

Hellenic Society for Neuroscience
28th Meeting
4-6 October 2019

Friday, 4 October 2019

9:00 – 10:00 – Registration and Welcome

10:00-11:00 – PL1: Eero Castren, University of Helsinki, Finland. *Neurotrophic factors, neuronal plasticity and the antidepressant effect.* Chair: Domna Karagozeos, University of Crete and IMMB-FORTH, Greece.

11:00-12:30 – S1: Brain-Gut and Mood.

Chair: Arjan Blokland, Maastricht University, The Netherlands.

Dietmar Fuchs, Innsbruck University, Austria. *Cognitive Aging: insights from functional and molecular neuroimaging.*

Gerard Clarke, University College Cork, Ireland. *The Gut Microbiome, Brain Function and Behaviour: Moving the Goalposts in Psychiatry?*

Nora Schneider, Nestlé, Lausanne, Switzerland. *Food & Brain Development.*

12:30-13:00 – Coffee break

13:00-14:30 – S2: The shape of treatments to come: disease-modifying therapies in neurodegenerative diseases. Sponsored by Biogen

Chairs: Leonidas Stefanis, University of Athens and Alexia Polissidis, Biomedical Research Foundation Academy of Athens.

George Nomikos, Global Medical Lead, Clinical R&D, Biogen, Cambridge, MA, USA. *Alpha-synuclein antibodies “SPARK” interest in mitigating Parkinson’s disease progression.*

Jos Prickaerts, Maastricht University, The Netherlands. *Phosphodiesterase inhibitors: re-erecting their therapeutic potential for the treatment of dementia.*

Georgia Dermentzaki, Columbia University, New York, USA. *The newcomer: m6A’s role in motor neuron function.*

Panagiota Mavroei, Biomedical Research Foundation of the Academy of Athens (BRFAA). *It takes two to tangle: α -synuclein and p25 α orchestrate pathology in Multiple System Atrophy.*

14:30-15:30 – EURON advanced workshop: Drugs and the Brain – Lunch

15:30-17:00 – Junior Scientists Symposium Chair: Antonis Stamatakis, University of Athens, Greece.

Theodora Velona, Université Aix-Marseille, France. *PlexinD1 and Sema3E determine laminar positioning of heterotopically projecting callosal neurons.*

Elpinickie Ninou, Biomedical Research Foundation of the Academy of Athens, Greece. *Long non-coding RNA – Transcription factor regulatory networks in mammalian brain development.*

Iakovos Lazaridis, Karolinska Institute, Sweden. *Disappointment and decision making: A functional segregation of pallidal and hypothalamic pathways to the lateral habenula.*

Matina Bitzidou, The Francis Crick Institute, UK. *Participation of cortical areas in whisker-mediated recognition of elementary tactile sequences.*

Jagoda Jęczmień-Lazur, Jagiellonian University in Krakow, Poland. *Ultraviolet and blue light sensitivity of the visual thalamus.*

Athanasia Papoutsis, Institute of Molecular Biology and Biotechnology – FORTH, Greece. *Modeling of orientation preference in the apical and basal tress of L2/3 V1 pyramidal neurons.*

17:00-19:00 – S3: Systems neuroscience: from cells to circuits and behavior

Chairs: Dinos Meletis and Andreas Kardamakis, Karolinska Institute, Sweden.

Sten Grillner, Karolinska Institute, Sweden. *The computational logics of networks in motion – evolutionary conserved forebrain strategies to control behavior.*

<p>Gilad Silberberg, Karolinska Institute, Sweden. <i>Dopaminergic Modulation of Sensory Circuits in the Striatum.</i></p> <p>Jens Hjerling-Leffler, Karolinska Institute, Sweden. <i>Diversity of Interneurons in the Dorsal Striatum Revealed by Single-Cell RNA Sequencing and PatchSeq.</i></p> <p>Andreas Kardamakis, Karolinska Institute, Sweden. <i>Exploring visuomotor circuit dynamics in the mouse superior colliculus.</i></p> <p>Konstantinos Ampatzis, Karolinska Institute, Sweden. <i>Adult spinal motoneurons change their neurotransmitter phenotype to control locomotion.</i></p>
19:00-19:30 – Coffee break
19:30-20:30 – PL2: Julie Bakker, University of Liege, Belgium. <i>Gender identity, sex hormones, and the developing brain.</i> Chair: Christina Dalla, University of Athens.
20:30-22:30 – Welcome reception

