

IBNS 2016 Program - Budapest, Hungary

Please note this is not the final program and is subject to change.

Revised May 9, 2016

Tuesday, June 7

Council Meeting. 9:00-1:00

Tours. 1:00-6:00

Welcome Reception. 7:00-10:00

Student Social. 7:00-8:00

Wednesday, June 8

Sex differences in the brain: Implications for behavioral and biomedical research. Chair: Elena Choleris

8:00-8:30 Sex differences in rodent social behavior: Hormonal influences. Choleris, Elena; Clipperton-Allen, Amy; Ervin, Kelsy SJ; Lymer, Jennifer M; Gabor, Christopher S; Sheppard, Paul; Phan, Anna.

8:30-9:00 Sex matters: Hippocampal neurogenesis, Spatial Learning and Pattern Separation. Galea, Liisa A. M.

9:00-9:30 Estrogenic regulation of memory in males and females: Molecular mechanisms and implications for aging. Frick, Karyn M.

9:30-10:00 Sex differences in stroke and stroke therapies. Sohrabji, Farida.

Epigenetic Regulation of Motivated Behaviors. Chair: Zuoxin Wang; Co-Chair: Mohamed Kabbaj

8:00-8:30 Role of DNA methyl-cytosine oxidation in cocaine action. Feng, Jian.

8:30-9:00 Methamphetamine-associated memory is regulated by histone methylation. Miller, Courtney A.

9:00-9:30 Influence of genomic imprinting on metabolism and behavior. Lu, Xin-Yun.

9:30-10:00 Epigenetics of Social Bonding in Prairie Voles. Kabbaj, Mohamed; Wang, Zuoxin; Liu, Yan; Elvir, Lindsay.

Exhibits – Refreshment Break. 10:00-10:30

Keynote Speaker

10:30-11:30 **High Times for Cannabis: Epigenetic Imprint and its Legacy on Brain and Behavior.**
Yasmin Hurd.

Lunch. 11:30-1:30

Zebrafish and human brain disorders: A new tool in behavioral neuroscience. Chair: Robert Gerlai

- 1:30-2:00 Behavioral, anatomical, and pharmacological phenotyping of zebrafish models of autism. Ellen J. Hoffman, Marcus Ghosh, Katherine J. Turner, Steve W. Wilson, Matthew W. State, Antonio J. Giraldez, Jason Rihel.
- 2:00-2:30 Screening of natural products using zebrafish behavior. Ortiz, Jose G., del Valle-Mojica, L., Rosa-Falero, Coral and Torres-Hernandez, Bianca.
- 2:30-3:00 What makes us social? Analysis of a zebrafish model. Shams, Soaleha.
- 3:00-3:30 Zebrafish and alcohol: A simple vertebrate for a complex disease problem. Robert Gerlai.

Early life stress and serotonin: Effects on social and emotional health. Chair: Jodi Pawluski

- 1:30-2:00 Prenatal exposure to SSRI antidepressants and lessons we can learn about child development. Oberlander, Tim.
- 2:00-2:30 Effects of differential maternal care on sibling differences in anxiety, mothering, and serotonin mechanisms in rats. Ragan, Christina.
- 2:30-3:00 Developmental epigenetic programming in serotonin-transporter deficient mice. Van den Hove, Daniel.
- 3:00-3:30 Consequences of venlafaxine treatment and/or maternal adversity on neurobehavioral development of rat offspring. Császár Eszter, Melicherčíková Kristína, Mach Mojmir, Ujházy Eduard, Dubovický Michal.

Travel Award Blitz

- 4:10-4:16 A novel oxytocin-like compound reduces motivation to self-administer methamphetamine and relapse to methamphetamine seeking in rats. Baracz, Sarah; Everett, Nicholas; Bowen, Michael; Kassiou, Michael; Cornish, Jennifer; McGregor, Iain.
- 4:16-4:22 The subunit-specific role of NMDA receptors in behavioral dysfunctions evoked by traumatic event. Laszlo, Biro; Eva, Mikics; Eszter, Sipos; Christina, Miskolczi; Mate, Toth; Jozsef, Haller.
- 4:22-4:28 Examining the effect of chronic intranasal oxytocin administration on the neuroanatomy and behaviour in two different autism-related mouse models. Buchwald, Zsuzsa; Stuiwe, Monique; Ellegood, Jacob; Anagnostou, Evdokia; Lerch, Jason.
- 4:28-4:34 Temporal dissociation of activity-dependent alterations in prefrontal BDNF expression during decision-making shifts. Cole, Robert D.; Parikh, Vinay.
- 4:34-4:40 A gene x environment mouse model of switching between affective states: Reducing DAT function results in hypersensitivity to seasonal photoperiod-induced changes in affect. Cope, Zackary A; Dulcis, Davide; Young, Jared W.
- 4:40-4:46 Loss of neuronal activity in the central amygdala of seizure prone Fmr1 KO mice is conserved across multiple mouse lines susceptible to audiogenic seizures. Davenport, Matthew; Robinson, Chandler; Grainger, Lindsey; King, Andrew; Erickson, Craig; Schaefer, Tori.
- 4:46-4:52 CRHR1 Mediation of neuroplasticity and neuroinflammation in the hippocampus following global cerebral ischemia. Patricia B. de la Tremblaye and H el ene Plamondon.
- 4:52-4:58 Prodynorphin genetic polymorphisms and ventral striatonigral pathway activity contribute to individual differences in novelty seeking and positive reward traits. Egervari, Gabor; Jutras-Aswad, Didier; Landry, Joseph; Miller, Michael; Anderson, Sarah Ann; Michaelides, Michael; Jacobs, Michelle; Peter, Cyril; Yiannoulos, Georgia; Liu, Xun; Hurd, Yasmin L.

- 4:58-5:04 CB1 receptor antagonism increases anxiety-like behavioural responses and alters neurochemical levels in two distinct populations of zebrafish. Faccioli, Amanda; Tran, Steven; Chatterjee, Diptendu; Gerlai, Robert.
- 5:04-5:10 SERT on speed: Enhanced emission of amphetamine-induced 50-kHz ultrasonic vocalizations in rats lacking the serotonin transporter due to long-term adaptations in 5-HT_{2C} receptor functioning. Kisko TM, Willadsen M, Vörckel KJ, Seffer D, Schwarting RKW, Homberg J, Wöhr M.
- 5:10-5:16 Sex differences in the effects of naltrexone on appetitive and consummatory responses to ethanol in adult rats. Nieto, Steven J; Winoske, Kevin J; Kosten, Therese A.
- 5:16-5:22 Role for hypothalamic projections to habenula in obesity. Richard M. O'Connor and Paul J. Kenny.
- 5:22-5:28 The impact of neurogenesis on flexible maze training: Effects on hippocampal volume and cognition. Schoenfeld, Timothy; Rhee, Diane; Cameron, Heather.
- 5:28-5:34 Post-weaning social isolation results in ultrasonic communication deficits, cognitive impairments and alterations in microRNA-dependent Ube3a1 function on neuronal plasticity in rodents: Implications for autism. Seffer, Dominik; Rippberger, Henrike; Valluy, Jeremy; Bicker, Silvia; Aksoy-Aksel, Ayla; Lackinger, Martin; Sumer, Simon; Fiore, Roberto; Wüst, Tatjana; Metge, Franziska; Dieterich, Christoph; Schratt, Gerhard; Schwarting, Rainer K.W.; Wöhr, Markus.
- 5:34-5:40 Developmental social isolation alters expression of neural proteins in adult zebrafish. Shams, Soaleha; Chatterjee, Diptendu; Gerlai, Robert.
- 5:40-5:46 Dissociable roles for basolateral amygdala and orbitofrontal cortex in optimal choice behavior under conditions of reward variability. Alexandra Stolyarova, Alicia Izquierdo.
- 5:46-5:52 Aberrant Cognitive Phenotypes and Altered Hippocampal BDNF Expression Related to Epigenetic Modifications in the Shank1 Knockout Mouse Model for Autism. Sungur, A Ozge; Jochner, Magdalena CE; Harb, Hani; Kilic, Ayse; Garn, Holger; Schwarting, Rainer KW; Wöhr, Markus.
- 5:52-5:58 Alcohol induced locomotor activity is mediated by dopamine D₂-like receptors in zebrafish. Tran, Steven; Faccioli, Amanda; Nowicki, Magda; Chatterjee, Diptendu; Gerlai, Robert.

