Speakers

Tuesday 15th October 9:00
Inna Slutsky, PhD (Tel Aviv University, Israel)

Dr. Inna Slutsky is an Associate Professor at the Department of Physiology and Pharmacology and the Sagol School of Neuroscience at Tel Aviv University. Her research is focused on understanding the basic mechanisms that maintain synaptic plasticity and memory function and initiate memory dysfunction in Alzheimer’s disease (AD). Using advanced optical imaging, electrophysiology and molecular biology, Slutsky’s team focuses on identifying the mechanisms that drive synaptic and cognitive impairments in AD. Dr. Slutsky and her team discovered how neuronal activity and sensory experience regulate molecular composition of amyloid-beta (Dolev et al., Nature Neurosci, 2013), the physiological role of amyloid-beta (Abramov et al., Nature Neurosci, 2009), the role of magnesium ion in cognitive enhancement (Slutsky et al., Neuron, 2010) and the mechanism triggering synaptic hyperactivity at the earliest AD stages (Gazit et al., Neuron, 2016; Fogel et al., Cell Reports, 2014). Currently, her team is focused on stability mechanisms underlying neural circuit’s functioning (Slomowitz et al., eLife, 2015; Vertkin et al., PNAS, 2015) and firing homeostasis failures as the drivers of AD (Styr & Slutsky, Nature Neurosci 2018; Frere & Slutsky, Neuron 2018).

Dr. Slutsky completed her PhD in the Hebrew University of Jerusalem and post-doctorate studies at MIT. Slutsky is the recipient of the MetLife foundation prize in Alzheimer’s research, Bernard Katz Prize in Neuroscience, Sieratzki Prize in Neuroscience, the New Investigator Award in Alzheimer’s disease from American Federation for Ageing Research, the Sieratzki Prize and the ERC starting and consolidator awards.

Selected Publications:

Tuesday 17th October 9:00
Monica Di Luca, PhD (University of Milano, Italy)

Monica Di Luca is Professor of Pharmacology and Chair of Neuroscience Center (NeuroNest) at the University of Milano, where she graduated in Pharmacology. In 1992 she discussed her PhD thesis at the University of Milano, and in 1993 she completed a PhD programme in Molecular Biology at the University of Utrecht. Her primary research interest is related to synaptic plasticity in physiological and pathological conditions, with the primary aim to apply basic findings to the cure of neurodegenerative diseases as Alzheimer and Parkinson Disease.

She is author of more than 200 scientific publications on peer reviewed journals; she was and still is coordinator of several European Commission projects from VI framework Programme on, where she
always had a clear vision of transdisciplinarity involving all actors including patients organizations at the highest possible level of participation. She has been awarded of several honors including a Laurea Honoris Causa at the Faculty of Medicine and Pharmacy of the University of Mons in 2017 and EMBO membership in 2017 and since 2008 invited member of European Dana Alliance for the Brain. She has been President of Federation of European Neuroscience Societies (FENS) from 2014 to 2016. She is actually President of European Brain Council.

Selected Publications:

Wednesday 18th October 9:00
Daniel Choquet, PhD (University of Bordeaux, France)