Saturday, 5 October 2019
9:00-10:00 – PL3: Rosa Cossart, INMED-INSERM, France. <i>How development scaffolds internal hippocampal dynamics.</i> Chair: Kyriaki Sidiropoulou, University of Crete, Greece.
10:00-10:30 – Coffee break
10:30-12:00 – S4: Programming and reprogramming in the embryonic and adult brain
<p>Chairs: Dimitra Thomaidou, Hellenic Pasteur Institute, Greece and Stavros Taraviras, University of Patras, Greece.</p> <p>Christina Kyrousi, Max Planck Institute of Psychiatry, Germany. <i>Modelling human brain development and disease using cerebral organoids.</i></p> <p>Marina Vidaki, Koch Institute, MIT, USA. <i>Axonal Local Translation: Novel mechanisms of regulation during development and beyond.</i></p> <p>Stavros Taraviras, University of Patras, Greece. <i>Adult neural stem cells and ependymal cells share a common origin.</i></p> <p>Dimitra Thomaidou, Hellenic Pasteur Institute, Greece. <i>Direct reprogramming of astrocytes to induced-neurons by miRNAs and small neurogenic molecules: molecular mechanism and in vivo therapeutic potential.</i></p>
12:00-13:30 – S5: Behavioural aspects in animal models: Genetic and environmental impact
<p>Chairs: Antonis Stamatakis, University of Athens, and Myrto Denaxa, BSRC Alexander Fleming, Greece.</p> <p>Nicoletta Kessarar, Wolfson Institute for Biomedical Research, UCL, UK. <i>Hyperinhibition in the early postnatal cortex and autism-like behaviour in mice.</i></p> <p>Antonis Stamatakis, University of Athens, Greece. <i>Effects of an adverse early postnatal experience on rat prefrontal cortex structure and function.</i></p> <p>Katerina Segklia, Hellenic Pasteur Institute, Greece. <i>Cend1 in GABAergic neuron generation: effects on brain structure and function.</i></p> <p>Maria Plataki, University of Crete and IMBB-FORTH, Greece. <i>Critical periods during the postnatal period regulate adult prefrontal cortical and hippocampal function.</i></p>
13:30-14:30 – Poster presentations (Development, Cognition, Motivation and Reward, History) – Lunch
13:30-14:00 – Introduction to the ALBA network. Carmen Sandi, President of FENS.
14:30-15:30 – PL4: Carmen Sandi, EPFL, Switzerland. <i>Neural circuits for anxious actions.</i> Chair: Fotini Stylianopoulou, Hellenic Pasteur Institute, Greece.

15:30-17:00 – S6: Cognitive functions in the prefrontal cortex: from local circuits to long-range interactions

Chair: Georgia Gregoriou, University of Crete and IACM-FORTH, Greece.

Marie Carlen, Karolinska Institute, Sweden. Structure and function of the mouse prefrontal cortex.

Georgia G. Gregoriou, University of Crete and IACM-FORTH, Greece. *The role of the non-human primate prefrontal cortex in the control of visual attention.*

Albert Compte, Institut D' Investigacions Biomediques August Pi I Sunayer, Spain. *The synaptic basis of history biases in spatial working memory.*

17:00-17:30 – Coffee break**17:30-19:00 – S7: Time representation in Brain and Brain representation in Time**

Chairs: Konstantina Kilteni, Karolinska Institute, Sweden, and Argiro Vatakis, Panteion University of Social and Political Sciences, Greece.

Konstantina Kilteni, Karolinska Institute, Sweden. *Rapid learning and unlearning of sensory delays in self-generated movements: Psychophysics and fMRI.*

Argiro Vatakis, Panteion University of Social and Political Sciences, Greece. *Multisensory binding: The contribution of synchrony and semantic congruency in Multisensory Binding.*

Vassilis Thanopoulos, University of Athens, Greece. *Causal and temporally predictable associations between actions and their effects can induce Intentional Binding.*

Thomas Karantinos, University Mental Health Research Institute, Greece. *Intra-subject reaction time variability in schizophrenia.*

19:00-20:00 – Junior Scientists Symposium Chair: Anastasia Tsingotjidou, Aristotle University of Thessaloniki, Greece.