Oral Session 1: Addiction

- 6:00-6:10 Readers of histone acetylation marks regulate behavioral and transcriptional responses to drugs of abuse. Sartor, Gregory C.; Powell, Sam K.; Wahlestedt, Claes.
- 6:10-6:20 Ventral tegmental area L-type calcium channel mechanisms mediating cue-induced cocaine-seeking. Addy, Nii A; Nunes, Eric J; Hughley Shannon M; Solecki, Wojciech B; Wickham, Robert J; Small, Keri M; Rajadhyaksha, Anjali M.
- 6:20-6:30 Prenatal testosterone activity determines adult alcohol drinking and morphology in male and female mice. Huber, Sabine E.; Lenz, Bernd; Kornhuber, Johannes; Müller, Christian P.
- 6:30-6:40 Ceftriaxone and cocaine relapse: contrasting the roles of xCT and GLT-1 upregulation. Knackstedt, Lori.
- 6:40-6:50 Sex differences in the selection between psychostimulant and food reinforcement in rats. Kippin, Tod; Bagely, Jared; Purpura, Mari; Vieira, Philip.

6:50-7:00 Tetrahydrocannabinoids ? Cannabinoids with Strong Anti-Nicotine Effects in Multiple Rodent Models of Nicotine Dependence. Gardner, Eliot L.; Muldoon, Pretal; Wang, Xiao-Fei; Bi, Guo-Hua; Damaj, M. Imad; Lichtman, Aron H.; Pertwee, Roger G.; Xi, Zheng-Xiong.

Oral Session 2. Schizophrenia, other Genetic Disorders

- 6:00-6:10 Arc/Arg3.1 genetic disruption in mice causes dopamine system alterations and neurobehavioral phenotypes related to schizophrenia. Managò, Francesca; Mereu, Maddalena; Mastwal, Surjeet; Scheggia, Diego; Emanuele, Marco; Mastrogiacomo, Rosa; Talbot, Konrad; De Luca, Maria A.; Weinberger, Daniel R.; Wang, Kuan H.; Papaleo, Francesco.
- 6:10-6:20 Preventing both schizophrenia- and depression-like behavioral abnormalities in a novel neurodevelopmental model. Weiner Ina, Wolff Nizan, Ardeli Rachel, Jacobovich Elad, Doron Ravid.
- 6:20-6:30 Evaluating the validity of a novel transgenic mouse model for neuregulin 1 type III for schizophrenia. Tim Karl, Juan C Olaya, David Lloyd, Carrie L Heusner, Mitsuyuki Matsumoto & Cynthia Shannon Weickert.
- 6:30-6:40 A precision medicine genetic marker for core cognitive deficits in schizophrenia. Diego, Scheggia; Maddalena, Mereu; Marco, Armando; Maria, De Luca; Genny, Orso; Francesco, Papaleo.
- 6:40-6:50 The role of mesopontine cholinergic neurons in prepulse inhibition of startle. Azzopardi, Erin; Louttit, Andrea; Haddad, Faraj; Schmid, Susanne.
- 6:50-7:00 Hypoglycemia Reduces Cognitive Performance with Changes of Cerebral Blood Flow in Subjects with Type 1 Diabetes. Gjedde, Albert; Gejl, Michael; Brock, Birgitte; Møller, Arne; Van Duinkerken, Eelco; Haahr, Hanne; Hansen, Charlotte; Chu, Pei-Ling; Stender-Petersen, Kirstine; Rungby, Jørgen.

Thursday, June 9

Behavioral and molecular bases of drug and food addiction: Similarities and Differences. Chair: Jean Lud Cadet

- 8:00-8:30 Compulsive palatable food eating in the presence of adverse consequences. Cadet, Jean Lud; White, Shannan; and Krasnova, Irina.
- 8:30-9:00 Molecular mechanisms underlying methamphetamine addiction and relapse. Krasnova, Irina.
- 9:00-9:30 Sign-tracking; A failure in flexibility. Helen M. Nasser, Yu-Wei Chen, Kimberly Fiscella Donna J. Calu.
- 9:30-10:00 Environmental enrichment and addiction. Solinas, Marcello.

Diet impact on brain plasticity and cognition. Chair: Guillaume Ferreira; Co-Chair: Patrizia Campolongo

- 8:00-8:30 Juvenile obesity bidirectionally modulates amygdala and hippocampal memory systems. Ferreira Guillaume.
- 8:30-9:00 Effect of stress and high-fat diet on extinction memory and prefrontal plasticity in postweaning and adult animals. Mouna, Maroun; Guillaume, Ferreira; Rachel, Schayek; Tala, Khazen; Idit, Mor; Sophie, Trabish; Walaa Awad; Milly, Kritman.

- 9:00-9:30 Perinatal exposure to omega-3 fatty acid imbalance leads to enduring memory alterations in rats. Colucci, Paola; De Castro, Valentina; Peloso, Andrea; Campolongo, Patrizia.
- 9:30-10:00 The influence of diet and learning on the internal versus external controls of intake. Davidson, Terry.

Exhibits – Refreshment Break. 10:00-10:30

Keynote Speaker

- 10:30-11:30 Translating genetics findings into biological mechanisms for ADHD through animal models. Lesch, K.P.

Lunch. 11:30-1:30

Career Development Workshop. 11:30-1:30

Resilience Redux: Better living through neurobiological research. Chair: Kelly Lambert

- 1:30-2:00 Does BDNF promote or prevent behavioral responses to social stress? Kim L. Huhman.
- 2:00-2:30 Stimulation of Entorhinal Cortex-Dentate Gyrus Circuitry is Antidepressive. Yun, Sanghee; Reynolds, Ryan P.; Rivera, Phillip D.; Segev, Amir; Ito, Naoki; Mukherjee, Shibani; Richardson, Devon R.; Kang, Catherine E.; Chetkovich, Dane M.; Kourrich, Said; Eisch, Amelia J.
- 2:30-3:00 Role of inflammatory factors and microRNAs in resilience to stress. Bhatnagar, Seema.
- 3:00-3:30 Who Moved My Cheese? Mapping resilient neurobiological response profiles to cognitive uncertainty and environmental threats. Lambert, Kelly.

Neuroendocrine Regulation of Animal Vocalization. Chair: Cheryl Rosenfeld; Co-Chair: Frauke Hoffmann

- 1:30-2:00 Heeding the Hormonal Call: Turning on and Tuning in to Acoustic Signals. Andrew H. Bass.
- 2:30-3:00 Nonclassical actions of steroids in the modulation of vocal and auditory circuits in songbirds. Luke Ramage-Healey.
- 2:00-2:30 Males mate call, females don't? Anuran vocal communication and its hormonal control. Hoffmann, Frauke.
- 3:00-3:30 Effects of bisphenol-A (BPA) on F2 Peromyscus californicus pup vocalizations. Johnson, Sarah A; Javurek, Angela B; Murphy, Claire R.; Khan, Zoya Z.; Conard, Caroline M.; Eilersieck, Mark R.; Hoffmann, Frauke; Schenk, A. Katrin; Rosenfeld, Cheryl S.

Exhibits – Refreshment Break. 3:30-4:00

Dopamine sensitization: A burden for treatments in schizophrenia? Chair: Davide Amato; Co-Chair: Anthony Vernon

- 4:00-4:20 The acute and chronic effects of antipsychotic treatment on synaptic dopamine levels: Preliminary results from a meta-analysis of microdialysis studies. Joseph Kambeitz, Davide Amato.
- 4:20-4:40 Mechanisms of antipsychotic treatment failure and psychosis. Amato, Davide; Canneva, Fabio; Kornhuber, Johannes; von Hörsten, Stephan; Müller, Christian, P.
- 4:40-5:00 Chronic antipsychotic treatment and grey matter volume loss: Epiphenomenon or cause for concern? Vernon, Anthony C.

TMS and Brain Functions. Chair: José Rubén García Montes

- 4:00-4:20 Basics and functional effects of transcranial electrical stimulation (tES). Michael A. Nitsche.
- 4:20-4:40 Exploring brain functions: TMS-EEG co-registration. Paolo Maria Rossini, Riccardo Di Iorio.
- 4:40-5:00 TMS to face dyskinesias in Parkinson's disease. René Drucker-Colín, José Rubén García Montes.

