

The Brain Conferences

New Insights into Psychiatric Disorders through Computational, Biological and Developmental Approaches

25 – 28 September 2016

Copenhagen, Denmark

Sunday, 25 September 2016	
14:00-14:20	Arrival and registration
14:20-14:30	Welcome address from the Conference Chairs
Session 1: Learning and Decision Making	
14:30-15:30	Computational Psychiatry: The Missing Link Jonathan Cohen, Princeton Neuroscience Institute (USA)
15:30-16:00	Encoding of action by dopamine and cortical neurons: implications for symptoms of psychiatric disorders? Bita Moghaddam, University of Pittsburgh (USA)
16:00-16:30	Cognitive control over learning and action in corticostriatal circuits Michael J. Frank, Brown University (USA)
16:30-17:00	Coffee break
17:00-17:30	Corticostriatal mechanisms underlying individual differences in decision-making and addiction Stephanie Groman, Yale School of Medicine (USA)
17:30-18:00	Normative Dysfunction: Why Bad Decisions Stay Bad Peter Dayan, University College London (United Kingdom)
18:00-18:15	Perception of ambiguity: a bayesian approach with possible implications for psychosis Pantelis Leptourgos, École Normale Supérieure (France)
18:15-18:30	A causal role for the anterior mid-cingulate cortex in negative affect and cognitive control Serenella Tolomeo, University of Dundee (United Kingdom)
18:30-19:00	End of the day: comments and discussion Michael Browning, University of Oxford (United Kingdom)
19:00-19:45	Welcome Drink & Snacks

Monday, 26 September 2016

Session 2: Affect and Mood

09:00-10:00	Neural circuits important for valence processing Kay Tye, Massachusetts Institute of Technology (USA)
10:00-10:30	Neurobiology of stress, depression, and antidepressants: remodelling synaptic connections Ronald S. Duman, Yale School of Medicine (USA)
10:30-10:45	Neurobehavioral effects of cognitive-behavioural therapy on depression-related disruptions in reinforcement learning Vanessa Brown, Virginia Tech (USA)
10:45-11:00	An improved technology supports the role the glutamatergic system in depression: a 7T MRS study Beata Godlewska, University of Oxford (United Kingdom)
11:00-11:30	Coffee Break and Group Picture
11:30-12:00	The mathematics of regulating emotions Quentin J.M. Huys, ETH Zürich & University of Zürich (Switzerland)
12:00-12:30	Mood as momentum Yael Niv, Princeton University (USA)
12:30-13:00	Targeting emotional bias in the treatment of depression Catherine J. Harmer, University of Oxford (United Kingdom)
13:00-15:00	Lunch break

Session 3: Developmental Approaches

15:00-15:15	Depletion of the Cytoplasmic Fragile X Mental Retardation Protein 1 leads to deficits in synaptic plasticity and autism-like behaviour Sarah Borrie, KU Leuven & VIB (Belgium)
15:15-15:30	Neural activation patterns induced by chronic psychosocial stress in mice Mikaela Laine, University of Helsinki (Finland)
15:30-15:45	Poster Spotlights I (8 presentations, 90 seconds each)
15:45-17:45	Poster Session I & Afternoon Snack
17:45-18:15	Synapse-specification defects in models of autism-spectrum disorders Peter Scheiffele, Biozentrum, University of Basel (Switzerland)
18:15-18:45	Functional genomics of human brain development and implications for neurodevelopmental disorders Nenad Sestan, Yale School of Medicine (USA)
18:45-19:15	End of the day: comments and discussion Tiago Maia, University of Lisbon (Portugal)
19:30-21:30	Optional Dinner at Madklubben Bistro de Luxe

Tuesday, 27 September 2016

Session 4: Stress and Compulsion

09:00-10:00	Molecular mechanisms of gene x stress interactions: implications for psychiatric disorders Elisabeth Binder, Max Planck Institute of Psychiatry, Munich (Germany)
10:00-10:30	Flexibility of threat learning in post-traumatic stress disorder Daniela Schiller, Icahn School of Medicine at Mount Sinai (USA)
10:30-11:00	Coffee Break
11:00-11:30	Cognitive dysfunction in depression and obsessive compulsive disorder (OCD) Barbara J. Sahakian, University of Cambridge (United Kingdom)
11:30-12:00	The dimensionality of compulsivity Valerie Voon, University of Cambridge (United Kingdom)
12:00-14:15	Lunch Break
12:30-14:15	Guided city tour walk (for those who subscribe for the guided tour)

