

# IBNS - International Behavioral Neuroscience Society

## Event Schedule

**Tue, Jun 07, 2022**

8:00 AM

### Travel and Tour Day

🕒 8:00 AM - 6:00 PM, Jun 7

As the scientific sessions start early tomorrow, use this day to relax and enjoy the wonderful things that Scotland has to offer.

6:00 PM

### IBNS Council Meeting - by invitation only

🕒 6:00 PM - 10:00 PM, Jun 7

📍 Hamish Wood-Lantern Room

[Business Mee...](#)

IBNS Annual Council Meeting for Council Members only.

7:00 PM

### Networking Events - Check the Whova App

🕒 7:00 PM - 10:00 PM, Jun 7

Individually organized networking events. Check the Whova app for meet-ups.

**Wed, Jun 08, 2022**

8:00 AM

### Coffee Break - Exhibitors

🕒 8:00 AM - 8:30 AM, Jun 8

📍 Sir Alex Ferguson Library

[Networki...](#)

8:30 AM

### Keynote Speaker: Nandakumar Narayanan. Introduction: Jill McGaughy

🕒 8:30 AM - 9:30 AM, Jun 8

📍 Hamish Wood W011

[Keynote](#)

Cognition in Parkinson's disease at 4 hz. Narayanan, Nandakumar. University of Iowa. Cognitive deficits are a major challenge in Parkinson's disease (PD) and affect executive functions such as working memory, planning, attention, and timing. Approximately one-third of PD patients have cognitive impairments at incident diagnosis and 80% at some point in their disease course. We focus on the circuit bases for these symptoms of PD.

Electroencephalography (EEG) of PD patients reveals deficits in midfrontal delta/theta rhythms ~4 Hz during interval-timing and other cognitive control tasks, which predicts the cognitive performance of PD patients. Our work in rodent models indicates that disrupting ventral tegmental area dopamine models interval-timing deficits in PD as well as impaired 4 Hz rhythms. Our preclinical work describes a mechanism for cognitive control in which prefrontal 4 Hz rhythms engage prefrontal networks instantiating cognitive control. Finally, we present evidence that 4 Hz brain stimulation can boost cognitive control in preclinical models as well as in human PD patients. These data could inspire new biomarkers or targeted therapeutic interventions for PD and other human diseases that disrupt cognition.

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🗣️ Speaker



**Kumar Narayanan**

University of Iowa

9:30 AM

### Coffee Break - Exhibitors

🕒 9:30 AM - 10:00 AM, Jun 8

📍 Sir Alex Ferguson Library

Networki...

10:00 AM

### Symposium: The neural consequences of drug withdrawal on stress, affective, and cognitive behavior and implications for drug seeking

🕒 10:00 AM - 12:00 PM, Jun 8

📍 W011 Hamish Wood

Symposia

#### 🗨️ Speakers



#### Jayme McReynolds

Assistant Professor  
University of Cincinnati College of Medicine



#### Elizabeth West

Rowan University

#### 4 Subsessions

#### ● Cocaine induced neurophysiological alterations in corticostriatal circuits linked to learning and flexible behavior

🕒 10:00 AM - 10:30 AM, Jun 8

#### ● Remifentanyl self-administration in mice promotes sex-specific cortico-striatal dysfunction underlying deficits in cognitive flexibility and impaired control over drug taking.

🕒 10:30 AM - 11:00 AM, Jun 8

#### ● Setting the stage for drug susceptibility and resilience: How different types of stressors differentially augment in vivo prefrontal and accumbens neural signals for subsequent motivated behaviors

🕒 11:00 AM - 11:30 AM, Jun 8

#### ● Long-term consequences of repeated stress and cocaine use on drug-seeking behavior and stress reactivity

🕒 11:30 AM - 12:00 PM, Jun 8

### Symposium: Cognitive deficits following traumatic brain injury and the impacts of pharmacological and cognitive rehabilitation strategies across age, sex, and injury severity

🕒 10:00 AM - 11:30 PM, Jun 8

📍 W010AB Hamish Wood

Symposia

#### 🗨️ Speakers



#### Rachel Navarra

Assistant Professor  
Rowan University



#### Ramesh Raghupathi

Drexel University

### 3 Subsessions

● **Cognitive flexibility, risk/reward decision making, and catecholamine regulatory protein levels within the prefrontal cortex following repetitive mild traumatic brain injury.**

🕒 10:00 AM - 10:30 AM, Jun 8

● **The nicotinic acetylcholine receptor modulator AVL-3288 attenuates hippocampal-based cognitive deficits following repeated mild traumatic brain injury in adolescent rats**

🕒 10:30 AM - 11:00 AM, Jun 8

● **Multimodal assessment of complex cognitive recovery in rats treated with serotonergic and cholinergic compounds following brain trauma**

🕒 11:00 AM - 11:30 AM, Jun 8

### Symposium: Ultrastructural analysis of memory processes

🕒 10:00 AM - 11:30 AM, Jun 8

📍 Lantern Room - Hamish Wood

Symposia

### 🗣️ Speakers



**Kasia Radwanska**

Nencki Institute



**Peter Giese**

Professor

Kings college london

### 3 Subsessions

● **Structural synaptic plasticity provides a mechanism for spaced learning**

🕒 10:00 AM - 10:30 AM, Jun 8

● **Ultrastructural correlates of long-term memory.**

🕒 10:30 AM - 11:00 AM, Jun 8

● **Generation of multi-input synapses correlates with memory storage in aged mice**

🕒 11:00 AM - 11:30 AM, Jun 8

12:00 PM

### Lunch Break - Exhibitors

🕒 12:00 PM - 1:30 PM, Jun 8

📍 Sir Alex Ferguson Library

Networki...

### E&D Workshop - In Person Event Only

🕒 12:00 PM - 1:30 PM, Jun 8

📍 Lantern Room - Hamish Wood

Workshop

Members of the Ethics and Diversity Committee will be hosting a discussion on funding disparities within neuroscience. We have assembled data from around the globe which consistently show women and minority neuroscientists tend to have lower funding levels than white male scientists. An overview of the data will be intermixed with group discussions on why the funding levels are different and what actions may be taken to close the gap.

Attendees can eat lunch in the Sir Alex Ferguson Library at 12pm and then meet up at the Hamish Wood-Lantern room **at 12:30** for the event. You are welcome to bring your lunch to the Hamish Wood-Lantern room if you need more time to eat.

🔊 Speakers



**Janine Kwapis**  
Assistant Professor of Biology  
Penn State



**Susan Sangha**  
Associate Professor  
Indiana University School of Medicine

1:30 PM

**Symposium: Early life experiences shape neural circuitry underlying affective behavior: Parsing the potential for risk or resilience.**

🕒 1:30 PM - 3:30 PM, Jun 8

📍 W011 Hamish Wood

Symposia

🔊 Speakers



**Heidi Meyer**  
Assistant Professor  
Boston University



**Nicole Ferrara**  
Postdoctoral Researcher  
Rosalind Franklin University of Medicine and Science

4 Subsessions

● **Brief isolation alters maturing amygdala circuits supporting social recognition in adults and adolescents.**

🕒 1:30 PM - 2:00 PM, Jun 8

● **Chronic Infancy or Adolescent Stress Sex-Dependently Alters Hypothalamic-Pituitary-Adrenal Axis and Extinction of Conditioned Fear**

🕒 2:00 PM - 2:30 PM, Jun 8

● **A history of chronic adolescent predation stress accelerates synaptosomal metabolic aging in a sex- and region-specific manner.**

🕒 2:30 PM - 3:00 PM, Jun 8

● **Safety learning during adolescence attenuates threat responding in adulthood in a sex-specific manner**

🕒 3:00 PM - 3:30 PM, Jun 8

**Symposium: Outlining individual vulnerability to addiction by means of animal studies**

🕒 1:30 PM - 3:30 PM, Jun 8

📍 W010AB Hamish Wood

Symposia

🔊 Speakers



**Louise Adermark**  
Associate Professor  
University of Gothenburg



**Elisabet Jerlhag**  
Professor  
University of Gothenburg

#### 4 Subsessions

● **Evidence of individual differences in motives for nicotine seeking in rats**

🕒 1:30 PM - 2:00 PM, Jun 8

● **Neurophysiological correlates of sub-dimensions of alcohol use disorder in rodents**

🕒 2:00 PM - 2:30 PM, Jun 8

● **Gut-brain peptides and alcohol use disorder**

🕒 2:30 PM - 3:00 PM, Jun 8

● **Chronic Alcohol Ingestion Alters Striatal Glutamatergic and Dopaminergic Transmission in Rhesus Macaque**

🕒 3:00 PM - 3:30 PM, Jun 8

#### Symposium: Not just a relay: Contributions of thalamic nuclei to cognition

🕒 1:30 PM - 2:30 PM, Jun 8

📍 Lantern Room - Hamish Wood

Symposia

Thalamic nuclei, once seen mostly as sensory relays for cortical regions are now being increasingly recognized as important for integrative, associative and even cognitive processes. Far from being a passive structure with little role in brain-wide circuits, they do now appear as an active and essential partner for the cortical stage, with specific functional contributions. This symposium aims at highlighting how thalamic nuclei critically contribute to integrative cortical functions. The relevance of thalamic functions for a number of pathological conditions will also be highlighted.

