE Inc..
446.14	**J.C. O'Connor:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Janssen Research & Development, LLC. **N. Derecki:** A. Employment/Salary (full or part-time); Janssen Research & Development, LLC. **A. Bhattacharya:** A. Employment/Salary (full or part-time); Janssen Research & Development, LLC..
446.16	**M.N. Hill:** F. Consulting Fees (e.g., advisory boards); Matthew Hill is a scientific consultant for Pfizer..
446.21	**L. Schaevitz:** A. Employment/Salary (full or part-time); Vium. **D. Ford:** A. Employment/Salary (full or part-time); Vium. **M. Lim:** A. Employment/Salary (full or part-time); Vium.
448.13	**J. Yeh:** A. Employment/Salary (full or part-time); Institute of Urology, University of Southern California. **J. Mao:** A. Employment/Salary (full or part-time); Institute of Urology, University of Southern California. **H.H. Chang:** A. Employment/Salary (full or part-time); Institute of Urology, University of Southern California. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 (R01DK106181).
449.01	**P.B. Yoo:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patent file has been submitted.
449.04	**C.L. Langdale:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; GlaxoSmithKline. **J.A. Hokanson:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or

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	consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; GlaxoSmithKline. **A. Sridhar:** A. Employment/Salary (full or part-time); GlaxoSmithKline. **W.M. Grill:** B. Contracted Research/ Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; GlaxoSmithKline.
449.10	**M.A. Vizzard:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending 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 DK051369, NIH DK060481, NIH DK053832. **M.T. Nelson:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; DK053832, HL121706, HL095488.
450.07	**M.F. Ghilardi:** F. Consulting Fees (e.g., advisory boards); The Fresco Institute @ NYU.
450.14	**K.P. Wright:** A. Employment/Salary (full or part-time); American College of Chest Physicians, The Obesity Society, Obesity Medicine Association. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; National Institute of Health, Office of Naval Research, Torvec Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Torvec Inc.. F. Consulting Fees (e.g., advisory boards); Torvec Inc..
451.10	**Y. Hu:** A. Employment/Salary (full or part-time); This research was supported [in part] by the Intramural Research Program of the NIH, NIDA.
452.25	**C.E. Schoonover:** A. Employment/Salary (full or part-time); Columbia University.
456.10	**Z.D. Brodnik:** A. Employment/Salary (full or part-time); Drexel University College of Medicine. **R.A. España:** A. Employment/Salary (full or part-time); Drexel University College of Medicine.
456.24	**J.S. Burgdorf:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx. F. Consulting Fees (e.g., advisory boards); Aptinyx. **E.M. Colechio:** A. Employment/Salary (full or part-time); Aptinyx Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx Inc. **N. Ghoreishi-Haack:** A. Employment/Salary (full or part-time); Aptinyx Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx Inc. **A.L. Gross:** A. Employment/Salary (full or part-time); Aptinyx Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx Inc. **X. Zhang:** C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); Aptinyx Inc. **P.L. Stanton:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Aptinyx Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx Inc.. F. Consulting Fees (e.g., advisory boards); Aptinyx Inc. **R.L. Kroes:** A. Employment/Salary (full or part-time); Aptinyx Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/ patent holder, excluding diversified mutual funds); Aptinyx Inc. **J.R. Moskal:** A. Employment/Salary (full or part-time); Aptinyx Inc.. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Aptinyx Inc..
457.04	**I.N. Krasnova:** A. Employment/Salary (full or part-time); National Institutes of Health.
457.09	**M.A. Taffe:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; R44DA041967. C. Other Research Support (receipt of drugs, supplies, equipment or other in-kind support); La Jolla Alcohol Research, Inc. **S.A. Vandewater:** F. Consulting Fees (e.g., advisory boards); La Jolla Alcohol Research, Inc. **M. Cole:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; R44DA041967. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); La Jolla Alcohol Research, Inc.
457.20	**M.P. Carrera:** A. Employment/Salary (full or part-time); Universidade Estadual do North Fluminense. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; CNPq and FAPERJ. **F.R.C. Dias:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; FAPERJ. **L.R. Oliveira:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; UENF/PIBIC. **B.G. Santos:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; CAPES. **J.L.L. Silva:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; UENF/PIBIC.
460.08	**D.A. Morilak:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; H Lundbeck A/S. F. Consulting Fees (e.g., advisory boards); Lundbeck Research, USA.
460.09	**D.A. Morilak:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; H Lundbeck A/S. F. Consulting Fees (e.g., advisory boards); Lundbeck Research, USA.
460.11	**M.B. Milienne-Petiot:** A. Employment/Salary (full or part-time); UCSD. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; TMARC. **J.W. Young:** A. Employment/Salary (full or part-time); UCSD. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; TMARC. **A. Minassian:** A. Employment/Salary (full or part-time); UCSD. B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or