Session 5: Schizophrenia

14:15-14:45	Mapping the Neural Circuitry Substrate for Cognitive Dysfunction in Schizophrenia David A. Lewis, University of Pittsburgh (USA)
14:45-15:15	Cortical microcircuit dysfunction contributing to working memory impairment in schizophrenia: computational and experimental insights John H. Krystal, Yale School of Medicine (USA)
15:15-15:30	Poster Spotlights II (8 presentations, 90 seconds each)
15:30-17:30	Poster Session II + Afternoon Snack
17:30-18:00	From genes to cognition in a genetic mouse model of schizophrenia predisposition Joshua Gordon, Columbia University (USA)
18:00-18:30	Oscillations and Neuronal Dynamics in Schizophrenia: The Search for Basic Symptoms and Translational Opportunities Peter Uhlhaas, University of Glasgow (United Kingdom)
18:30-19:00	End of the day: comments and discussion Sophie Denève, École Normale Supérieure (France)
19:00-	Free time, individual dinner

Wednesday, 28 September 2016

Session 6: Big Data/Large Cohorts

09:00-10:00	Assessing Moderated Effects of Mobile Health Interventions on Behaviour Susan A. Murphy, University of Michigan (USA)
10:00-10:30	Machine learning and neuroimaging in psychiatry: the potential and the challenges Janaina Moureao-Miranda, University College London (United Kingdom)
10:30-11:00	Coffee Break
11:00-11:30	Risk and resilience mechanisms for psychiatric disorders Andreas Meyer-Lindeberg, Central Institute of Mental Health, Mannheim (Germany)
11:30-11:45	Gene networks, neuron types, and brain circuits underlying common psychiatric disorders Dennis Vitkup, Columbia University (USA)
11:45-12:00	Functional Flexibility in the Structural Connectome Promotes Cognitive Flexibility John Medaglia, University of Pennsylvania (USA)
12:00-14:00	Lunch break
14:00-14:30	Genetic evidence for synaptic dysfunction in schizophrenia and related disorders Michael J. Owen, Cardiff University (United Kingdom)
14:30-15:00	Psychiatric disorders as diseases of network dynamics Daniel Durstewitz, Central Institute of Mental Health, Mannheim (Germany)
15:00-16:00	Tying it all together (discussion) John Krystal, Oscar Marín, Yael Niv
18:30-19:00	Farewell Drink
19:00-22:00	Gala Dinner and Poster Awards

Poster Spotlights I

Monday, 26 September 2016, 3:30 pm - 3:45 pm

No	Surname	Abstract title	Institution
1	Aurbach	Hippocampal Fibroblast Growth Factor 9 is Upregulated in Major Depression and May Influence Diagnosis-Specific Expression of Gene Ensembles	University of Michigan
2	Bähler	Model-based analysis of DA-dependent rule switching behavior and associated neural representations in rats	Central Institute of Mental Health
3	Berwian	Predicting relapse after antidepressant discontinuation - a computational approach	Swiss Federal Institute of Technology Zürich & Univ. of Zürich
4	Biegler	Is prediction error overestimated in autism or in patients with delusions?	NTNU
5	Gustafsen	Role for sortilin in migration of neural progenitors	Aarhus University
6	Hula	Computations of Trustworthiness and Irritability	UCL
7	Huang	Social Deficits in Dysbindin-1 Knockout Mice Are Ameliorated by Intranasal Oxytocin	Italiano Istituto di Tecnologia
8	Joseph	Role of TGF β in schizophrenia related behaviours in neonatal ventral hippocampus lesioned rats	McGill University
9	Koppe	Selective Knockout of CACNA1C Coding for the CaV1.2 Subunit of L-Type Calcium Channels Impedes Operant Rule Learning	Central Institute of Mental Health
10	Larsen	Genetic risk for schizophrenia is associated with an impaired auditory steady-state gamma response	DRCMR & DTU

Poster Spotlights II

Tuesday, 27 September 2016, 3:15 pm - 3:30 pm

No	Name	Abstract title	Institution
1	Miskowiak	Differences in neural and cognitive response to emotional faces in middle-aged dizygotic twins at familial risk of depression: possible markers of resilience?	Psychiatric Centre Copenhagen, Copenhagen Univ. Hospital, Rigshospitalet
2	Mitchell	Assessing the validity and robustness of the maternal immune activation model of schizophrenia	Trinity College Dublin
3	Mulej Bratec	How do you make me feel better? Social cognitive emotion regulation and the default mode network	Klinikum Rechts der Isar, Technische Universität München
4	Ramírez-Mahaluf	A Computational Model of Major Depression: the Role of Glutamate Dysfunction on Cingulo-Frontal Network Dynamics	Pontificia Universidad Católica de Chile
5	Totalh	Deciphering the roles of attention and arousal in learning	Max Planck Institut for Biological Cybernetics