#### Speaker



**Mathieu Wolff**

Bordeaux Neurocampus, CNRS, Univ Bx

#### 2 Subsessions

● **Thalamic contributions to attention: Implications for attention dysfunction in autism and epilepsy.**

🕒 1:30 PM - 2:00 PM, Jun 8

● **Thalamocortical circuits of goal-directed behaviors.**

🕒 2:00 PM - 2:30 PM, Jun 8

3:30 PM

#### Break - Exhibitors

🕒 3:30 PM - 4:00 PM, Jun 8

📍 Sir Alex Ferguson Library

Networki...

4:00 PM

#### Symposium: Ultrasonic Vocalizations: A Window Into the Rodent Brain?

🕒 4:00 PM - 5:30 PM, Jun 8

📍 W011 Hamish Wood

Symposia

#### Speaker



**Jennifer Honeycutt**

Assistant Professor  
Bowdoin College

### 3 Subsessions

● **Aversive ultrasonic vocalization playback as a means of probing anxiety and hypervigilance in rat models of affective [dys]function**

🕒 4:00 PM - 4:30 PM, Jun 8

● **Exploring the role of ultrasonic vocalizations in social and non-social behaviors in rats.**

🕒 4:30 PM - 5:00 PM, Jun 8

● **High-frequency 50-kHz laughter-like ultrasonic calling in rats: From sickness behavior to mania**

🕒 5:00 PM - 5:30 PM, Jun 8

### **Symposium: Examining the role of synaptic plasticity and neuronal excitability in the formation and retrieval of different types of memory**

🕒 4:00 PM - 5:30 PM, Jun 8

📍 W010AB Hamish Wood

**Symposia**

#### 👤 Speakers



**Sheena Josselyn**

Senior Scientist/Professor  
Hospital for Sick Children/University of Toronto



**Christina Kim**

Assistant Professor @ Center for Neuroscience and Dept of Neurology  
University of California, Davis

### 3 Subsessions

● **Endogenous allocation to a hippocampal engram**

🕒 4:00 PM - 4:30 PM, Jun 8

● **The Ins and Outs of Neurexins in homeostatic plasticity and Learning**

🕒 4:30 PM - 5:00 PM, Jun 8

● **Interrogating activated neural ensembles**

🕒 5:00 PM - 5:30 PM, Jun 8

### **Symposium: Crossing the Translational Valley: Measuring Neural Activity in the Behaving Rodent Brain**

🕒 4:00 PM - 6:00 PM, Jun 8

📍 Lantern Room - Hamish Wood

**Symposia**

This symposium focuses on combining behavioral assays with simultaneous measures of neural activity.

It is increasingly understood that behavioral similarity is critical, but not sufficient, to ensure the best possibility of translating preclinical results to new therapeutic targets.

The talks in this symposium will discuss the approaches, successes and difficulties of coupling measures of neural activity online (EEG, in vivo electrophysiology, fiber photometry) with behavioral assessment in rodents.

These approaches can both test whether well-established behaviors do measure brain activity in rodents as they are assumed to do, but also help understand basic cortical functions and develop novel biomarkers that may inform diagnosis.

#### 👤 Speaker



**Jonathan Brigman**

Associate Professor & Regents' Lecturer  
University of New Mexico HSC

#### 4 Subsessions

● **A sneak peek into the dynamic interplay between excitatory and inhibitory systems during behavioral flexibility.**

🕒 4:00 PM - 4:30 PM, Jun 8

● **Translational Biomarkers in Preclinical Models of Neurodevelopmental Disorders**

🕒 4:30 PM - 5:00 PM, Jun 8

● **Neural measures of impaired working memory and flexible learning in mouse models for neuropsychiatric disorders**

🕒 5:00 PM - 5:30 PM, Jun 8

● **Amphetamine increases motivation in humans and mice without affecting the parietal alpha biomarker**

🕒 5:30 PM - 6:00 PM, Jun 8

6:00 PM

#### Award Talk

🕒 6:00 PM - 6:30 PM, Jun 8

📍 Hamish Wood W011

[Award Ta...](#)

6:30 PM

#### Break - Walk to City Chambers

🕒 6:30 PM - 7:30 PM, Jun 8

[Networki...](#)

7:30 PM

#### Welcome Reception

🕒 7:30 PM - 9:30 PM, Jun 8

📍 City Chambers

[Networki...](#)

Meet in front of Hamish Wood to walk to City Chambers for Civic Welcome by the City

### Thu, Jun 09, 2022

8:00 AM

#### Coffee Break

🕒 8:00 AM - 8:30 AM, Jun 9

📍 Sir Alex Ferguson Library

[Networki...](#)

8:30 AM

#### Symposium: Brains Circuits for Novelty and Familiarity

🕒 8:30 AM - 10:30 AM, Jun 9

📍 W010AB Hamish Wood

[Symposia](#)

#### 👤 Speakers



##### Susana Mingote

Associate Professor in Biology  
Advanced Science Research Center, CUNY



##### Susanna Molas

Instructor, faculty member  
University of Massachusetts Chan Medical School

#### 4 Subsessions

- **A pathway for rapid orienting in response to novel olfactory stimuli**  
⌚ 8:30 AM - 9:00 AM, Jun 9
- **A cortico-subcortical brain circuit for investigatory behavior.**  
⌚ 9:00 AM - 9:30 AM, Jun 9
- **Opposite activity dynamics of two midbrain circuits encodes social novelty.**  
⌚ 9:30 AM - 10:00 AM, Jun 9
- **Memorable first impressions : a hypothalamic-hippocampal circuit underlying novel social discrimination**  
⌚ 10:00 AM - 10:30 AM, Jun 9

#### Symposium: Impact of early life experience on neural plasticity, epigenetics, and behavior

⌚ 8:30 AM - 10:30 AM, Jun 9

📍 W011 Hamish Wood

Symposia

#### 👤 Speakers



**Cate Peña**

Princeton



**Kathleen Morrison**

Assistant Professor  
West Virginia University

#### 3 Subsessions

- **Impact of early life stress on epigenetic regulation in reward circuitry**  
⌚ 9:00 AM - 9:30 AM, Jun 9
- **Role for chromatin remodeling in pubertal stress-induced transcriptional and behavioral plasticity**  
⌚ 9:30 AM - 10:00 AM, Jun 9
- **Neural epigenetic signatures of early life adversity and exercise intervention.**  
⌚ 10:00 AM - 10:30 AM, Jun 9

#### Symposium: Transgenerational Consequences of Environmental Exposures

⌚ 8:30 AM - 10:30 AM, Jun 9

📍 Lantern Room - Hamish Wood

Symposia

#### 👤 Speaker



**Fair Vassoler**

Assistant Professor  
Tufts University - Cummings School of Veterinary M



#### 4 Subsessions

### ● Multi and Transgenerational Effects of Paternal Exposure to Nicotine Alters Offspring Fear Memory, Sensitivity to Nicotine, Hippocampal Genetic and Neural Function, and Basal Corticosterone

🕒 8:30 AM - 9:00 AM, Jun 9

### ● Transgenerational epigenetics and the potential consequences of the opioid epidemic

🕒 9:00 AM - 9:30 AM, Jun 9

### ● Cellular mechanisms of allostasis regulating mitochondrial bioenergetics coordinate enduring effects of paternal stress on offspring stress responsivity.

🕒 9:30 AM - 10:00 AM, Jun 9

### ● Cocaine-induced changes in sperm Cdkn1a methylation are associated with cocaine resistance in male offspring

🕒 10:00 AM - 10:30 AM, Jun 9

10:30 AM

#### Break - Exhibitors

🕒 10:30 AM - 11:00 AM, Jun 9

📍 Sir Alex Ferguson Library

Networki...

11:00 AM

#### Keynote Speaker: Stan Floresco. Introduction: Jared Young

🕒 11:00 AM - 12:00 PM, Jun 9

📍 W011 Hamish Wood

Keynote

Prefrontal-subcortical dynamics underlying risk/reward decision making. Stan B. Floresco, University of British Columbia. We routinely face decisions requiring evaluation and choice of different actions may or may not yield different types of rewards. These situations trigger competitive decision biases that reflect interplay between different medial prefrontal/orbital cortex, amygdalar and striatal nodes within the brain's dopamine system, which plays a critical role in action selection and reward processing. This lecture discusses some of the interactions between these circuits that shape decision biases and underlie conflicting urges when evaluating options that vary in terms of potential risks and rewards. Optogenetic studies revealed that phasic activity in subcortical circuitry linking dopamine and amygdala inputs to the ventral striatum promote choice towards more preferred rewards, and modify choices after non-rewarded actions. These biases are modified by medial prefrontal regions exert top-down control over the amygdala to differentially shape these urges during different periods of the decision process. Cortical signals prior to action selection aid in evaluating which options may be "better" and increase likelihood that actions are biased towards them. On the other hand, prefrontal signals during different choices outcomes exert a multifaceted and context-dependent influence over subsequent action selection, providing a relative value signal for rewarded choices and differentially biasing the impact of non-rewarded ones. In comparison, chemogenetic studies probing medial orbitofrontal cortical functions showed that distinct projections to the amygdala, ventral striatum, or cortico-cortical pathways enable flexible decision making and integration of reward history to promote optimal decision biases. These findings provide insight into the dynamic competition between these cortical/subcortical circuits that shape our decision biases and underlie conflicting urges when evaluating options that vary in terms of potential risks and rewards.

