

# 16<sup>th</sup> ANA - 25<sup>th</sup> APHAR Meeting Innsbruck

September 25-27, 2019

CCB Innsbruck, Am Innrain 80



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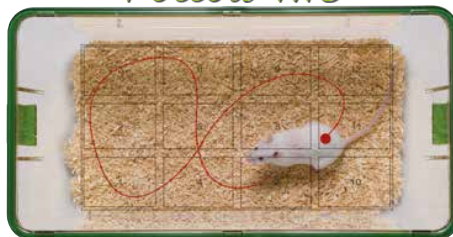
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## Welcome Address

Dear Colleagues,

As the organizers of this joint meeting of the Austrian Neuroscience Association (ANA), Austrian Pharmacological Society (APHAR) and the FWF-funded Special Research Program SFB-F44, we would like to welcome you in Innsbruck.

We have tried to put together an exciting program addressing a number of topical issues in Neuroscience, Neuropsychopharmacology and Clinical Pharmacology. Besides keynote lectures from distinguished international speakers, the meeting is organized in parallel sessions of selected short oral presentations and thematic mini-symposia alternated with poster sessions.

We hope the meeting will be a success, but with nearly 250 registered participants, it is already the largest meeting the two societies have ever organized, confirming the great interest around the topics presented and discussed in the meeting. The meeting will also stage two symposia to promote discussions between neuroscientists and philosophers.

From the large number of abstracts, we have witnessed the impressive amount of cutting edge science performed in Austria in the fields of neuroscience and pharmacology. We also have a number of registered participants from neighboring countries, whose attendance we regard very highly, and a remarkable number of senior scientists, with or without own contributions, from whom we can expect a valuable feedback for both oral and poster presentations.

We thank you, the sponsors and the Medical University of Innsbruck for the contribution and support that made possible this exciting opportunity to meet and promote the advancement of science! We wish you all a productive and highly successful meeting.

The Organizing Committee

Francesco Ferraguti  
Sigismund Huck  
Thomas Griesbacher  
Ramon Tasan  
Jörg Striessnig

08:30	Registration
09:00-11:15	<a href="#">SFB-F44 Satellite Symposium I</a>
09:00-09:10	Introduction: Jörg Striessnig (University of Innsbruck)
09:10-10:00	Plenary: The dopamine synapse David Sulzer (Columbia University, New York, USA) Chair: Jörg Striessnig (University of Innsbruck)
10:00-10:50	Plenary: From disease mechanisms to target discovery in Parkinson's disease Richard Wade-Martins (Oxford University, Oxford, UK) Chair: Jörg Striessnig (University of Innsbruck)
10:00-13:00	Mounting of Posters
11:15-11:30	<a href="#">Opening of the ANA-APHAR Meeting</a> Introduction: Christine Bandtlow, Vice-rector for Research (Medical University of Innsbruck), Sigismund Huck, ANA President (Medical University of Vienna), Francesco Ferraguti, Vice- president of the ANA (Medical University of Innsbruck)
11:30-12:20	Plenary: Firing Rate Homeostasis in Visual Cortical Circuits Gina Turrigiano (Brandeis University, Boston, USA) Chair: Georg Dechant (Medical University of Innsbruck)
12:30-13:30	Lunch break
13:30-14:15	<a href="#">Poster Flash I</a> Chair: Johannes Berger (Medical University of Vienna) - Posters P.1-P.29
14:15-16:00	Poster presentations I & Coffee
16:00-17:00	<a href="#">Minisymposium: Molecular Signaling Mechanisms Controlling Cerebral Cortex Development in Health and Disease</a> Chair: Simon Hippenmeyer (IST Austria, Klosterneuburg)
16:00-16:20	Molecular Mechanisms of Neural Stem Cell Lineage Progression in Cerebral Cortex Robert Beattie (IST Austria, Klosterneuburg), Abstract #006
16:20-16:40	Genetic Screening for Neuro-Developmental Disorders in Human Cerebral Organoids Christopher Esk (IMBA, Vienna), Abstract #031
16:40-17:00	Loss of the Autism Associated Gene Cul3 Leads to Abnormal Neuronal Migration and Behavioral Defects in Mice Jasmin Morandell (IST Austria, Klosterneuburg), Abstract #095
16:00-17:00	<a href="#">Oral I: Structure and function of neuronal circuits</a> Chair: Barbara Hausott (Medical University of Innsbruck)
16:00-16:15	Whole brain clearing and imaging reveals magnetically activated brain regions in the mouse Lukas Landler (IMP, Vienna), Abstract #081

