Max-Planck-Institut für Ornithologie

Max Planck Institute for Ornithology

Seewiesen Colloquia

Speaker invited by: Henrik Brumm

Thursday, December 11, 2014, 13:00 h, in House 4, Lecture Room

In search of stress resilience

PD Dr. Mathias V. Schmidt

Max Planck Institute of Psychiatry

Chronic stress is widely regarded as key risk factor for a variety of diseases, including depression. Yet, while some individuals are vulnerable to stress, others are remarkably resilient. It seems clear that genetic predispositions interact with environmental demands such as chronic stress and modulate its long-term outcome. In addition, there is abundant evidence that environmental circumstances early in life are capable of shaping the adult phenotype. In my research group we therefore aim to unravel the complex interplay of genetic predispositions with environmental influences during development and in adulthood on the level of individual stress resilience. I will illustrate several research strategies to address this question, ranging from candidate gene approaches to unbiased screening for novel targets and biomarkers. In addition, I will present evidence that aversive experiences early in life may under specific circumstances be beneficial, resulting in individuals that are better adapted to deal with aversive challenges later in life.

Who is Mathias Schmidt?

2003 Postdoctoral fellowship Max Planck Institute of Psychiatry, DE

2010 Habilitation Ludwig Maximilian University in Munich, DE

2010 Research Group Leader Max Planck Institute of Psychiatry, DE

Selected publications:

- Gassen NC, Hartmann J, Zschocke J, Stepan J, Hafner K, Zellner A, Kirmeier T, Kollmannsberger L, Wagner KV, Dedic N, Balsevich G, Deussing JM, Kloiber S, Lucae S, Holsboer F, Eder M, Uhr M, Isig M, Schmidt MV*, Rein T*; Association of FKBP51 with priming autophagy pathways and mediating antidepressant treatment response: Evidence in cells, mice and humans; Plos Medicine (2014), in press, *shared senior authorship

- Wagner KV, Hartmann J, Labermaier C, Häusl AS, Zhao G, Harbich D, Schmid B, Wang XD, Santarelli S, Kohl C, Gassen NC, Matosin N, Schieven M, Webhofer C, Turck CW, Lindemann L, Jaschke G, Wettstein JG, Rein T, Müller MB, Schmidt MV; Homer1/mGluR5 activity moderates vulnerability to chronic social stress; Neuropsychopharmacology (2014), in press

- Labermaier C, Kohl C, Hartmann J, Devigny C, Altmann A, Weber P, Arloth J, Quast C, Wagner KV, Scharf SH, Czibere L, Widner-Andrä R, Brenndörfer J, Landgraf R, Hausch F, Jones KA, Müller MB, Uhr M, Holsboer F, Binder EB, Schmidt MV; A polymorphism in the Crhr1 gene determines stress vulnerability in male mice; Endocrinology (2014), 155(7):2500-10.

- Wang XD, Su YA, Wagner KV, Avrabos C, Scharf SH, Hartmann J, Wolf M, Liebl C, Kühne C, Wurst W, Holsboer F, Eder M, Deussing JM, Müller MB, Schmidt MV; Nectin-3 links CRHR1 signaling to stress-induced memory deficits and spine loss; Nature Neuroscience (2013), 16(6):706-13.

Co-ordinator: Carmen Dobus (cdobus@orn.mpg.de) Tel.: 08157-932-232