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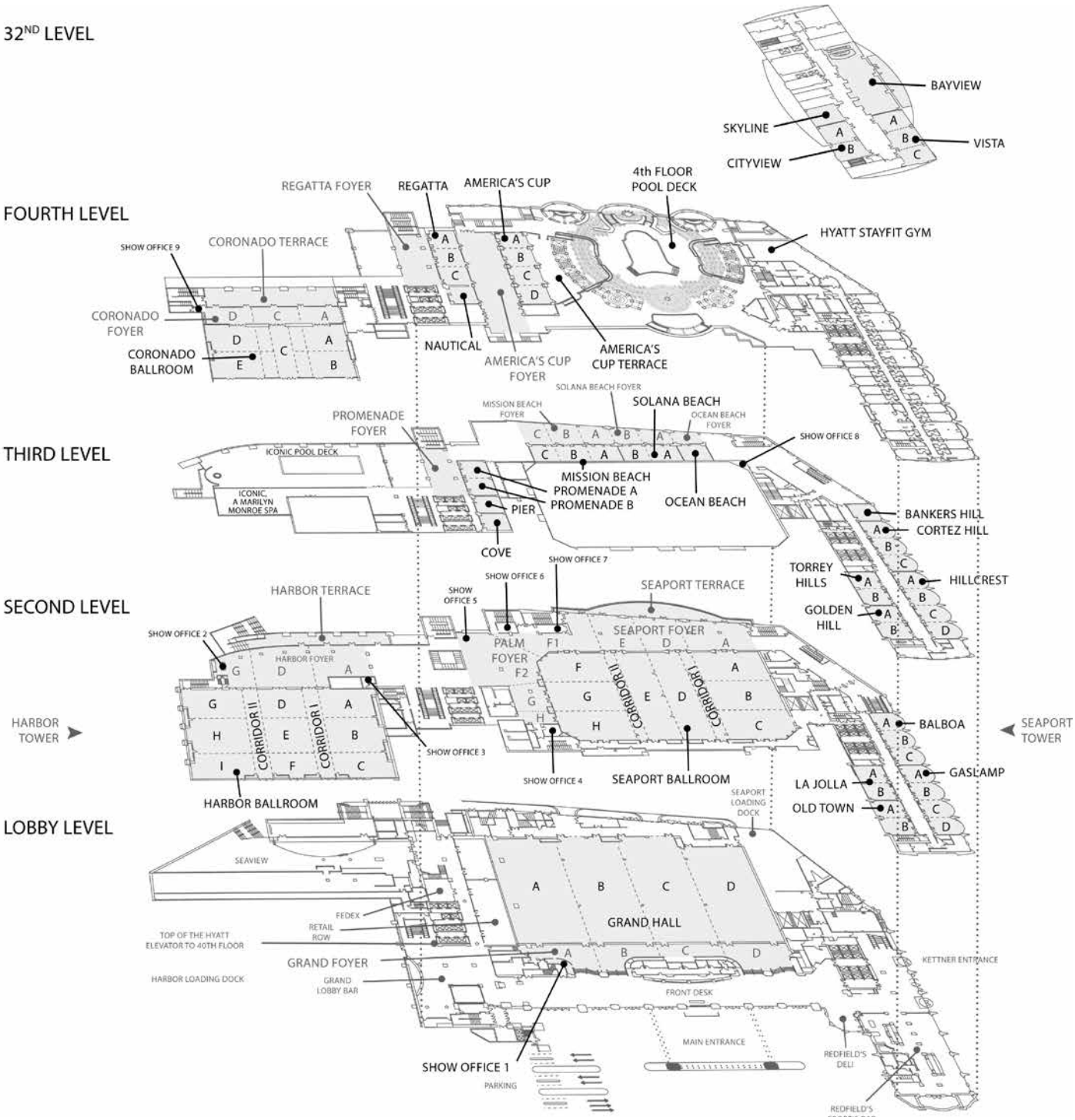
	consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; TMARC.
462.07	**S. Daripelli:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD., Hyderabad, India. **V. Benade:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD., Hyderabad, India. **G. Ayyanki:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD., Hyderabad, India. **V. Kamuju:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD., Hyderabad, India. **G. Bhyrapuneni:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD., Hyderabad, India. **R. Nirogi:** A. Employment/Salary (full or part-time); Suven Life Sciences LTD., Hyderabad, India.
464.01	**D. Feifel:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); DF is a named inventor on a patent application for the therapeutic use of oxytocin, filed on his behalf by UCSD.
465.17	**H.S. Mayberg:** E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Dr. Mayberg has licensed intellectual property to St. Jude Medical Inc. to develop DBS for the treatment of severe depression (US 2005/0033379A1)..
466.04	**T.A. Tishler:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Janssen Scientific Affairs, LLC. **G. Bartzokis:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Janssen Scientific Affairs, LLC. **K.L. Subotnik:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Janssen Scientific Affairs, LLC. **K.H. Nuechterlein:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Janssen Scientific Affairs, LLC. **B.M. Ellingson:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Janssen Scientific Affairs, LLC.
466.09	**J. Conn:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Research funding from Bristol Myers-Squibb, Johnson and Johnson, AstraZeneca. E. Ownership Interest (stock, stock options, royalty, receipt of intellectual property rights/patent holder, excluding diversified mutual funds); Patents that protect different classes of M1 PAMs. F. Consulting Fees (e.g., advisory boards); Consultant Pfizer.
466.19	**J. Zhao:** A. Employment/Salary (full or part-time); NIMH/NIH.
467.11	**M. Corredor:** A. Employment/Salary (full or part-time); University of Antioquia, Biology Institute, GEBIOMIC Group.
468.08	**M.P. Frosch:** B. Contracted Research/Research Grant (principal investigator for a drug study, collaborator or consultant and pending and current grants). If you are a PI for a drug study, report that research relationship even if those funds come to an institution; Massachusetts Alzheimer Disease Research Center.
468.21	**A. Walker:** A. Employment/Salary (full or part-time); UC Berkeley. **Y. Huang:** A. Employment/Salary (full or part-time); UC Berkeley.
469.11	**C. Graversen:** A. Employment/Salary (full or part-time); Eriksholm Research Centre - part of Oticon. **E.B. Petersen:** A. Employment/Salary (full or part-time); Eriksholm Research Centre - part of Oticon. **A. Favre-Felix:** A. Employment/Salary (full or part-time); Eriksholm Research Centre - part of Oticon. **T. Lunner:** A. Employment/Salary (full or part-time); Eriksholm Research Centre - part of Oticon.
470.13	**F. Rothganger:** A. Employment/Salary (full or part-time); Sandia National Laboratories.

