

CURRICULUM VITAE

Univ. Prof. Dr. med. Marianne B. Müller

Head, Translational Psychiatry
 Dept. Of Psychiatry and Psychotherapy, University Medical Center
 Mainz, Germany
 and
 Leibniz Institute for Resilience Research, Mainz
 Hanns-Dieter-Hüsch Weg 19, 55128 Mainz, Germany
 Tel.: 06131 3921349
 Email: marianne.mueller@uni-mainz.de, marianne.mueller@lir-mainz.de

Profile

- Professor of **Translational Psychiatry** with longstanding expertise in **animal model development** to improve translational approaches, **identification of disease mechanisms** and **prediction of therapy response**
- Proven track record of translational research in neuropsychiatry with **highly cited high-impact publications**
- Proven track record of **successful strategic research development** to attract **large programme level and research funding** to establish a new research center
- Board-certified psychiatrist with broad clinical expertise in neuropsychiatric disease area

Positions and employment

since 01/2020

- **Group Leader, Leibniz Institute for Resilience Research, Mainz**

since 03/2014

- **Full Professor** (W2, permanent position) *Translational Psychiatry, University Medical Center Mainz*
- **Head of Section Translational Psychiatry**
- **Head**, Independent Research Group *Translational Psychiatry*, University Medical Center Mainz and Focus Translational Neuroscience, Mainz
- **Head**, Independent Research Group *Neurobehavioral Mechanisms of Resilience*, German Resilience Center, Mainz
- **Scientific Lead**, Research Platform *Mouse Behavioral Unit*, German Resilience Center, Mainz

Responsibilities:

- Leading strategic initiatives to shape the research portfolio of the section *Translational Psychiatry*
- Leading international, interdisciplinary and translational research teams
- Member Executive committee, Collaborative Research Center (CRC) 1193 (Neurobiology of Resilience, Funded by the German National Research Foundation, DFG): responsible for application and strategic decisions within the CRC 1193 (<https://crc1193.de/>)
- Founding Member, German Resilience Center Mainz
- Mentoring, teaching and supervision of team members and doctoral students

Achievements:

- Funding of the CRC 1193 (total budget: 10 Mio €/4 years) since 2016
- Co-organizer of the *Annual International Symposium on Resilience Research* which covers the latest developments in resilience research, both in animal models and human studies

07/2013	Offer for position as University Professor in Translational Psychiatry (<i>primo loco</i>), University Medical Center, Mainz
02/2004-01/2007	Assistant Medical Director (open psychiatric ward) at the Max Planck Institute of Psychiatry Responsibility for diagnosis and state-of-the-art treatment of severely affected psychiatric inpatients, expert knowledge of a wide spectrum of psychiatric diseases
11/2004	Habilitation at the Ludwig Maximilians University, Munich (postdoctoral lecture qualification in psychiatry to become a faculty member and to qualify for professor positions in Germany, <i>Privatdozent</i> ; equivalent to PhD for physicians in Germany) Continuous teaching activities for medical students in Psychiatry
08/2004	W2-Professorship award for outstanding female scientists from the Max Planck Society for the Advancement of Sciences
1/2004-12/2013	Head, Independent Research Group Molecular Stress Physiology at the Max Planck Institute of Psychiatry, Munich, Germany - Leading projects on the identification and characterization of novel targets and pathways mediating antidepressant-like effects and individual differences in antidepressant response (mouse models) - Coordinating translational approaches integrating data from mouse disease models with clinical data from psychiatric patients
1/2004-12/2013	Speaker and Coordinator of the Psychopharmacology Research Programme at the Max Planck Institute of Psychiatry - Coordinating different projects of preclinical and clinical scientists to bridge the gap between bench and bedside, decisions on overall research strategy - Presentation of the <i>Psychopharmacology Research Programme</i> strategy to the external Scientific Advisory Board of the Max Planck Institute of Psychiatry
12/2003	Speciality board Psychiatry and Psychotherapy (Facharzt)
07/1997-12/2003	Resident in Psychiatry and Neurology , Max Planck Institute of Psychiatry Senior Scientist in the Molecular Neurogenetics Group, - Lead research projects on the neurobiological mechanisms underlying affective disorders (focus on stress hormone system) - Gained extensive experience in clinical Psychiatry and Neurology
04/1997-08/1997	Visiting Scientist at the Netherlands Institute for Brain Research, Amsterdam
07/1996-03/1997	Fellowship from the Max Planck Institute of Psychiatry, Munich, full-time clinical work (Psychiatry)
01/1996-06/1996	Junior research scientist , Molecular Neuro-Oncology, Dep. of Neuropathology, University of Bonn (Prof. Dr. O.D. Wiestler)
Education	
01/1996	Medical Thesis , Department of Neuropathology, University of Bonn, Germany
11/1995	Medical Degree (Germany State Examination, Grade: 1.49, equivalent to Grade A), University of Bonn, Germany