Katerina Kalemaki, University of Crete and IMBB-FORTH, Greece. *Developmental changes of GABA inhibitory function in the mPFC.*

Dimitrios Tzeranis, University of Cyprus, Cyprus. *Development of Novel Treatments for Central Nervous System Injuries based on Porous Collagen Scaffolds*

Panagiotis Sapountzis, IACM-FORTH, Greece. *How is information about stimulus location and identity encoded and stored in the prefrontal and parietal cortices?*

Katerina Kandyliaki, Maastricht University, The Netherlands. *Why and how to employ ecologically valid tests in the neurobiology of language.*

20:00 – HSfN general assembly**Sunday, 6 October 2019**

9:00-10:00 – PL5: Gregoire Courtine, EPFL, Switzerland. *Neurotechnologies restoring motor control after paralysis.* Chair: Georgia Gregoriou, University of Crete and IACM-FORTH, Greece.

10:00-10:30 – Coffee break**10:30-12:00 – S8: New insights/ challenges in CNS and PNS myelination**

Chair: Maria Savvaki, IMBB-FORTH, Greece.

Catherine Faivre-Sarrailh, Institut de Neurobiologie de la Méditerranée, Aix Marseille Université-INSERM, France, *The Caspr/Contactin family as autoimmune target at the node of Ranvier.*

Kleopas A. Kleopa, Cyprus School of Molecular Medicine and The Cyprus Institute of Neurology & Genetics, Cyprus. *Gene therapy approaches for PNS and CNS demyelinating disorders.*

Maria Savvaki, IMBB-FORTH, Greece. *The role of autophagy in the development of CNS myelin.*

12:00-13:30 – S9: EURONEUROTROPIN

Chair: Theodora Calogeropoulou

Antonino Cattaneo, Scuola Normale Superiore, Italy. *Taking pain out of NGF.*

Eran Perlson, Tel-Aviv University, Israel. *Sema3A Facilitates a Retrograde Death Signal in ALS-Diseased Motor Neurons via CRMP4-Dynein Complex Formation.*

Kanelina Karali, IMBB-FORTH, Greece. *Synthetic microneurotrophins: neurogenic and neuroprotective effects in Alzheimer's disease.*

Theodora Calogeropoulou, National Hellenic Research Foundation, Greece. *“EuroNeurotrophin”: A European training network for the discovery of neurotrophins small molecule mimetics as potential therapeutic agents for neurodegeneration and neuroinflammation.*

13:30-14:30 – Poster presentations (Neurodegenerative disorders, Integrative Physiology and Behavior, Sensory systems) – **Lunch**

14:30-16:00 – S10: From cellular to physiological stress: common mechanisms to neuropsychiatric and neurological pathologies

Chairs: Christina Dalla, University of Athens, Greece, and Ioannis Sotiropoulos, ICVS Institute, University of Minho, Portugal.

Ehud Cohen, The Hebrew University of Jerusalem, Israel. *The manipulation of aging: a new approach for the development of combinatorial treatments for neurodegenerative disorders: Deciphering the proteostasis network response to the accumulation of toxic protein aggregates in the aging brain.*

Christina Dalla, University of Athens, Greece. *Sex differences in animal models of depression: from behavior to neural networks.*

Sheela Vyas, CNRS, INSERM & Université Pierre et Marie Curie, France. *Inflammation, stress and glucocorticoid receptors in neurodegeneration.*

Ioannis Sotiropoulos, ICVS Institute, University of Minho, Portugal. *Endolysosomal sorting and RNA-protein biology in stress-driven brain pathology: exploring the link between depression to Alzheimer's disease.*

16:00-17:30 – S11: LRRK2... 15 years from its discovery to becoming a viable drug target for Parkinson's disease.

Chair: Hardy J Rideout, Biomedical Research Foundation of the Academy of Athens, Greece.

Elisa Greggio, University of Padova, Italy. *LRRK2 function and dysfunction beyond the neuron.*

R. Jeremy Nichols, Stanford University, USA. *The path towards identifying novel LRRK2 substrates.*

Arjan Kortholt, University of Groningen, The Netherlands. *Understanding the GTP/GDP cycle of LRRK2 and regulation of its conformation and activity.*

Lilian Petropoulou-Vathi, Biomedical Research Foundation of the Academy of Athens, Greece. *LRRK2-focussed biomarkers of disease progression in PD patients.*

17:30 – Closing ceremony – Travel awards

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