Hotel Floor Plans

MANCHESTER GRAND HYATT

1 Market Pl
San Diego, CA 92101

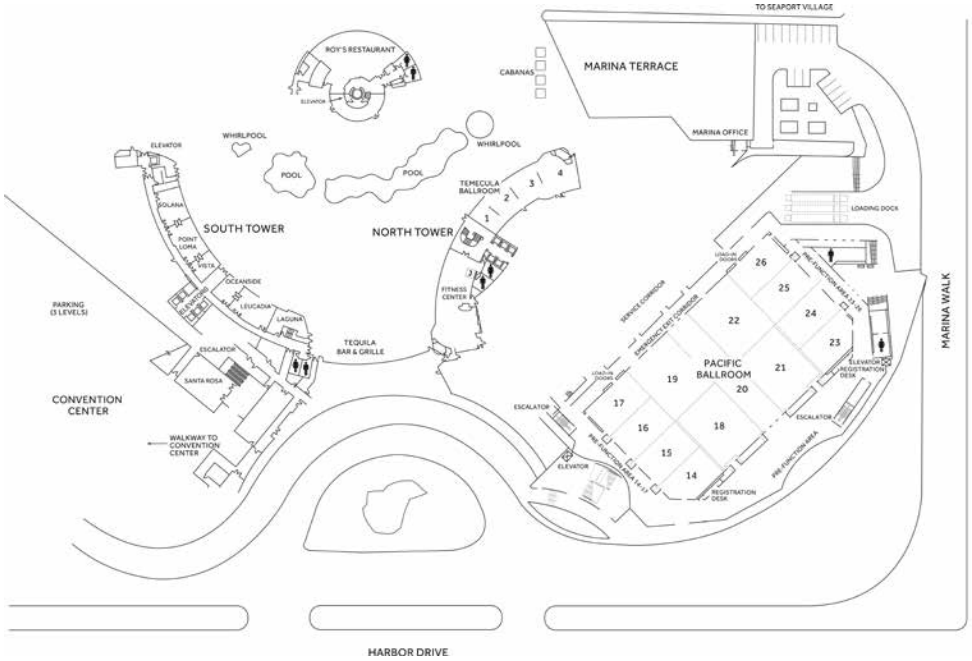


MARRIOTT MARQUIS SAN DIEGO MARINA

333 W Harbor Dr
San Diego, CA 92101

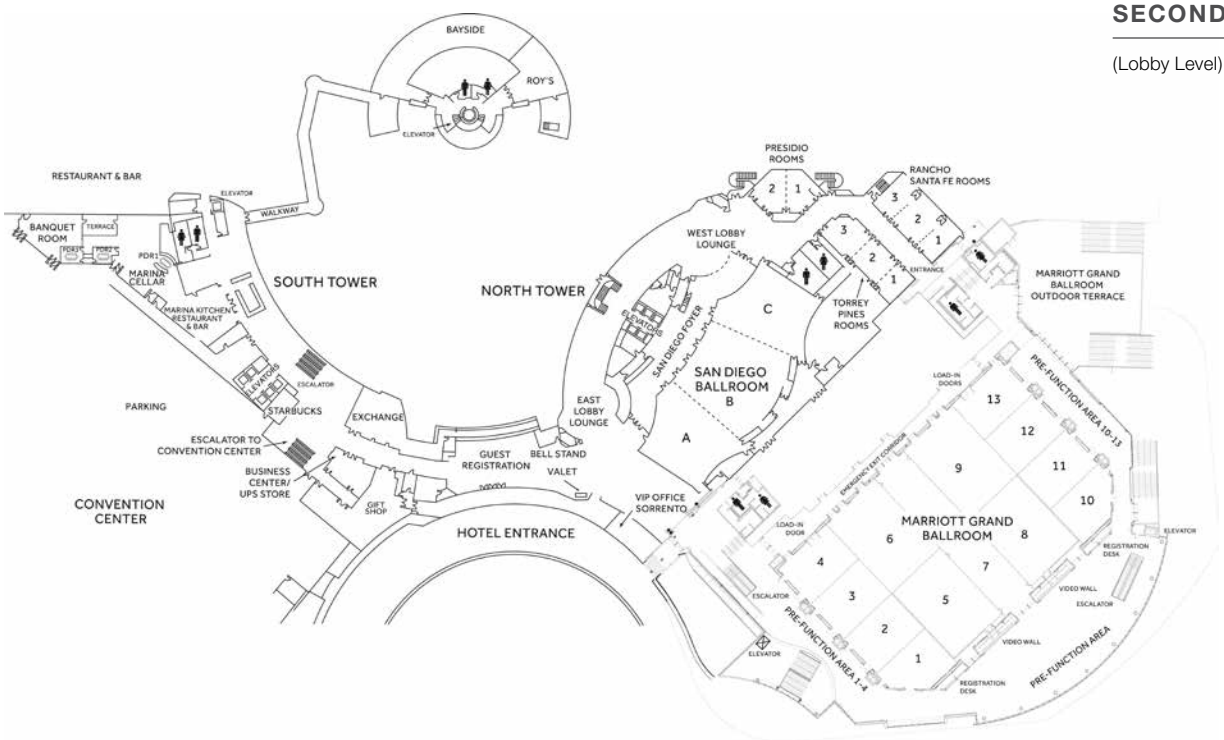
FIRST FLOOR

(Ground Level)



SECOND FLOOR

(Lobby Level)



SOUTH TOWER

Second Floor

Bayside

1st Floor

Laguna
Leucadia
Oceanside
Point Loma
Santa Rosa
Solana
Vista

3rd Floor

Balboa
Cardiff
Carlsbad
Del Mar
Encinitas
Marina Ballroom D–G
Miramar
Mission Hills
Palomar

4th Floor

Catalina
Coronado
Dana Point
La Costa
La Jolla
La Mesa
Malibu
Newport Beach

NORTH TOWER

Lobby Level

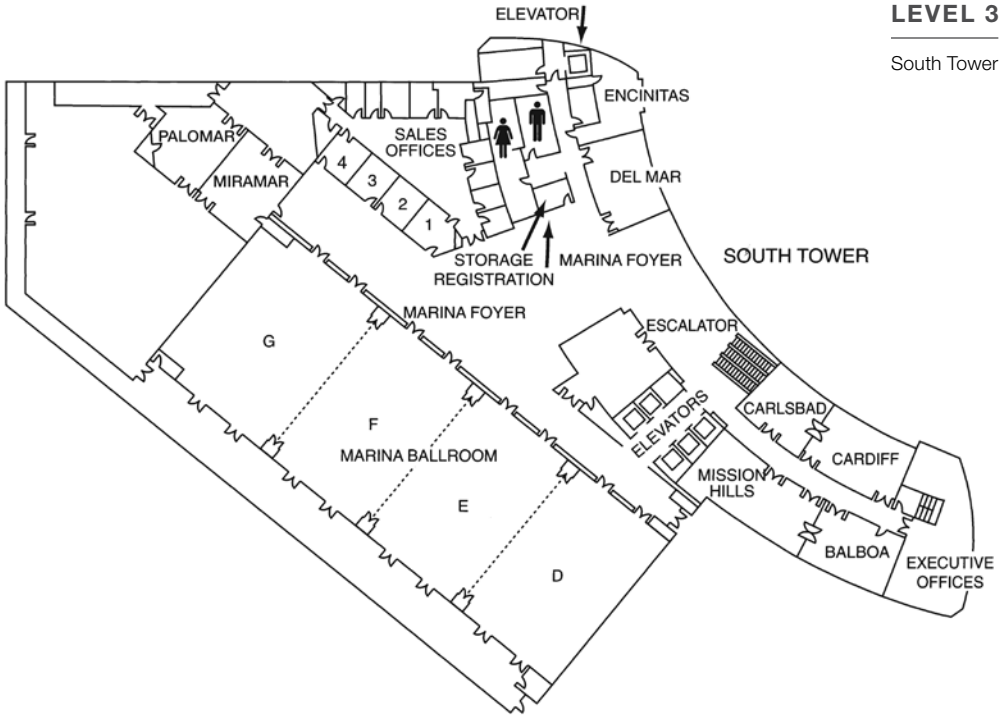
Presidio 1–2
Rancho Santa Fe 1–3
Marriott Ballroom 1–13
San Diego Ballrooms A–C
Torrey Pines 1–3