#### 🔊 Speaker



**Stan Floresco**  
UBC

12:00 PM

#### Lunch Break - Exhibitors

🕒 12:00 PM - 1:30 PM, Jun 9

📍 Sir Alex Ferguson Library

Networki...

#### Black in Neuro Event-In Person Event Only

🕒 12:00 PM - 1:30 PM, Jun 9

📍 Lantern Room Hamish Wood

Networki...

Join us for the Black In Neuro (BIN) Social, hosted by Dr. Brielle Ferguson. Black In Neuro is an organization that seeks to build community, provide resources, and increase visibility for Black scholars in neuroscience-related fields. Grab your lunch and then head on up to the lantern room by 12:15. You'll learn a bit more about B IN, past and present, enjoy some lunch, and network with the BIN community. We hope to provide a space for meaningful discussion, as well as facilitate networking, spur collaborations, and build career-lasting friendships. Open to both Black In Neuro folks and allies. Hope to see you there!

1:30 PM

## Symposium: Obsessive compulsive rodents? Advances and challenges in the use of preclinical models in OCD research

🕒 1:30 PM - 3:30 PM, Jun 9

📍 W011 Hamish Wood

Symposia

### 🗣️ Speakers



**Lizzie Manning**

Research Associate  
University of Newcastle



**Eric Burguiere**

Team leader at Paris Brain Institute - CNRS researcher  
Paris Brain Institute (ICM)

### 4 Subsessions

● **More than compulsivity: reconsidering the Sapap3 knockout mouse in the light of comorbidity and heterogeneity.**

🕒 1:30 PM - 2:00 PM, Jun 9

● **Sign-tracking and dysfunctional behaviour: findings from a rodent analogue of checking**

🕒 2:00 PM - 2:30 PM, Jun 9

● **Deep-brain stimulation of the mouse internal capsule reveals distinct effects on compulsive behavior and neuronal activity in cortico-striatal circuits**

🕒 2:30 PM - 3:00 PM, Jun 9

● **Lessons learned from challenges and successes in preclinical obsessive compulsive disorder research**

🕒 3:00 PM - 3:30 PM, Jun 9

## Symposium: Understanding neuronal ensembles in relevant models of reward.

🕒 1:30 PM - 3:30 PM, Jun 9

📍 W010AB Hamish Wood

Symposia

### 🗣️ Speakers



**Ana-Clara Bobadilla**

University Of Wyoming



**Véronique Deroche**

Inserm

4 Subsessions

● **Reward-specific ensembles in the nucleus accumbens core.**

🕒 1:30 PM - 2:00 PM, Jun 9

● **The chosen ones: recruitment of pyramidal cell and interneuron ensembles in the medial prefrontal cortex during appetitive conditioning and extinction**

🕒 2:00 PM - 2:30 PM, Jun 9

● **A specific neuronal ensemble in the central Amygdala mediates compulsive-like alcohol use**

🕒 2:30 PM - 3:00 PM, Jun 9

● **The many faces of reward-memories in Drosophila**

🕒 3:00 PM - 3:30 PM, Jun 9

**Symposium: Behavioral Manifestations of Noradrenergic Dysfunction**

🕒 1:30 PM - 3:30 PM, Jun 9

📍 Lantern Room - Hamish Wood

Symposia

👤 Speakers



**Barry Waterhouse**

Professor and Chair  
Rowan University School of Osteopathic Medicine



**Jill McGaughy**

Professor  
University of New Hampshire

4 Subsessions

● **Development of cortical noradrenergic systems and ontogeny of executive function in interaction with stress.**

🕒 1:30 PM - 2:00 PM, Jun 9

● **Role of locus coeruleus-norepinephrine system dysfunction in the behavioral and cognitive deficits associated with neurodegenerative disease**

🕒 2:00 PM - 2:30 PM, Jun 9

● **Retinal Regulation of Locus Coeruleus: A Chemogenetic Approach to Treat Neuropsychiatric Disorders**

🕒 2:30 PM - 3:00 PM, Jun 9

● **Organizational features and behavioral implications of the locus coeruleus-norepinephrine projection to motor and non-motor regions of the mouse cerebellum**

🕒 3:00 PM - 3:30 PM, Jun 9

3:30 PM

**Break - Exhibitors**

🕒 3:30 PM - 4:00 PM, Jun 9

📍 Sir Alex Ferguson Library

Networki...

4:00 PM

**Symposium: The role of orexins in rodent behavioral endophenotypes of neuropsychiatric disorders: examining anxiety, stress, cognition, and addiction with an emphasis on sex differences and translational opportunities**

🕒 4:00 PM - 6:00 PM, Jun 9

📍 W010AB Hamish Wood

Symposia

#### 🗣️ Speakers



**Markus Fendt**

Group Leader & adj. Professor  
University of Magdeburg



**Nadine Faesel**

PhD Student  
Otto-von-Guericke-University Magdeburg & University of Bremen

#### 4 Subsessions

● **Dietary amino acids control behaviour via orexin neurons**

🕒 4:00 PM - 4:30 PM, Jun 9

● **Sex-dependent role of orexin in behavioral endophenotypes of neuropsychiatric disorders.**

🕒 4:30 PM - 5:00 PM, Jun 9

● **The contributions of orexins to sex differences in the response to stress**

🕒 5:00 PM - 5:30 PM, Jun 9

● **Orexin system plasticity underlies drug and food overconsumption.**

🕒 5:30 PM - 6:00 PM, Jun 9

### **Symposium: Neurocognitive control of adaptive behaviour: evidence from the appetitive-aversive continuum.**

🕒 4:00 PM - 6:00 PM, Jun 9

📍 Lantern Room - Hamish Wood

Symposia

#### 🗣️ Speakers



**Shauna Parkes**

Tenured Researcher  
University of Bordeaux, CNRS



**Nathan Marchant**

Amsterdam University Medical Center

#### 4 Subsessions

● **VTA dopamine neurons represent valence prediction errors.**

🕒 4:00 PM - 4:30 PM, Jun 9

● **Punishment coding in basolateral amygdala and the effect of benzodiazepines**

🕒 4:30 PM - 5:00 PM, Jun 9

● **Adapting to changes in action-outcome relationships: A role for orbitofrontal cortex and ventral hippocampus.**

🕒 5:00 PM - 5:30 PM, Jun 9

● **Role of anterior insula cortex in context-induced relapse of nicotine-seeking.**

🕒 5:30 PM - 6:00 PM, Jun 9

### **Symposium: Interactions between the molecular circadian clock and behavior**

🕒 4:00 PM - 6:00 PM, Jun 9

📍 W011 Hamish Wood

Symposia

## 🔊 Speakers



**Janine Kwapis**

Assistant Professor of Biology  
Penn State



**Snehajyoti Chatterjee**

Research Scientist  
University of Iowa

## 4 Subsessions

● **Diurnal regulation of memory via local control of the circadian gene Period1.**

🕒 4:00 PM - 4:30 PM, Jun 9

● **CREB-binding protein (CBP) regulates hippocampus-dependent memory and circadian gene expression**

🕒 4:30 PM - 5:00 PM, Jun 9

● **Hippocampal circadian clock regulates memory retrieval via cAMP-PKA pathway-induced GluA1 phosphorylation**

🕒 5:00 PM - 5:30 PM, Jun 9

● **Astrocyte Molecular Clock Function in the Nucleus Accumbens is Important for Reward-Related Behavior**

🕒 5:30 PM - 6:00 PM, Jun 9

6:00 PM

## Break - Exhibitors

🕒 6:00 PM - 6:30 PM, Jun 9

📍 Sir Alex Ferguson Library

[Networki...](#)

6:30 PM

## Poster Session 1

🕒 6:30 PM - 8:30 PM, Jun 9

📍 Sir Alex Ferguson Library

[Poster Sessio...](#)

## 107 Subsessions

● **Valproic acid improves anxiety-like behavior and amphetamine hyper-reactivity in isolation reared trait anxiety rats but reverses the benefits of environmental enrichment**

🕒 6:30 PM - 8:30 PM, Jun 9

● **Safety learning during thermal threat is affected by social isolation stress and requires prefrontal and hippocampal processing**

🕒 6:30 PM - 8:30 PM, Jun 9

● **Hippocampal Neurogenesis Mediates Decision Making Under Conflict**

🕒 6:30 PM - 8:30 PM, Jun 9

● **Developmental exposure to pyrethroid pesticides causes and autism-related phenotype in mouse and prairie vole**

🕒 6:30 PM - 8:30 PM, Jun 9

● **Assessment of the neonatal vocalization development in the neurodevelopmental model of schizophrenia**

🕒 6:30 PM - 8:30 PM, Jun 9

● **How a history of avoidance influences generalization and extinction of fear memories**

🕒 6:30 PM - 8:30 PM, Jun 9

● **Dorsal striatal dopamine dynamics encode the estimation of temporal intervals**

🕒 6:30 PM - 8:30 PM, Jun 9

● **Sex differences in dopaminergic regulation of risky decision making.**

🕒 6:30 PM - 8:30 PM, Jun 9

● **DNA methylation as a possible epigenetic driver of anxiety-like behavior in an**