1989-1995

Medical School, University of Bonn, Speciality subject: Psychiatry

05/1989

High School Diploma (*Abitur*, Sankt Augustin, Germany), Grade: 1,0 (equivalent to A)

05/1987-05/1989

Student at the Cologne University of Music, instrumental music performance, piano**Fellowships and Honors**

09/2015

AGNP-Award for Research in Neuropsychopharmacology

11/2006

Robert Sauer Award, Bavarian Academy of Sciences

2004

Professorship Award for outstanding female scientists, Max Planck Society

2004

CINP Young Investigator Award

2000

Fellowship Award from the ECNP

2000

Bayerischer Habilitations-Förderpreis (thesis award and research grant for obtaining a postdoctoral degree (*Habilitation*) to qualify for professor positions in Germany)

1997-1999

Fellowship from the Max Planck Society for the Advancement of Science

1990-1995

Fellow of the German Academic Scholarship Foundation (*Studienstiftung des Deutschen Volkes; Germany's most prestigious scholarship foundation*)**Languages**

German (native), English (fluent), French (advanced)

Grants and FundingTotal funding 2016-2021: **3.049.000 €**

03/2017-12/2020

Boehringer Ingelheim Foundation (Application of the German Resilience Center)

PI of the following subprojects:

Project 04: Mutual influence of gut microbiota composition and resilience (with K. Endres, Mainz). Volume: **156.500 €****Project 06:** Neurobehavioral mechanisms of stress inoculation – a translational approach (mit S. Ryu, O. Tüscher, Mainz). Volume: **406.500 €****Project 09:** Decoding the molecular pathways promoting resilience by targeting activated neuronal subpopulations (with S. Gerber, Mainz). Volume: **342.200 €****Section Animal models of Resilience** (*Mouse behavioral unit and animal model development*). Volume: **629.800 €**

07/2016-07/2021	Collaborative Research Center 1193 („<i>Neurobiology of Resilience to stress-related mental dysfunction: from understanding mechanisms to promoting prevention</i>“); Member of the <i>Executive Committee</i> PI of the following subprojects: A03: Neuronal actin dynamics shaping resilience: the role of the novel actin-interacting protein ‘downregulated in renal cancer’ (together with A. Acker-Palmer, Frankfurt). Volume: 495.000 € Z02: Modelling individual differences in response to stress in mice: an approach to identify neuro-biological mechanisms underlying resilience (with B. Lutz, Mainz). Volume: 961.000 €
03/2017-12/2018	Intramural Funding (JGU Mainz); 60.000 €
02/2008-04/2011	European Union /Seventh Framework Program: Collaborative grant <i>Synaptic mechanisms of memory loss: novel cell adhesion molecules as therapeutic targets</i> • Work package leader and Principle Investigator
2000-2004	BMBF Federal Ministry of Education, Science, Research and Technology. Member MedNet “<i>Depression and Suicidality</i>”
2001-2003	Bayerischer Habilitations-Förderpreis (<i>Habilitationsstipendium</i> and project support); 350.000 Euro
Research Focus and Expertise	• <i>Animal model development</i> (including various stress and resilience models, approaches to model heterogeneity in response to pharmacological treatment, focus on development of longitudinal assessments in observer-independent conditions, individuality (IntelliCages) • <i>Precision Psychiatry:</i> Identification of molecular mechanisms mediating individual response to antidepressants, identification of biomarkers predicting response in translational approaches • Individuality, stratification and detailed phenotyping to closely model human disease conditions in transdiagnostic/cross-disorder approaches; RDoC • Decoding the molecular pathways mediating rapid onset antidepressants compounds using genetic approaches to target activated neuronal populations (TRAP/INTACT) • Role of neuronal actin dynamics in sculpting neuropsychiatric phenotypes: from neurodevelopmental disorders to stress-related disease conditions
Publications	Overall I have published more than 100 papers in international peer-reviewed scientific journals (please see additional <i>List of Publications</i> enclosed)

List of Publications

My publication record comprises more than 100 papers in peer-review journals in the field of *Neuroscience*, *Multidisciplinary Sciences*, *Psychiatry*, *Psychopharmacology* and *Behavioral Sciences*.

