



The 3rd Munich Winter Conference on Stress

**A Max Planck Institute of Psychiatry / Weizmann
Institute of Science Conference**

Program



Saturday, March 12, 2022

15:00 – 19:00 **Arrival & Registration**

20:00 – 22:00 **Dinner**

Sunday, March 13, 2022

7:30 – 8:30 **Breakfast**

8:30 – 10:30 **Session 1: Advances in stress phenotyping: From behavior to circuits**

Chair: Mathias Schmidt & Alon Chen

How to use deep learning algorithms to study behavior?

Mackenzie Mathis, Switzerland

Operant chronic social defeat stress – moving from social interaction to social choice

Nastacia Goodwin, USA

Automatically annotated motion tracking identifies a distinct social behavioral profile following chronic social defeat stress

Joeri Bordes, Germany

Multimic dissection of the acute stress response

Johannes Bohacek, Switzerland

10:30 – 11:00 **Open debate**

11:00 – 16:00 **Scientific group discussions / Outdoor activities**

16:00 – 18:30

Session 2: Stress and development

Chair: Aniko Korosi

Stress and nutrition: overlapping mechanisms in fetal programming of brain development and mental health

Francesca Cirulli, Italy

Effects of early life adversity on cognition and motivated behavior

Debra Bangasser, USA

Mechanisms involved in prenatal programming of offspring stress responses & related behaviors

Paula Brunton, United Kingdom

Stress and the developing brain: a critical role for neuroimmune crosstalk

Staci Bilbo, USA

Molecular and circuit mechanisms by which early-life adversity impacts reward seeking behaviors are sex-dependent

Tallie Z. Baram, USA

18:30 – 19:00

Open debate

20:00 – 22:00

Dinner & Poster presentation I

Monday, March 14, 2022

7:30 – 8:30

Breakfast

8:30 – 10:30

Session 3: Sex differences

Chair: Jessica Deslauriers

Sex-specific neurovascular alterations underlie stress responses in mice and human depression

Caroline Menard, Canada

Sex shapes cell-type-specific transcriptional signatures of stress in the mouse hypothalamic paraventricular nucleus

Elena Brivio, Israel

Sex differences in glucocorticoid regulation of striatal dopamine transmission

Ashley Holloway, USA

Sex-specific chromatin dynamics in the brain: Implications for anxiety disorders and depression

Marija Kundakovic, USA

10:30 – 11:00

Open debate

11:00 – 16:00

Scientific group discussions / Outdoor activities

16:00 – 18:30

Session 4: Mechanisms and circuits of stress

Chairs: Jason Radley

The resilient brain: hardness or flexibility? An overview of neuroimaging findings in humans

Nic van der Wee, Netherlands

Neural signature of stress resilience

Marloes Henckens, Netherlands

Neural circuits of fear driven actions

Oded Klavir, Israel

Diverse ensembles in the extended amygdala encode emotional and social behaviors

Simon Chang, Germany

Increased brain CRF system activity causes bad mothering

Oliver Bosch, Germany

18:30 – 19:00

Open debate

20:00 – 22:00

Dinner & Poster presentation II

Tuesday, March 15, 2022

7:30 – 8:30

Breakfast

8:30 – 10:30

Session 5: Autophagy, stress and disease
Chair: Nicole Bowles

Autophagy in stress-related diseases and interventions

Nils Gassen, Germany

The role of the acid sphingomyelinase/ceramide system in the pathophysiology of major depression

Cosima Rhein, Germany

Inflammasome-mediated neurodegeneration is regulated by secretory autophagy

Jakob Hartmann, USA

FKBP51 on weight watch: chaperoning metabolism through regulatory WIPI protein networks

Thomas Bajaj, Germany

10:30 – 11:00

Open debate

11:00 – 16:00

Scientific group discussions / Outdoor activities

16:00 – 18:30

Session 6: Advances understanding stress-related disorders

Chair: Carmen Sandi

Translational approaches to threat and PTSD, from mice to (wo)men

Kerry Ressler, USA

Translational evaluation of methyl-CpG binding protein 2 involvement in susceptibility to PTSD