Stress and Behavior. Chair: Samina Salim

- 5:00-5:15 Glutathione as a glutamate reservoir: The GLU that binds inflammation and neurotransmission. Sedlak, Thomas W.; Koga, Minoru; Sawa, Akira.
- 5:15-5:30 A natural product as a tool to explore therapeutic targets for stress-induced microglial immune changes and depressive behaviors. Kamiya, Atsushi.
- 5:30-5:45 Oxidative Stress and Psychological Stress: A Cause or Consequence? Salim, Samina; Solanki, Naimesh.
- 5:45-6:00 The Role of Inflammation in PTSD and its Modulation by COMT Val158Met Genotype. Risbrough, Victoria; Deslauriers, Jessica; Nievergelt, Caroline; Baker, Dewleen; Geyer, Mark.

Pharmacological manipulation of trace amine-associated Receptor 1 signaling challenges conventional concepts of psychostimulant action. Chair: David Grandy; Co-Chair: Raul Gainetdinov

- 5:00-5:20 Behavioral Consequences of Modulating Glutamate Transmission by TAAR1. Gainetdinov RR.
- 5:20-5:40 TAAR1 activation reduces cocaine intake and relapse: Behavioral and neurobiological evidence. Li, Jun-Xu.
- 5:40-6:00 Modulation of mouse behavior and cognition by the endogenous TAAR1 agonist 3-iodothyronamine. Zucchi, Riccardo.

Exhibits – Refreshment Break. 6:00-6:30

Poster Session 1. 6:30-8:30

1. The interaction of oxytocin and the vasopressin V1A receptor in reducing relapse to methamphetamine abuse. Everett, Nicholas; Baracz, Sarah; Cornish, Jennifer.
2. Single-Exposure Conditioned Place Preference: An animal model of initial subjective drug effects. Grisel, Judith.
3. Is there an implicit association between physical activity and alcohol consumption? Najjar, Laian; Neighbors, Clayton; Henderson, Craig; Young, Chelsie; Hoyt, Alex; Leasure, Jennifer.
4. Chronic Alcohol Drinking Alters Modulation of Dopamine Release in Rhesus Dorsal Striatum. Lovinger, David M., Salinas, Armando, Cuzon Carlson, Verginia, Mateo, Yolanda, Grant, Kathleen A.
5. Sex differences in the effects of naltrexone on appetitive and consummatory responses to ethanol in adult rats. Nieto, Steven J; Winoske, Kevin J; Kosten, Therese A.
6. Context-independent effects of footshock on drug-seeking. Pizzimenti, Christie; Navis, Thomas; Lattal, K. Matthew.
7. The role of behavioral contingency in excessive cocaine-induced escalation of intake. Ploense, Kyle; Vieira, Philip; Bubalo, Lana; Olivarría, Gema; Carr, Amanda; Kippin, Tod.
8. Prenatal testosterone activity determines adult alcohol drinking and morphology in male and female mice. Huber, Sabine E.; Lenz, Bernd; Kornhuber, Johannes; Müller, Christian P.
9. Prenatal alcohol exposure alters cranially directed blood flow and neurological responses to transient cerebral ischemia in adult mice. Bake, Shameena; Gardner, Rachael; Tingling, Joseph; Miranda, Rajesh C; Sohrabji, Farida.

10. Magnetic field stimulation diminishes the probability to increase dyskinesia and decreases FosB in the genetic and 6-OHDA models of Parkinson's disease. Garcia-Montes, Jose-Ruben; Ruiz-DeDiego, Irene; Solis-Castrejon, Oscar; Drucker-Colin, Rene; Moratalla, Rosario.
11. Investigation of sucrose preference in large home cage with environmental enrichment. Kekesi, Gabriella; Ducza, Eszter; Büki, Alexandra; Benedek, Gyorgy, Horvath, Gyongyi.
12. Effects of systemic administration of ibuprofen on stress response in a rat model of post-traumatic stress disorder. Bombi Lee, Insop Shim, Hyejung Lee, Dae-Hyun Hahm.
13. Gene variants in cytochrome P450 CYP2C19 and CYP2D6 are associated with psychosis in a clinical sample of persons with Down syndrome. Malt, Eva; Dahl, Renate; Juhasz, Katalin, Rud, Ellen; Haugsand, Trine; Davidsen, Eva.
14. Prenatal exposure to Intuerluekin-6: A translational study examining component behaviors and MR based metrics associated with ADHD and autism. Mills, Brian; Shunmugavel, Anandakumar; Pizzimenti, Christie; Lattal, Matt; Mitchell, Suzanne; Fair, Damien.
15. Neural response to cognitive and emotional empathy task in the brain of autism spectrum disorder. Jung-Woo, Son; Seungwon, Jung; LsboK, Lee; Hee-Rhee, Ghim.
16. The role of mesopontine cholinergic neurons in prepulse inhibition of startle. Azzopardi, Erin; Louttit, Andrea; Haddad, Faraj; Schmid, Susanne.
17. The Aid of Ephedrine HCL, Curcumin and Turmerone in Neurogenesis and Inhibition of Beta-Amyloid Plaques in Transgenic Mice Models. Paramasivam, Keerthi.
18. The therapeutic potential of cannabidiol for Alzheimer's disease. David Cheng, Andrew Jenner, Andrea Spiro, Brett Garner and Tim Karl.
19. Flumazenil effects on c fos expression in striatum of rats with associative tolerance to midazolam. Cruz-Morales SE, Gonzalez-Sanchez DJ, Castillo-Roberto G, Arriaga-Ramirez JPC.
20. Effects of GABA-B Receptor Modulation in a Model of Chronic Inflammation. Murtishaw, Andrew S.; Bolton, Monica M.; Heaney, Chelcie F., Langhardt, Michael A.; Belmonte, Krystal Courtney D.; Boren, Austin J.; Calvin, Kirsten N.; Kinney, Jefferson W.
21. Role for hypothalamic projections to habenula in obesity. Richard M. O'Connor and Paul J. Kenny.
22. Single neuron firing in the rat Amygdala and Piriform Cortex during Social Interaction. Pibiri, Francesca; Poulter, Steven; Lever, Colin.
23. Lanthionine synthetase C-like 2 protein (LANCL2) in the spinal cord is crucial to maintain normal nociceptive behaviors in rats. Han-Rong Weng and Dylan W. Maixner.
24. Critical developmental period for the effects of methamphetamine on social behavior of adult male and female rats. Hrebickova, Ivana; Sevcikova, Maria; Macuchova, Eva; Slamberova, Romana.
25. Hyper-locomotor activity in the mice lacking in an enzyme synthesizing chondroitin sulfate. Igarashi, Michihiro; Takeuchi, Kosei; Yoshioka, Nozomu; Takao, Keizo; Miyakawa, Tsuyoshi.
26. Social play behavior in juvenile rats after neonatal exposure to methamphetamine. Sevcikova, Maria; Holubova, Anna; Hrebickova, Ivana; Slamberova, Romana.
27. Changes in gut microbiome during development of behavioral sensitization to the dopamine agonist quinpirole. Szechtman, Henry; Jung, Tony; Jung, Paul; Raveendran, Lucshman; Farbod, Yasamin; Sakic, Boris; Dvorkin-Gheva, Anna; Surette, Michael.
28. Signaling by tuberoinfundibular peptide of 39 residues in the medial amygdala modulates male aggressive behaviors. Tsuda, Mumeko C; Usdin, Ted B.
29. Sex-dependent behavioral effects of isolation-rearing. Hall, F. Scott; Muskiewicz, Dawn; Joshi, Dankesh; Gutierrez, Federico Resendiz; Hall, Natasha; Saber, Yasir.
30. Mechanisms underlying the effects of Synthetic Psychoactive Cathinones. Hall, F. Scott; Issa, Omar; Muskiewicz, Dawn; Saber, Yasir; Hall, Natasha; Yager, Joseph; Osting, Taylor; Piao, Ying-Shan; Sora, Ichiro.
31. Harmonic resonances in EEG from human participants entrained to photic flicker. Thalheimer, William; Storrs, Tyler; Candelaria, Damien; Cocchieri, Caterina; Saia, Domenick; Da Silva, Brenda; Flores, Mary; Flores, Juan; Danbury, Michelle; Rossi III, John.
32. Convulsions induced by Methyl -carboline-3-carboxylate (-CCM) in mice: effects of preceding saline injections. Martin, Benot.