H-Index (24.07.2020): 46 (*Web of Science*, search for author= (Muller MB* OR Mueller MB* OR Müller MB*) AND address = (Bonn OR Munich OR München OR Mainz).

Most-cited paper: Müller MB et al., *Nature Neuroscience* 2003; 6: 1100-1107 (328 citations). 19 papers were cited more than 100 times; 6 papers have been recommended by the *Faculty of 1000*

Five most important scientific papers:

1. van der Kooij MA, Jene T, Treccani G, Miederer I, Hasch A, Voelxen N, Walenta S, **Müller MB** (2018). Chronic social stress-induced hyperglycemia in mice couples individual stress susceptibility to impaired spatial memory. ***Proceedings of the National Academy of Science*** 115 (43) E10187-E10196; published ahead of print October 9, 2018 <https://doi.org/10.1073/pnas.1804412115>

IF 9,5

Stress-associated mental disorders and diabetes pose an enormous socio-economic burden. Cognitive impairments are common in metabolic disorders such as diabetes and are accompanied by hyperglycemia but still, a causal role for glucose has not been established. In this paper we could show that chronic social defeat (CSD) stress induces lasting peripheral and central hyperglycemia, impaired glucose metabolism and spatial memory impairment in a subgroup of mice which can be rescued by the antidiabetic empagliflozin. Those findings highlight the importance of investigating individual heterogeneity in outcomes and further bridge the gap between stress-related pathologies and metabolic disorders.

2. Carrillo-Roa T, Labermaier C, Weber P, Herzog DP, Lareau C, Santarelli S, Wagner KV, Rex-Haffner M, Harbich D, Scharf SH, Nemeroff CB, Dunlop BW, Craighead WE, Mayberg HS, Schmidt MV, Uhr M, Holsboer F, Sillaber I, Binder EB, **Müller MB** (2017). Common genes associated with antidepressant response in mouse and man identify key role of glucocorticoid receptor sensitivity. *PLOS Biol* 15(12): e2002690. <https://doi.org/10.1371/journal.pbio.2002690>

IF 9,1

In this paper, we describe and validate a novel animal experimental approach to investigate the heterogeneity in response to antidepressant treatment. This piece of work illustrates my expertise in model development. Applying a translational strategy, we could finally identify the key role of the glucocorticoid receptor in shaping response to antidepressants. This paper was featured in *Newsweek* „Why Antidepressants Don't Work for Everyone: Genetic Clue Found“.

3. Kalisch R, Müller MB, Tüscher O (2015). A conceptual framework for the neurobiological study of resilience. ***Behav Brain Sci.***; 38:e92. doi: 10.1017/S0140525X1400082

IF 15,1

This paper defines the conceptual and unifying framework of resilience as a basis of the collaborative research center 1193 founded by the German National Research Foundation.

4. Schmidt MV, Schülke J-P, Liebl C, Stuessi M, Avrabos C, Bock J, Wöhrmann GM, Davies HA, Zimmermann N, Scharf SH, Trümbach D, Würst W, Zieglerberger W, Turck C, Holsboer F, Stewart MG, Bradke F, Eder M, **Müller MB***, Rein T* (2011). The tumor suppressor DRR1 is a

stress-induced actin bundling factor that modulates synaptic efficacy and cognition. ***Proceedings of the National Academy of Science*** 108: 17213-17218

IF 9.5 *shared last authorship

Although the epidemiological link between stress and mental disorders is well established, it still remained unclear how stressful experiences are translated into molecular and cellular events which, in individuals at risk, predispose to the development of mental disorders later in life. We could here identify DRR1, a novel actin-interacting protein to mediate stress-induced consequences on cognitive performance and hippocampal function. This novel link between stress and neuronal actin dynamics was discussed in *Research Highlights in Nature* (Stress alters brain connections. ***Nature*** 2011; 478: 159)

5. **Müller MB**, Zimmermann S, Sillaber I, Hagemeyer TP, Timpl P, Kormann MSD, Droste S, Deussing JM, Kühn R, Reul JM, Holsboer F, Wurst W (2003). Limbic corticotropin-releasing hormone receptor 1 mediates anxiety-related behavior and hormonal adaptation to stress. ***Nature Neuroscience*** 6: 1100-1107

IF 19.9

This is the first characterization of a conditional knockout mouse line for corticotropin-releasing hormone-receptor type 1 (CRHR1). We could dissect the role of CRHR1 in modulating neuroendocrine function from its impact on emotional behaviour and, in particular, anxiety-related behaviour. The fundamental importance of those findings for the field are reflected in the high number of citations (cited 303 times).