1st Floor

Temecula

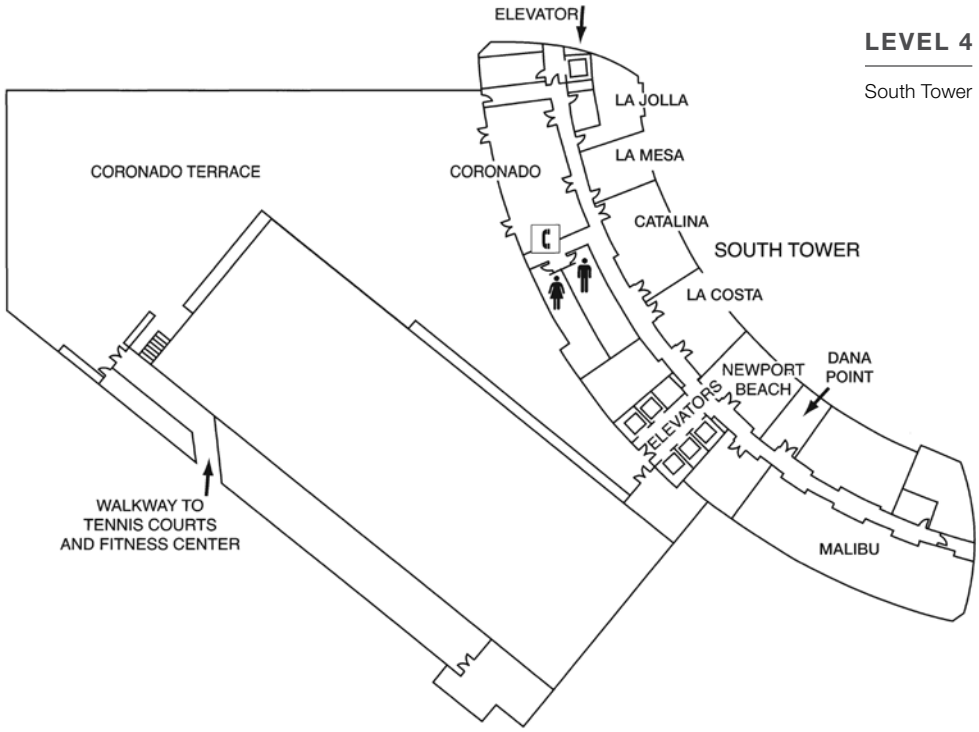
LEVEL 3

South Tower



LEVEL 4

South Tower

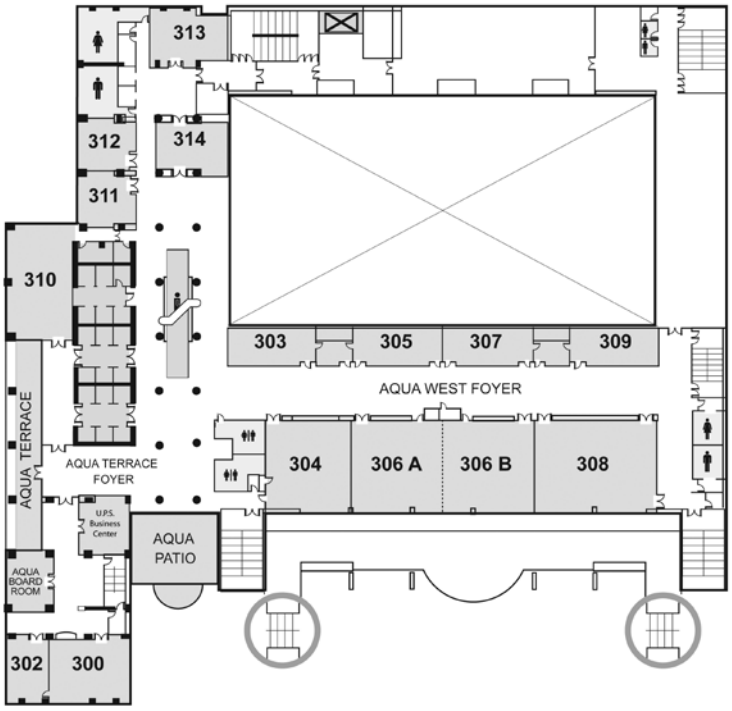


HILTON SAN DIEGO BAYFRONT

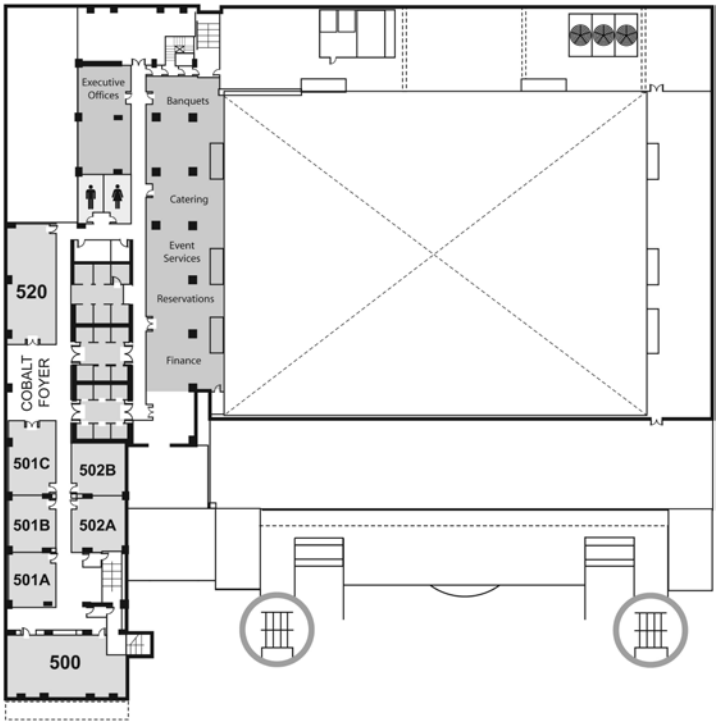
1 Park Blvd
San Diego, CA 92101

= Function Space
= Elevators and Escalators
= Restrooms
= Stairs

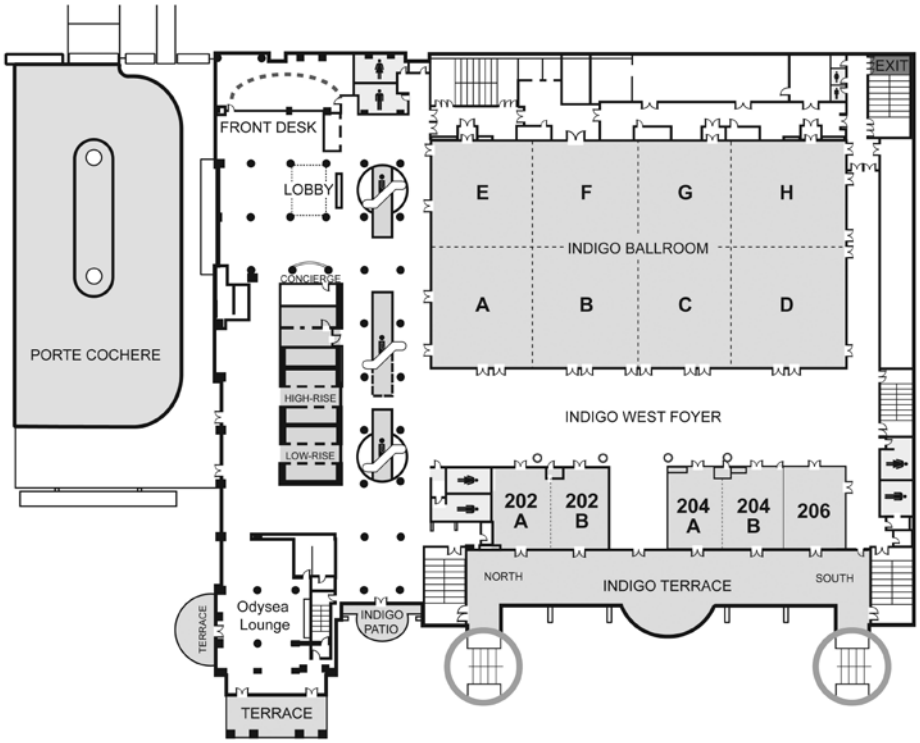
