



## **Retreat DFG-Research Unit 2107**

**February 11-12, 2016**

**Rauischholzhausen Castle**

### **Programme**

#### ***Thursday, February 11<sup>th</sup>, 2016***

- 12:00 Arrival, Room Check in
- 12:30 Lunch
- 13:30 Introduction Prof. Tilo Kircher
- 14:00 Chair: Prof. Schwarting  
Prof. Udo Dannlowski (WP1)  
Dissecting the neurobiology in the course of affective disorders – the Marburg-Münster affective disorders cohort study (MACS)
- 14:45 Dr. Markus Wöhr/PD Dr. Holger Garn (WP2)  
Environmental risk and protective factors in genetic rodent models of affective disorders
- 15:30 Coffee break
- 16:00 Chair: Prof. Dempfle  
Prof. Gerhard Schratt (WP3)  
microRNAs as regulators of the neuroplasticity of affective disorders
- 16:45 Prof. Carsten Culmsee (WP4)  
Cellular stress and mitochondrial perturbation in affective disorders
- 17:30 Methods presentation I: MR Brain Imaging, Prof. Udo Dannlowski/Prof. Andreas Jansen
- 18:00 Poster session I
- 18:45 Dinner
- 19:30 Get Together

## ***Friday, February 12<sup>th</sup>, 2016***

- 07:30 Breakfast
- 08:30 Chair: Prof. Nöthen  
Dr. Andreas Forstner/Dr. Stephanie Witt (WP5)  
Integrative analyses of genetic, epigenetic, and environmental vulnerability factors of affective disorders
- 09:15 Prof. Andreas Jansen/Prof. Astrid Dempfle (WP6)  
Methodological aspects of longitudinal imaging genetics MRI studies: reliability, quality assurance, statistical genetics and genetic epidemiology
- 10:00 WP networking
- 11:00 Coffee break
- 11:30 Chair: Prof. Krug  
Prof. Ina Pfefferle (CP1)  
Biomaterial Bank (BMB)
- 12:15 (short break)
- 12:30 Lunch
- 13:30 WP networking
- 14:30 Poster session II
- 15:15 Methods presentation II: Micro RNAs, Prof. Schrott
- 15:45 Summary and Outlook
- 16:15 Coffee and cake



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### Poster

#### Poster Session I, Thursday, February 11, 2016, 18:00-18:45

##### WP1

###### **Der Einfluss des Ersterkrankungsalters auf das Hirnvolumen bei Patienten mit depressiver Störung**

Henrike Bröhl, Felicitas Meier, Jennifer Engelen, Bruno Dietsche, Axel Krug, Udo Dannlowski, Tilo Kircher

###### **Multivariate Analysen in der Bildgebung mit der MANIA-Toolbox**

Dominik Grotegerd, Ronny Redlich, Jorge R.C. Almeida, Mona Riemenschneider, Harald Kugel, Volker Arolt, Udo Dannlowski

###### **Belohnungsprozesse bei unipolarer Depression und bipolarer Störung: eine fMRT-Studie**

Katharina Dohm, Ronny Redlich, Dominik Grotegerd, Nils Opel, Pienie Zwitserlood, Harald Kugel, Udo Dannlowski

###### **Ist die Amygdala-Hyperaktivität bei Depression Folge von Kindesmisshandlung oder genuin nur mit der Störung assoziiert?**

Jennifer Engelen, Henrike Bröhl, Felicitas Meier, Bruno Dietsche, Axel Krug, Udo Dannlowski, Tilo Kircher

###### **Genotype-Phenotype Relationships and Neurobiology of Affective Disorders – Prospects of the Cooperation KFO 241 and FOR 2107 in Muenster**

Katharina Förster, Susanne Meinert, Christian Bürger, Dario Zaremba, Ronny Redlich, Dominik Grotegerd, Katharina Dohm, Silke Jörgens, Bernhard Baune, Udo Dannlowski

##### WP2

###### **Behavioral phenotyping of the Cacna1c genetic rat model: First findings**

Moria D. Braun, Theresa M. Kisko, Rukhshona Kayumova, Clara Raitchel, Christine Hohmeyer, Marcella Rietschel, Stephanie Witt, Rainer K. W. Schwarting, Markus Wöhr