- 16:15-16:30 A versatile depigmentation, clearing and labeling method provides systemic and high resolution insight into whole animal nervous systems Marko Pende (Department for Bioelectronics, FKE, Vienna University of Technology, & Center for Brain Research, Medical University of Vienna), Abstract #106
- 16:30-16:45 On the brain of sleeping dragons and ancient claustric-cortical networks Lorenz August Fenk (Max Planck Institute for Brain Research, Frankfurt am Main, Germany), Abstract #036
- 16:45-17:00 Modulation of neurotransmitter release via KCTDs at the medial habenula to interpeduncular nucleus pathway Peter Koppensteiner (IST Austria, Klosterneuburg), Abstract #011
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- 16:00-17:30 [SFB-F44 Satellite Symposium II](#)  
Chair: Nicolas Singewald (University of Innsbruck)
- 16:00-16:30 A dopaminergic basis for fear extinction learning Sevil Duvarci (Goethe University, Frankfurt, Germany)
- 16:30-17:00 A brain circuit for descending modulation of neuropathic pain Gerald W. Zamponi (University of Calgary, Calgary, Canada)
- 17:00-17:30 Brain circuits encoding threats Manuel Mameli (University of Lausanne, Lausanne, Switzerland)
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- 17:00-18:00 [Minisymposium: The mammalian hypothalamus: cellular diversity for functional multiplicity](#)  
Chair: Tibor Harkany (Department of Molecular Neurosciences, CBR, Vienna)
- 17:00-17:20 Anatomical and functional diversity of periventricular dopamine neurons Solomiia Korchynska (Department of Molecular Neurosciences, CBR, Vienna), Abstract #077
- 17:20-17:40 Role of the galanin peptide system in behavior, food intake, metabolism and inflammation Barbara Kofler (Paracelsus Medical University, Salzburg), Abstract #076
- 17:40-18:00 Stress activates the brainstem noradrenergic system via volume transmission to maintain a delayed and prolonged cortical response Alan Alpar (Semmelweis University, Budapest, Hungary), Abstract #004
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- 17:00-18:00 [Oral II: Controlling neuronal activity](#)  
Chair: Balint Lasztoczi (Medical University of Vienna)
- 17:00-17:15 Insights into the pathomechanism of drug-resistant epilepsies Anna R. Tröscher (Department of Neuroimmunology, CBR, Vienna), Abstract #135
- 17:15-17:30 Olanzapine is a potent agonist at the hM4D(Gi) DREADD amenable to clinical translation of chemogenetics Andreas Lieb (Department of Clinical and Experimental Epilepsy, UCL Queen Square Institute of Neurology, University College London, London, UK & Department of Pharmacology, Medical University of Innsbruck), Abstract #086
- 17:30-17:45 Multiplexing motor functions and impulsive traits is molecularly dissociated by subthalamic metabotropic glutamate receptor 4 Andreea Constantinescu (IMP, Vienna), Abstract #017
- 17:45-18:00 Role of the L-type voltage-gated calcium channel Cav1.3 in the formation of persistent fear extinction-memory Anupam Sah (Department of Pharmacology and Toxicology, Institute of Pharmacy and Center for Molecular Biosciences, University of Innsbruck), Abstract #119
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Wednesday, September 25, 2019

18:00-19:00 [SFB-F44 Alumni Minisymposium](#)

Chair: Francesco Ferraguti (Medical University of Innsbruck)

18:00-18:20 Increased excitability of neocortical motor neurons in a rat model of spinal cord injury Bruno Benedetti (Paracelsus Medical University, Salzburg)

18:20-18:40 Amygdala coding in Higher-Order Fear Nigel Whittle (FMI, Basel, Switzerland)

18:40-19:00 Targeting  $\alpha$ -synuclein, a promising therapeutic strategy for Multiple System Atrophy: preclinical evidence Antonio Heras-Garvin (Medical University of Innsbruck)

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08:30 Registration

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09:00-09:50 [Plenary: Dynamic nanoscale organization of AMPA receptors tunes synaptic fate during LTD](#)  
Eric Hosy (Bordeaux Neurocampus, Université de Bordeaux, Bordeaux France)  
Chair: Jozsef Csicsvari (IST, Klosterneuburg)

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10:00-10:45 [Poster Flash II & Exhibitor presentations](#)  
Chair: Enrica Paradiso (Medical University of Innsbruck) - Posters P.30-P.58

10:45-13:00 Poster presentations II & Buffet

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13:00-14:00 [Advancing the Austrian Science Landscape: Opportunities and Priorities](#). Presentation by - and discussion with - FWF President Klement Tockner  
Chair: Sigismund Huck (Medical University of Vienna)

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14:00-15:00 [Minisymposium: Structure and function of central synapses](#)  
Chair: Peter Jonas (IST Austria, Klosterneuburg)

14:00-14:20 Resolving presynaptic ultrastructure-function relationships in hippocampal mossy fiber and Schaffer collateral synapses Ben Cooper (Max Planck Institute of Experimental Medicine, Göttingen, Germany), Abstract #018

14:20-14:40 Ultrastructural analysis of Cav2.1 voltage-gated calcium channels in relation to the vesicle fusion sites at fast and slow neuron synapses Walter Kaufmann (IST Austria, Klosterneuburg), Abstract #071

14:40-15:00 Functional and structural correlates of post-tetanic potentiation at hippocampal mossy fiber synapses David Vandael (IST Austria, Klosterneuburg)

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15:00-16:00 [Oral III: Pathology & therapeutic targets](#)  
Chair: Nadja Stefanova (Medical University of Innsbruck)

15:00-15:15 Cav2.3 Ca<sup>2+</sup> channel signalling during substantia nigra dopamine neuron-like activity and its fine-tuning by different  $\beta$ -subunits Anita Siller (Department of Pharmacology and Toxicology, Institute of Pharmacy, Center for Molecular Biosciences, University of Innsbruck), Abstract #127

15:15-15:30 Versatile modulation of Kv7-mediated K<sup>+</sup> currents through (silent) modifier Kv channel subunits Michael G. Leitner (Division of Physiology, Medical University of Innsbruck), Abstract #084

15:30-15:45 Intra-parenchymal application of extracellular vesicles improves motor recovery and reduces inflammation in a rat model of spinal cord injury Pasquale Romanelli (Paracelsus Medical University, Salzburg), Abstract #117

15:45-16:00 Glial cell-derived neurotrophic factor loaded collagen scaffolds provide neuroprotection in ex vivo organotypic brain slice Parkinson's disease models Buket Uçar (Laboratory of Psychiatry and Experimental Alzheimer's Research, Medical University of Innsbruck), Abstract #137