**early life adversity model**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Resource scarcity alters the basolateral amygdala transcriptome in a sex specific manner**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Dopamine projections to the basolateral amygdala mediate the encoding of outcome-specific reward memories**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Object recognition memory encoding requires hippocampal theta activity**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Title: Levels of Estradiol and Progesterone Are Associated with Fear Acquisition and Extinction Learning Differences in Women**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Neuronal-specific Diras2 deletion results in distinct behavioural and morphological alterations in mice**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **The pleasure of absent danger: Neural and emotional responses to the unexpected omission of pain**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **An in vivo, neuron-specific approach for pairing translational and epigenetic signatures of early-life exercise.**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Characterization of parental caregiving of sick offspring in mice**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Short-active gestational photoperiod reduces effortful choice behavior in mice, partial normalization by d-amphetamine**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Prelimbic neuronal ensembles mediate cocaine seeking after acquisition in male and female rats**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Preclinical assessment of opioid + non-opioid drug interactions in search for combinations with an improved therapeutic index**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Cannabidiolic acid methyl ester (HU-580) in a preclinical schizophrenia mouse model**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Fos-expressing neuronal ensembles in rat infralimbic cortex encode initial and maintained oxycodone seeking in rats**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Psilocybin acutely reduces impulsive decision-making without affecting motivation**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Basal Forebrain Cholinergic Projections to The Basolateral Amygdala Are Necessary to Produce Durable and Extinction-Resistant Fear Memories**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Alprazolam exposure during adolescence induces life-long dysregulation of reward sensitivity and second messenger signaling within the VTA-NAc pathway.**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **The role of the nucleus accumbens in cocaine memory reconsolidation**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Social deficits induced by pervasive environmental stressors are prevented by microbial or dopaminergic modulation**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Systemic des-acyl ghrelin decreases alcohol intake and attenuates alcohol-mediated behaviours in rodents.**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Neutral sphingomyelinase is a major driver of sex-differences in depression and alcohol-abuse**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Effects of an oxytocin receptor antagonist on estrogens facilitation of on social recognition in the medial amygdala of female mice**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **HSV-1 intranasal infection contributes to olfactory behavioral deficits in 5xFAD mice**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **The Effects of Novel High-CBD Cannabis on Neuroanatomy in the Long-Evans**

**Rat.**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Chemogenetic inhibition of projection neurons in ventrolateral orbitofrontal cortex does not impair reversal learning**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Role of acetylcholine release in the prefrontal cortex during social interaction**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Genetic disruption of dopamine  $\hat{1}^2$ -hydroxylase confers a behavioral syndrome resembling toxoplasmosis in mice**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Effects of a KHX-enriched diet on motor behavior in a MPTP mouse model for Parkinson's disease**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Chronic unpredictable stress in female Wistar and Wistar-Kyoto rats subjected to progesterone withdrawal: relevance for Premenstrual Dysphoric Disorder.**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Science Communication: Using Pop Culture to Teach Children about the Brain and Behaviour**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Dopamine: A Tale of Two Cities**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Science for all ages: What Quidditch can teach us about prefrontal cortex, the striatum, and the cerebellum**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Integrating neuroanatomy and behavioural neuroscience to enhance medical students' appreciation of visual processing**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Sex steroids Vasopressin interplay rapidly modulate social recognition and aggression in male mice**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Encoding of anxiety learning and diazepam treatment by rodent prefrontal cortex and VTA neurons**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Hippocampal encoding of complementary static and dynamic spatial visual scenes**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **ACC neurons respond both during and after response conflict**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **What Dads Do Is Important Too: Paternal Preconception Drug Effects on Neurobehavioral Development of Their Offspring**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Dysphoric Side Effects of SR141716 (Rimonabant) were Likely Predictable from Preclinical Animal Models**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **The basolateral amygdala to nucleus accumbens shell pathway encodes, but doesn't retrieve, outcome-specific predictions to guide choice between actions**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Alcohol-induced Changes in Decision Making and Neural Response to Negative Affect in Young Adults with Bipolar Disorder**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Acute effects of cannabis on cognition in aging**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Differential effects of social, physical, and cognitive stimulation in APPNL-G-F mice**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Nicotinic receptor activity in the nucleus accumbens differentially alters sign-tracking during a contingency change and overtraining**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Driving is a no (new) brainer: The impact of adult neurogenesis on cognitive learning in male Long-Evans rats.**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Free choice high-fat high-sugar diet during adolescence or adulthood alters feeding behaviours**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **The sympathetic nervous system in cocaine use disorder**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Early-Life Sleep Deprivation and Alcohol Consumption: Insights from a Rat Model**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Prefrontal cortex mitochondrial dysfunction links gestational stress and depressive-like behavior in postpartum rats**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Photobiomodulation of cytochrome c oxidase by chronic transcranial laser in young and aged rat brains**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Cellular and neurochemical mechanisms of the cannabidiol antipsychotic-like effect: involvement of 5-HT1A and CB2 receptors**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Effects of chemogenetic manipulation of the ventral hippocampus to nucleus accumbens pathway on sign- and goal-tracking behaviors**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Stress-related neurochemical modulation of reward-related risky decision-making and response inhibition involving punishment**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **The Impact of Pubertal Stress on Maternal Memory Formation**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Does exercise rescue the toxic effects from early life stress? An examination of exercise induced decreases in the inflammatory factor COX-2 in the hippocampus of C57/Black 6J Mice.**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Interaction of amphetamine and female reproductive cycle during interval timing in mice**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Imaging of calcium transients in rat hippocampus reveals stable place cells clustered by field location**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Organizational Features and Functional Implications of the Locus Coeruleus-Norepinephrine Projection to Motor Regions of the Rodent Brain**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Chronic ACE2 inhibition similar to that caused by SARS-CoV-2 infection causes cognitive impairment in mice that correlates with hippocampal oxidative stress and neuroinflammation**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Dynamical management of potential threat with dopamine and direct and indirect pathway neurons in the tail striatum**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **The effects of pre-reproductive stress in female rats on maternal care and DNA methylation across generations**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Pay attention to this change: Lateral Hypothalamic GABAergic neurons in attention and alcohol memories.**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **New Tools for Optical Control of Oxytocin Signaling and Social Behavior**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Evaluating theoretical models of hippocampal mapping in complex environments across protracted experience in freely-behaving mice**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Sex differences in the effects of chronic nicotine on the murine hippocampus during contextual fear extinction**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Do rats have partner preferences in social play?**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **A working memory update: development of a novel procedure for assessing updating in rodents**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Dissociable regulation of effort-related decision making by mu and kappa opioid receptors**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Opposing amygdala-striatal pathways allow chronic stress to accelerate habit formation**

⌚ 6:30 PM - 8:30 PM, Jun 9



● **MMA Fighters and Epigenetics: An Analysis of DNA Methylation and miRNA Expression**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Methylation of Genes and Regulation of Inflammatory Processes on Mental Health Outcomes in Young Adults with Alcoholic Parents**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Behavioral and neural alterations of the reward system by exposure to junk food in rats**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Do different patterns of junk food exposure cause short-term and long-term neural adaptations in the reward system?**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Exposure to Perinatal Fluoxetine May Lead to Dysregulation of BDNF in the Hippocampus**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Structural and functional sex differences in the ventral pallidal vasopressin system are associated with the sex-specific regulation of social play behavior in juvenile rats**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **A transient beta oscillation occurs with high temporal regularity prior to stopping an ongoing movement**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **High fat diet feeding disrupts nucleus accumbens core regulated motivational control over food-seeking behaviour**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Exploring experimental parameters influencing social motivation in rats using social operant conditioning.**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Efficacy of Bremelanotide (Vyleesi) and melanocortin 4 receptors in the nucleus accumbens to enhance sexual motivation in female Syrian hamsters**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **The Effects of Oral Cannabidiol Administration in Male Rodents: Sleep, Anxiety & Proliferation.**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Contributions of ventrolateral orbitofrontal cortex to flexible stimulus-reward learning under Delay Conditions**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **The ontogeny of alcohol-induced negative affect in C57BL/6J mice**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Examining the impact of pubertal stress and adult hormone exposure on the PVN transcriptome**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Ventral hippocampus activity during reward seeking is modulated by a history of low dose ethanol in mice.**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Perinatal omega-3 fatty acid supplementation prevents prenatal THC induced pathophenotypes**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Brief exposure to environmental enrichment reduces cue-evoked sucrose seeking and consumption in mice**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Characterization of novel clinically-relevant behavioral phenotypes in young adult Mucopolysaccharidosis IIIB mice.**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Dopamine antagonism during acquisition of the two-way active avoidance task in rats**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Genetic background determines adolescent hippocampal learning and gene expression after acute alcohol exposure**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Gtf2ird1 alone is not responsible for increased social motivation in a mouse modeling the Williams Syndrome deletion.**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Investigating the Relationship Between Antioxidant Capacity and Stereotypy in Mice**

⌚ 6:30 PM - 8:30 PM, Jun 9

● **Melanin-concentrating hormone neurons differentially regulate feeding and arousal as a function of downstream projection area**