###### **SERT on speed: Enhanced emission of amphetamine-induced 50-kHz ultrasonic vocalizations in rats lacking the serotonin transporter due to long-term adaptations in 5-HT<sub>2C</sub> receptor functioning**

Theresa M. Kisko, Maria Willadsen, K. Jakob Vörckel, Dominik Seffer, Rainer K. W. Schwarting, Judith Homberg, Markus Wöhr

##### WP3

###### **MicroRNAs regulate the neuroplasticity of Major Depressive Disorder**

Helena Martins, Sharof Khudayberdiev, Moria D. Braun, Theresa M. Kisko, A. Özge Sungur, Dominik Seffer, Markus Wöhr, Rainer K. W. Schwarting, Gerhard Schratt

##### WP4

###### **Analysis of isolated mitochondria from the prefrontal cortex of heterozygous Cacna1c rats**

Susanne Michels, Goutham Ganjam, Amalia Dolga, Ina Eisenbach, Katharina Elsässer, Lena Hoffmann, Birgit Honrath, Anja Jelinek, Moria Braun, Theresa Kisko, Özge Sungur, Dominik Seffer, Rukhshona Kayumova, Tobias Redecker, Christine Hohmeyer, Stephanie Witt, Marcella Rietschel, Markus Wöhr, Rainer Schwarting, Carsten Culmsee

## **CP1**

### **Gen-Umweltinteraktionen als Ursache von affektiven Störungen - Epigenetische Untersuchungen an Kandidatengenen in mononukleären Zellen von Probanden der Marburg Affective Disorder Cohort Study (MACS)**

Fabian Kormann

### **Assoziation zwischen inflammatorischen Parametern und morphologischen Charakteristika des Hippocampus bei affektiv erkrankten Patienten**

Julian Glandorf

## **Poster Session II, Friday, February 12, 2016, 14:30-15:15**

### **WP1**

#### **Differential abnormal pattern of anterior cingulate gyrus activation in unipolar and bipolar depression**

Christian Bürger, Ronny Redlich, Dominik Grotegerd, Ilona Schneider, Dario Zaremba, Susanne Meinert, Judith Alferink, Jens Bölte, Harald Kugel, Volker Arolt, Udo Dannlowski

#### **Neurale Korrelate des episodischen Gedächtnisses bei Patienten mit einer depressiven versus einer euthymen Phase - eine fMRT-Studie**

Felicitas Meier, Henrike Bröhl, Bruno Dietsche, Tilo Kircher, Udo Dannlowski, Axel Krug

#### **Differentiating Unipolar and Bipolar Depression Using White Matter. A voxel-based approach with DTI**

Susanne Meinert, Jonathan Repple, Christian Bürger, Dario Zaremba, Ronny Redlich, Dominik Grotegerd, Katharina Dohm, Katharina Förster, Udo Dannlowski

#### **Die Vorhersage der individuellen EKT-Response mittels struktureller Bildgebung**

Ronny Redlich, Katharina Dohm, Dario Zaremba, Dominik Grotegerd, Nils Opel, Peter Zwanzger, V. Arolt, Harald Kugel, W. Heindel Udo Dannlowski

#### **Clinical Predictors of Hippocampal Atrophy in Patients with Major Depressive Disorder**

Dario Zaremba, Christian Bürger, Katharina Dohm, Verena Enneking, Katharina Förster, Dominik Grotegerd, Susanne Meinert, Ronny Redlich, Harald Kugel, Udo Dannlowski

### **WP5**

#### **Epigenetic Methods: Next-generation bisulfite sequencing of *CACNA1C* with Illumina MiSeq**

Helene Dukal, Darja Schendel, Maren Lang, Josef Frank, Jens Treutlein, Andreas Forstner, Markus M Nöthen, Stephanie H Witt, Marcella Rietschel

#### **Enhancer variant enrichment analysis in genome-wide association study of bipolar disorder**

Sugirthan Sivalingam

### **WP6**

#### **Quality Assurance in MACS**

Christoph Vogelbacher, Jens Sommer, Andreas Jansen, Miriam Bauer

#### **Test Retest Reliability of fMRI Paradigms in MACS**

Miriam Bauer, Roman Kessler, Olaf Steinträger, Andreas Jansen

#### **Towards Improved Emotive fMRI Paradigms - a Future Perspective**

Roman Kessler, Miriam Bauer, Kristin Zimmermann, Andreas Jansen