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15:00-16:00 **Oral IV: Peripheral nerves and nociception**

Chair: Rene Seiger (Medical University of Vienna)

15:00-15:15 **miRNA and neuroregenerative processes in a mouse model for peripheral nerve injury**

Theodora Kalpachidou (Division of Physiology, Department of Physiology and Medical Physics, Medical University of Innsbruck), Abstract #069

15:15-15:30 **ENDF-1, a hops-derived prenylated flavonoid, enhances neurite growth and complexity in DRG neurons despite extracellular matrix inhibitors**

Lara Bieler (Institute of Experimental Neuroregeneration, Spinal Cord Injury and Tissue Regeneration Center, Paracelsus Medical University, Salzburg), Abstract #012

15:30-15:45 **The role of methyl transferase PRDM12 in nociceptor function in development and adulthood**

Vanja Nagy (Ludwig Boltzmann Institute for Rare and Undiagnosed Diseases, Vienna; CeMM Research Center for Molecular Medicine of the Austrian Academy of Sciences, Vienna; Department of Neurology, Medical University of Vienna), Abstract #097

15:45-16:00 **Safer analgesics by dual modulation of opioid and neuropeptide FF receptors**

Maria Dumitrascuta (Department of Pharmaceutical Chemistry, Institute of Pharmacy and Center for Molecular Biosciences Innsbruck (CMBI), University of Innsbruck), Abstract #022

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16:00-16:45 **Poster Flash III & Exhibitor presentations**

Chair: Iwona Kmiec (Medical University of Innsbruck) - Posters P.59-P.87

16:45-18:15 **Poster presentations III & Coffee**

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18:30-19:15 **Austrian Pioneers in Neuroscience Award, Otto Loewi Price & Lecture**

Chair: Sigismund Huck (Medical University of Vienna)

19:15-20:15 **ANA General Assembly**

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20:30 **Barbecue at the CCB**



08:30 Registration

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09:00-09:50 [Plenary: Disease mechanisms and potential novel treatment options for inherited retinal diseases](#) Stylianos Michalakis (Ludwig Maximilians University, Munich, Germany)  
Chair: Alexandra Koschak (University of Innsbruck)

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10:00-11:00 [Orals V: Pathology & therapeutic targets II](#)

Chair: Vanja Nagy (Ludwig Boltzmann Institute for Rare and Undiagnosed Diseases, Vienna)

10:00-10:15 Cysteine modification of KV7 channels as analgesic mechanism of action of paracetamol  
Isabella Salzer (Division of Neurophysiology and Neuropharmacology, Center for Physiology and Pharmacology, Medical University of Vienna), Abstract #120

10:15-10:30 A new CACNA1D-associated mouse model for autism spectrum disorder Nadine Ortner  
(Department of Pharmacology and Toxicology, Institute of Pharmacy, Center for Molecular Biosciences, University of Innsbruck), Abstract #104

10:30-10:45 Function and architecture of GPCR-controlled PKA signalosomes Andreas Feichtner (Institute of Biochemistry and Center for Molecular Biosciences, University of Innsbruck), Abstract #035

10:45-11:00 A pseudo-population-based approach for the analysis of pharmacological and naturalistic fMRI experiments Manfred Klöbl (Department of Psychiatry and Psychotherapy, Medical University of Vienna), Abstract #074

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10:00-12:00 [Workshop – Young ANA](#)

Communicating science to media (Elisabeth Guggenberger, Press officer, Fraunhofer Austria; Stefan Bernhardt, MBA)

Open Science Movement and Frontiers' Approach to Scientific Publishing Oksana Parylo (Editorial Program Manager, Frontiers)

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11:00-11:45 [Poster Flash IV](#)

Chair: Luca Zangrandi (Medical University of Innsbruck) - Posters P.88-P.115

11:45-13:15 Poster presentations IV & Buffet

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11:45-12:45 [Symposium: "Neuroscience and Philosophy" Part I](#)

Chair: Markus Kunze

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12:30 Clinical Pharmacology General Assembly

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13:30-14:00 Awards: Best Posters and Orals Awards

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14:00-14:50 [Plenary: Microdosing and microtracer technology in modern drug development: chances and challenges](#) Wouter H.J. VAES (TNO, Zeist, The Netherlands)  
Chair: Markus Zeitlinger (Medical University of Vienna)

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Friday, September 27, 2019

15:00-16:00 **Symposium: Clinical Pharmacology**

Chair: Romuald Bellmann (Medical University of Innsbruck)

15:00-15:15 Long term inhibition of complement C1s in patients with cold agglutinin disease: results from a named patient program Georg Gelbenegger (Department of Clinical Pharmacology, Medical University of Vienna), Abstract #047

15:15-15:30 Positron-emission tomography imaging reveals a functional interplay between ABCB1 and ABCG2 in the hepatobiliary excretion of dual substrate drugs Irene Hernández Lozano (Department of Clinical Pharmacology, Medical University of Vienna), Abstract #057

15:30-15:45 Tetrahydrocannabinol increases optic nerve head blood flow in healthy subjects Nikolaus Hommer (Department of Clinical Pharmacology, Medical University of Vienna), Abstract #060

15:45-16:00 The aptamer BT200 effectively inhibits von Willebrand factor (VWF)-dependent platelet function after stimulated VWF release by desmopressin or endotoxin Katarina Kovacevic (Department of Clinical Pharmacology, Medical University of Vienna), Abstract #078