Livia Cosentino, Italy

Novel glucocorticoid receptor ligands: understanding adaptation and treating stress-related disease

Onno Meijer, Netherlands

Mechanisms of memory under stress

Lars Schwabe, Germany

Ketamine exerts antidepressant effects via cell-type specific regulation of Kcnq2

Pablo Lopez, Germany

18:30 – 19:00

Open debate and closing remarks

20:00 – 22:00

Dinner

Wednesday, March 16, 2022

7:30 – 12:00

Breakfast & Departure

Poster presentations I Sunday, March 13, 2022

Kfir Asraf, IL

A Gene x Environment model of cognitive deficits in glutamate dehydrogenase-deficient mice

Arnab Barik, IN

A role for lateral septum in stress induced analgesia

Asaf Benjamin, IL

Wireless recording and inhibition of medial prefrontal cortical neurons using eOPN3 and miniature neural-loggers in groups of freely interacting mice in an ethologically relevant paradigm

Laura Boj, DE

The involvement of astrocytes in OXT-regulated socio-emotional behaviors: focus on social fear

Joeri Bordes, DE

Automatically annotated motion tracking identifies a distinct social behavioral profile following chronic social defeat stress

Kari Bosch, NL

A positive take on depression: The interaction between antidepressants and the environment in the improvement of depressive-like symptoms

Nicole Bowles, US

The endogenous circadian regulation of cortisol reactivity to stress in humans

Luisa Demarchi, DE

Loosing the offspring: impact on the mother's brain and behavior in rats

Nathalia Carvalho, BR

Nociceptive C-fibers are implicated in the social defeat stress (SDS)-induced hyperalgesia

Simon Chang, DE

Diverse ensembles in the extended amygdala encode emotional and social behaviours

Alexander Cook, DE

Optogenetic elevation of glucocorticoid levels during development alters behavior and brain transcriptome in adult zebrafish

Livia Cosentino, IT

Translational evaluation of Methyl-CpG binding protein 2 involvement in susceptibility to PTSD

Jessica Deslauriers, CA

Susceptibility to psychological trauma: investigating the immune response and BBB integrity in an animal model of PTSD

Livia Di Crescenzo, IT

5-HT7 receptor stimulation rescues PTSD-like behavioral alterations in a mouse model carrying a truncated form of MECP2

Moisés dos Santos Corrêa, BR

Post-training CFC mifepristone infusion in mPFC elicits faster corticosterone recovery and promotes recent fear generalization

Sian Duss, CH

The impact of stress related locus coeruleus firing patterns on brain circuits

Joana Cruz Pereira, IE

'Does probiotic supplementation modulate stress response in aged mice?

Federica Fermani, DE

A role for neurons in the lateral and medial divisions of the central amygdala in appetitive behaviours

Jorine Geertsema, NL

The modulatory effect of early dietary supplementation with polyphenols on the early-life stress-induced cognitive and brain plasticity alterations in male mice

Cassandra Gheorghe, IE

Exercise and Stress-related Biomarkers: a gut-brain axis perspective

Lior Givon, IL

Understanding the interplay between dopamine, fear, anxiety and the stereotypic behavior of grooming in DAT-Cre mice

Katharina Gryksa, DE

Chronic psychosocial stress aggravates social fear conditioning: The role of the immune system

Shlomi Habusha, IL

The effect of fear on the Cortical-Limbic-Striatal circuitry in action selection

Samantha Haque, UK

Critical role of the mineralocorticoid receptor in differentiation of human foetal neural progenitor cells

Marene Hardonk, NL

Mapping Δ FosB expression levels in stress- and reward-related brain areas following 28 days of voluntary wheel running in rats