33. Dissociable roles for basolateral amygdala and orbitofrontal cortex in optimal choice behavior under conditions of reward variability. Alexandra Stolyarova, Alicia Izquierdo.
34. Behavioral characterization of neuropeptide S-deficient mice in animal paradigms of pathological fear. Kolodziejczyk, Malgortaza; Germer, Josephine; Kahl, Evelyn; Fendt, Markus.
35. Effects of lipopolysaccharide administration on performance deficits in the 5-choice serial reaction time task are augmented in socially-isolated rats. Adams, Wendy; Harris, Eva; Zeeb, Fiona; Taves, Matthew; Soma, Kiran; Winstanley, Catharine.
36. Effect of beta-asarone on impairment of spatial working memory and apoptosis in the hippocampus of rats exposed to chronic corticosterone administration. Bombi Lee, Insop Shim, Hyejung Lee, Dae-Hyun Hahm.
37. En route to delineating the hippocampal contributions to spatial learning. Poulter, Steven; Austen, Joe; Kosaki, Yutaka; Lever, Colin; McGregor, Anthony.
38. Relief learning requires a coincident activation of dopamine D1 and NMDA receptors within the nucleus accumbens. Bergado Acosta, Jorge R.; Kahl, Evelyn; Kogias, Georgios; Uzunezer, Taygun; Fendt Markus.
39. Aha-like experience in the rat. Makino, Kenichi; Ikegaya, Yuji.
40. Learning and memory in the traveling salesman problem in rats. Stojanovic, Marta; Blaser, Rachel.
41. Effects of Acute Ethanol Withdrawal and Intoxication on the Extinction and Reconditioning of Contextual Fear Memories. Williams, Amy R; Lattal, Kennon Matthew.
42. Hypoglycemia Reduces Cognitive Performance with Changes of Cerebral Blood Flow in Subjects with Type 1 Diabetes. Gjedde, Albert; Gejl, Michael; Brock, Birgitte; Møller, Arne; Van Duinkerken, Eelco; Haahr, Hanne; Hansen, Charlotte; Chu, Pei-Ling; Stender-Petersen, Kirstine; Rungby, Jørgen.
43. Role of muscarinic acetylcholine signaling in G protein-coupled estrogen receptor-mediated social learning facilitation in female mice. Ervin, Kelsy; Qiu, Wansu; Topic, Tino; Choleris, Elena.
44. Long-term early life adverse experience affects recognition memory and accelerates the process of habituation to familiar environment. Holubova, Anna; Mikulecka, Anna; Pometlova, Marie; Nohejlova, Kateryna; Slamberova, Romana.
45. Learning impairments produced by embryonic lead exposure persisted in F3 male and female zebrafish. Xu, Xiaojuan; Weber, Daniel.
46. Post-weaning social isolation results in ultrasonic communication deficits, cognitive impairments and alterations in microRNA-dependent Ube3a1 function on neuronal plasticity in rodents: Implications for autism. Seffer, Dominik; Rippberger, Henrike; Valluy, Jeremy; Bicker, Silvia; Aksoy-Aksel, Ayla; Lackinger, Martin; Sumer, Simon; Fiore, Roberto; W?st, Tatjana; Metge, Franziska; Dieterich, Christoph; Schrott, Gerhard; Schwarting, Rainer K.W.; Wöhr, Markus.
47. Application of activation induced manganese-enhanced magnetic resonance imaging (MEMRI) for mapping of brain structures activated by operant behavior in rats. Gálosi, R., Szalay, Cs., Aradi, M., Pál, J., Perlaki, G., Karádi, Z. and Lénárd, L.
48. Temporal dissociation of activity-dependent alterations in prefrontal BDNF expression during decision-making shifts. Cole, Robert D.; Parikh, Vinay.
49. Exogenous ketone supplements reduce anxiety-related behavior in Sprague-Dawley and Wistar Albino Glaxo/Rijswijk rats. Ari, Csilla; Kovacs, Zsolt; Juhasz, Gabor; Murdun, Cem; Goldhagen, Craig R; Koutnik, Andrew; Poff, Angela M; Kesi, Shannon L; D'Agostino, Dominic P.
50. Long-term sexually-dichotomic impact of adolescent CRF hyper-signaling on adult anxiety-like traits and trauma susceptibility. Toth M, Desiree Hoppener, Geyer MA, Mansuy IM, Merlo-Pich E, Risbrough VB.
51. CB1 receptor antagonism increases anxiety-like behavioural responses and alters neurochemical levels in two distinct populations of zebrafish. Facciol, Amanda; Tran, Steven; Chatterjee, Diptendu; Gerlai, Robert.
52. The Cacna1c genetic rat model for affective disorders: Behavioral phenotypes and inflammatory markers. Braun, Moria D.; Kisko, Theresa M.; Kayumova, Rukshona; Raithel, Clara; Hohmeyer, Christine; Rietschel, Marcella; Witt, Stephanie H.; Schwarting, Rainer K.W.; Garn, Holger; Wöhr, Markus.

53. The impact of maternal separation on adolescent social behavior may be mediated by changes in the maternal care after separation. A. Magalhaes, R. Alves, M. Nogueira, C.J. Alves, A. Mesquita, T. Summavielle, L. De Sousa.
54. Environmental enrichment prevents autistic-like behaviors following early life stress in CD-1 Mice. Cornwell, Catherine; Melton, Christopher; McDowell, Yoanna; LeMon, Janelle.
55. Nucleus incertus, GABA and relaxin-3: an emerging modulatory role in arousal, stress and memory. Ma, Sherie; Ong-Palsson, Emma; Allocca, Giancarlo; Singleton, Caitlin; Williams, Spencer; Bathgate, Ross; Gundlach, Andrew.
56. Pharmacotherapy combined with psychotherapy in social disturbances: plastic role of the ventromedial prefrontal cortex. Mikics, Eva; Karpova, Nina; Biro, Laszlo; Guirado, Ramon; Miskolczi, Christina; Toth, Mate; Balazsfi, Diana; Zelena, Dora; Umemori, Juzoh; Haller, Jozsef; Castren, Eero.
57. Altruistic behavior in rats is enhanced by experience. Wrighten, Shayna; Kellis, Devin; Spears, Treonte.
58. The Neural Correlates of Visual Imagery. Winlove, Crawford I. P; Ranson, Jake; Aldworth, Susan; MacKisack, Matthew; Macpherson, Fiona; Onians, John; Zeman, Adam.
59. Early-life inflammation decelerates fear extinction in adult rodents? Potential implications for the endocannabinoid system. Doenni, Vienna M; Hill, Matthew N; Pittman Quentin J.
60. SERT on speed: Enhanced emission of amphetamine-induced 50-kHz ultrasonic vocalizations in rats lacking the serotonin transporter due to long-term adaptations in 5-HT_{2C} receptor functioning. Kisko, Theresa M; Willadsen, Maria; Vörckel, Karl J; Seffer, Dominik; Schwarting, Rainer KW; Homberg, Judith; Wöhr, Markus.