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16:00-17:30 **Symposium: "Neuroscience and Philosophy" Part II**

Chair: Markus Kunze (Medical University of Vienna)

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16:00-17:30 Heribert Konzett & Hans-Horst Meyer Awards & APHAR General Assembly

17:30 End of Meeting



Human Brain Project  
Education Programme



Poster Session I: Wednesday, September 25, 14:15-16:00

- P.1** Somatodendritic release of dopamine and role of L- and R-type  $\text{Ca}^{2+}$  channels in regulating the spontaneous firing of midbrain dopaminergic neurons *Valentina Carabelli et al.* (Torino, Italy), Abstract #152
- P.2** Decreased white matter diffusivity metrics after acute SSRI challenge in depressed patients and healthy controls *Rene Seiger et al.* (Vienna, Austria), Abstract #124
- P.3** Nogo receptor (NgR) – signalling is required for the maintenance of the structural integrity of mouse fungiform and circumvallate taste buds *Dominik Brück et al.* (Innsbruck, Austria), Abstract #013
- P.4** Presynaptic mechanisms underlying post-tetanic potentiation at hippocampal mossy fiber synapses *Yuji Okamoto et al.* (Klosterneuburg, Austria), Abstract #103
- P.5** Functional characterization of the presence / absence of presynaptic mGluRs and endocannabinoid CB1 receptors in PV-, VIP- and SOM-containing interneurons in temporal lobe epilepsy: a hypothesis *Sadegh Rahimi et al.* (Innsbruck, Austria), Abstract #110
- P.6** GABAergic neurons coordinate hippocampal information processing through diverse gamma oscillations *Balint Lasztozsi et al.* (Vienna, Austria), Abstract #083
- P.7** Neural networks underlying cocaine addiction and social interaction *Hussein Ghareh et al.* (Innsbruck, Austria), Abstract #048
- P.8** Classification in major depressive disorder using randomForest and various cortical and subcortical gray matter measures *Thomas Vanicek et al.* (Vienna, Austria), Abstract #140
- P.9** Sprouty2 influences trafficking of receptor tyrosine kinases in glioma cells *Barbara Hausott et al.* (Innsbruck, Austria), Abstract #054
- P.10** Intracellular characterization of CA3 principal neurons activity during spatial navigation *Maria Magdalena Picher et al.* (Klosterneuburg, Austria), Abstract #107
- P.11** LORETA mapping and coherence analysis reveal brain functional connectivity features during choice reaction task in military service members with mild traumatic brain injury and posttraumatic stress disorder *Veronika Vozniuk et al.* (Kyiv, Ukraine), Abstract #141
- P.12** Functional neuroanatomy of prodynorphin *Iwona Kmiec et al.* (Innsbruck, Austria), Abstract #075
- P.13** TRPC3 activation induces  $\text{Ca}^{2+}$ -dependent inhibition of hippocampal firing *Oleksandra Tiapko et al.* (Graz, Austria), Abstract #133
- P.14** The presynaptic calcium channel subunit  $\alpha 2\delta$ -2 regulates postsynaptic GABA<sub>A</sub>-receptor abundance and axonal wiring by a trans-synaptic mechanism *Stefanie Geisler et al.* (Innsbruck, Austria), Abstract #046
- P.15** Function of non-coding RNAs in neurodegenerative and neurodevelopmental diseases *David Heimdörfer et al.* (Innsbruck, Austria), Abstract #056
- P.16** Sparse coding in identified dentate gyrus granule cells in head-fixed running mice *Xiaomin Zhang et al.* (Klosterneuburg, Austria), Abstract #147
- P.17** Simultaneous knockdown of Sprouty2 and PTEN promotes axon growth *Sataporn Jamsuwan et al.* (Innsbruck, Austria), Abstract #065
- P.18** Development and characterization of a human Rett syndrome cell model using a transient non-integrating reprogramming strategy *Anna Huber et al.* (Vienna, Austria), Abstract #062

## Posters

- P.19** TMT-opsins differentially modulate medaka brain function in a context-dependent manner Bruno Fontinha *et al.* (Vienna, Austria), Abstract #042
- P.20** Data-driven exploration of mouse behavior in the Go / No-Go task Lukasz Piszczek *et al.* (Vienna, Austria), Abstract #109
- P.21** Anti-neuronal autoimmune encephalitis associated with  $\alpha$ -amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid receptor (AMPA) antibodies: novel clinical presentation and neuropathological findings Gerda Ricken *et al.* (Vienna, Austria), Abstract #115
- P.22** Dopaminergic midbrain neurons display complex glucose sensing properties: a multi-electrode array and calcium imaging study in mouse brain slices Christina Pötschke *et al.* (Ulm, Germany), Abstract #089
- P.23** CaV2.3 channels trigger selective dopaminergic neuron loss in Parkinson's disease Birgit Liss *et al.* (Ulm, Germany), Abstract #008
- P.24** Reelin and ywhaz zebrafish models for autism spectrum disorder Elisa Dalla Vecchia *et al.* (Leicester, UK), Abstract #020
- P.25** The neuronal calcium sensor NCS-1 is involved in defining vulnerability of substantia nigra dopaminergic neurons to degeneration in Parkinson's disease Johanna Duda *et al.* (Ulm, Germany), Abstract #128
- P.26** Convergence of functional network dynamics and metabolism during task performance Lucas Rischka *et al.* (Vienna, Austria), Abstract #116
- P.27** Brain and peripheral inflammatory alterations in trait anxiety: anti-inflammatory intervention via minocycline Sinead Rooney *et al.* (Innsbruck, Austria), Abstract #118
- P.28** Role of prefronto – cortical dopaminergic signalling in deficient fear extinction and its rescue Simone Sartori *et al.* (Innsbruck, Austria), Abstract #121
- P.29** Protein kinase N1 is a novel regulator of cerebellar axonal and synaptic development via inhibition of AKT and NeuroD2 Stephanie zur Nedden *et al.* (Innsbruck, Austria), Abstract #149