Ashley Holloway, US

Sex differences in glucocorticoid regulation of striatal dopamine transmission

Stoyo Karamihalev, DE

Deep, automated phenotyping adds social context to individual behavior and physiology

Janssen Kotah, NL

Investigating early-life stress effects on the hippocampal neuroimmune system: Focus on response to secondary challenges

Veronika Kovarova, DE

The impact of atg7 and FKBP51 in MBH on behavior and metabolism

Poster presentations II Monday, March 14, 2022

Adam Lannon, IE

Exploring secondary traumatic stress; a novel model to understand the social transmission of pain

Sarah-Jane Leigh, IE

The role of the gut microbiota in acute stress-induced alterations in gut metabolome

Louisa Linders, NL

Stress-driven potentiation of hypothalamic synapses onto ventral tegmental area dopamine neurons causes increased consumption of palatable food

Rohit Menon, DE

HDAC1 mediated regulation of GABA-A signaling regulates long-term extinction of social fear

Patricia Molina, ES

Identification and characterisation of stressor-specific neuronal ensembles in rat medial prefrontal cortex

Karen Mifsud, UK

Glucocorticoid action in the brain: New data, new concepts

Eva Mikics, HU

Cognitive vulnerability factors in post-traumatic stress disorder

Shiladitya Mitra, DE

Absence of FKBP5 in murine microglial cells attenuates response to LPS stimulation

Sowmya Narayan, DE

Understanding effects of developmental stress exposure on adulthood vulnerability to stress in a mouse model, with a focus on translational relevance

Marco Pagliusi Jr., BR

Chemogenetic activation of the descending pain pathway blocks social defeat stress outcomes

Marina Paunero Quezadas, MX

Brain Derived Neurotrophic Factor expression in patients with PTSD due to sexual trauma

Eleonora Riccardi, IT

Behavioral correlates of fear memory in a rat model for PTSD: ultrasonic vocalizations and sex differences

Danai Riga, NL

Neuropeptide Y in stress and anxiety: a novel role for an old ally

Amy Ritter, IL

The neural circuit of enhanced post-traumatic threat detection

Silvie Ruigrok, CH

The neurometabolic underpinnings of social rank – is there a role for accumbal sirtuin 1?

Jeniffer Sanguino Gómez, NL

Machine learning approaches further characterize early-life stress traits during fear conditioning: from engrams to behavior

Alice Sanson, DE

Neuropeptides' alterations in nucleus accumbens shell: effects on maternal aggression and care

Yair Shemesh, IL

Territorial aggression is mediated via two parallel neuropeptide pathways

Theresa Süß, DE

Neurocircuitry of social fear extinction - involvement of the septal oxytocin system?

Gabriel Tofani, IE

Gut microbiota modulate the circadian oscillations of the HPA-axis with time-of-day dependent effects on the stress response

Mate Toth, HU

Neurochemically distinct populations of the bed nucleus of stria terminalis modulate innate fear response to weak threat evoked by predator odor stimuli

Dogukan Ülgen, CH

Hybridization-based in situ sequencing in the nucleus accumbens reveals peripubertal stress-associated changes in the different cell types

Rebecca Waag, CH

Assessing the molecular and functional alterations induced by repeated stress exposure in the locus coeruleus

Dewi van der Geugten, NL

Better safe than sorry? The role of the extended amygdala circuit in generalized fear and anxiety

Lotte van Doeselaar, DE

FKBP51 in glutamatergic forebrain neurons mediates beneficial effects of moderate early life adversity on hippocampal structure and function

Eva Viho, NL

Cell type specificity of glucocorticoid signalling in the adult mouse hippocampus

Lars Wilmes, IE

Stress and resilience in the gut-brain axis: role of the microbiome in comorbid behavioral phenotypes

Huanqing Yang, DE

Cognitive and emotional functions of mice lacking the mineralocorticoid receptor in glutamatergic or GABAergic neurons

Hiba Zaidan, IL

Transgenerational effects of pre-reproductive stress in female rats: putative mechanisms and future implications