AQUA LEVEL



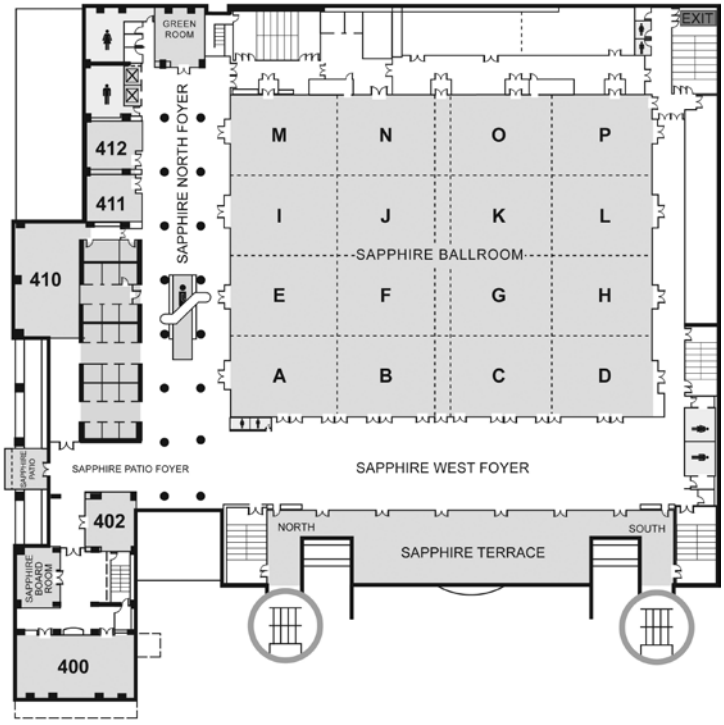
COBALT LEVEL



INDIGO LEVEL

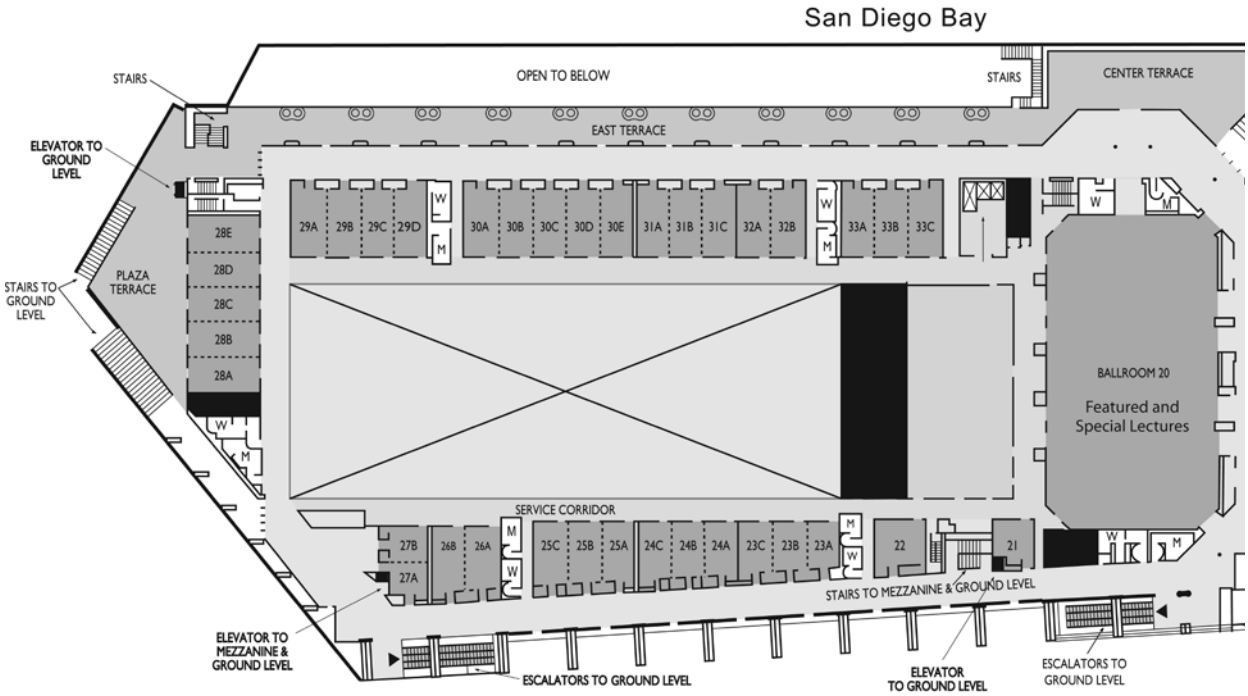


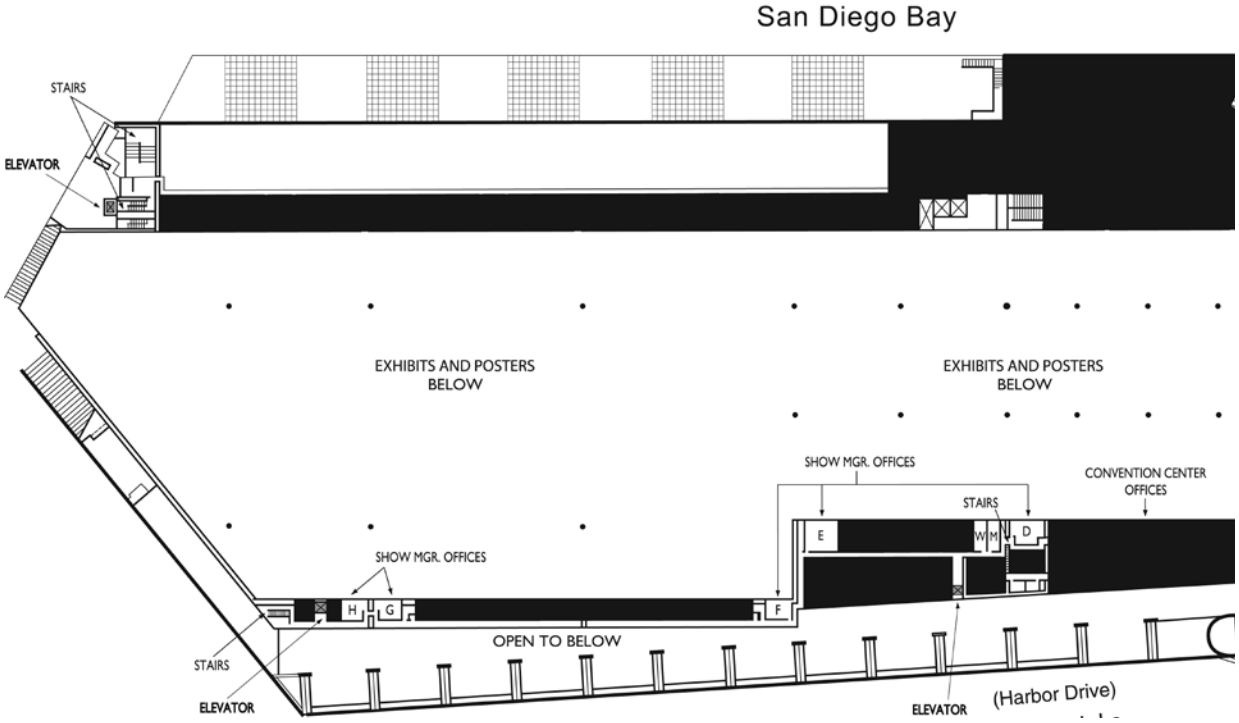
SAPPHIRE LEVEL



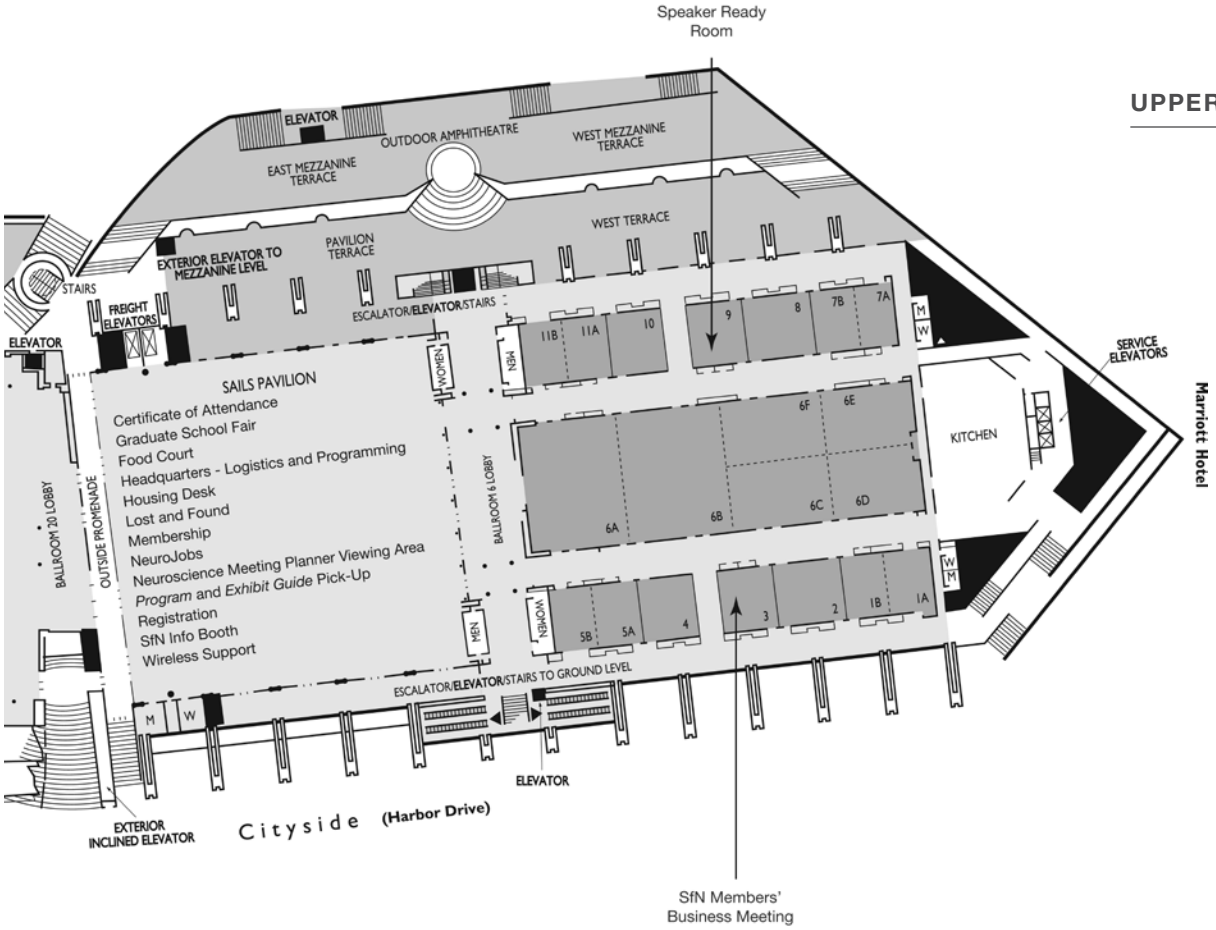
SAN DIEGO CONVENTION CENTER

111 W Harbor Dr
San Diego, CA 92101

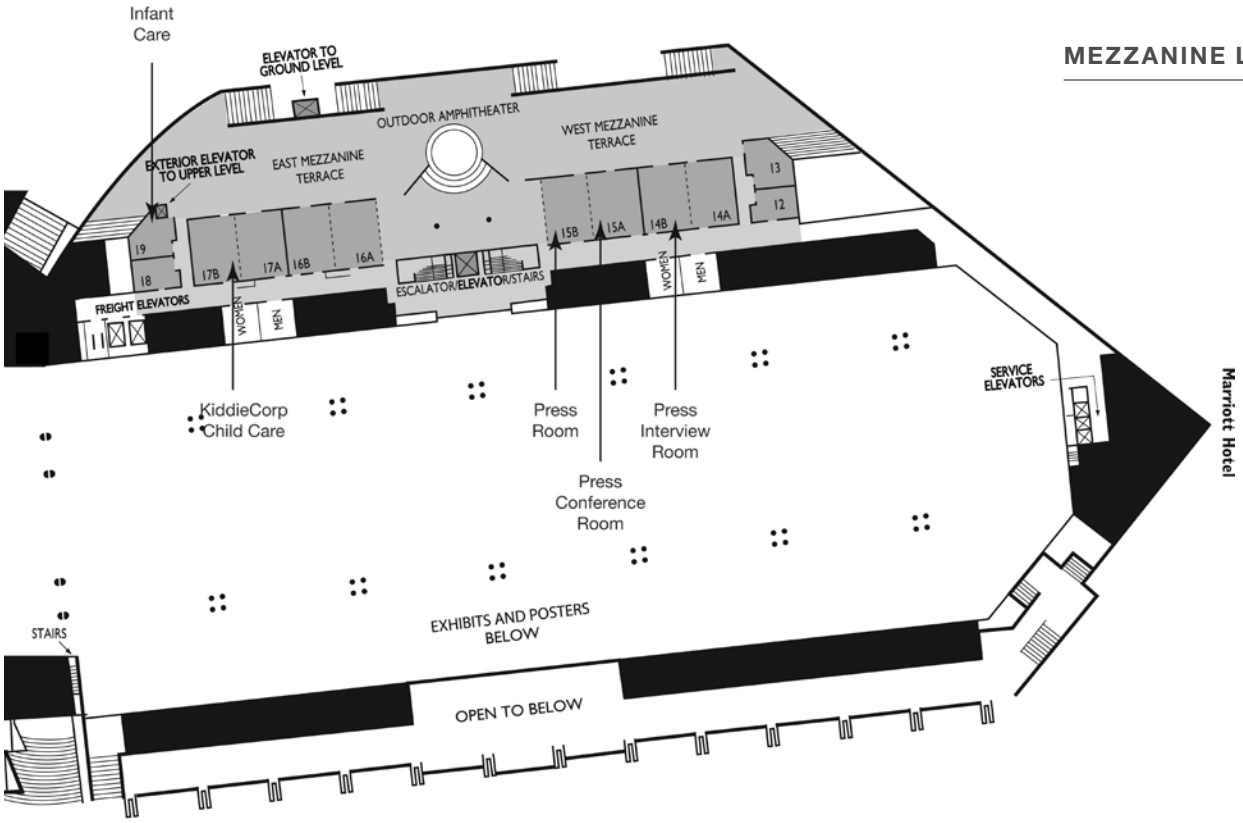




UPPER LEVEL