🕒 6:30 PM - 8:30 PM, Jun 9

● **Oxycodone self-administration during pregnancy disrupts offspring ultrasonic vocalizations: Role of the dam-pup dyad in symptoms of neonatal opioid withdrawal syndrome**

🕒 6:30 PM - 8:30 PM, Jun 9

● **Pharmacological and neurophysiological effects of novel psilocybin-related tryptamines**

🕒 6:30 PM - 8:30 PM, Jun 9

● **Sex differences in the effects of age on prefrontal cortex-mediated cognition in Fischer 344 x Brown Norway F1 hybrid rats**

🕒 6:30 PM - 8:30 PM, Jun 9

● **Social transfer of fear in group housed mice with autism-like phenotype**

🕒 6:30 PM - 8:30 PM, Jun 9

● **Striatal acetylcholine reports distinct update signals during flexible multi-step decision making.**

🕒 6:30 PM - 8:30 PM, Jun 9

● **Effects of acute lysergic acid diethylamide on intermittent ethanol and sucrose drinking and intracranial self-stimulation in C57BL/6 mice**

🕒 6:30 PM - 8:30 PM, Jun 9

● **The contribution of preexisting neural circuitry to behavioral outcomes following social defeat stress in male and female mice.**

🕒 6:30 PM - 8:30 PM, Jun 9

**Fri, Jun 10, 2022**

8:00 AM

**Coffee Break - Exhibitors**

🕒 8:00 AM - 8:30 AM, Jun 10

📍 Sir Alex Ferguson Library

[Networki...](#)

8:30 AM

**Symposium: Taking great pain: Identifying novel factors that influence pain behavior**

🕒 8:30 AM - 10:30 AM, Jun 10

📍 W011 Hamish Wood

[Symposia](#)

👤 **Speakers**



**Kate Sadler**

Medical College of Wisconsin



**Sydney Trask**

Assistant Professor  
Purdue University

#### 4 Subsessions

● **TLR4-induced acute pain: Interactions between the nervous and immune system in the context of sex differences.**

🕒 8:30 AM - 9:00 AM, Jun 10

● **Pain, sex, and death.**

🕒 9:00 AM - 9:30 AM, Jun 10

● **Disease and injury related changes in the gut microbiome contribute to persistent pain**

🕒 9:30 AM - 10:00 AM, Jun 10

● **Contextual control of conditioned pain tolerance and endogenous analgesic systems.**

🕒 10:00 AM - 10:30 AM, Jun 10

### Symposium: The microbiota-gut-brain axis as a modulator of brain function and behavior

🕒 8:30 AM - 10:30 AM, Jun 10

📍 W010AB Hamish Wood

Symposia

#### 🗨️ Speaker



**Anthony Hannan**

Professor  
University of Melbourne

#### 4 Subsessions

● **Drugs from Bugs: The Potential of the Microbiome in Mental Illness**

🕒 8:30 AM - 9:00 AM, Jun 10

● **Microbiome and the social brain.**

🕒 9:00 AM - 9:30 AM, Jun 10

● **The Microbiota and Immune System Crosstalk in Neurodevelopment and Behavior**

🕒 9:30 AM - 10:00 AM, Jun 10

● **Gene-Environment Interactions and the Microbiota-Gut-Brain Axis in the Modulation of Brain Function and Behavioral Endophenotypes**

🕒 10:00 AM - 10:30 AM, Jun 10

### Symposium: Neural Mechanisms Mediating Sex Differences in Motivation for Food Reward and Cocaine

🕒 8:30 AM - 10:30 AM, Jun 10

📍 Lantern Room - Hamish Wood

Symposia

#### 🗨️ Speaker



**Jill Becker**

Professor of Psychology, Research Professor Molecular and Behavioral Neuroscience Institute  
University of Michigan

#### 4 Subsessions

● **Sex differences in NAc glutamate plasticity and the role of ovarian hormones in food-seeking**

🕒 8:30 AM - 9:00 AM, Jun 10

● **Perineuronal nets are regulated by sex and diet in the prefrontal cortex**

🕒 9:00 AM - 9:30 AM, Jun 10

● **Hormonal regulation of risky decision making in male and female rats**

🕒 9:30 AM - 10:00 AM, Jun 10

● **Estradiol acts at multiple estradiol receptor subtypes in the nucleus accumbens and dorsal striatum to differentially affecting reward in females and males.**

🕒 10:00 AM - 10:30 AM, Jun 10

10:30 AM

#### Break - Exhibitors

🕒 10:30 AM - 11:00 AM, Jun 10

📍 Sir Alex Ferguson Library

[Networki...](#)

11:00 AM

#### Symposium: Neural control of sexual behavior

🕒 11:00 AM - 1:00 PM, Jun 10

📍 W011 Hamish Wood

[Symposia](#)

#### 👤 Speakers



**Bertrand Lacoste**

Champalimaud Foundation



**Elke Snoeren**

Professor  
UiT The Arctic University of Norway

#### 4 Subsessions

● **Modeling neural mechanisms of sexual desire in female Syrian hamsters**

🕒 11:00 AM - 11:30 AM, Jun 10

● **VTA dopamine neurons and male mice sexual behaviour**

🕒 11:30 AM - 12:00 PM, Jun 10

● **Preclinical evidence for a new on-demand treatment for lifelong premature ejaculation: Enduro**

🕒 12:00 PM - 12:30 PM, Jun 10

● **The neural control of male rat copulation patterns.**

🕒 12:30 PM - 1:00 PM, Jun 10

#### Symposium: Exploring the link between impulsivity and psychopathology

🕒 11:00 AM - 1:00 PM, Jun 10

📍 W010AB Hamish Wood

[Symposia](#)

Impulsive behaviours have been associated with a range of neuropsychiatric disorders, but impulsivity is not just a transdiagnostic symptom. Higher levels of impulsivity are associated with increased risk of developing mental health disorders, many of which are neurodevelopmental in nature. Childhood and adolescence are particularly critical periods for the development of impulse control and often when the first fractures lines are observed. Of particular interest is the trend for impulsivity to predict the later development of compulsive behaviours, as observed in addiction. The vulnerability associated with impulsivity is an obvious target for the prevention of serious mental health disorders. Research into the behavioural and neurobiological underpinnings of impulsive behaviour has started to elucidate why some individuals are more impulsive and why this makes them more vulnerable to developing neuropsychiatric disorders.

In this symposium we will take a cross-species approach to presenting new research on impulsivity and how it relates to psychopathology. Covering various forms of impulsivity, including impulsive actions and choices, we will showcase new research aimed at understanding how changes in the brain contribute to impulsive behaviours. Importantly, we will conclude with a panel discussion focussed on drawing these findings together and highlighting future directions for translational research that aims to understand the vulnerabilities associated with high impulsivity.

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#### 🗣️ Speaker



**Karly Turner**

Research Fellow  
University of New South Wales

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#### 4 Subsessions

● **Synergistic interaction of win-paired cues, addictive drugs, and motor impulsivity**

🕒 11:00 AM - 11:30 AM, Jun 10

● **Insights into the neurobiology of impulsivity and impulse control from the ABCD study**

🕒 11:30 AM - 12:00 PM, Jun 10

● **Studying the neurobiology of impulsivity in rodents using automated approaches**

🕒 12:00 PM - 12:30 PM, Jun 10

● **Behavioural and neural signatures of impulsive actions in rats**

🕒 12:30 PM - 1:00 PM, Jun 10

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### **Symposium: Extrasynaptic Regulators of Drug Relapse: Exploring the 3rd and 4th dimensions**

🕒 11:00 AM - 1:00 PM, Jun 10

📍 Lantern Room - Hamish Wood

**Symposia**

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#### 🗣️ Speakers



**Peter Kalivas**

Professor  
Medical University of South Carolina



**Anna Kruyer**

Research Assistant Professor  
Medical University of South Carolina

#### 4 Subsessions

##### ● Activity-dependent plasticity of inter-synaptic crosstalk

🕒 11:00 AM - 11:30 AM, Jun 10

##### ● Astrocytes in the basal ganglia adapt to heroin use and extinction by selective association with D1-MSNs to regulate seeking

🕒 11:30 AM - 12:00 PM, Jun 10

##### ● Astrocytes modulate amphetamine-induced neural plasticity in-vivo

🕒 12:00 PM - 12:30 PM, Jun 10

##### ● Catalytic signaling in the accumbens extracellular matrix regulates drug and stress cue reactivity

🕒 12:30 PM - 1:00 PM, Jun 10

1:00 PM

#### Lunch Break - Exhibitors

🕒 1:00 PM - 2:30 PM, Jun 10

📍 Sir Alex Ferguson Library

Networki...

#### Meet the Professionals-In Person Event Only

🕒 1:00 PM - 2:30 PM, Jun 10

📍 Sir Alex Ferguson Library

Networki...

2:30 PM

#### Keynote Speaker: Elizabeth Tunbridge. Introduction: Greg Carr

🕒 2:30 PM - 3:30 PM, Jun 10

📍 W011 Hamish Wood

Keynote

Buildings brains from genes: moving from loci to new treatments in psychiatry. Tunbridge, Elizabeth. University of Oxford, Boehringer Ingelheim

In recent years, large-scale genomic studies have identified a large number of loci that are robustly associated with psychiatric disorders. The challenge now is to use this information to better understand the biological basis of these illnesses and to improve treatments. In this presentation I will outline how understanding the impact of genes and proteins of interest across multiple levels (molecular, cellular, network, systems) might help us to bridge the vast divide between the genome and the complex symptoms experienced by people with psychiatric disorders. In doing so, I will highlight how understanding these links might lead to new therapeutic approaches, but also how much remains unknown about the human brain.

