

Personal Information

Name: Prof. Dr. Chadi TOUMA
Date of Birth: 16 January 1974



Contact Details

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Professional Experience

2016 – present Full Professor, Department of Behavioural Biology, Faculty of Biology and Chemistry, University of Osnabrück, Germany

2010 – 2016 Head, Research Group of Psychoneuroendocrinology, Max Planck Institute of Psychiatry, Munich, Germany

2009 – present Faculty member of the ‘*Graduate School of Systemic Neurosciences*’ and the ‘*Munich Center for Neurosciences – Brain & Mind*’

2007 – 2009 Senior Scientist, Research Group of Behavioural Neuroendocrinology, Max Planck Institute of Psychiatry, Munich, Germany

2004 – 2007 Postdoctoral Researcher, Max Planck Institute of Psychiatry, Munich, Germany (Group of Prof. Dr. Rainer Landgraf)

2003 – 2004 Postdoctoral research fellow, Institute of Neuro- and Behavioural Biology, University of Münster, Germany (Group of Prof. Dr. Norbert Sachser) and Institute of Biochemistry, University of Veterinary Medicine Vienna, Austria (Group of Prof. Dr. Rupert Palme)

Academic Education

2000 – 2003 Dissertation (Ph.D.) at the Institute of Neuro- and Behavioural Biology, University of Münster, Germany (Supervisor: Prof. Dr. N. Sachser)
Grade: ‘*summa cum laude*’
Supported by a Ph.D. fellowship from the ‘*Studienstiftung des deutschen Volkes*’ (German National Academic Foundation)

1994 – 1999 Biology studies at the University of Münster, Germany
Diploma (M.Sc.) in Zoology/Behavioural Endocrinology
Grade: ‘*with distinction*’
Scholarship (1996 – 1999) from the ‘*Studienstiftung des deutschen Volkes*’ (German National Academic Foundation)

1993 – 1994 Biochemistry studies at the University of Hanover, Germany

Research Interests

- *Genes, Hormones and the Brain*
 - molecular genetic and neuroendocrine bases of behaviour
- *Function and Regulation of the Stress Hormone Systems*
 - focus: alterations in neurodegenerative and psychiatric disorders
- *Gene – Environment Interactions, Epigenetics*
 - modulation of genetic predispositions by social and non-social environmental factors
- *Regulation of Energy Metabolism and Neuronal Functions*
 - impact of metabolic changes on behavioural and neurobiological endophenotypes

Ten Selected Publications

- McIlwrick S, Rechenberg A, Matthes M, Burgstaller J, Schwarzbauer T, Chen A, **Touma C** (2016): Genetic predisposition for high stress reactivity amplifies effects of early-life adversity. *Psychoneuroendocrinology* 70: 85-97.
- Gaali S, Kirschner S, Cuboni S, Hartmann J, Kozany C, Balsevich G, Namendorf C, Fernandez-Vizarra P, Sippel C, Zannas AS, Draenert R, Binder EB, Almeida OFX, Rühler G, Uhr M, Schmidt MV, **Touma C**, Bracher A, Hausch F (2015): Selective inhibitors of the FK506-binding protein 51 by induced fit. *Nature Chemical Biology* 11: 33-39.
- Heinzmann JM, Kloiber S, Mattos GE, Bielohuby M, Schmidt MV, Palme R, Holsboer F, Uhr M, Ising M, **Touma C** (2014): Mice selected for extremes in stress reactivity reveal key endophenotypes of major depression: A translational approach. *Psychoneuroendocrinology* 49: 229-243.
- Knapman A, Kaltwasser SF, Martins-de-Souza D, Holsboer F, Landgraf R, Turck CW, Czisch M, **Touma C** (2012): Increased stress reactivity is associated with reduced hippocampal activity and neuronal integrity along with changes in energy metabolism. *European Journal of Neuroscience* 35: 412-422.
- Refojo D, Schweizer M, Kuehne C, Ehrenberg S, Thoeringer C, Vogl AM, Dedic N, Schumacher M, von Wolff G, Avrabos C, **Touma C**, Engblom D, Schütz G, Nave KA, Eder M, Wotjak CT, Sillaber I, Holsboer F, Wurst W, Deussing JM (2011): Glutamatergic and dopaminergic neurons mediate anxiogenic and anxiolytic effects of CRHR1. *Science* 333: 1903-1907.
- Surget A, Tanti A, Leonardo DE, Laugeray A, Rainer Q, **Touma C**, Palme R, Griebel G, Ibarguen-Vargas Y, Hen R, Belzung C (2011): Antidepressants recruit new neurons to improve stress response regulation. *Molecular Psychiatry* 16: 1177-1188.
- Touma C**, Gassen NC, Herrmann L, Cheung-Flynn J, Büll DR, Ionescu IA, Heinzmann JM, Knapman A, Siebertz A, Depping AM, Hartmann J, Hausch F, Schmidt MV, Holsboer F, Ising M, Cox MB, Schmidt U, Rein T (2011): FK506 binding protein 5 (FKBP5) shapes stress responsiveness: modulation of neuroendocrine reactivity and coping behavior. *Biological Psychiatry* 70: 928-936.
- Touma C**, Bunck M, Glasl L, Nussbaumer M, Palme R, Stein H, Wolferstätter M, Zeh R, Zimbelmann M, Holsboer F, Landgraf R (2008): Mice selected for high versus low stress reactivity: a new animal model for affective disorders. *Psychoneuroendocrinology* 33: 839-862.
- Touma C**, Ambrée O, Görtz N, Keyvani K, Lewejohann L, Palme R, Paulus W, Schwarze-Eicker K, Sachser N (2004): Age- and sex-dependent development of adrenocortical hyperactivity in a transgenic mouse model of Alzheimer's disease. *Neurobiology of Aging* 25: 893-904.
- Touma C**, Palme R, Sachser N (2004): Analyzing corticosterone metabolites in fecal samples of mice: a noninvasive technique to monitor stress hormones. *Hormones and Behavior* 45: 10-22.