MEZZANINE LEVEL



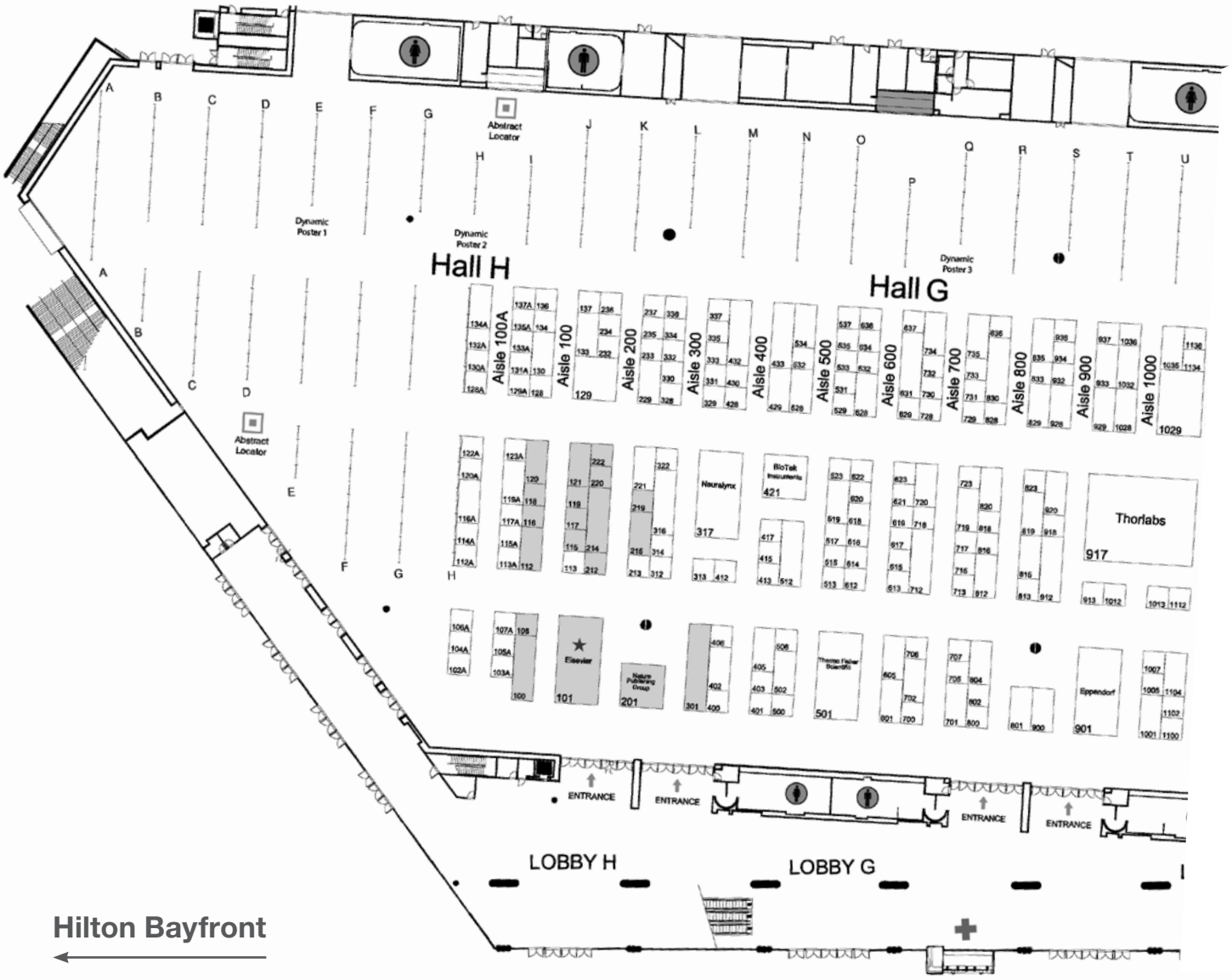
Exhibits and Poster Sessions

SAN DIEGO CONVENTION CENTER

Meeting Dates: November 12–16

Exhibit Dates: November 13–16

Note: Entrances will open at noon on Saturday and at 7 a.m. Sunday through Wednesday for poster presenter setup only. Poster sessions are open for all attendees at 1 p.m. on Saturday and 8 a.m. Sunday through Wednesday. Pending fire marshal approval. Floor plans subject to change. For current floor plan, visit **SfN.org/exhibits.**



KEY

- Publishers Row
- SfN Booth
- Nonprofits/ U.S. Government Agencies
- ★ Sustaining Associate Members
- Abstract Locator
- Concession Area
- Women's Restroom
- Men's Restroom
- Entrance