Funding Acknowledgements: MRC, J&J Innovations Unrestricted Educational Grant

#### 🗣️ Speaker



**Liz Tunbridge**

Boehringer Ingelheim

3:30 PM

#### Break - Exhibitors

🕒 3:30 PM - 4:00 PM, Jun 10

📍 Sir Alex Ferguson Library

Networki...

4:00 PM

#### Travel Award Blitz

🕒 4:00 PM - 6:00 PM, Jun 10

📍 W011 Hamish Wood

Award Ta...

6:00 PM

### Break - Exhibitors

🕒 6:00 PM - 6:30 PM, Jun 10

📍 Sir Alex Ferguson Library

Networki...

6:30 PM

### Poster Session 2

🕒 6:30 PM - 8:30 PM, Jun 10

📍 Sir Alex Ferguson Library

Poster Sessio...

#### 100 Subsessions

- **Sex-dependent activity in anterior cingulate cortex modulates offspring interactions**  
🕒 6:30 PM - 8:30 PM, Jun 10
- **Social and Environmental Positive Stimuli Can Increase NPY Expression in Long-Evans Rats Exposed to Unpredictable Chronic Stress**  
🕒 6:30 PM - 8:30 PM, Jun 10
- **The role of the nucleus accumbens shell in alcohol use despite negative consequences**  
🕒 6:30 PM - 8:30 PM, Jun 10
- **Characterizing the role of the posterior intralaminar complex of the thalamus in social behavior in mice**  
🕒 6:30 PM - 8:30 PM, Jun 10
- **Dopaminergic plasticity underlying bonding and loss in monogamous prairie voles**  
🕒 6:30 PM - 8:30 PM, Jun 10
- **Orexin's role in attention, impulsivity and psychostimulant induced cognitive deficits.**  
🕒 6:30 PM - 8:30 PM, Jun 10
- **Lipopolysaccharide-induced neuroinflammation in the posterior dorsomedial striatum facilitates goal-directed action**  
🕒 6:30 PM - 8:30 PM, Jun 10
- **Sex-specific variation of catecholamine regulatory proteins may underlie increased risky choice preference following repetitive mild traumatic brain injury**  
🕒 6:30 PM - 8:30 PM, Jun 10
- **Time and Dose-Dependent Effects of Corticosterone Inhibition on Learning and Consolidation of the Cued Water Maze**  
🕒 6:30 PM - 8:30 PM, Jun 10
- **Chronic corticosterone administration alters synaptic mitochondrial function within the hippocampus of C57Bl/6 mice in a sex-specific manner**  
🕒 6:30 PM - 8:30 PM, Jun 10
- **Adolescent-onset ethanol drinking increases COX-2 and PGE2 in adult female rats: Antagonism of ethanol reinstatement by COX-2 and EP1 receptor inhibitors**  
🕒 6:30 PM - 8:30 PM, Jun 10
- **Impact of melatonin deficit on the emotional status and oxidative stress-induced changes in sphingomyelin and cholesterol level in young adult, mature, and aged rats**  
🕒 6:30 PM - 8:30 PM, Jun 10
- **The effects of Effort-Based Reward training and chemogenetic activation of the lateral habenula on behavioral and neuroendocrine responses in stressful contexts**  
🕒 6:30 PM - 8:30 PM, Jun 10
- **Aromatase inhibition in the basolateral amygdala impairs heroin extinction memory retention in male and female rodents**  
🕒 6:30 PM - 8:30 PM, Jun 10
- **Short-chain fatty acid metabolites modulate cocaine-seeking behaviors**  
🕒 6:30 PM - 8:30 PM, Jun 10
- **Cannabis extract alone and in combination with cannabidiol reduces relapse to methamphetamine and locomotor sensitization.**  
🕒 6:30 PM - 8:30 PM, Jun 10
- **Prenatal circadian rhythm disruption induces sex-specific substance use-**

**related phenotypes in mice**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Cognitive relationships underlying risky decision making in male and female rats**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **The Cocaine and Oxycodone Biobanks: Two repositories of biological samples from genetically characterized outbred rats that exhibit compulsive-like...**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Serotonin receptor 7 stimulation rescues fear generalization in a PTSD transgenic mouse model carrying a truncated form of MECP2**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Preclinical mouse study on maternal separation impacting childhood chemotherapy-induced cognitive impairment**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **The rewarding nature of relief**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Impaired fear memory in a BDNF Val66Met rat model is reversed by chronic exercise**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **The effects of acute restraint stress in adolescent and adult rats on the brain and behavior.**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Mice lacking 5-lipoxygenase display motor deficits associated with cortical and hippocampal synapse abnormalities**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Social learning in mouse models of autism**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Serotonin receptors 2A in the rat mPFC are necessary for Retrieval Induced Forgetting**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Chemogenetic activation of VTA dopamine neurons affects operant responding for but not social play expression in adolescent rats.**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Impaired amygdala plasticity and salience evaluation following environmental enrichment loss in rats**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Prelimbic cortex encoding of reward-predictive cues following devaluation**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Exposure to enriched environment reveals sex-specific behaviour modification in Cacna1c haploinsufficient rats**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Paternal cocaine self-administration enhances fear-related behaviors and suppresses synaptic activity only in male progeny.**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Cannabis oil strain differentially impacts reward learning, decision-making, and impulsivity on a rodent gambling task**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Amphetamine increases motivation in humans and mice, although did not affect the parietal alpha biomarker**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Effects of reproductive experience on cost-benefit decision making in females**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Post-training Glucocorticoid Receptor blockade in the mPFC promotes faster corticosterone recovery and contextual fear generalization in male rats.**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Exercise and protection from stress caused by maternal deprivation in the hippocampi of female C57/Black 6J mice.**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Acute environmental de-enrichment triggers severe aggressive behavior in BALB/c mice.**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Prefrontal-amygdala circuits regulating cue-guided risk/reward decision-making.**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Differential effects of short-term social isolation on anxiety and cognition in adult and aging zebrafish (Danio rerio).**



⌚ 6:30 PM - 8:30 PM, Jun 10

● **A corticothalamic circuit exhibits sex-specific regulation of sociability**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Emergence of individual personality traits in mice living in same sex colonies from weaning: social behaviors, acoustic communication and motivation profiles**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Basolateral amygdala-striatal projections contribute to allow stress to accelerate habit formation**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Endocannabinoids influence the neural substrates of interval timing in the nucleus accumbens**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Inhibition of Parvalbumin Interneurons (PV INs) in the Prefrontal Cortex after Chronic Variable Stress ( CVS) Mitigates CVS induced behavioral and physiological phenotypes in Male Mice**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Neuronal transcriptomic and epigenomic signatures of early-life adversity and exercise underlie modulations to cognitive function.**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Circuit-specific chemogenetic modulation of working memory in aged rhesus monkeys**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **The role of progesterone in dorsal hippocampal D2-type dopamine receptor facilitated social learning in male mice**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Aerobic exercise preserves pattern separation ability and enhances neurogenesis in a dietary model of obesity**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Social reciprocity is altered in mouse models of neurodevelopmental disorders in a naturalistic setting**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Rodent Behavioral and Antidepressant Effects of Psilocybin and Novel Tryptamines**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **The role of the BNST in the regulation of natural reward consummation**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **The rapid effect of estrogens on social recognition in the paraventricular nucleus of male mice**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Chronic early-life resource deprivation disrupts the landscape and function of cortical inhibitory neurons**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **A novel assessment of rule-learning in mice using operant touch screen boxes**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Cannabidiol accelerates the development of tolerance to the analgesic effects of oxycodone but not morphine: a potential drug-drug interaction.**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Role of ventral midbrain dopamine neurons in familiarity**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Ventral hippocampus is required for updating action-outcome associations through context-outcome learning**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Paternal methamphetamine administration does not cause such a serious effects to rat offspring during development and in adulthood as maternal administration**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Behavioural changes in young adult pre-symptomatic C9orf72, MAPT and GRN mutation carriers: A GENFI study**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Cognitive and social behavioral outcomes in premature infants following neonatal adenosine antagonist treatment: Influence of drug timing, pre-existing prenatal inflammation, and sex**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Social buffering reduces LPS induced neuroinflammatory distress-associated behaviors in mice**