Friday, June 10

Consequences of drugs and stress during adolescence: Today, Tomorrow, and Beyond. Chair: Elizabeth Byrnes; Co-Chair: Fair Vassoler

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| 8:00-8:30 | The role of prefrontal norepinephrine in the ontogeny of cognitive control. McGaughy, Jill A. |
| 8:30-9:00 | Nicotine-induced synaptic plasticity in the orbitofrontal cortex differ between adolescent and adult mice. Turner, Jill. |
| 9:00-9:30 | Adolescent stress exposure increases vulnerability to addiction: Role of glutamate plasticity. Briand, Lisa; Fosnocht, Anne; Ellis, Alexandra; Deutschmann, Andre. |
| 9:30-10:00 | A history of adolescent morphine exposure induces transgenerational effects on reward and relapse. Vassoler, Fair. |

Selected topics of the Hungarian Behavioral Neuroscience. Chair: László Lénárd; Co-Chair: Robert Gerlai

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| 8:00-8:20 | Substance P and neurotensin: Reinforcers in the limbic system. Lénárd L., László K., Kertes E., Ollmann T., Péczely L., Kovács A., Gálosi, R., Karádi, Z. |
| 8:20-8:40 | The role of CRF and the urocortins in social interaction. Bagosi, Zsolt; Csabafi, Krisztina; Jászberényi, Miklós; Telegdy, Gyula. |
| 8:40-9:00 | Role of subcortical prefrontal projections in social behavior as revealed by axonal optic stimulation. Jozsef Haller, Eva Mikics, Laszlo Biro, Eszter Sipos, Dora Zelena, Mate Toth. |
| 9:00-9:20 | Glucose-monitoring neurons in the medial orbitofrontal cortex of rat. Szabo, Istvan; Hormay, Edina; Csetenyi, Bettina; Karadi, Zoltan. |
| 9:20-9:40 | The application of psychomotor vigilance measures in a nonhuman primate pharmacological model of neurocognitive disorders. Hernádi, István; Oláh, Vilmos; Trunk, Attila; Inkeller, Judit. |

9:40-10:00 Neural mechanisms for vocal social perception: dog-human comparative fMRI studies. Attila Andics, Márta Gácsi, Tamás Faragó, Anna Gábor, Dóra Szabó, Ádám Miklósi.

Exhibits – Refreshment Break. 10:00-10:30

Keynote Speaker

10:30-11:30 Regulation and Function of Adult Hippocampal Neurogenesis: the Role of Exercise. van Praag, Henriette.

Lunch. 11:30-1:30

Meet the Professionals. 11:30-1:30

Current progress in characterizing therapeutic strategies and challenges after experimental CNS injury.

Chair: Anthony E. Kline; Co-Chair: Corina O. Bondi

1:30-2:00 Unraveling frontal lobe dysfunction after TBI with pre-clinical models. Bondi, Corina; Cooley, Emma; Rohac, Rebecca; Marshall, Ian; McPeake, Emily; Kutash, Lindsay; LaPorte, Megan; Cheng, Jeffrey; Kline, Anthony.

2:00-2:30 Using circuit-directed behavioral induction of immediate early genes as a biomarker for circuit integrity during recovery of brain injury. Thomas, Theresa; Khodadad, Aida; Adelson, P. David; Lifshitz, Jonathan.

2:30-3:00 CRHR1 Mediation of neuroplasticity and neuroinflammation in the hippocampus following global cerebral ischemia. Patricia B. de la Tremblaye and Hélène Plamondon.

3:00-3:30 When behavioral management after brain trauma goes awry. Kline, Anthony E, Bondi, Corina O.

The heterogeneity of depression: Obstacle or opportunity? Chair: Bill Deakin; Co-Chair: Gabriella Juhasz

1:30-2:00 The role of comorbid disorders in deciphering the pathophysiology of depression. Juhasz, Gabriella; Marx, Peter; Antal, Peter; Deakin, Bill.

2:00-2:30 Can we translate the diathesis-stress approach from animal to human research? Harro, Jaanus; Kaart, Tanel; Laas, Kariina; Veidebuam, Toomas.

2:30-3:00 Stratification of Appetite Changes in Depression and in Response to Anorectic Drugs using functional Magnetic Resonance Imaging. Dourish, Colin.

3:00-3:30 Exploring possible stratifications using a Bayesian systems-based approach in large-scale heterogeneous data. Hullam, Gabor; Juhasz, Gabriella; Antal, Peter.

Exhibits – Refreshment Break. 3:30-4:00

The different faces of hippocampal theta. Chair: Colin Lever

4:00-4:15 Spatial cognition or Anxiety? Can dissociable theta frequency correlates reconcile opposing views of hippocampal function? Colin Lever, Miranda Hines, Steven Poulter, Vincent Douchamps, Anthony McGregor.

4:15-4:30 Coding of space and time by interactions of entorhinal cortex and medial septum. Hasselmo, Michael.

4:30-4:45 What does hippocampus tell hypothalamus? Optogenetic control of hippocampal theta oscillations reveals their function in locomotion. Bender, Franziska; Gorbati, Maria; Carus-Cadavieco, Marta; Denisova, Natalia; Gao, Xiaojie; Holman, Constance; Ponomarenko, Alexey; Korotkova, Tatiana.

4:45-5:00 Theta-related physiology in the freely moving developing rat. Thomas J Wills.

Role of the prefrontal cortex and hippocampus in motivation, decision making, and drug relapse: Cooperation or competition? Chair: Jennifer M. Bossert

4:00-4:15 My ERK-some PFC: A glutamatergic basis for incubated drug-craving. Szumlinski, Karen K.

4:15-4:30 Role of projections from ventral subiculum to nucleus accumbens shell in context-induced reinstatement of heroin seeking in rats. Bossert, Jennifer M.; Adhikary, Sweta; St. Laurent, Robyn; Marchant, Nathan J.; Wang, Huiling; Morales, Marisela; Shaham, Yavin.

4:30-4:45 Prefrontal cortex and hippocampus: henchmen of addiction. Fuchs, Rita A.

4:45-5:00 Hippocampal circuits in cognition and behavior. Chudasama, Yogita.

Oral Session 3. Learning, Memory, Attention, and Related Cognitive Functions

5:00-5:10 In vivo optogenetic manipulation of dopamine neurons in a novel behavioral economics based food-seeking task. Oleson, Erik; Pultorak; Katherine; Krzystyniak, Gregory; Das, Raibatak; Schelp, Scott.

5:10-5:20 ERK phosphorylation of cholinergic medial septal neurons by icv infusion of a relaxin3 agonist impairs spatial working memory. Francisco E. Olucha-Bordonau, Héctor Albert-Gascó, Álvaro García-Avilés, Salma Moustafa, Sandra Sánchez-Sarasua, Andrew L. Gundlach, Ana M. Sánchez-Pérez.

5:20-5:30 The Aid of Ephedrine HCL, Curcumin and Turmerone in Neurogenesis and Inhibition of Beta-Amyloid Plaques in Transgenic Mice Models. Paramasivam, Keerthi.

5:30-5:40 The sound of silence - The role of vocalizations in sociosexual behaviors and mate choice in groups of rats (*Rattus Norvegicus*) in a seminatural environment. Xi Chu, Anders Agmo.

New cellular insights into the maintenance of memory in mammals and mollusks. Chair: David Glanzman

5:00-5:15 PKMzeta, LTP and Memory. Sacktor, Todd.

5:15-5:30 PKM stabilizing proteins in long-term memory. Ferguson, Larissa; Chen, Shanping; Glanzman, David; Sossin Wayne.

5:30-5:45 Multiple Calpains Can Mediate Formation of Protein Kinase Ms Involved in Memory-Related Synaptic Plasticity. Hastings, Margaret H.; Abi Farah, Carole; Dunn, Tyler W.; Hu, Jiangyuan; Cai, Diancai; Chen, Shanping; Gong, Katrina; Fan, Xiaotang; Bougie, Joanna K.; Baker-Andresen, Danay; Schacher, Samuel; Glanzman, David L.; Sossin, Wayne S.

5:45-6:00 The role of PKM and epigenetic mechanisms in the consolidation and maintenance of long-term memory. Glanzman, David L.; Chen, Shanping; Cai, Dianbai; Pearce, Kaycey; Roberts, Adam C.

Exhibits – Refreshment Break. 6:00-6:30

Poster Session 2. 6:30-8:30

1. A novel oxytocin-like compound reduces motivation to self-administer methamphetamine and relapse to methamphetamine seeking in rats. Baracz, Sarah; Everett, Nicholas; Bowen, Michael; Kassiou, Michael; Cornish, Jennifer; McGregor, Iain.
2. Effect of *Bupleurum falcatum* on behavioral sensitization and enhanced dopaminergic expression. Dae-Hyuk Jang, Hyun-ju Lee; Dae-Hyun Hahm, Hye-Jung Lee; Insop Shim.