## Poster Session II: Thursday, September 26, 10:45-13:00

- P.30** Expression of metabotropic glutamate (mGlu) 5 receptors in different subpopulations of somatostatin neurons Ana Fajardo Serrano *et al.* (Innsbruck, Austria), Abstract #033
- P.31** Functional neural circuitry underlying parental care behavior in virgin female mice Anna Gundacker *et al.* (Vienna, Austria), Abstract #052
- P.32** Reconsidering the neuropathogenic role of paroxysmal depolarization shifts in epilepsy, epileptogenesis and beyond Helmut Kubista *et al.* (Vienna, Austria), Abstract #079
- P.33** Region- and cell-type specific contributions of mGlu5 receptors to social behavior and anxiety Arnau Ramos Prats *et al.* (Innsbruck, Austria), Abstract #111
- P.34** Functional analysis of the docked vesicle pool in hippocampal mossy fiber terminals by electron microscopy Olena Kim *et al.* (Klosterneuburg, Austria), Abstract #073
- P.35** Mapping presynaptic inputs to medial accumbens D1-medium spiny neurons using rabies monosynaptic tracing: focusing on insular cortex input Barbara Pinheiro *et al.* (Innsbruck, Austria), Abstract #108
- P.36** Directed forgetting during pregnancy Lisa Mayer *et al.* (Salzburg, Austria), Abstract #091

- P.37** Spatial information exchange between hippocampus and medial prefrontal cortex *Michele Nardin et al.* (Klosterneuburg, Austria), Abstract #098
- P.38** Pituitary adenylate cyclase-activating polypeptide in CRF-containing parvocellular neurons of the rat hypothalamic paraventricular nucleus modulates neuroendocrine and behavioral stress response *Veronica Fontebasso et al.* (Innsbruck, Austria), Abstract #041
- P.39** Impact of temperature challenges on directed forgetting in young men *Anna Maria Wipplinger et al.* (Salzburg, Austria), Abstract #145
- P.40** White matter plasticity in complex cortical malformations *Victoria-Elisabeth Gruber et al.* (Vienna, Austria), Abstract #051
- P.41** Plasticity of amygdala intercalated cell microcircuits in fear learning *Anna Seewald et al.* (Innsbruck, Austria), Abstract #123
- P.42** A chemogenetic approach to attenuate neuronal excitability in temporal lobe epilepsy *Melanie Widmann et al.* (Innsbruck, Austria), Abstract #144
- P.43** Investigations on the role of mTOR signaling pathway in antinociceptive and aversion of HS665, a selective  $\alpha$ -opioid receptor agonist *Filippo Erli et al.* (Innsbruck, Austria), Abstract #029
- P.44** ARC39, a specific inhibitor of acidic sphingomyelinase (ASM), reveals impact of the enzyme on hippocampal excitability *Chih-hung Lin et al.* (Erlangen, Germany), Abstract #087
- P.45** L-type calcium channel-mediated  $\text{Ca}^{2+}$  influx exerts regulatory control of the mitochondrial ATP synthase in cultured hippocampal neurons *Matej Hotka et al.* (Vienna, Austria), Abstract #061
- P.46** Combined anti- $\alpha$ -synuclein therapy for disease modification in multiple system atrophy *Miguel Lemos et al.* (Innsbruck, Austria), Abstract #085
- P.47** Relevance of the leukotriene signaling pathway in transgenic mouse models for  $\alpha$ -synucleinopathies *Katharina Strempl et al.* (Salzburg, Austria), Abstract #130
- P.48** Neuropathology and magnetic resonance imaging characteristics in autoimmune glial fibrillary acidic protein meningoencephalomyelitis *Verena Endmayr et al.* (Vienna, Austria), Abstract #026
- P.49** Screening for auto-antibodies in patients after spinal cord injury *Carmen Schwaiger et al.* (Vienna, Austria), Abstract #122
- P.50** Montelukast in mouse and man – preclinical and clinical (BUENA study) data of leukotriene inhibition in Alzheimer's disease *Johanna Michael et al.* (Salzburg, Austria), Abstract #093
- P.51** CD8+ T-cell-mediated contribution to neuropathology in a transgenic Alzheimer's disease mouse model *Michael Stefan Unger et al.* (Salzburg, Austria), Abstract #138
- P.52** Structure – function relationship of mitochondria in neuronal diseases *Lisa Bergmeister et al.* (Innsbruck, Austria), Abstract #009
- P.53** Hunger promotes fear extinction through the activation of the basolateral amygdala by calretinin neurons of the paraventricular thalamus *Lucas B. Comeras Diez et al.* (Innsbruck, Austria), Abstract #016
- P.54** Replay of behavioral trajectories in the medial prefrontal cortex during rule switching *Karole Kaefer et al.* (Klosterneuburg, Austria), Abstract #067
- P.55** The role of Satb2 in neuronal cell homeostasis *Patrick Feurle et al.* (Innsbruck, Austria), Abstract #038
- P.56** Satb2-dependent 3D genome organization *Nico Wahl et al.* (Innsbruck, Austria), Abstract #142

