Max Planck Institute
for Metabolism Research

Director: Prof. Dr. Jens Brüning

Lecture in MPIfMR seminar series

Wednesday, July 6th, 2022, 14:00

Dr. Claire Foldi
Senior Research Fellow and Group Leader
Biomedicine Discovery Institute,
Monash University, Melbourne, Australia

Targeting cognitive inflexibility to treat anorexia nervosa – insights into the effects of psilocybin in animal models

Psychedelics, including psilocybin and LSD, are undergoing a “renaissance” as possible treatments for a range of psychiatric and neurological disorders, especially because of their fast onset of therapeutic activity. There has been a rapid push to clinical trials since the 2018 designation of psilocybin as a “breakthrough therapy” by the US FDA, based on its efficacy in treatment-resistant depression, including 4 clinical trials currently underway in patients with anorexia nervosa (AN). While the outcomes of these trials will show efficacy one way or the other, it is imperative to understand the biological mechanisms through which psilocybin may act to produce therapeutic outcomes, in order to best direct treatment to individuals likely to respond. This is especially important given the climate of intense media hype that may bias the outcomes of clinical trials based on an expectation of efficacy. We have tested the effects of a single dose of psilocybin on the development of pathological weight loss in the most well-established animal model of AN, known as activity-based anorexia, and suggest a role for reinforcement learning and behavioural flexibility in the positive effects of psilocybin on energy balance. We are now focused on uncovering the neurobiological substrates that underpin these effects, by examining changes in serotonin receptor expression and the brain-derived neurotropic factor (BDNF) signalling pathway.

Hybrid: MPI seminar room + virtual
https://conf.sf.mpg.de/b/alt-dzo-7v2-re0

Host: Dr. Weiyi Chen