Manuscripts currently submitted/in review:

Herzog DP, Pascual Cuadrado P, Treccani G, Jene T, Opitz V, Hasch A, Lutz B, Lieb K, Sillaber I, van der Kooij MA, Tiwari VK, **Müller MB**. A distinct transcriptional signature of antidepressant response in hippocampal dentate gyrus granule cells. ***Translational Psychiatry*** (currently under revision)

Treccani G, Yigit H, Lingner T, Hübner V, Wennström M, Herzog DP, Fricke M, Wegener G, Mittmann T, Trotter J, **Müller MB**. Early life stress targets the transcriptional signature and functional properties of voltage gated-sodium channels (Na_v) in hippocampal NG2+ glia. ***Biological Psychiatry*** (submitted).

Ayash S, Lingner T, Ryu S, Kalisch R, Schmitt U, **Müller MB**. Unique and brain-region specific transcriptional signatures confirm a translationally informed framework to study resilience in mice (in preparation for ***Nat Comm***)

Complete list of peer-reviewed publications:

Ayash S, Schmitt U, Lyons DM, **Müller MB** (2020). Stress inoculation in mice induces global resilience. ***Transl Psychiatry*** 10(1):200. doi: 10.1038/s41398-020-00889-0.

Perumal N, Straßburger L, Herzog DP, **Müller MB**, Pfeiffer N, Grus FH, Manicam C (2020). Bioenergetic shift and actin cytoskeleton remodelling as acute vascular adaptive mechanisms to angiotensin II in murine retina and ophthalmic artery. ***Redox Biol*** 34:101597; doi: 10.1016/j.redox.2020.101597. Epub 2020 May 29.

Treccani H, Schlegelmilch A-L, Schultz N, Herzog DP, Bessa JM, Sotiropoulos I, **Müller MB**, Wennström M (2020). Hippocampal NG2+ pericytes in chronically stressed rats and depressed patients: a quantitative study. **Stress** 24;1-6. doi: 10.1080/10253890.2020.1781083. Online ahead of print.

Dethloff F, Vargas F, Elijah E, Quinn R, Park DI, Herzog DP, **Müller MB**, Gentry EC, Knight R, Gonzalez A, Dorrestein PC, Turck CW (2020). Paroxetine Administration Affects Microbiota and Bile Acid Levels in Mice. **Front Psychiatry**. 2020 11:518. doi: 10.3389/fpsyt.2020.00518. eCollection 2020.

Herzog DP, Mellema RM, Remmers F, Lutz B, **Müller MB**, Treccani G (2020). Sexually Dimorphic Behavioral Profile in a Transgenic Model Enabling Targeted Recombination in Active Neurons in Response to Ketamine and (2R,6R)-Hydroxynorketamine Administration. **Int J Mol Sci**. 20;21(6):2142. doi: 10.3390/ijms21062142.

Ayash S, Schmitt U, **Müller MB** (2020). Chronic social defeat-induced social avoidance as a proxy of stress resilience in mice involves conditioned learning. **J Psychiatr Res**;120:64-71. doi: 10.1016/j.jpsychires.2019.10.001. Epub 2019 Oct 9.

Herzog DP, Wegener G, Lieb K, **Müller MB**, Treccani G (2019). Decoding the Mechanism of Action of Rapid-Acting Antidepressant Treatment Strategies: Does Gender Matter? **Int J Mol Sci** 22;20(4):949. doi: 10.3390/ijms20040949.