⌚ 6:30 PM - 8:30 PM, Jun 10

- **Chronic effects of cannabis on cognition in aging.**  
⌚ 6:30 PM - 8:30 PM, Jun 10
- **Involvement of an oxytocinergic hypothalamic-striatal pathway in the regulation of juvenile social play behavior**  
⌚ 6:30 PM - 8:30 PM, Jun 10
- **Self-administration acquisition rate predicts locomotor sensitivity to cocaine in male rats**  
⌚ 6:30 PM - 8:30 PM, Jun 10
- **Correlation Between Refugee Post Migration Stress And Breast Cancer Awareness and Screening Attitudes in a Sample of Syrian Refugee Women Resettled in Houston, Texas, USA**  
⌚ 6:30 PM - 8:30 PM, Jun 10
- **Characterization of resident and intruder interactions in the social defeat model of stress**  
⌚ 6:30 PM - 8:30 PM, Jun 10
- **Prenatal alcohol exposure alters behavior and power in translational neurophysiological signals during rodent touchscreen tasks**  
⌚ 6:30 PM - 8:30 PM, Jun 10
- **Epigenetic mechanisms underlying susceptibility to methamphetamine self-administration in methamphetamine-sired male rats**  
⌚ 6:30 PM - 8:30 PM, Jun 10
- **The sex specific effects of acute ketamine treatment on neural and behavioral outcomes following early life adversity**  
⌚ 6:30 PM - 8:30 PM, Jun 10
- **Sex differences in behavior and glutamic acid decarboxylase (GAD) expression following adolescent social isolation in Long Evans rats**  
⌚ 6:30 PM - 8:30 PM, Jun 10
- **Post-conditioning lesions to the perirhinal cortex does not impair fear extinction learning.**  
⌚ 6:30 PM - 8:30 PM, Jun 10
- **Multiple dopamine receptor subtypes exert sex-dependent modulation of cue-guided risk-reward decision making**  
⌚ 6:30 PM - 8:30 PM, Jun 10
- **Different involvement of anterior and posterior paraventricular nucleus of the thalamus in development of sign-tracking by mice of two inbred strains**  
⌚ 6:30 PM - 8:30 PM, Jun 10
- **Early disruption of mother-pups attachment fosters either susceptibility or resistance to develop anxiety/depression phenotypes in adulthood, depending on genotype**  
⌚ 6:30 PM - 8:30 PM, Jun 10
- **The automated social operant task: a quantitative measure of social motivation in mice**  
⌚ 6:30 PM - 8:30 PM, Jun 10
- **Whole Litter Phenotyping in a Dosing Study of Maternal Immune Activation**  
⌚ 6:30 PM - 8:30 PM, Jun 10
- **From an empty stomach to anxiolysis: molecular and behavioural sex differences in ghrelin axis**  
⌚ 6:30 PM - 8:30 PM, Jun 10
- **Adenosine 3 Receptor Agonist as a Treatment for Traumatic Brain Injury**  
⌚ 6:30 PM - 8:30 PM, Jun 10
- **Participation of the neurodevelopmental disorder associated gene MYT1L in motor function and sensory responsivity**  
⌚ 6:30 PM - 8:30 PM, Jun 10
- **Age- and sex-related changes in short and long-term plasticity at the perforant path-dentate gyrus synapse in adult, and old-adult Sprague Dawley rats**  
⌚ 6:30 PM - 8:30 PM, Jun 10
- **Age- and sex-specific changes in behaviour and hippocampal plasticity in young and aged, male and female rats after locus coeruleus originated tau dysfunction initiated in young adulthood**  
⌚ 6:30 PM - 8:30 PM, Jun 10
- **Ultrasonic vocalization playback as an affective assay at both neural and behavioral levels: Implications for understanding adversity-induced emotional dysfunction**  
⌚ 6:30 PM - 8:30 PM, Jun 10
- **Age-dependent alterations in touchscreen-based assessments of cognitive function in marmosets**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **The Serotonin 2A Receptor Regulates Synaptic Plasticity of Claustrum Cortical Projection Neurons: Implications for Cocaine-Induced Cognitive Deficits**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **The nicotinic acetylcholine receptor modulator AVL-3288 attenuates hippocampal-based cognitive deficits following repeated mild traumatic brain injury in adolescent rats**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Neuron-specific cilia loss differentially alters behavioral responses to cocaine in mice**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Adolescent Binge Alcohol Exposure Impairs Spatial Learning and Memory in a Sex-Specific Manner in C57BL/6J mice**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Prelimbic cortex neural encoding in an Alzheimer's disease rat model during an outcome devaluation task**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Enabling concentration-response analyses for neuropsychopharmacology.**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Chronic Stress Impairs Working Memory in Young Adulthood but Enhances Working Memory in Aging**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Optogenetic manipulation of direct and indirect pathways during interval timing in mice.**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Social Defeat Stress is Consolidated as a Fear Memory in a Social Context-Dependent Manner.**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Therapeutic Potential of Miconazole in a Mouse Model of Chemotherapy-Induced Cognitive Impairment**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Considering a role for dopamine in dieting using a mouse model.**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Distinct roles for prefrontal dopamine D1 and D2 neurons in social hierarchy**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Temporally-specific inhibition of ventral tegmental area dopamine neurons during decision making under risk of punishment.**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Intraperitoneal IGF1 treatment improves ischemic stroke-induced affective and cognitive behaviors in acyclic middle-aged female rats**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **Effects of Adolescent Lorazepam Exposure on Drinking Behavior in Adulthood**

⌚ 6:30 PM - 8:30 PM, Jun 10

● **A large-scale study of normal cognitive aging in the rhesus monkey**

⌚ 6:30 PM - 8:30 PM, Jun 10

**Sat, Jun 11, 2022**

8:00 AM

**Coffee Break - Exhibitors**

⌚ 8:00 AM - 8:30 AM, Jun 11

📍 Sir Alex Ferguson Library

[Networki...](#)

8:30 AM

**Symposium: Behavioral neuroscience of zebrafish**

⌚ 8:30 AM - 10:30 AM, Jun 11

📍 W010AB Hamish Wood

[Symposia](#)

Brief introduction to zebrafish models in CNS research

### Speakers



**Allan Kalueff**  
Professor  
Southwest University



**Matt Parker**  
Reader in Neuroscience and Psychopharmacology  
University of Portsmouth



**Courtney Hillman**  
PhD Student  
University of Portsmouth

### 3 Subsessions

● **From zebrafish biology to their [excitingly complex] behavioral neuroscience**

🕒 8:30 AM - 9:00 AM, Jun 11

● **Working memory assessment in zebrafish using the Free Movement Pattern Y-maze: ontogeny, pharmacology and cross-species translation**

🕒 9:30 AM - 10:00 AM, Jun 11

● **The neurobiology of zebrafish aggression**

🕒 10:00 AM - 10:30 AM, Jun 11

### Symposium: Sex differences in value-based decision making: progress toward a more representative model of the human condition

🕒 8:30 AM - 10:30 AM, Jun 11

📍 W011 Hamish Wood

Symposia

### Speakers



**Caitlin Orsini**  
UT Austin



**Jen Bizon**  
Professor and Chair, Department of Neuroscience  
University of Florida

### 4 Subsessions

● **Sex differences in dopaminergic modulation of punishment-based risky decision making**

🕒 8:30 AM - 9:00 AM, Jun 11

● **Divergent strategies for value-based decisions in male and female mice.**

🕒 9:00 AM - 9:30 AM, Jun 11

● **Translation of anxiety into actions by prefrontal cortex neurons**

🕒 9:30 AM - 10:00 AM, Jun 11

● **Effects of reproductive experience on cost-benefit decision making in females**

🕒 10:00 AM - 10:30 AM, Jun 11

### Symposium: Impact of chronic exposure to cannabis on brain development

🕒 8:30 AM - 10:00 AM, Jun 11

📍 Lantern Room - Hamish Wood

Symposia

## Speakers



### Susanne Schmid

Vice Dean, Basic Medical Sciences  
University of Western Ontario



### Mohammed Sarikahya

PhD Student  
Western University

## 3 Subsessions

### ● Cannabis Use and Schizophrenia: Cracking the Chicken-Or-Egg Question

🕒 8:30 AM - 9:00 AM, Jun 11

### ● In-utero $\Delta^9$ -impinges on cognitive functions of the rat progeny: evidence for functional interactions with cannabidiol COPY

🕒 9:00 AM - 9:30 AM, Jun 11

### ● Pre-natal cannabinoid exposure induces sex-dependent affective and cognitive deficits and aberrant omega-3 fatty acid signaling in the mesocorticolimbic circuitry

🕒 9:30 AM - 10:00 AM, Jun 11

10:30 AM

## Break - Exhibitors

🕒 10:30 AM - 11:00 AM, Jun 11

📍 Sir Alex Ferguson Library

[Networki...](#)

11:00 AM

## Local Keynote Symposium. Introduction: Jill McGaughy and Greg Carr

🕒 11:00 AM - 1:00 PM, Jun 11

📍 W011 Hamish Wood

[Keynote](#)

## Using human-robot encounters to explore human behavioural and brain plasticity

🕒 11:00 AM - 12:00 PM, Jun 11

📍 W011 Hamish Wood

[Keynote](#)

Using human robot encounters to explore human behavioural and brain plasticity. Emily S. Cross<sup>1,2,1</sup>. Institute of Neuroscience and Psychology, University of Glasgow, Glasgow, Scotland<sup>2</sup>. Department of Cognitive Science, Macquarie University, Sydney, Australia. Understanding how we perceive and interact with others is a core challenge of social cognition research. This challenge is poised to intensify in importance as the ubiquity of artificial intelligence and the presence of humanoid robots in society grows. This talk examines how established theories and methods from psychology and neuroscience are revealing fundamental aspects of how people behave with robots. Robots provide a resolutely new approach to studying brain and behavioural flexibility manifest by humans during social interaction. As machines, they can deliver behaviours that can be perceived as 'social', even though they are artificial agents and, as such, can be programmed to deliver a perfectly determined and reproducible set of actions. As development of service robots, home companion robots and assistance robots for schools, hospitals and care homes continues apace, the extent to which we perceive and treat such machines as social agents and how we engage with them over the long term remains largely unexplored. This talk describes research that bridges social cognition, behavioural neuroscience and robotics, with important implications not only for the design of social robots, but equally critically, for our understanding of the neurocognitive mechanisms supporting human social behaviour more generally. This work has been supported by funding from the European Research Council (GA 677270) and the Leverhulme Foundation (PLP-2018-152)

