

PROGRAM

MONDAY, September 16—7:00 PM

SESSION 1 KEYNOTE SESSION

Chairperson: **Anthony Grace**, University of Pittsburgh, Pittsburgh, Pennsylvania, USA

The molecular jigsaw puzzle of schizophrenia

Anissa Abi-Dargham [35'+10']

Presenter affiliation: Stony Brook University, Stony Brook, New York; Columbia University, New York, New York. 1

Toward the mysteries of sleep

Masahi Yanagisawa [35'+10']

Presenter affiliation: International Institute for Integrative Sleep Medicine, Tsukuba University, Tsukuba, Ibaraki, Japan. 2

TUESDAY, September 17—9:00 AM

SESSION 2 NEUROPSYCHIATRIC DISORDERS

Chairperson: **Christian Luscher**, University of Geneva, Geneva, Switzerland

Peripubertal stress and hippocampal damage as risk factors in the pathophysiology of schizophrenia—Implications for treatment and prevention

Anthony A. Grace, Feliipe V. Gomes, Xiyu Zhu, Daniela Uliana [20'+10']

Presenter affiliation: University of Pittsburgh, Pittsburgh, Pennsylvania. 3

Investigating bipolar disorder using combined iPSC and mouse models

Jun Yao [20'+10']

Presenter affiliation: Tsinghua University, Beijing, China. 4

Common molecular, synaptic and behavior endo-phenotype in the olfactory system in three genetic susceptibility mouse models of schizophrenia

Xinjun Wang, Li Sun, Chunzhao Zhang, Qian-Quan Sun [15'+5']

Presenter affiliation: University of Wyoming, Laramie, Wyoming.

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Coffee / Tea Break

Selective negative allosteric modulators of alpha 5-GABA_A receptors—Novel antidepressants

Alan Frazer [20'+10']

Presenter affiliation: UT Health San Antonio, San Antonio, San Antonio, Texas; South Texas Veterans Health Care System, San Antonio, Texas.

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Linking circuits to psychiatric disease and neurotherapeutic targets—From monkey anatomy to human neuroimaging

Suzanne N. Haber [20'+10']

Presenter affiliation: University of Rochester, Rochester, New York.

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PINK1-deficient mice show impaired hippocampal neurogenesis and increased vulnerability to stress-induced depression

Sandeep K. Agnihotri, Liuke Sun, Benjamin K. Yee, Ruifang Shen,

Hansruedi Büeler [15'+5']

Presenter affiliation: Harbin Institute of Technology, Harbin, China.

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TUESDAY, September 17—2:00 PM

SESSION 3 POSTER SESSION

Autism high-risk genes and new subtypes of autism-related neurodevelopmental syndromes

Hui Guo, Huidan Wu, Yingting Quan, Kun Xia

Presenter affiliation: Central South University, Changsha, China.

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A dual role of the UNC-13 M domain in Ca²⁺-triggered neurotransmitter release at the *C. elegans* neuromuscular junction

Haowen Liu, Lei Li, Zhitao Hu

Presenter affiliation: Queensland Brain Institute, University of Queensland, St. Lucia, Australia.

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| Molecular specificity of the inhibitory architecture modulates morphine-induced synaptic plasticity in prelimbic cortex <u>Changyou Jiang</u> , Qiumin Le, Feifei Wang, Lan Ma Presenter affiliation: Fudan University, Shanghai, China. | 11 |
| Exposome-wide association study in autism spectrum disorder using targeted and untargeted metabolomics platforms <u>Sek Won Kong</u> Presenter affiliation: Boston Children’s Hospital, Boston, Massachusetts. | 12 |
| Understanding systems-level mitochondrial dynamics in the axon through quantitative analysis and modeling Yiyi Yu, HaoChih Lee, Qinle Ba, <u>Wenjing Li</u> , Ge Yang Presenter affiliation: Institute of Automation, Chinese Academy of Sciences, Beijing, China. | 13 |
| Induction of vascular cognitive impairment by feeding chronic cerebral hypoperfusion mice with B6, B12, and Folate deficient diet <u>Ziyu Wang</u> Presenter affiliation: KAIST, Daejeon, South Korea. | 14 |
| Basolateral amygdala projecting anterior cingulate cortex neurons control reward devaluation <u>Zhengwei Yuan</u> , Zhongyang Qi, Yuting Cui, Qiru Feng, Minmin Luo Presenter affiliation: National Institute of Biological Sciences, Beijing, Beijing, China; Tsinghua University, Beijing, China. | 15 |

TUESDAY, September 17—4:30 PM

Chinese Tea and Beer Tasting

TUESDAY, September 17—7:00 PM

SESSION 4 NEURAL CIRCUITS OF SOCIAL BEHAVIOR

Chairperson: **Minmin Luo**, National Institute of Biological Sciences, Beijing, China