Daniel Choquet obtained an engineering degree from Ecole Centrale (Paris, France) in 1984. He then got attracted to neuroscience and completed his PhD in the lab of Henri Korn at the Pasteur Institute (Paris), studying ion channels in lymphocytes. He got appointed tenure Research officer at the CNRS in 1988. He then performed a postdoctoral/sabbatical at the Duke University (North Carolina, USA) in the laboratory of Michael Sheetz where he studied the regulation of integrin-cytoskeletal linkage by force, and demonstrated that cells can sense and respond to extracellular traction. He then setup his group in Bordeaux (France) at the Institute for Neuroscience where he got a directorship position at the CNRS. He launched an interdisciplinary program on the combination of physiology, cell and chemical biology and high resolution imaging to study the functional role of the dynamic organization and trafficking of neurotransmitter receptors in synaptic transmission. He is now heading the Institute for Interdisciplinary Neuroscience and the Bordeaux Imaging Center core facility. He is also the director of the center of excellence BRAIN, Bordeaux Region Aquitaine Initiative for Neuroscience. He has been the recipient of several awards including the 1990 Bronze Medal from the CNRS, the Research prize from the Fondation pour la Recherche Médicale (FRM), 1997, the Grand Prix from the French Academy of Sciences, Prix du CEA and the 2009 Silver Medal from the CNRS. He is a Member of the Institut de France, the French Science Academy since November 2010 and Officier de la Légion d’honneur. He has been awarded three ERC advanced grants in 2008, 2013 and 2018. His team develops several research topics, combining neuroscience, physics and chemistry in order to unravel the dynamics and nanoscale organization of multimolecular receptor complexes and their functional role in glutamatergic synaptic transmission. Recently, the team has engaged in a major program to analyse and understand the interplay between AMPA type glutamate receptor nanoscale dynamics, synaptic plasticity and memory formation in the healthy and diseased brain.

Selected Publications:

Tuesday 22nd October 9:00
Dietmar Schmucker, PhD (Leuven Center for Brain & Disease Research, Belgium)

Prof Schmucker studied at Ludwig Maximilians University in Munich (LMU) and did his Ph.D. at the Max-Planck Institute in Goettingen, Germany. The subject was Drosophila Neurogenetics, his supervisor Dr. H. Jaeckle. He went on to do a 4 year postdoc in Los Angeles with Larry Zipursky, HHMI Investigator at UCLA. At the end of 2001 Prof Schmucker started his own lab as Assistant Professor at Harvard Medical School, Department of Neurobiology, with promotion to Associated Professor in January 2008. Later he got recruited to VIB Leuven at the end of 2009 and has been a group leader at VIB since. For 2019 he was awarded a Alexander von Humboldt Professorship with the opportunity to expand and continue his research at the LIMES and DZNE in Bonn Germany. Throughout his professional career his research interest was on neuronal wiring, with a focus on genetics, biochemistry and imaging. Prof Schmucker discovered the molecular diversity of the neuronal receptor Dscam1, an alternatively spliced gene providing tens of thousands of receptor isoforms, essential for neuronal self-avoidance and axonal branching. His current studies focus on elucidating mechanisms of axonal branching, axon degeneration/regeneration, CNS synaptogenesis, and membrane receptor function/signaling. His group uses the model organisms Drosophila and Xenopus tropicalis.

Selected Publications:
- **Slit and Receptor Tyrosine Phosphatase 69D Confer Spatial Specificity to Axon Branching via Dscam1Dascenco D* Erfurth M* Izadifar A Song M Sachse S Bortnick R Urwyler O Petrovic M Ayaz D He H Kise Y Thomas F Kidd T Schmucker DCELL, 162, 1140-54, 2015* These authors contributed equally
- **Axonal wiring in neural development: Target-independent mechanisms help to establish precision and complexity**Petrovic M, Schmucker DBIOESSAYS, 37, 996-1004, 2015
Wednesday 23rd octobre 9:00 Brain Prize Winners

Bart De Strooper, PhD (UK-Dementia Research Institute, United Kingdom)

Bart De Strooper is scientific director of the UK-Dementia Research Institute since October 2016. He is professor of molecular medicine at the KU Leuven and VIB, Belgium and professor in dementia research at the University College London, UK.

Bart De Strooper’s scientific work focuses on the understanding of the fundamental mechanisms that underlie Alzheimer’s and Parkinson’s disease. His major findings are the role of ADAM10 and presenilin/gamma-secretase in the proteolysis of the amyloid precursor protein and Notch, and he has worked on microRNA, mitochondria, and more recently on the role of the different brain cell types in the pathogenesis of Alzheimer’s Disease.

He received his M.D. in 1985 and Ph.D. in 1991 from KU Leuven. He worked as postdoctoral researcher in the European Molecular Biology Laboratory (EMBL) in Heidelberg, Germany, in the laboratory of Carlos Dotti.