SAN DIEGO CONVENTION CENTER

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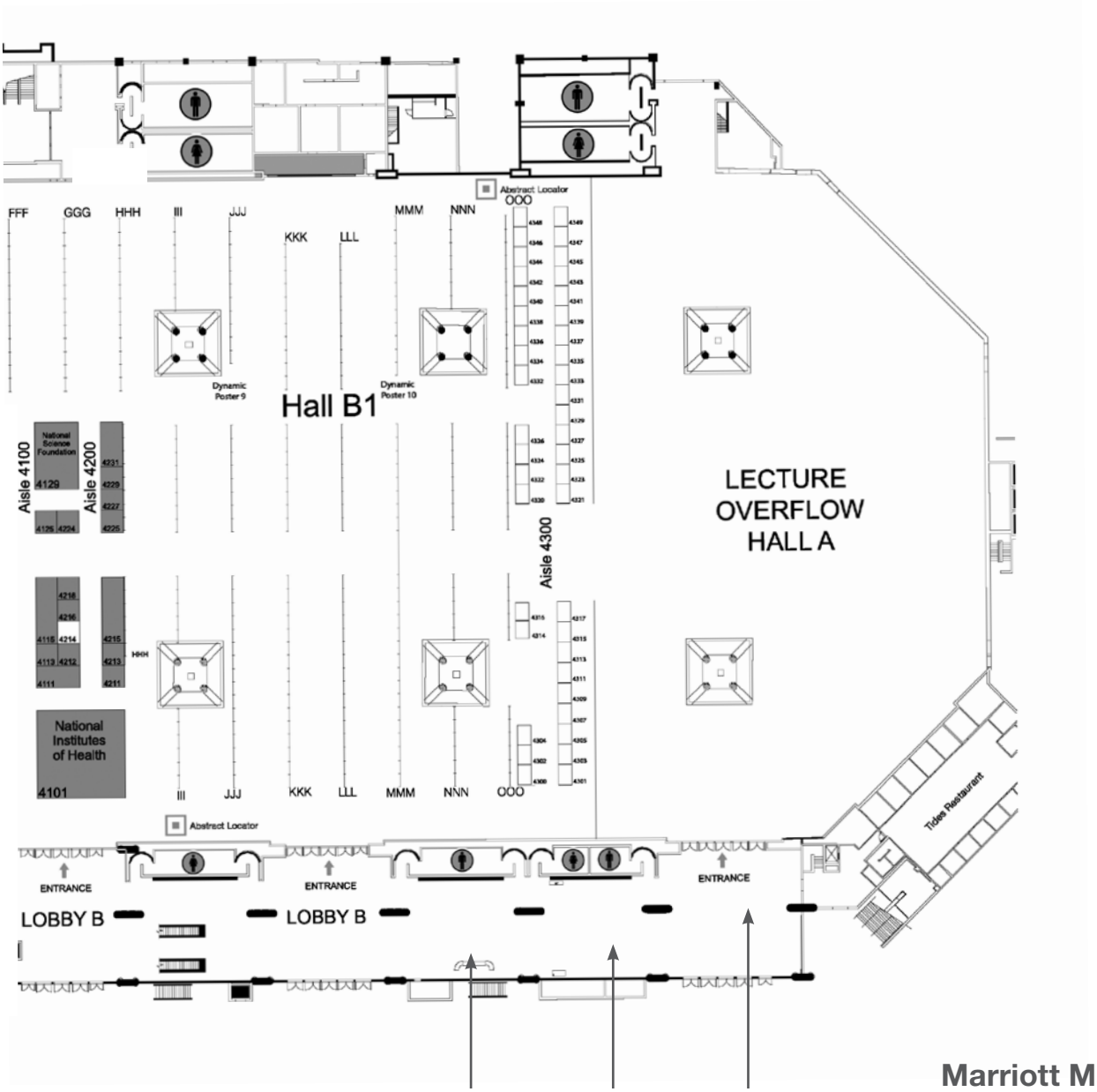

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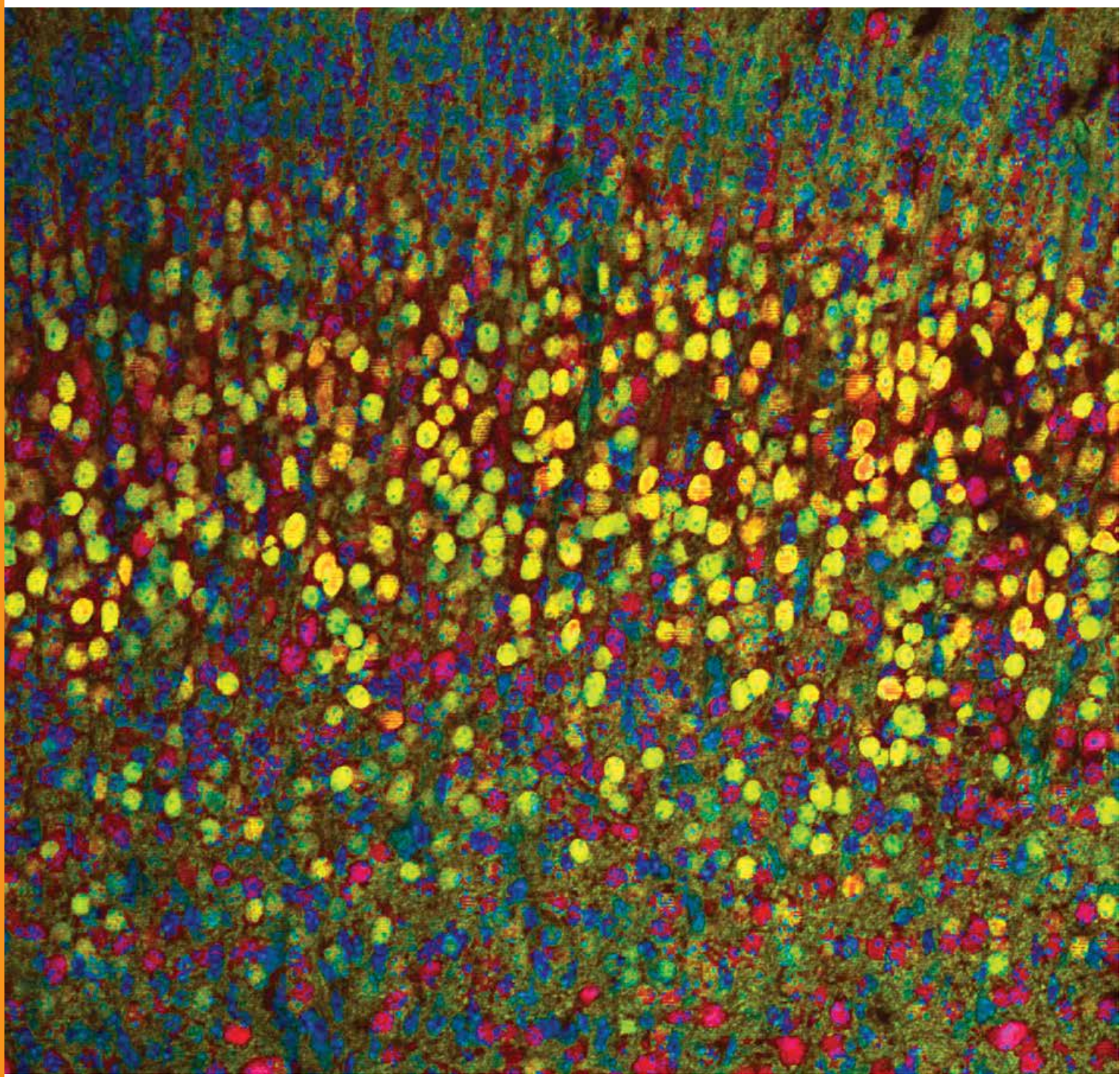

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