3. Potential role of wolfberry extract in the drug abuse rehabilitation: Protective effect of Lycium barbarum polysaccharide on dextromethorphan-induced neurogenesis and mood impaired rats. Po, Kevin Kai-ting; Siu, Andrew Man-hong; Chan Jackie Ngai-man; So, Kwok-fai; Fung Kai-hang; Lau, Benson Wui-man.
4. Determining Mechanisms behind the Blunted Response to Stimulants in Toxoplasma gondii Chronically Infected Mice. McFarland, Ross; Weng, Zi Teng; Sibley, David; Baraban, Jay; Yolken, Robert; Pletnikov, Mikhail.
5. The role of mGluR5 in neurobiological mechanisms of resilience to develop comorbid PTSD and cocaine addiction. Marek Schwendt and Lori Knackstedt.
6. Mapping of the prenatal and adult methamphetamine effects on D1-like dopamine, M1 and M2 muscarinic receptors in rat central nervous system. Slamberova, Romana; Farar, Vladimir; Valuskova, Paulina; Myslivecek, Jaromir.
7. Altered long-term plasticity of glutamatergic synapses in the nucleus accumbens of alcohol-dependent rats. Giuseppe Talani, Gabriele Sarigu, Laura Firino, Francescangelo Vedele, Luca Picci, Giovanni Biggio, Enrico Sanna.
8. Alcohol induced locomotor activity is mediated by dopamine D2-like receptors in zebrafish. Tran, Steven; Facciol, Amanda; Nowicki, Magda; Chatterjee, Diptendu; Gerlai, Robert.
9. The role of copa and CB1 receptor in cocaine-induced locomotor sensitization and JWH-210-induced dopamine release. Jaesuk Yun, Tac-hyung Lee, Young-Hoon Kim, HyeJin Cha, Hye-Kyung Park and Hyung Soo Kim.
10. Ceftriaxone and cocaine relapse: contrasting the roles of xCT and GLT-1 upregulation. Knackstedt, Lori.
11. Examining the effect of chronic intranasal oxytocin administration on the neuroanatomy and behaviour in two different autism-related mouse models. Buchwald, Zsuzsa; Stuve, Monique; Ellegood, Jacob; Anagnostou, Evdokia; Lerch, Jason.
12. Mild Behavioural Impairments in Shank3 Mutant Mice, a mouse model for autism spectrum disorders? Allain-Thibeault Ferhat, Anne-Marie Le Sourd, Thomas Bourgeron, Elodie Ey.
13. Heterozygous deletion of GTF2i results in hypersocial behavior, but duplication of this gene has no effects on social behavior in mice: implications for Williams Beuren Syndrome and Autism Spectrum Disorder. Martin, Loren; Iceberg, Erica; Allaf, Gabriel; Slama, Maryann; Liew, Cassandra; Engelmann, Julie.
14. Developmental social isolation alters expression of neural proteins in adult zebrafish. Shams, Soaleha; Chatterjee, Diptendu; Gerlai, Robert.
15. Deficiency of neurogranin, a susceptible gene for schizophrenia, causes behavioral phenotypes related to schizophrenia and immaturity of the dentate gyrus in mice. Satoko Hattori, Hideo Hagihara, Yoshihiro Takamiya, Toshiki Kameyama, Yuya Ouchi, Hidehito Inagaki, Hiroki Kurahashi, Freesia L Huang, Kuo-Ping Huang, Tsuyoshi Miyakawa.
16. Aberrant Cognitive Phenotypes and Altered Hippocampal BDNF Expression Related to Epigenetic Modifications in the Shank1 Knockout Mouse Model for Autism. Sungur, A Ozge; Jochner, Magdalena CE; Harb, Hani; Kilic, Ayse; Garn, Holger; Schwarting, Rainer KW; Wöhr, Markus.
17. A precision medicine genetic marker for core cognitive deficits in schizophrenia. Diego, Scheggia; Maddalena, Mereu; Marco, Armando; Maria, De Luca; Genny, Orso; Francesco, Papaleo.
18. Stimulation of the nucleus pontis oralis elicits low frequency oscillations at different frequencies in the prefrontal cortex and hippocampus in urethane anesthetized rats. Bernat Kocsis.
19. CRHR1 Mediation of neuroplasticity and neuroinflammation in the hippocampus following global cerebral ischemia. Patricia B. de la Tremblaye and Hélène Plamondon.
20. Dopaminergic nature of behaviorally-induced emission of 50 kHz appetitive vocalizations. Mulvihill, KG; Brudzynski, SM.
21. The antidepressant-like effect of agmatine is associated with AMPA receptor activation and increased levels of BDNF and synaptic proteins in prefrontal cortex. Neis, Vivian B; Moretti, Morgana; Bettio, Luis Eduardo; Ribeiro, Camille; Rosa, Priscila; Gonzalves, Filipe; Lopes, Mark; Leal, Rodrigo; Rodrigues, Ana Lucia.

22. Loss of neuronal activity in the central amygdala of seizure prone Fmr1 KO mice is conserved across multiple mouse lines susceptible to audiogenic seizures. Davenport, Matthew; Robinson, Chandler; Grainger, Lindsey; King, Andrew; Erickson, Craig; Schaefer, Tori.
23. Investigating the effects of history of concussion on baseline scores on the Sport Concussion Assessment Tool (SCAT-2). Kim M Gerecke; Madeline Davis.
24. An investigation of maternal experience on neurobiological and behavioral responses in middle aged rats. Kirk, Emily; Thompson, Brooke; Barha, Cindy; Galea, Liisa; Bardi, Massimo; Kent, Molly; Lambert, Kelly.
25. Strains of an accompanying conspecific affect the efficacy of social buffering in male rats. Kiyokawa, Yasushi; Nakamura, Kayo; Ishii, Akiko; Takeuchi, Yukari; Mori, Yuji.
26. Ketamine exposure during adolescence increases sensitivity to reward-related stimuli in adulthood. Riggs, Lace M.; Alipio, Jason B.; Garcia, Israel; Zavala, Arturo R.; Iniguez, Sergio D.
27. Prodynorphin genetic polymorphisms and ventral striatonigral pathway activity contribute to individual differences in novelty seeking and positive reward traits. Egervari, Gabor; Jutras-Aswad, Didier; Landry, Joseph; Miller, Michael; Anderson, Sarah Ann; Michaelides, Michael; Jacobs, Michelle; Peter, Cyril; Yiannoulos, Georgia; Liu, Xun; Hurd, Yasmin L.
28. An open source toolkit for combining neurophysiology and rodent behavior. Katalin Sviatkó, Tamás Laszlovszky, Panna Hegedüs, Nicola Solari, Joshua I Sanders, Balázs Hangya.
29. Integrity of Parent's Brain in Infancy Supports the Development of Children's Social Competencies. Abraham, Eyal; Hendler, Talma; Feldman, Ruth.
30. Elevated blood ketone levels increase the latency of anesthetic induction in GLUT1 mouse model. Ari, Csilla; Murdun, Cem; Goldhagen, Craig; Rogers, Christopher; D'Agostino, Dominic.
31. Individual differences in fear extinction; Role of orexin and cholinergic systems. Wilson, Marlene A.; Sharko, Amanda C; Kaigler, Kris F; Mott, David; McElroy, Joshua; Hartshorn, George; Fadel, Jim R.
32. The subunit-specific role of NMDA receptors in behavioral dysfunctions evoked by traumatic event. Laszlo, Biro; Eva, Mikics; Eszter, Sipos; Christina, Miskolczi; Mate, Toth; Jozsef, Haller.
33. High fat diet induced neuroinflammation and cognitive impairment can be restored by fitohormone abscisic acid treatment. SanchezPerez, Ana Maria; Sanchez, Sandra; Moustafa, Salma; Garcia-Aviles, Avaro; OluchaBordonau Francisco.
34. The memory-promoting effects of estradiol and low luteinizing hormone: Possible role of brain-derived neurotrophic factor. Thornton, Janice; Bohm-Levine, Nathaniel.
35. Do prenatally methamphetamine-exposed male and female rats differ in the effect of chronic treatment with various drugs on spatial learning? Macuchova, Eva; Hrebickova, Ivana; Sevcikova, Maria; Nohejlova, Kateryna; Slamberova, Romana.
36. Rat model of prenatal malnutrition: prefrontal cortical dysfunction and neuropsychiatric implications. McGaughy, Jill A.; Galler, Janina R.
37. Acute amphetamine administration improves attention in rats with low baseline performance. Turner, Karly; Peak, James; Burne, Thomas.
38. Dorsal hippocampal dopamine D2-type receptors sex-specifically mediate the social transmission of food preferences in mice. Matta, Richard; Underwood, Emily A.; Leach, Zoe K.; Vertes, Alex C.; Atabakhsh, Victoria; da Silva, Mayara B.; Choleris, Elena.
39. Gender Differences in Decision-Making under Risk. Cherkasova M. V., Winstanley C. A., Clark L., Stoessl A.J.
40. Exploring Neurobiological Markers of Resilience Through Life's Ups and Downs: Effects of Contingency Training in Male and Female Long-Evans Rats. Kent Molly, Scott Samantha, Mckearney Noelle, Dozier B, Lambert Skylar, Terhunecotter Brennan, Kirk Emily, Thompson Brooke, Bardi Massimo, & Lambert Kelly.
41. Resilience Therapy for Depression: Exploring Neurobiological Adjustments to Predisposed and Acquired Behavioral Strategies. McKearney, Noelle; Dozier, Braeshawn; Lambert, Skylar; Scott, Samantha; Kent, Molly; Bardi, Massimo; Lambert, Kelly.
42. The impact of neurogenesis on flexible maze training: effects on hippocampal volume and cognition. Schoenfeld, Timothy; Rhee, Diane; Cameron, Heather.

