

Monday 13th April 2015

SYMPOSIA

08:30 - 10:30

12. Theme A: Development

Venue: Pentland

The cell biology of neurogenesis

Convenor: Kate Storey (University of Dundee)

Chaired by: Kate Storey (University of Dundee)

12.01 Ultradian gene expression oscillations control neural progenitor maintenance and the timing of differentiation

Nancy Papalopulu

University of Manchester

12.02 The role of centrosomal proteins during zebrafish neurogenesis

Paula Alexandre

University College London

12.03 Cutting to the chase: an ESCRT module is required for neuron pruning

Darren Williams

King's College London

12.04 Cell biological mechanisms regulating neuronal differentiation

Kate Storey

University of Dundee

08:30 - 10:30

13. Theme B: Molecular, Cellular and Synaptic Mechanisms

Venue: Sidlaw

Synaptopathy: the new field of synaptic medicine

Convenor: Seth Grant (Edinburgh University)

Chaired by: Seth Grant (Edinburgh University)

13.01 Convergence of disease onto complexes in the postsynaptic proteome

Seth Grant

Edinburgh University

13.02 The role of synaptic dysfunction in striatum

Jean-Antoine Girault

Institut du Fer-à-Moulin, Paris

13.03 Convergence of hippocampal pathophysiology in *Syngap*^{+/-} and *Fmr1*^{-/-} mice

Peter Kind

University of Edinburgh

13.04 Synaptic pathology in neurodegenerative diseases

Giovanna Mallucci

University of Cambridge

08.30 – 10.30

S5. Theme S: Special Event

Venue: Fintry

Drugs, addiction and freewill: do addicted individuals have free will?

Convenors: European Dana Alliance for the Brain and the International Neuroethics Society

Chaired by: Barbara Sahakian (University of Cambridge)

S5.01 Compulsivity and habit development in cocaine users

Trevor Robbins

University of Cambridge

S5.02 Genetics of substance abuse

Gunter Schumann

King's College London

S5.03 Substances of abuse, treatments, policy and law

David Nutt

Imperial College London

S5.04 Neuroethical aspects of addiction focusing on free will

Julian Savulescu

University of Oxford



08:30 - 10:30

14. Theme C: Sensory and Motor Systems

Venue: Lowther

Closing the loop: brain-computer interfaces and neurofeedback

Convenor: Andrew Jackson (Newcastle University)

Chaired by: Andrew Jackson (Newcastle University)

14.01 Applications of closed-loop brain computer interfaces

Eberhard Fetz

University of Washington

14.02 Operant conditioning of low-frequency local field potentials

Andrew Jackson

Newcastle University

14.03 Brain Training in Huntington's Disease: Enhancing neural plasticity using real-time fMRI neurofeedback training

Marina Papoutsis

University College London

14.04 Brain-Computer Interfaces for severe motor paralysis

Andrea Kuebler

University of Wuerzburg

08:30 - 10:30

15. Theme E: Sleep, Circadian and Neuroendocrine Mechanisms **Venue:** **Menteith**

Sleep, circadian rhythms and the neuroendocrine system

Convenor: Jon Johnston (University of Surrey)

Chaired by: Jon Johnston (University of Surrey)

15.01 Timed feeding, neuroendocrinology and the human circadian system

Jon Johnston

University of Surrey

15.02 Chronobiology and sleep in relation to body weight regulation

Margriet Westerterp

Maastricht University

15.03 Interactions between the circadian system and orexigenic neurones

Hugh Piggins

University of Manchester

15.04 Sleep, circadian rhythms and insulin sensitivity

Rachel Leproult

Université Libre de Bruxelles

This Symposium is sponsored by the **Society for Endocrinology**



08:30 - 10:30

16. Theme D: Learning, Memory and Cognition **Venue:** **Lammermuir 1**

Reconsolidation, extinction, and the space in between

Convenor: Amy Milton (University of Cambridge)

Chaired by: Amy Milton (University of Cambridge)