Regulation of social conflict by the synaptic plasticity in the habenulo-interpeduncular pathway

Hitoshi Okamoto [20'+10']

Presenter affiliation: RIKEN Center for Brain Science, Wako, Japan. 16

The medial preoptic area and sexually dimorphic social behaviors

Xiao-Hong Xu [20'+10']

Presenter affiliation: Chinese Academy of Sciences, Shanghai, China. 17

A brain circuit universally governs diverse aggressive behaviors

Shumin Duan [20'+10']

Presenter affiliation: Zhejiang University, Hangzhou, China. 18

Neuronal processing of social information in the medial amygdala of awake behaving mice

Ying Li [15'+5']

Presenter affiliation: Chinese Institute for Brain Research, Beijing, China. 19

Understanding the social brain

Weizhe Hong [15'+5']

Presenter affiliation: University of California, Los Angeles, Los Angeles, California. 20

WEDNESDAY, September 18—9:00 AM

SESSION 5 NEUROMODULATORS

Chairperson: **Hitoshi Okamoto**, RIKEN Center for Brain Science, Wako, Japan

Regulation of different aspects of aversively motivated behavior by ventral striatal circuitry

Stan B. Floresco [20'+10']

Presenter affiliation: University of British Columbia, Vancouver, Canada. 21

- Dopamine dynamics underlying delayed gratification**
 Zilong Gao, Chen Lu, Hanqing Wang, Xiaojing Wang, Wenzhi Sun, Ji Hu [20'+10']
 Presenter affiliation: ShanghaiTech University, Shanghai, China. 22
- A many-to-one sensory circuit encodes oxygen levels and drives respiratory behavior in *Danio rerio***
Chen-Min Yeh [15'+5']
 Presenter affiliation: The Salk Institute for Biological Studies, La Jolla, California. 23
- Binocular orientation matching regulates the development of visual circuits and behaviors**
Yu Gu [15'+5']
 Presenter affiliation: Fudan University, Shanghai, China. 24
- Coffee / Tea Brea**
- Mechanisms of synaptic plasticity in the noradrenergic locus coeruleus**
 Andrea Locarno, Ieva Miseviciute, Francois Georges, Raffaella Tonini [20'+10']
 Presenter affiliation: Istituto Italiano di Tecnologia, Genoa, Italy. 25
- Activation of cortical somatostatin interneurons rescues synapse loss and motor deficits after acute MPTP infusion**
 Kai Chen, Guang Yang, Kwok-Fai So, Li Zhang [15'+5']
 Presenter affiliation: Jinan University, Guangzhou, China. 26
- Hypothalamic glucagon like peptide-1 (GLP-1) regulates food intake**
Ji Liu, Kristie Conde, Jay Phansalkar, Zhiping Pang [15'+5']
 Presenter affiliation: University of Science and Technology of China, Hefei, China. 27

WEDNESDAY, September 18—1:30 PM

Visit to Old Suzhou

WEDNESDAY, September 18—7:00 PM

SESSION 6 STRESS AND ANXIETY

Chairperson: Lan Ma, Fudan University, Shanghai, China

Role of insular cortex in processing aversive somatosensory information during threat learning

Emmanuelle Berret, Michael Kintscher, Shriya Palchaudhuri, Wei Tang, Denys Osypenko, Olexiy Kochubey, Ralf Schneggenburger [20'+10']

Presenter affiliation: Laboratory of Synaptic Mechanisms, École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland.

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New features of the corticotrophin releasing factor system and its role in the regulation exerted by the basolateral amygdala to prefrontal cortex and nucleus accumbens

Hector E. Yarur, Juan A. Zegers, Katia Gysling [20'+10']

Presenter affiliation: Pontificia Universidad Católica de Chile, Santiago, Chile.

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Rapid, biphasic CRF neuronal responses encode positive and negative valence

Jineun Kim, Seongju Lee, Yi-Ya Fang, Anna Shin, Seahyung Park, Jong-Woo Sohn, Daesoo Kim, Dayu Lin, Greg S. B. Suh [20'+10']

Presenter affiliation: Korea Advanced Institute of Science and Technology, Daejeon, South Korea; New York University School of Medicine, New York, New York.

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Role of central amygdala in restrain-induced stress responses

Fan Xiao, Jiansheng Su, Wenfei Han [15'+5']

Presenter affiliation: Tongji University, Shanghai, China.

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THURSDAY, September 19—9:00 AM

SESSION 7 NEUROBIOLOGY OF DRUG ADDICTION

Chairperson: Yulong Li, Peking University School of Life Sciences, Beijing, China

Is opioid addiction an addiction like the others?

Christian Luscher [20'+10']

Presenter affiliation: University of Geneva, Genève, Switzerland.