In 2018, Bart De Strooper, together with John Hardy, Christian Haas and Michel Goedert, was awarded the Brain Prize for their groundbreaking research on the genetic and molecular basis of Alzheimer disease. Other awards include the Potamkin Award of the American Academy of Neurology in 2002 (USA), the 2003 Alois Alzheimer Award of the Deutscher Gesellschaft für Gerontopsychiatrie und psychotherapie (Germany), the Joseph Maisin Prize in 2005 for fundamental biomedical sciences, (FWO Flanders, Belgium), the 2008 Metlife Foundation Award for medical research (USA) and the 2018 European Grand Prix for Research (France).

Selected Publications:

Christian Haass, PhD (Ludwig-Maximilians University, Germany)

Dr. Haass graduated in Molecular Biology at the University of Heidelberg, Germany. He was a postdoc and assistant professor of Neurology at the Harvard Medical School in the institute of Dr. Dennis Selkoe. Since 1999 he is the head of the division of Biochemistry at the Ludwig-Maximilians University and since 2009 he is also the speaker of the German Center for Neurodegenerative Diseases (DZNE) in Munich. Dr. Haass received a number of prestigious awards, among them, the Gottfried Wilhelm
Leibniz-Award of the Deutsche Forschungsgemeinschaft, the Potamkin Award of the American Academy of Neurology, an ERC advanced grant, and most recently the brain prize. Dr. Haass is the speaker of the Munich Cluster of Systems Neurology (SyNergy).

**Selected Publications:**

- CSF progranulin increases in the course of Alzheimer’s disease and is associated with sTREM2, neurodegeneration and cognitive decline. Suárez-Calvet, M; Capell, A; Araque, Caballero MÁ; Morenas-Rodriguez, E; Fellerer, K; Franzmeier, N; Kleinberger, G; Eren, E; Deming, Y; Piccio, L; Karch, CM; Cruchaga, C; Paumier, K; Bateman, RJ; Fagan, AM; Morris, JC; Levin, J; Danek, A; Jucker, M; Masters, CL; Rossor, MN; Ringman, JM; Shaw, LM; Trojanowski, JQ, Weiner, M; Ewers, M; Haass, C; Dominantly Inherited Alzheimer Network; Alzheimer’s Disease Neuroimaging Initiative. EMBO Mol Med. 2018 Dec;10(12). pii: e9712.

**Saturday 26th October 9:00**

**Reinhard Jahn, PhD (Max Planck Institute for Biophysical Chemistry, Germany)**

Reinhard Jahn studied biology and chemistry at the Universities of Freiburg and Göttingen (doctorate in 1981). He was postdoctoral fellow at Yale and Rockefeller University (1983-1985), and assistant professor at Rockefeller University (1985-1986). Between 1986 and 1991 he was junior research group leader at the Max Planck Institute of Psychiatry in Munich. 1991 he moved to Yale University as associate/full professor for pharmacology and cell biology and as investigator of the Howard Hughes Medical Institute. In 1997 he became Director at the Max Planck Institute for Biophysical Chemistry. He has obtained several awards including the Leibniz-Prize (2000), the Ernst Jung Prize for Medicine (2006), the Sir Bernhard Katz Award (2008), the Heinrich Wieland Prize (2014) and the Balzan Prize (2016). Elected Memberships include the European Molecular Biology Organization (EMBO), the German National Academy Leopoldina, the Academia Europaea, and the National Academy of Sciences of the United States of America. His research focuses on the molecular mechanism of exocytosis in neurons, focusing on the function of SNARE proteins and their regulation by accessory proteins. In addition, his group works on the structure and function of synaptic vesicles, with particular emphasis on the uptake and storage of amino acid neurotransmitters.

**Selected Publications:**


**Monday 28th October 9:00**

Claudia Bagni, PhD (University of Lausanne, Switzerland)

My laboratory has a long-lasting interest in the study of intellectual disabilities such as Fragile X Syndrome (FXS), Autism (ASD) and Schizophrenia (SCZ) in which the recurring aspect is the dysregulation of the synaptic proteome. The knowledge we acquire examining molecular mechanisms at the synapses will offer a major inroad into the understanding of processes that govern, not only learning and memory and human behavior, but disorders called “synaptopathies” that arise from malfunctioning synapses. We use rodents, patients’ cells and recently Drosophila. FXS, ASD and SCZ are still without an effective cure and we aim, ultimately with the use of biological models, human stem cells and in collaboration with clinical researchers, to develop possible pharmacological approaches to modulate some aspects of these synaptopathies.