- P.57** Functional integration of neuronal precursors in the adult murine piriform cortex Sebastien Couillard-Despres *et al.* (Salzburg, Austria), Abstract #019
- P.58** Characterization of neurokinin B neurons of the bed nucleus of the stria terminalis and elucidation of their role in metabolic and emotional processing Pradeepa Mohan Bethuraj *et al.* (Innsbruck, Austria), Abstract #094

Poster Session III: Thursday, September 26, 16:45-18:15

- P.59** A prefrontal neuronal circuit for activating descending modulation of neuropathic pain Zizhen Zhang *et al.* (Calgary, Canada), Abstract #148
- P.60** The molecular basis of epilepsy triggered by point mutations in the human GABA transporter-1 Florian P. Fischer *et al.* (Vienna, Austria), Abstract #039
- P.61** Chronic treatment with five vascular risk factors causes cerebral amyloid angiopathy but no Alzheimer pathology in C57BL/6 mice Bettina Foidl *et al.* (Innsbruck, Austria), Abstract #040
- P.62** Neuroinflammatory pathways involved in the selective neurodegeneration observed in a transgenic mouse model of multiple system atrophy Violetta Refolo *et al.* (Innsbruck, Austria), Abstract #113
- P.63** Insular cortex inhibitory microcircuits for saliency detection Enrica Paradiso *et al.* (Innsbruck, Austria), Abstract #105
- P.64** Ghrelin: a novel interface to rescue impaired fear extinction by enhancing mesocorticolimbic dopamine signaling? Eva Maria Fritz *et al.* (Innsbruck, Austria), Abstract #043
- P.65** Mad2, a novel player in clathrin-mediated endocytosis, interacts with monoamine transporters Florian Koban *et al.* (Vienna, Austria), Abstract #150
- P.66** Capacitance measurements: a tool to link functional and structural data Verena Burtcher *et al.* (Vienna, Austria), Abstract #015
- P.67** Heterocyclic modafinil analogue CE-123 improves spatial memory in hole-board task of aged male Sprague-Dawley rats Ahmed Hussein *et al.* (Vienna, Austria), Abstract #063
- P.68** Retinal rod bipolar cells co-express three different L-type Ca<sup>2+</sup> channel transcripts Hartwig Seitter *et al.* (Innsbruck, Austria), Abstract #125
- P.69** The transport cycle of the human creatine transporter-1 Clemens Farr *et al.* (Vienna, Austria), Abstract #034
- P.70** Glycine transporter 1 and glycine transporter 2: a comparison of their transport kinetics Fatma Erdem *et al.* (Vienna, Austria), Abstract #028
- P.71** A regulatory domain renders the amyloid-beta-degrading peptidase insulin-degrading enzyme transport-competent Markus Kunze *et al.* (Vienna, Austria), Abstract #080
- P.72** Elucidating the functional role of extracellular loop 4 of the serotonin transporter by employing antibodies and FabS Eray Esendir *et al.* (Vienna, Austria), Abstract #030
- P.73** A glimpse on the residues responsible for energy coupling in the human SERT Ralph Gradisch *et al.* (Vienna, Austria), Abstract #050
- P.74** Pharmacological characterization of  $\beta$ -adrenergic ( $\beta$ -AR) agonists dobutamine and isoproterenol: monoamine neurotransmitter and organic cation transporters as novel targets Marija Ilic *et al.* (Vienna, Austria), Abstract #064

## Posters

- P.75** Galanin is a potent modulator of cytokine / chemokine expression of human macrophages Andrea Ramsbacher *et al.* (Salzburg, Austria), Abstract #112
- P.76** Discovery of  $\kappa$ -opioid receptor peptide ligands in plants Nataša Tomašević *et al.* (Vienna, Austria), Abstract #134
- P.77** Discovery of nature-derived oxytocin and vasopressin peptides Jasmin Gattringer *et al.* (Vienna, Austria), Abstract #045
- P.78** Isolation and *de novo* sequencing of cysteine-rich peptides from beetroot Bernhard Retzl *et al.* (Vienna, Austria), Abstract #114
- P.79** Discovery of novel plant-based enzyme inhibitors of prolyl-oligopeptidase Carina Ebermann *et al.* (Vienna, Austria), Abstract #023
- P.80** Synthesis of C-tail peptide probes of GPCRs to determine their signalling interactome Caroline Eßer *et al.* (Vienna, Austria), Abstract #032
- P.81** Lack of galanin receptor 3 but not receptor 2 influences inflammation and fecal microbiota during DSS-induced colitis Susanne Brunner *et al.* (Salzburg, Austria), Abstract #014
- P.82** Targeting  $\kappa$ -opioid receptor by circular peptides isolated from an 'ipecac' root extract Edin Muratspahic *et al.* (Vienna, Austria), Abstract #096
- P.83** Proof-of-concept study for a viral gene supplementation therapy for congenital stationary night blindness type 2 Thomas Heigl *et al.* (Innsbruck, Austria), Abstract #055
- P.84** Mutations of a voltage-gated CaV1.3 L-type Ca<sup>2+</sup> channel (CACNA1D) with unknown pathogenic potential Yuliia Nikonishyna *et al.* (Innsbruck, Austria), Abstract #100
- P.85** Interplay of aminopropyl-benzothiophenes with monoamine transporters Tea Ljubisic *et al.* (Vienna, Austria), Abstract #088
- P.86** Knockout of CaV1.3 channels delays photoreceptor degeneration in a model of retinitis pigmentosa Irem Kilicarslan *et al.* (Innsbruck, Austria), Abstract #072
- P.87** An *in vitro* model to study the human-specific nicotinic acetylcholine receptor gene *CHRFAM7A* Gökçe İlayda Söztekin *et al.* (Vienna, Austria), Abstract #129