16.01 Reconsolidation and extinction: common and distinct triggers

Charlotte Flavell

University of Birmingham

16.02 Molecular and behavioural properties of the transition between reconsolidation and extinction

Emiliano Merlo

University of Cambridge

16.03 Reconsolidation-extinction boundaries in fear memory attenuation

Marie Monfils

University of Texas

16.04 Targeting fear memory: a window of opportunity

Merel Kindt

University of Amsterdam

08:30 - 10:30

17. Theme D: Learning, Memory and Cognition **Venue: Lammermuir 2**

Knowing where you are: circuit mechanisms for estimating location

Convenor: Matt Nolan (University of Edinburgh)

Chaired by: Matt Nolan (University of Edinburgh)

17.01 How the geometry of the environment affects grid cell symmetry

Julija Krupic

University College London

17.02 Synaptic and dendritic mechanisms of grid cell firing

Christoph Schmidt-Hieber

University College London

17.03 Identifying the Ionic Algorithms for Calculating Spatial Maps

Lisa Giocomo

Stanford University

17.04 Circuit mechanisms for path integration

Matt Nolan

University of Edinburgh

10:30 – 11:15

REFRESHMENTS AND TRADE EXHIBITION VIEWING

Venue: Lennox Suite

10:30 - 11:15

Speed Dating for Careers in Science – Session 1

Venue: Platform 5 Cafe

PLENARY LECTURE

11.15 - 12:15

Kay E Davies (University of Oxford)

Venue: Pentland

'Role of oxidative stress in neurodegeneration'

Chaired by: Peter Brophy (University of Edinburgh)

Sponsored by **Johnson & Johnson Innovation**



12:15 - 13:15

LUNCH

Venue: Lennox Suite

12:15 - 13:15

CEILIDH WORKSHOP

Venue: Menteith

13:15 - 14:45

POSTER SESSION 2 AND TRADE EXHIBITION

Venue: Lennox Suite

P2-A-001 to P2-A-020

P2-B-001 to P2-B-043

P2-C-001 to P2-C-031

P2-D-001 to P2-D-061

P2-E-001 to P2-E-017

P2-F-001 to P2-F-058

P2-G-001 to P2-G-014

SYMPOSIA

14:45 - 16:45

18. Theme F: Nervous System Disorders

Venue: Pentland

Human stem cell models of neurodegenerative disease

Convenor: Rick Livesey (University of Cambridge)

Chaired by: Christopher Shaw (King's College London)

18.01 Modelling alpha-synuclein disease mechanisms with neurons derived from human pluripotent stem cells

Tilo Kunath

University of Edinburgh

18.02 Human stem cell models of motor neuron disease

Chris Shaw

Kings College London

18.03 Stem cell models of frontotemporal dementia

Selina Wray

University College London

18.04 Mechanistic studies of Alzheimer's disease initiation and progression in stem cell models

Lewis Evans

University of Cambridge

This Symposium is sponsored by **Astrazeneca**



14:45 - 16:45

19. Theme D: Learning, Memory and Cognition **Venue: Sidlaw**

Psychedelic neuroscience: can understanding brain mechanisms guide new treatments?

Convenor: David Nutt (Imperial College London)

Chaired by: David Nutt (Imperial College London)

19.01 Ketamine studies on human brain function

Mitul Mehta

King's College

19.02 Comparative effects of psychedelics and MDMA on human brain function

Robin Carhart-Harris

Imperial College London

19.03 Electrophysiology of psychedelics and ketamine in rat brain

Flavie Kersante

Bristol University

19.04 The psychology and therapeutic potential of psychedelics, MDMA and ketamine

Val Curran

University College London

This Symposium is sponsored by **British Association for Psychopharmacology**



14:45 - 16:45

20. Theme D: Learning, Memory and Cognition **Venue: Lowther**

Mind wandering, ADHD and the brain

Convenor: Sue Curtis (Institute of Psychiatry)

Chaired by: Philip Asherson (Institute of Psychiatry)