**Selected Publication:**


**Monday 29th October 9:00**

Matthijs Verhage, PhD (Vrije Universiteit, Netherlands)

Matthijs Verhage obtained his PhD at the University of Amsterdam in 1990 (cum laude). He received post-doctoral training at the labs of prof. David G. Nicholls (Dundee, UK) and the recent Nobel laureate prof. Thomas C. Südhof (HHMI, Dallas, USA).

Since 2001 he is full professor and head of the Department of Functional Genomics at the VUmc and at the Faculty of Life Sciences, Vrije Universiteit, Amsterdam, The Netherlands. In 2003 he became the first chairman of the Center for Neurogenomics and Cognitive Research (CNCR). He was co-founder and vice chair of the Dutch NeuroBsik Mouse Phenomics consortium.

Since 2014, he is also affiliated with the Karolinska Institutet in Stockholm, Sweden (0.1fte) and since 2015 also with the Broad Institute at the Massachusetts Institute of Technology (MIT) in Boston, USA (0.1fte). Matthijs Verhage was partner of the EU consortium EU-Synapse, vice chair of EuroSpin and SynSys, co-founder and vice chair of H2020 consortium COSYN and founder and coordinator of SynGO.
In 2013 he received the ERC Advanced Grant of the European Research Council. Matthijs Verhage has studied the presynaptic nerve terminal in health and disease for several decades. His lab contributed to the elucidation of secretory pathways in mammalian CNS neurons and synaptic plasticity mechanisms. His team is also involved in studying the role of synaptic dysfunction in encephalopathies, intellectual disability, autism and schizophrenia.

Selected Publications:

Tuesday 30th October, 9:00
Stephane Oliet (Neurocentre Magendie, France)

Stéphane Oliet is a neurophysiologist with a strong interest in synaptic transmission and neuron-glia interactions. He has made some breakthrough discoveries in the field of synaptic plasticity and did some pioneered work on the contribution of astrocytes to synaptic functions. He was among the first to identify distinct forms of long-term depression in the hippocampus while in the laboratory of Roger Nicoll at UCSF. He also participated to the demonstration that NMDA-receptor dependent synaptic plasticity was expressed postsynaptically at CA3-CA1 synapses. He then described the importance of the astroglial environment for glutamatergic transmission through glutamate transport and gliotransmission. His group in Bordeaux has contributed significantly to the emerging concept of of the tripartite synapse that considers astrocytes as active partners of chemical synapses. In particular, they showed that astroglial glutamate transporters were key regulators of synaptic efficacy through the control of presynaptic metabotropic receptors activity. He also demonstrated that membrane trafficking of these receptors at the surface of astrocytes was essential for ensuring an efficient glutamate uptake. His group also focused on the ability of astrocytes to supply synaptic NMDA receptors with an endogenous co-agonist, D-serine. Through this process, astrocytes gate hippocampal NMDAR-dependent plasticity and thus play a role in learning and memory. His interest in glia cells now extended to pathological situation including cognitive deficit associated with Alzheimer disease and more generally neuroinflammation.

Stephane Oliet is the acting director of the Neurocentre Magendie, an Inserm Research Institute which is part of Bordeaux Neurocampus. This Institute is composed of about 200 persons, 11 research teams, and 6 technical platforms.

Selected publications:
- Astroglial CB1 Receptors Determine Synaptic D-Serine Availability to Enable Recognition Memory. Robin LM, Oliveira da Cruz JF, Langlais VC, Martin-Fernandez M, Metna-Laurent M, Busquets-Garcia A, Bellochio L, Soria-Gomez E, Papouin T, Varilh M, Sherwood MW,