Kretschmar A, Schülke J-P, Masana M, Dürre K, **Müller MB**, Bausch AR, Rein T (2018). The stress-inducible protein DRR1 exerts distinct effects on actin dynamics. **Int J Mol Sci** 11;19(12):3993. doi: 10.3390/ijms19123993

van der Kooij MA, Jene T, Treccani G, Miederer I, Hasch A, Voelxen N, Walenta S, **Müller MB** (2018). Chronic social stress-induced hyperglycemia in mice couples individual stress susceptibility to impaired spatial memory. **Proceedings of the National Academy of Science** 115 (43) E10187-E10196; published ahead of print October 9, 2018 <https://doi.org/10.1073/pnas.1804412115>

Herzog DP, Beckmann H, Lieb K, Ryu S, **Müller MB** (2018). Understanding and predicting antidepressant response: using animal models to move toward precision psychiatry. **Front Psychiatry**. Oct 22;9:512. doi: 10.3389/fpsyt.2018.00512. eCollection 2018.

Kretschmar A, Schülke J-P, Masana M, Dürre K, **Müller MB**, Bausch AR, Rein T. (accepted for publication) The stress-inducible protein DRR1 exerts distinct effects on actin dynamics. **Int J Mol Sci**

van der Kooij MA, Jene T, Treccani G, Miederer I, Hasch A, Voelxen N, Walenta S, **Müller MB** (2018). Chronic social stress-induced hyperglycemia in mice couples individual stress susceptibility to impaired spatial memory. **Proceedings of the National Academy of Science** 115 (43) E10187-E10196; published ahead of print October 9, 2018 <https://doi.org/10.1073/pnas.1804412115>

Herzog DP, Beckmann H, Lieb K, Ryu S, **Müller MB** (2018). Understanding and predicting antidepressant response: using animal models to move toward precision psychiatry. **Front Psychiatry**. Oct 22;9:512. doi: 10.3389/fpsyt.2018.00512. eCollection 2018.

Masana M, Westerholz S, Kretzschmar A, Treccani G, Liebl C, Santarelli S, Dournes C, Popoli M, Schmidt MV, Rein T, **Müller MB** (2018). Expression and glucocorticoid-dependent regulation of the stress-inducible protein DRR1 in the mouse adult brain. **Brain Struct Funct** Dec;223(9):4039-4052. doi: 10.1007/s00429-018-1737-7. Epub 2018 Aug 18.

Jene T, Gassen NC, Opitz V, Endres K, **Müller MB***, van der Kooij MA* (2018). Temporal profiling of an acute stress-induced behavioral phenotype in mice and the role of hippocampal DRR1. **Psychoneuroendocrinology** 91; 149-158

*shared last authorship

Carrillo-Roa T, Labermaier C, Weber P, Herzog DP, Lareau C, Santarelli S, Wagner KV, Rex-Haffner M, Harbich D, Scharf SH, Nemeroff CB, Dunlop BW, Craighead WE, Mayberg HS, Schmidt MV, Uhr M, Holsboer F, Sillaber I, Binder EB, **Müller MB** (2017). Common genes associated with antidepressant response in mouse and man identify key role of glucocorticoid receptor sensitivity. **PLOS Biol** 15(12): e2002690. <https://doi.org/10.1371/journal.pbio.2002690>

Kalisch R, Baker DG, Basten U, Boks MP, Bonanno GA, Brummelman E, Chmitorz A, Fernandez G, Fiebag CJ, Galatzer-Levy I, Geuze E, Groppa S, Helmreich I, Hendler T, Hermans EJ, Jovanovic T, Kubiak T, Lieb K, Lutz B, **Müller MB**, Murry RJ, Nievergelt CM, Reif A, Roelofs K, Rutten BPF, Sander D, Schick A, Tüscher P, van Diest I, van Harmelen A, Veer IM, Vermetten E, Vinkers CH, Wager TH, Walter H, Wessa M, Wibral M, Kleim B (2017) The resilience framework as a strategy to combat stress-related disorders. **Nature Human Behavior** DOI: 10.17863/CAM.16856

Wagner S, Engel A, Engelmann J, Herzog D, Dreimüller N, **Müller MB**, Tadic A, Lieb K (2017). Early improvement as a resilience signal predicting later remission to antidepressant treatment in patients with Major Depressive Disorder: Systematic review and meta-analysis. **J Psychiatric Research** 94; 96-106