20.01 The mental phenomena of mind wandering and its relationship to ADHD and the brain

Philip Asherson

Institute of Psychiatry, King's College London

20.02 What can electrophysiology tell us about the DMN, and its relationship with the wandering mind?

Elizabeth Liddle

University of Nottingham

20.03 The altered brain in ADHD and effects of medication

Katya Rubia
King's College London

20.04 Evidence for the neural and psychological heterogeneity of the wandering mind

Jonathan Smallwood
University of York

This Symposium is sponsored by the **UK Adult ADHD Network**



14:45 - 16:45

21. Theme B: Molecular, Cellular and Synaptic Mechanisms **Venue: Lammermuir 1**

Holding it together: membrane interactions underlying the health and well-being of neuronal cell biology

Convenor: Vincent O'Connor (University of Southampton)
Chaired by: Paul Skehel (The University of Edinburgh)

21.01 Cerebellar ataxia: beta III spectrin scaffold of interactions disconnected

Mandy Jackson
The University of Edinburgh

21.02 More than one ligand: differential actions of BDNF on neuronal morphology

Katrin Deinhardt
University of Southampton

21.03 Translational control of gene expression in neuropsychiatric diseases

Christos Gkogkas
University of Edinburgh

21.04 The missing link between motoneuron excitability and ER stress in fALS

Smita Saxena
University of Bern

14:45 - 16:45

22. Theme F: Nervous System Disorders

Venue: Lammermuir 2

The pedunclopontine nucleus - a new target for deep brain stimulation in Parkinson's disease

Convenor: John Stein (University of Oxford)

Chaired by: John Stein (University of Oxford)

22.01 Connections of the PPN

Paul Bolam

University of Oxford

22.02 Primate studies on the PPN and translation to PD patients

Tipu Aziz

J Radcliffe Hospital, Oxford

22.03 PPN stimulation for freezing and falling patients

Peter Silburn

University of Queensland

22.04 PPN pathology and the effects of PPN DBS on akinesia

Elena Moro

University of Grenoble

SPECIAL EVENT

14:45 - 17:45

S6. Theme S: Special Event

Venue: Fintry

Neuroimaging analysis methods

Convenor: Gerard Ridgway (Oxford and UCL)

Chaired by: Gerard Ridgway (Oxford and UCL)

S6.01 Mining HCP data with FSL and Workbench

Saad Jbabdi

University of Oxford

S6.02 MSM: A new tool for multimodal surface-based registration

Emma Robinson

University of Oxford

S6.03 Signal and noise in FMRI connectivity analyses

Eugene Duff

University of Oxford

S6.04 SPM and FSL - Why and how you might use both together

Gerard Ridgway

University of Oxford and UCL

S6.05 Dynamic Casual Modelling (DCM) and FMRI

Peter Zeidman
University College London

S6.06 Detecting cortical and sub-cortical activity and MEG and EEG

Sofie Meyer
University College London

S6.07 DCM for MEG and EEG

Bernadette van Wijk
University College London

This Special Event is sponsored by **Siemens**



SPECIAL EVENT

14:45 - 16:45

S7. Theme S: Special Event

Venue: Menteith

Effective grantsmanship and funding opportunities

S7.01 Funding Opportunities and Priority Areas - Wellcome Trust

John Isaac
Wellcome Trust, Head of Neuroscience and Mental Health

S7.02 Funding Opportunities and Priority Areas - BBSRC

Jef Grainger
BBSRC, Head of Sector for Bioscience for Health

S7.03 Funding Opportunities and Priority Areas - MRC

Kathryn Adcock
MRC, Head of Neuroscience and Mental Health

16:45 - 17:45

REFRESHMENTS AND TRADE EXHIBITION VIEWING

Venue: Lennox Suite

16:45 - 17:45

Speed Dating for Careers in Science – Session 2

Venue: Platform 5 Cafe

PLENARY LECTURE

18:15 - 19:15

Giacomo Rizzolatti (Università di Parma)

Venue: **Pentland**

'Understanding others: A neural mechanism'

Chaired by: Trevor Robbins (University of Cambridge)

20:00 - LATE

STUDENT SOCIAL EVENT (offsite and by ticket only)

Venue: **Teviot Row
Debating Hall**