## Speaker



### Emily Cross

University of Glasgow

12:00 PM

### Effects of learning and experience in the adult brain

🕒 12:00 PM - 1:00 PM, Jun 11

📍 W011 Hamish Wood

Keynote

Effects of learning and experience in the adult brain  
Sampaio-Baptista, Cassandra 11 School of Psychology and Neuroscience, University of Glasgow  
Neural plasticity refers to the brain changes that continuously occur throughout our lifetime, when we learn new skills or interact with our environment, as we age, or in response to pathology and trauma. I will provide an overview on multidisciplinary approaches to image functional and structural plasticity in adult learning. This includes the use of multimodal MRI, alongside cellular techniques in model species, to monitor skill learning and to probe which factors (performance, training intensity, brain activity modulation, etc.) influence adult brain plasticity. In particular, I will highlight white matter plasticity as an overlooked mechanism by which experience can shape the brain structure and function.

🗣️ Speaker



**Cassandra Sampaio Baptista**

University of Glasgow

1:00 PM

### Lunch Break - Exhibitors

🕒 1:00 PM - 2:30 PM, Jun 11

📍 Sir Alex Ferguson Library

Networki...

### Women In Learning Event-Cancelled

🕒 1:00 PM - 2:30 PM, Jun 11

📍 Lantern Room - Hamish Wood

Networki...

This event has been cancelled.

2:30 PM

### Symposium: Behavioural and neurobiological basis of social affective cues in social choice.

🕒 2:30 PM - 4:30 PM, Jun 11

📍 W011 Hamish Wood

Symposia

Social cognition refers to cognitive processes needed to process social cues in order to understand others' behaviour and intention and to develop adapted social interactions. Social cognition impairments are common features of psychiatric disorders like Autism or Schizophrenia. Animal models of these pathologies need to include the study of affective social communication as part of social symptoms. However, the neurobiology underlying the perception, processing and proper reaction to social cues is still far to be understood. Mice show a complex social repertoire demonstrating the ability to integrate multiple sensory cues (tactile, olfactory with the vomeronasal system, auditory with USV, postural and visual with body/facial expression) to decode affective state of a congener and adapting their behaviour.

We need to better capture which social affective cues are processed by an animal to decode the affective state of a congener. Another question is how this recognized affective state induce a choice among the ethologic behavioural repertoire like for example approach or escape from this congener.

Here, we will expose recent advancements on how the precise combination of sensory social cues are analysed by animals to decode the affective status of a congener and trigger adapted social responses. In particular, USV frequency could be linked to the emotional status of an animal, but there is no strong evidence that this emotional information is used to drive behavioural choices. Dr Adam Hamed will present his work on this topic with a talk about USV and their role in conveying affective value. Social behaviour is highly modulated by the olfactory and vomeronasal systems, and we will benefit of Dr Pablo Chamero expertise with his talk on the importance of the olfactory/vomeronasal system on adapted parental and sexual behaviours. Dr. Francesco Papaleo will provide the most updated evidence on brain circuits involved in the ability to perceive, process and decode affective status of a congener. Moreover, Dr Alexis Faure will talk about recent findings on how prefrontal acetylcholine (Ach) can change the processing of affective cues and therefore social behaviour.

The goal of this symposium will be to have fruitful exchanges in proposing intervention of specialists in diverse aspect of social affective communication at behavioural and neurobiological level. Our aim would be to better capture what is known about the role of social affective cues in the driving of social choice and brain circuits involved.

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#### Speaker



**Alexis Faure**  
Neuropsi

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#### 4 Subsessions

● **Emotional social context differentiates the behavioral response measured in appetitive and aversive bands of ultrasonic vocalizations.**

🕒 2:30 PM - 3:00 PM, Jun 11

● **Neural Circuits of Emotion Discrimination**

🕒 3:00 PM - 3:30 PM, Jun 11

● **Prefrontal cholinergic modulation of social contact: Alteration of affective social cues.**

🕒 3:30 PM - 4:00 PM, Jun 11

● **Vomeronasal pathways that drive social behaviours in the mouse**

🕒 4:00 PM - 4:30 PM, Jun 11

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### **Symposium: Recent advances in the implementation and interpretation of spontaneous object recognition memory testing.**

🕒 2:30 PM - 4:30 PM, Jun 11

📍 W010AB Hamish Wood

**Symposia**

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#### Speaker



**Alex Easton**  
Professor  
Durham University

#### 4 Subsessions

● **Sex-specific recognition deficits during the preclinical stage of a new model of Alzheimer's disease.**

🕒 2:30 PM - 3:00 PM, Jun 11

● **Using continuous novel object recognition testing to dissociate causes of amnesia in the scPCP rat model for schizophrenia and measure their improvement after exercise**

🕒 3:00 PM - 3:30 PM, Jun 11

● **Object and object memory representations across the proximodistal axis of CA1.**

🕒 3:30 PM - 4:00 PM, Jun 11

● **Involvement of retrosplenial cortex in spatial learning and navigation**

🕒 4:00 PM - 4:30 PM, Jun 11

#### Symposium: New insights into the neural circuits of threat avoidance behavior in rodents

🕒 2:30 PM - 4:30 PM, Jun 11

📍 Lantern Room - Hamish Wood

Symposia

#### Speakers



**Maria Diehl**

Assistant Professor  
Kansas State University



**Anthony Burgos-Robles**

Assistant Professor  
University of Texas at San Antonio

#### 4 Subsessions

● **Prefrontal circuits of platform-mediated active avoidance under social conditions in rats.**

🕒 2:30 PM - 3:00 PM, Jun 11

● **Prefrontal involvement for flexible behavioral adaptation during active avoidance learning.**

🕒 3:00 PM - 3:30 PM, Jun 11

● **Thalamostriatal pathways controlling active avoidance behavior**

🕒 3:30 PM - 4:00 PM, Jun 11

● **Neural Circuits that Regulate Reward Approach vs. Predator Avoidance Conflict**

🕒 4:00 PM - 4:30 PM, Jun 11

4:30 PM

#### Break

🕒 4:30 PM - 5:00 PM, Jun 11

📍 Sir Alex Ferguson Library

Networki...

5:00 PM

#### Keynote Speaker: Christian Keysers. Introduction: Fair Vassoler

🕒 5:00 PM - 6:00 PM, Jun 11

📍 W011 Hamish Wood

Keynote



A cross-species approach to empathy and prosociality.

Christian Keyzers 1,2, Valeria Gazzola 1,21 Netherlands Institute for Neuroscience, KNAW, Amsterdam, NL2  
Dept of Psychology, University of Amsterdam, Amsterdam, NL

How does our brain make us feel what others feel? How does it motivate us to help others? In humans, the somatosensory, insular and cingulate cortices are activated both when experiencing pain and while witnessing other do so. How and whether such vicarious activations cause us to share the distress of others and help remains difficult to test in humans. I will present a series of experiments showing that altering brain activity in these brain regions does alter emotional contagion and prosociality. In humans, activity in the somatosensory cortex of observers predicts helping and perturbing that activity perturbs helping. Single cell recordings in rats show that neurons involved in an animal's own pain become reactivated while the animal witnesses another animal in pain. Strikingly, this occurs in area 24, the rodent homologue of the anterior cingulate cortex in which humans show activations while witnessing the pain of others. Rats normally freeze while witness a conspecific receiving footshocks – evidence of emotional contagion – and deactivating area 24 reduces such vicarious freezing demonstrating the causal role of this region in sharing the emotions of others. These data show the existence of an evolutionarily conserved mechanism that maps the pain of others onto an observer's own pain circuitry and trigger emotional contagion. Finally, when a rat can choose between a lever that produces food for the rat itself, and one that produces food and triggers a footshock to another animal, rats learn to avoid the shock-lever. Deactivating area 24 abolishes this harm aversion, suggesting a causal link between emotional contagion and helping. In the light of these experiments, I will suggest that emotion sharing is an evolutionarily conserved mechanism that allows animals and humans to better prepare for yet unseen dangers by tuning into the state of those that have already detected them. This selfishly beneficial mechanism can promote prosociality, but does so in fewer animals and situations than the emotional contagion itself. Funding: The research received funding from the ERC and NWO.

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 Speaker




**Christian Keyzers**

Netherlands Institute For Neuroscience

6:00 PM

### IBNS Business Meeting


 6:00 PM - 6:30 PM, Jun 11

 Hamish Wood W011

[Business Mee...](#)

6:30 PM

### Walk to evening event

 6:30 PM - 7:00 PM, Jun 11

[Networki...](#)

7:00 PM

### Awards Banquet

 7:00 PM - 11:45 PM, Jun 11

 Voco Grand Central Hotel

[Networki...](#)