## Poster Session IV, Friday, September 27, 11:45-13:00

- P.88** Modulation of cocaine affinity in hSERT and hDAT Dániel Szöllösi *et al.* (Vienna, Austria), Abstract #132
- P.89** Inhibiting eicosanoid degradation exerts antifibrotic effects in a pulmonary fibrosis mouse model and in human tissue Thomas Bärnthaler *et al.* (Graz, Austria), Abstract #005
- P.90** Upstream stimulatory factor 1 (USF-1) as a link between metabolism and mood regulation Maria Nikou *et al.* (Vienna, Austria), Abstract #101
- P.91** Role of brown adipose tissue in mood regulation Spyridon Sideromenos *et al.* (Vienna, Austria), Abstract #126
- P.92** Structure modeling of CaV1.1 calcium channels reveals functional inter- and intradomain interactions involved in voltage sensing Monica Fernandez-Quintero *et al.* (Innsbruck, Austria), Abstract #037
- P.93** Sodium binding stabilised the outward-open state of hSERT by entropy – enthalpy compensation Thomas Stockner *et al.* (Vienna, Austria), Abstract #131



## Posters

- P.94** Discovery and analysis of cysteine-rich plant peptides as modulators of cannabinoid receptors Fabiola Susanna Emser *et al.* (Vienna, Austria), Abstract #151
- P.95** Characterization of the synaptogenic potential of the retinal calcium channel  $\alpha 2\delta$ -4 subunit Cornelia Ablinger *et al.* (Innsbruck, Austria), Abstract #001
- P.96** Dual role of CaV1.1 voltage-sensing domain I in determining kinetics and voltage dependence of calcium channel activation Yousra El Ghaleb *et al.* (Innsbruck, Austria), Abstract #025
- P.97** Dissecting the functions of multiple interactions of STAC3 in skeletal muscle excitation – contraction coupling Wietske Tuinte *et al.* (Innsbruck, Austria), Abstract #136
- P.98** CaV1.4 Ile745Thr mutation differently affects rod and cone visual pathways Lucia Zanetti *et al.* (Innsbruck, Austria), Abstract #146
- P.99** Pathways involved in cholesterol trafficking are dysregulated in the spinal cord of *Abcd1*-deficient mice Mark Lassnig *et al.* (Vienna, Austria), Abstract #082
- P.100** Postsynaptic calcium signalling controls presynaptic differentiation at the neuromuscular synapse Mehmet Kaplan *et al.* (Innsbruck, Austria), Abstract #070
- P.101** GABA<sub>A</sub> receptor subtype selective loreclezole analogues targeting an  $\alpha 6$  specific site Doris Enz & Xenia Simeone *et al.* (Vienna, Austria), Abstract #027
- P.102** Pharmacokinetics of two cyclodextrin nanoparticle-based angiotensin receptor antagonist eye drop formulations in rabbits Martin Kallab *et al.* (Vienna, Austria), Abstract #068
- P.103** Susac's syndrome – underlying pathogenic mechanisms Sarah Glatter *et al.* (Vienna, Austria), Abstract #049
- P.104** Comparison of dosage strategies of meropenem vs. *Pseudomonas aeruginosa* and *Escherichia coli* Alina Nussbaumer-Pröll *et al.* (Vienna, Austria), Abstract #102
- P.105** Anidulafungin concentrations in human tissues Rene Welte *et al.* (Innsbruck, Austria), Abstract #143
- P.106** STAT3 $\beta$  is a tumor suppressor in acute myeloid leukemia Petra Aigner *et al.* (Vienna, Austria), Abstract #003
- P.107** A role for platelets in Alzheimer's disease? Diana Marisa Bessa de Sousa *et al.* (Salzburg, Austria), Abstract #010
- P.108** Pharmacological characterization of  $\alpha$ -pyrrolidinovalerophenone Marco Niello *et al.* (Vienna, Austria), Abstract #099
- P.109** Treatment of APPSL transgenic mice with an ALDH2 activator as a promising treatment option for Alzheimer's disease Barbara Hinteregger *et al.* (Grambach, Austria), Abstract #058
- P.110** Micafungin concentrations in human brain tissue and cerebrospinal fluid Jana Marx *et al.* (Innsbruck, Austria), Abstract #090
- P.111** Penetration of echinocandins in wound secretion Tiziana Gasperetti *et al.* (Innsbruck, Austria), Abstract #044
- P.112** Pharmacological profile of the bradycardic agent ivabradine on human cardiac ion channels Janine Ebner *et al.* (Vienna, Austria), Abstract #024
- P.113** Enhanced migration and proliferation of human melanoma cells by nonessential amino acid proline Konstantin Mayr *et al.* (Vienna, Austria), Abstract #092

## Mini-Symposia: "Neuroscience and Philosophy"

Chair: Markus Kunze (Division of Pathobiology of the Nervous System, Center for Brain Research, Medical University of Vienna)

Philosophy is a natural discussion partner for neuroscience, since both aim at explaining the secret of the mind although their approaches are very different. Whereas neuroscientists deduce their knowledge from empirical results and try to unify different pieces of information into a coherent picture, philosophers analyze arguments, reflect on justifications and limits of statements or concepts, and describe scientific processes on a meta-level. Thus, both sides can be expected to benefit from interdisciplinary exchange, which is frequently advertised but hardly implemented. However, interdisciplinary exchange is also inherently complicated due to differences in methods and language, but also by mutual ignorance of thinking traditions, which justify implicit assumptions commonly accepted in one field but hardly known in the other.