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When the brain chooses under the influence, the drug is the only option
Serge H. Ahmed [20'+10']
Presenter affiliation: Université de Bordeaux, Bordeaux, France;
CNRS, Bordeaux, France. 33

Serotonin modulation of transition to compulsive drug use
Yue Li, Linda Simmler, Vincent J. Pascoli, Ruud V. Zessen, Christian
Luscher [15'+5']
Presenter affiliation: University of Geneva, Geneva, Switzerland. 34

Coffee / Tea Break

Silent synapses dictate cocaine memory destabilization and reconsolidation
William J. Wright, Nicholas M. Graziane, Yavin Shaham, Oliver M.
Schlueter, Eric J. Nestler, Yan Dong [20'+10']
Presenter affiliation: University of Pittsburgh, Pittsburgh, Pennsylvania. 35

Role of REM sleep on memory
Akihiro Yamanaka [20'+10']
Presenter affiliation: Nagoya University, Nagoya, Japan. 36

Inter-engram circuitry mediates the retrieval of cocaine memory
Lan Ma, Yiming Zhou, Xing Liu [20'+10']
Presenter affiliation: Fudan University, Shanghai, China. 37

THURSDAY, September 19—2:00 PM

SESSION 8 NEUROBIOLOGY OF LEARNING AND MEMORY

Chairperson: **Yan Dong**, University of Pittsburgh, Pittsburgh,
Pennsylvania, USA

NMDAR-controlled CCK switches LTP and memory encoding
Jufang He [20'+10']
Presenter affiliation: City University of Hong Kong, Hong Kong, China. 38

Deformations of the hippocampal cognitive map in large irregular spaces
Julija Krupic, Marino Krstulovic, Prannoy Chaudhuri-Vayalambone,
Pauline Kerekes, Marius Bauza [20'+10']
Presenter affiliation: University of Cambridge, Cambridge, United
Kingdom. 39

Sensory and state coding in subcortical circuits

Jan Gründemann [20'+10']

Presenter affiliation: University of Basel, Basel, Switzerland.

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Coffee / Tea Break

Fear erasure facilitated by immature inhibitory neuron transplantation

Yong-Chun Yu [20'+10']

Presenter affiliation: Fudan University, Shanghai, China.

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The raphe dopamine system controls the expression of incentive memory

Rui Lin, Jingwen Liang, Ruiyu Wang, Ting Yan, Youtong Zhou, Yang Liu, Qiru Feng, Anan Li, Hui Gong, Minmin Luo [15'+5']

Presenter affiliation: National Institute of Biological Sciences, Beijing, China.

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Pi4KII α in basolateral amygdala regulates US retrieval-induced contextual fear memory reconsolidation through early endosomal trafficking of GluA1-AMPA

Hong-Ling Guo, Zhong-Yu Zhang, Kai Yuan, Ying Han, Wen Zhang, Jie Shi, Lin Lu [15'+5']

Presenter affiliation: Peking University, Beijing, China.

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THURSDAY, September 19—6:00 PM

COCKTAILS and BANQUET

FRIDAY, September 20—9:00 AM

SESSION 9 EMERGING NEUROMETHODS

Chairperson: **Yong-Chun Yu**, Fudan University, Shanghai, China

A novel genetically-encoded sensor for monitoring endocannabinoid dynamics in vitro and in vivo

Yulong Li [20'+10']

Presenter affiliation: Peking University School of Life Sciences, Beijing, China.

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Whole-brain reconstruction of neuronal morphology with cell type-specificity
Haibing Zhou, Ji Hu, Wenzhi Sun [15'+5']
Presenter affiliation: Chinese Institute for Brain Research, Beijing, China. 45

A genetically-encoded red fluorescent sensor for norepinephrine
Jiali Duan, Fangmiao Sun, Jiesi Feng, Yulong Li [15'+5']
Presenter affiliation: Peking University School of Life Sciences, Beijing, China. 46

Coffee / Tea Break

Whole-brain reconstruction of neuronal morphology with cell type-specificity
Minmin Luo [20'+10']
Presenter affiliation: National Institute of Biological Sciences, Beijing, China; Chinese Institute for Brain Research, Beijing, China; Tsinghua University, Beijing, China. 47

Targeted deeper brain stimulation by non-invasive ultrasound
Quanxiang Xian, Zhihai Qiu, Jinghui Guo, Shashwati Kala, Jiejun Zhu, Lei Sun [15'+5']
Presenter affiliation: The Hong Kong Polytechnic University, Hong Kong, Hong Kong. 48

Development of genetically-encoded multiplex tags for cell labeling under electron microscope
Yixin Hu, Rongbo Sun, Yini Yang, Renzimo Zhang, Yulong Li [15'+5']
Presenter affiliation: Peking University School of Life Sciences, Beijing, China. 49

Closing Remarks

Christian Luscher
University of Geneva