43. Exploring the Causal Link Between Ultrasonic Vocalizations and Behavior in Rats. Burke, Candace; Kisko, Theresa; Pellis, Sergio; Euston, David.
44. Wogonin attenuates hippocampal neuronal loss and cognitive dysfunction in trimethyltin-intoxicated rats. Sunyoung Lee, Bombi Lee; Insop Shim, Hyejung Lee; Dae-Hyun Hahm.
45. Relaxin-3/RXFP3 signalling and anxiety: effects of chronic rAAV expression of an RXFP3 agonist peptide in ventral hippocampus. Rytova, Valeria; Ganella, Despina; Hawkes, David; Bathgate, Ross; Ma Sherie; Gundlach, Andrew.
46. The putative lithium-mimetic ebselen reduces impulsive action but not impulsive choice. Barkus, Chris; Ferland, Jacqueline-Marie; Adams, Wendy; Bannerman, David; Winstanley, Catherine; Sharp, Trevor.
47. The Activation And Blockage Of Crf Type 2 Receptors Of The Medial Amygdala Alter Elevated T-Maze Inhibitory Avoidance, An Anxiety-Related Response. Viana, Milena B.; Alves, Stephanie W.E.; Portela, Natasha C.; Silva, Mariana S.; C?spedes, Isabel C.; Bittencourt, Jackson C.
48. A gene x environment mouse model of switching between affective states: Reducing DAT function results in hypersensitivity to seasonal photoperiod-induced changes in affect. Cope, Zackary A; Dulcis, Davide; Young, Jared W.
49. Adaptations of the dorsal raphe in a rat model of depression and following antidepressant treatment. Babb, Jessica A; Linnros, Sofia E; Commons, Kathryn G.
50. Exposure to a selective-serotonin reuptake inhibitor (SSRI) during pregnancy impacts sensitization to cocaine in a sex-dependent manner. Kott, J. M., Mooney-Leber, S. M., Perrine, S., & Brummelte, S.
51. Individual variability in mice? response to lithium: a hurdle or an advantage? Itamar Ezer, Catherine Belzung, Haim Einat.
52. Subdiaphragmatic vagotomy does not influenced rats? behavior in elevated plus maze and does not protect against noradrenergic responses after i.p. LPS injection. Marek Wieczorek, Anna Kobrzycka, Krystyna Koziec, Artur H. Swiergiel, Marta Siudak.
53. Changes of neuronal plasticity in the hippocampus of mothers induced by 3h pups separation during the first two weeks after birth. Mostallino, Maria Cristina; Biggio, Francesca; Boi, Laura; Biggio, Giovanni.
54. The role of Mitogen and Stress activated protein Kinase 1 in response to environment enrichment throughout life. Lorenzo Mor?1, J. Simon Arthur and Bruno Frenguelli
55. Does aberrant hippocampal neurogenesis affect rat?s behavior in different behavioral tests? Costa, Ana Paula Ramos; Levone, Brunno Rocha; Linarteovich, Vagner Fagnani; Vanz, Felipe; Boutaud, Claudia Ailinne Vera; Valenzuela, Camila Mariel Quinones, Lino de Oliveira, Cilene; Dinan, Thimoty G.; O?leary, Olivia; Cryan, John F.; de Lima, Thereza C.
56. Adult hippocampal neurogenesis affects motivation to obtain sucrose, but not food, reward in operant tasks. Karlsson, R?se-Marie; Wang, Alice; Sonti, Anup; Cameron, Heather.
57. Effect of venlafaxine and chronic unpredictable stress on behavior and hippocampal neurogenesis of rat dams. Melichercikova, Kristina; Csaszar, Eszter; Ujhazy, Eduard; Mach Mojmir; Dubovicky, Michal.
58. Socio-sexual behaviors in ovariectomized rats housed in a seminatural environment and treated with the estrogen receptor α agonist propylpyrazoletriol (PPT) or the estrogen receptor β agonist diarylpropionitrile (DPN). Olivia Le Moëne, Anders Ågmo.
59. How many synapses does a single microglia monitor in the stratum radiatum of CA1? Krejčova, Lane Viana; Bento-Torres, J.; Guedes, Rubem CA; Oliveira, Marcus; Perry, Victor Hugh; Picanço-Diniz, Cristovam.
60. Androgen receptor overexpression leads to deficits in fear-conditioning in male mice. Ramzan, Firyal; Azam, Amber; Monks, Ashley; Zovkic, Iva.
61. Using circuit-directed behavioral induction of immediate early genes as a biomarker for circuit integrity during recovery of brain injury. Thomas, Theresa; Khodadad, Aida; Adelson, P. David; Lifshitz, Jonathan.
62. Investigation of sucrose preference in large home cage with environmental enrichment. Büki A., Kekesi G., Benedek G., Horvath G. Dept. Physiol., Fac. Med., Univ. Szeged, Szeged, Hungary.
63. AMBITUS system, a rectangular corridor for the investigation of cognitive function. Horvath G., Liszli P., Kekesi G., Büki A., Benedek G. Dept. Physiol., Fac. Med., Univ. Szeged, Szeged, Hungary.

Saturday, June 11

Individual vulnerability to addiction: Dissection of behavior, neural circuits, cellular and molecular mechanisms. Chair: Gabor Egervari; Co-Chair: Yasmin Hurd

- 8:00-8:30 Inter-individual differences in cocaine and heroin addiction in the rat: behavioural and neurobiological mechanisms. Belin, D.
- 8:30-9:00 When the brakes fail: mPFC plasticity mechanisms in drug seeking. De Vries, Taco.
- 9:00-9:30 Contribution of genetic and environmental factors in the regulation of stress mechanisms and individual vulnerability to drugs of abuse. Ciccocioppo, Roberto; Domi, Esi; Scuppa Giulia; Brunori, Gloria, Shen, Quienwei; Ubaldi, Massimo.
- 9:30-10:00 Prodynorphin genetic polymorphisms and ventral striatonigral pathway activity contribute to individual differences in novelty seeking and positive reward traits. Egervari, Gabor; Jutras-Aswad, Didier; Landry, Joseph; Miller, Michael; Anderson, Sarah Ann; Michaelides, Michael; Jacobs, Michelle; Peter, Cyril; Yiannoulos, Georgia; Liu, Xun; Hurd, Yasmin L.

Integrated neuromodulatory control of arousal and complex behaviours: Focus on dual transmitter systems and networks. Chair: Sherie Ma; Co-Chair: William Wisden

- 8:00-8:30 Histamine and GABA co-transmission promote arousal. Wisden, William; Yu, Xiao; Ye, Zhiwen; Houston, Cat; Harding, Edward; Brickley, Stephen G; Franks, Nicholas P.
- 8:30-9:00 Interactions of glutamate/orexin and GABA/MCH systems with arousal networks. Leonard, Christopher S.
- 9:00-9:30 Central cholinergic neurons are rapidly recruited by reinforcement feedback. Hangya, Balazs; Ranade, Sachin; Lorenc, Maja; Kepecs, Adam.
- 9:30-10:00 Nucleus incertus, GABA and relaxin-3: an emerging modulatory role in arousal, stress and memory. Ma, Sherie; Ong-Palsson, Emma; Allocca, Giancarlo; Singleton, Caitlin; Williams, Spencer; Bathgate, Ross; Gundlach, Andrew.