The ANA-APHAR meeting will host two Mini-Symposia devoted to the interdisciplinary exchange between active neuroscientists and philosophers working in the areas of philosophy of science, philosophy of biology and philosophy of mind and human action. The focus will be on practicing exchange and promoting an active participation of the audience. We hope that these discussions will not only offer participants new ideas and interesting discussions, but also reduce common stereotypes and prejudice between natural scientists and philosophers.

### Mini-Symposium I: Friday, September 27, 11:45-12:45

#### Animal models in Neuroscience to study Human Diseases

Simone Sartori (Department of Pharmacology and Toxicology - Institute of Pharmacy, Innsbruck Medical University), Federica Malfatti (Department of Christian Philosophy, University Innsbruck)

Animal models are frequently used in neuroscience to investigate basic mechanisms underlying complex brain functions, but also to study human diseases or to test therapeutic options. However, this approach does not always provide reliable answers, because depending on the question similarities or dissimilarities between animals and humans prevail. Philosophy has developed a profound theoretical framework to describe the application of models in scientific praxis, which facilitates the exploration of benefits and limits of animal models from a systematic perspective. This might help in the analysis and classification of unexpected outcomes and to describe the aims of individual experiments more precisely. In the symposium typical animal experiments and possible pitfalls will be exemplified and the concept of models in science will be introduced to stimulate a vivid discussion.

### Mini-Symposium II: Friday September 27, 16:00-17:30

#### How to understand human agency? Bridging the gap between neuronal circuits and human behavior

Neuroscientist: Johannes Passecker (Zuckerman Mind Brain Behaviour Institute, Columbia University, NY, USA)

Philosopher: Anne Sophie Meincke (University of Southampton & University of Vienna)

Philosophers: Josef Quitterer & Daniel Wehinger (Institute for Christian Philosophy, University Innsbruck)

Human subjects have a strong intuition of being their life's authors and to act in a self-controlled manner, but some interpretations of neuroscientific experiments suggest that this perceived freedom might actually be limited. Philosophers have discussed the existence and possible limitations of free will for centuries and developed broad conceptual frameworks, which facilitate the classification of arguments and the identification of fallacies by their similarities to previously formulated arguments. On the contrary, results obtained by means of neuroscientific experiments can challenge traditional concepts and reveal ill-founded assumptions in philosophical arguments. Exemplarily, the measurement of neuronal activity in freely behaving animals is a well-established technique, which can be applied to study rodents when performing a behavioral task involving an alternative choice. Based on this model we will discuss the relation between neuronal activity and behavior and whether justified conclusions for human decision-making can be drawn.

## General Information

### General Information

#### Oral sessions

Please note that you will have time for a 10 minute presentation, followed by a 5 minute discussion. Chairs of the sessions are requested to strictly stick to the schedule. Please put your PowerPoint slides on a USB stick and hand it over for copying the file to the person in charge at our registration desk at least 1 hour before your session starts.

#### Poster sessions

"Poster Flashes" take place in the main lecture hall. You have one minute and ONE PowerPoint slide to highlight your research. Posters will be mounted at the beginning and remain in place until the end of the meeting. Please attend your poster during your poster session. Poster dimensions are A0 portrait format (width: 84 cm, height: 119 cm).

#### Registration fees

The conference fee includes participation in the program, the program and abstract booklet (pdf), lunch, coffee breaks, and dinners (but not accommodation).

#### Registration from July 17 to September 17, 2019

ANA regular members: € 150,-

ANA student members: € 100,-\*

Non-members: € 210,-

Student non-members: € 120,-\*

#### On-site registration (cash only please; the only option after September 17, 2019)

ANA regular members: € 180,-

ANA student members: € 120,-\*

Non-members: € 240,-

Student non-members: € 140,-\*

\*Reduced registration fees are applicable to students upon confirmation of student status by their supervisors at the registration desk.





## Antibodies for the Neuroscientist & Cellbiologist

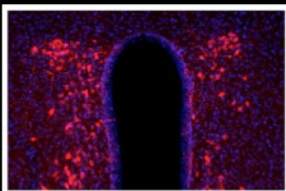
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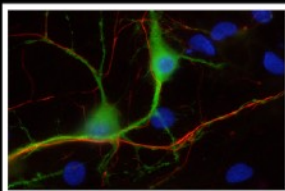
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- Ion channels
- Receptor proteins

- Neurotransmitter transporter proteins
- Active zone proteins
- Post-synaptic proteins

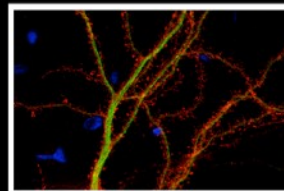
- Inhibitory Neurons
- SNARE proteins
- ...



**Oxytocin (408 004)**  
Indirect immunostaining of PFA fixed mouse brain section (hypothalamus) with Guinea pig anti-Oxytocin (dilution 1:500; red).



**Neurofilament H (171 111)**  
Indirect immunostaining of PFA fixed rat hippocampal neurons with mouse anti-Neurofilament H (dilution 1:500; red) and rabbit anti-MAP2 (cat. no. 188 002, dilution 1:1000; green).



**AMPA2 (182 105)**  
Immunostaining of rat hippocampus neurons with Guinea pig anti-AMPA2 (dilution 1:1000; red) and mouse anti-MAP2 (cat. no. 188 011, dilution 1:1000; green).

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