Park DI, Dournes C, Sillaber I, Ising M, Asara JM, Webhofer C, Filiou MD, **Müller MB**, Turk CW (2017). Delineation of molecular pathway activities of the chronic antidepressant treatment response suggests important roles for glutamatergic and ubiquitin–proteasome systems. **Translational Psychiatry** (2017) 7, e1078; doi:10.1038/tp.2017.39. Published online 4 April 2017

van der Kooij MA, Masana M, Rust MB, **Müller MB** (2016). The stressed cytoskeleton: how actin dynamics can shape stress-related consequences on synaptic plasticity and complex behavior. **Neurosci Biobehav Rev** 62, 69–75

Park DI, Dournes C, Sillaber I, Uhr M, Asara JM, Gassen NC, Rein T; Ising M, Webhofer C, Filiou MD, **Müller MB**, Turk CW (2016) Purine and pyrimidine metabolism: Convergent evidence on chronic antidepressant treatment response in mice and humans. **Sci Rep** 6: 35317. doi: 10.1038/srep35317

Santarelli S, Wagner KV, Labermaier C, Uribe A, Dournes C, Balsevich G, Hartmann J, Masana M, Holsboer F, Chen A, **Müller MB**, Schmidt MB (2016). SLC6A15, a novel stress vulnerability candidate, modulates anxiety and depressive-like behavior: involvement of the glutamatergic system. **Stress** 19: 83-90

Kalisch R, **Müller MB**, Tüscher O (2015). Advancing empirical resilience research. **Behav Brain Sci** 38: e128. doi: 10.1017/S0140525X15000023

Kalisch R, **Müller MB**, Tüscher O (2015). A conceptual framework for the neurobiological study of resilience. *Behav Brain Sci.*; 38:e92. doi: 10.1017/S0140525X1400082

Masana M, Jukic MM, Kretschmar A, Wagner KV, Westerholz S, Schmidt MV, Rein T, Brodski C, **Müller MB** (2015) Deciphering the spatio-temporal expression and stress regulation of Fam107B, the paralog of the resilience-promoting protein DRR1 in the mouse brain. *Neuroscience* Apr 2;290:147-58. doi: 10.1016/j.neuroscience.2015.01.026. Epub 2015 Jan 28

Wagner KV, Hartmann J, Labermaier C, Häusl AS, Zhao G, Wang XD, Santarelli S, Kohl C, Gassen NC, Matosin N, Webhofer C, Turck C, Lindemann K, Jaschke G, Wettstein JG, Rein T, **Müller MB**, Schmidt MV (2015). Homer1/mGluR5 activity moderates vulnerability to chronic social stress. *Neuropsychopharmacology* 13;40:1222-33

Filser S, Jung C, Blazquez-Llorca L, Brandt Elvang A, Volbracht C, Masana M, **Müller MB**, Ovsepián SV, Herms J (2015) Pharmacological inhibition of BACE1 impairs dendritic spine formation and synaptic plasticity. *Biol Psychiatry* 15;77(8):729-39

Weckmann K, Labermaier C, Webhofer C, Asara JM, **Müller MB**, Turck CW (2014). Time-dependent metabolomic profiling of Ketamine drug action reveals hippocampal pathway alterations and biomarker candidates. *Translational Psychiatry* , 4, e481; doi:10.1038/tp.2014.119

Wagner KV, Häusl AS, Pöhlmann ML, Hartmann J, Labermaier C, **Müller MB**, Schmidt MV (2014). Hippocampal Homer1 Levels Influence Motivational Behavior in an Operant Conditioning Task. *Plos ONE*, Published: January 21, 2014 DOI: 10.1371/journal.pone.0085975

Masana M, Su Y-A, Jansen L, Westerholz S, Liebl C, Wagner KV, Schmidt MV, Rein T, **Müller MB** (2014). The stress-inducible actin-interacting protein DRR1 shapes social behavior. *Psychoneuroendocrinology* 48:98-110.

Labermaier C, Kohl C, Hartmann J, Devigny C, Altmann A, Weber P, Arloth J, Quast C, Wagner KV, Scharf SH, Czibere L, Brenndörfer J, Widner-Andrä R, Landgraf R, Hausch F, Jones KA, **Müller MB**, Uhr M, Holsboer F, Binder EB, Schmidt MV (2014). A polymorphism in the crhr1 gene determines stress vulnerability in male mice. *Endocrinology*; 155(7): 2500-10

Santarelli S, Lesuis SL, Wang XD, Wagner KV, Hartmann J, Labermaier C, Scharf SH, **Müller MB**, Holsboer F, Schmidt MV (2014). Evidence supporting the match/mismatch hypothesis of psychiatric disorders. *Eur Neuropsychopharmacology.*; 24(6): 907-18