Exhibits – Refreshment Break. 10:00-10:30

Keynote Speaker

- 10:30-11:30 Developmental Neuroinflammation and Long-Term Brain Pathology: From Models and Mechanisms to Transgenerational Effects. Meyer, Urs.

Lunch. 11:30-1:30

Exploring novel systems involved in the aetiology and potential treatment of anxiety disorders. Chair: David Slattery; Co-Chair: Clara Perani

- 1:30-2:00 Assessing the role of oxytocin and neuropeptide S in anxiety-related behaviour. Slattery, David; Jurek, Ben; Martinetz, Stefanie; Grund, Thomas; Neumann, Inga.
- 2:00-2:30 Marijuana as Medicine: Targeting cannabinoid-modulating circuits to treat anxiety. Holmes, Andrew.
- 2:30-3:00 Stress exposure and High-Fat diet alter maternal anxiety-related behaviour and hypothalamus-pituitary-adrenal axis function. Perani, Clara; Hillerer, Katharina; Neumann, Inga; Slattery, David.
- 3:00-3:30 The microbiota-gut-brain axis as a novel strategy for targeting anxiety disorders. Cryan, John. F.

Developmental rodent models of behavioral dysfunction in neuropsychiatry: Disrupting the excitatory/inhibitory balance. Chair: Jared Young; Co-Chair: Susan Powell

- 1:30-2:00 Rat model of prenatal malnutrition: prefrontal cortical dysfunction and neuropsychiatric implications. McGaughy, Jill A.; Galler, Janina R.
- 2:00-2:30 Cognition, glutamate, and developmental vitamin D-deficiency in rodents. Burne, Thomas, McGrath, John, Turner, Karly.
- 2:30-3:00 Effects of perinatal and adolescent oxidative stress on inhibitory interneurons and behavior in mice. Powell, Susan; Khan, Asma; de Jong, Loek; Kamenski, Mary; Higa, Kerin; Lucero, Jacinto; Young, Jared; Behrens, M. Margarita.
- 3:00-3:30 Reducing neuronal transcription factor Sp4 alters glutamatergic/NMDA receptor function and behaviors relevant to serious mental illness. Jared W. Young and Xianjin Zhou.

Exhibits – Refreshment Break. 4:00-4:30

Function and neuroplasticity in the mesocorticolimbic system and alcohol dependence. Chair: Giovanni Biggio; Co-Chair: David M. Lovinger

- 4:00-4:12 Synaptic Adaptations in the Dorsal Striatum and their Role in Alcohol-Related Habits. Lovinger, David M.
- 4:12-4:24 Dopaminergic hypofunction in alcohol dependence: from rodents to humans. Diana, Marco.
- 4:24-4:36 Altered long-term plasticity of glutamatergic synapses in the nucleus accumbens of alcohol-dependent rats. Sanna, Enrico; Licheri, Valentina; Sarigu, Gabriele; Biggio, Giovanni; Talani, Giuseppe.
- 4:36-4:48 Acute and long-lasting changes in neurotransmission in rat striatal subregions by ethanol. Adermark, Louise.
- 4:48-5:00 GABA-A drugs, addiction and neuroplasticity. Korpi, Esa R.; Vashchinkina, Elena

Colliculo-pulvinar pathway: The fast and coarse road for biologically relevant stimuli in primates. Chair: Rafael Maior

- 4:00-4:15 Emotion perception without visual cortex: functional and anatomical mechanisms. Marco Tamietto, Alessia Celeghein.
- 4:15-4:30 Interaction between the primate deep layers of superior colliculus and the amygdala: Behavioral effects and anatomical connections. Malkova, Ludise; Saunders, Richard C.; Forcelli Patrick A.
- 4:30-4:45 Of friends and foes: Threat detection at the ontogenesis of social cognition. Maior, Rafael; Tomaz, Carlos.
- 4:45-5:00 Rapid detection of snakes and faces in the monkey superior collicular and pulvinar neurons in the subcortical visual pathway. Nishimaru, Hiroshi; Le, Quan Van; Nguyen, Minh Nui; Matsumoto, Jumpei; Takamura, Yusaku; Ono, Taketoshi; Nishijo, Hisao.

Oral Session 4. Affective Disorders

- 5:00-5:10 Gestational stress and fluoxetine treatment differentially affect plasticity, methylation and serotonin levels in the PFC and hippocampus of the rat dam. Pawluski, Jodi; Rayen, Ine; van Donkelaar, Eva; Loftus, Tiffany; Steinbusch, Harry; Kokras, Nikolaos; Dalla, Christina; Gemmel, Mary.

- 5:10-5:20 Positive reinforcing and anxiolytic effects of oxytocin microinjection in the rat central nucleus of amygdala. Laszlo, Kristof; Kovacs, Anita; Zagoracz, Olga; Ollmann, Tamas; Peczely, Laszlo; Kertes, Erika; Karadi, Zoltan; Lenard, Laszlo.
- 5:20-5:30 Corticosterone induces depressive-like behavior in juvenile female post-pubescent rats, but not pre-pubescent rats. Tyler R. Nickle, Erica M. Stanley, Teresa J. Meyer, and David S. Middlemas.
- 5:30-5:40 Sex-dependent behavioral effects of isolation-rearing. Hall, F. Scott; Muskiewicz, Dawn; Joshi, Dankesh; Gutierrez, Federico Resendiz; Hall, Natasha; Saber, Yasir.
- 5:40-5:50 Individual variability in mice response to lithium: A hurdle or an advantage? Itamar Ezer, Catherine Belzung, Haim Einat.
- 5:50-6:00 Integrity of Parent's Brain in Infancy Supports the Development of Children's Social Competencies. Abraham, Eyal; Hendler, Talma; Feldman, Ruth.

Oral Session 5. Other Systems and Behavioral Effects

- 5:00-5:10 Exploring the Causal Link Between Ultrasonic Vocalizations and Behavior in Rats. Burke, Candace; Kisko, Theresa; Pellis, Sergio; Euston, David.
- 5:10-5:20 Closed nest pre-weaning environment improves the development of physical characteristics and reflexes in neonatal hypoxic ischemic injury. Donaldson, S. Tiffany; Rollins, Laura Grace; Santolucito, Hayley; Ravenelle, Rebecca; Mason, Briana.
- 5:20-5:30 The putative lithium-mimetic ebselen reduces impulsive action but not impulsive choice. Barkus, Chris; Ferland, Jacqueline-Marie; Adams, Wendy; Bannerman, David; Winstanley, Catherine; Sharp, Trevor.
- 5:30-5:40 Early-life inflammation decelerates fear extinction in adult rodents ? Potential implications for the endocannabinoid system. Doenni, Vienna M; Hill, Matthew N; Pittman Quentin J.
- 5:40-5:50 Pharmacotherapy combined with psychotherapy in social disturbances: plastic role of the ventromedial prefrontal cortex. Mikics, Eva; Karpova, Nina; Biro, Laszlo; Guirado, Ramon; Miskolczi, Christina; Toth, Mate; Balazsfi, Diana; Zelena, Dora; Umemori, Juzoh; Haller, Jozsef; Castren, Eero.
- 5:50-6:00 Application of activation induced manganese-enhanced magnetic resonance imaging (MEMRI) for mapping of brain structures activated by operant behavior in rats. Gálosi, R., Szalay, Cs., Aradi, M., Pál, J., Perlaki, G., Karádi, Z. and Lénárd, L.

Early Career Award Presentation

- 6:00-6:30 Oxytocin inhibits ethanol consumption and intoxication in rats: interactions with dopamine and extrasynaptic GABA-A receptors. Bowen, Michael; Peters, Sebastian; Absalom, Nathan; Chebib, Mary; Neumann, Inga; McGregor, Iain.

Business Meeting. 6:30-7:30

Awards Banquet. 8:00-12:00

Sunday, June 12.

Departures