Labermaier C, Masana M, **Müller MB** (2013). Biomarkers Predicting Antidepressant Treatment Response: How Can We Advance the Field? *Disease Markers* 35, Issue 1, Pages 23–31

Wang XD, Su Y, 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 (2013). Nectin-3 Links CRHR1 Signaling to Stress-Induced Memory Deficits and Spine Loss. *Nature Neuroscience* 16(6):706-13

Scharf SH, Sterlemann V, Liebl C, **Müller MB**, Schmidt MV (2013). Chronic social stress during adolescence: Interplay of paroxetine treatment and aging. *Neuropharmacology*; 72:38-46

Wagner K, Hartmann J, Mangold K, Wang XD, Labermaier C, Liebl C, Wolf M, Gassen N, Holsboer F, Rein T, **Müller MB**, Schmidt MV (2013). Homer1 mediates acute stress-induced cognitive deficits in the dorsal hippocampus **Journal of Neuroscience**; 27;33 :3857-64

Ganea K, Menke A, Schmidt MV, Lucae S, Rammes G, Liebl C, Harbich D, Sterlemann V, Storch C, Uhr M, Holsboer F, Binder EB, Sillaber I, **Müller MB** (2012). Convergent animal and human evidence suggests the activin/inhibin pathway to be involved in antidepressant response. **Translational Psychiatry** 2, e177; doi:10.1038/tp.2012.104

Hartmann J, Wagner KV, Dedic N, Marinescu D, Scharf SH, Wang X-D, M. Deussing JM, Hausch F, Rein T, Schmidt U, Holsboer F, **Müller MB**, Schmidt MV (2012). Fkbp52 heterozygosity alters behavioral, endocrine and neurogenetic parameters under basal and chronic stress conditions in mice. **Psychoneuroendocrinology** (doi.org/10.1016/j.psyneuen.2012.04.017)

Wagner KV, Marinescu D, Hartmann J, Wang X-D, Labermaier C, Scharf SH, Liebl C, Uhr M, Holsboer F, **Müller MB**, Schmidt MV (2012). Differences in FKBP51 Regulation Following Chronic Social Defeat Stress Correlate with Individual Stress Sensitivity: Influence of Paroxetine Treatment. **Neuropsychopharmacology** (advance online publication; doi: 10.1038/npp.2012.150)

Hartmann J, Wagner KV, Liebl C, Scharf SH, Wang XD, Wolf M, Hausch F, Rein T, Schmidt U, Touma C, Cheung-Flynn J, Cox MB, Smith DF, Holsboer F, **Müller MB**, Schmidt MV (2012). The involvement of FK506-binding protein 51 (FKBP5) in the behavioral and neuroendocrine effects of chronic social defeat stress. **Neuropharmacology** 1: 332-339

Wang XD, Labermaier C, Holsboer F, Wurst W, Deussing JM, **Müller MB**, Schmidt MV (2012). Early-life stress-induced anxiety-related behavior in adult mice partially requires forebrain corticotropin-releasing hormone receptor 1. **European Journal of Neuroscience** 36: 2360-2367

Schmidt MV, Schülke J-P, Liebl C, Stiess M, Avrabos C, Bock J, Wochnik GM, Davies HA, Zimmermann N, Scharf SH, Trümbach D, Wurst W, Zieglgänsberger W, Turck C, Holsboer F, Stewart MG, Bradke F, Eder M, **Müller MB***, Rein T* (2011). The tumor suppressor DRR1 is a stress-induced actin bundling factor that modulates synaptic efficacy and cognition. **Proceedings of the National Academy of Science** 108: 17213-17218

*Shared last authorship

This paper was discussed in *Research Highlights* in **Nature** (Stress alters brain connections. **Nature** 2011; 478: 159)

Scharf SH, Liebl C, Binder EB, Schmidt MV, **Müller MB** (2011). Expression and regulation of the fkbp5 gene in the adult mouse brain. **PLoS One** 6(2): e16883. doi:10.1371/journal.pone.0016883

Wagner KV, Wang XD, Liebl C, Scharf SH, **Müller MB**, Schmidt MV (2011). Pituitary glucocorticoid receptor deletion reduces vulnerability to chronic stress **Psychoneuroendocrinology** 36: 579-587

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