Introductory Remarks to Symposium 32

The longitudinal course of psychosis - clinical and neurobiological aspects

Peter G. Falkai and Thomas G. Schulze, München

This symposium will give an update of the latest work of the Clinical Research Group 241 (www.kfo241.de) and the PsyCourse consortium (www.PsyCourse.de), based in both Munich and Göttingen. Since 2012, researchers of these center grants have established one of the largest infrastructure worldwide for clinical, genetic, and neurobiological studies into the longitudinal basis of major psychiatric disorders such as schizophrenia (SZ), bipolar disorder (BD), and major depression (MD). Leveraging a sophisticated medical informatics framework for comprehensive phenotypic assessments and biomaterial banking, well over 800 patients have been enrolled at more than 20 sites across Germany and Austria. They have been seen at up to 4 timepoints during a follow-up period of 2 years. At each time point, detailed clinical information as well as biomaterial (DNA, RNA, plasma, serum) are obtained. This unique resource has been complemented by brain imaging, systems biology, and statistical projects by consortium members. At the 2017 meeting, we will present first analyses tapping into this resource that will help shed light on the biological basis of the course of major mental illnesses. Presentations will include in-depth clinical studies describing disease trajectories based on a multitude of empirical data, cutting-edge functional imaging analyses of longitudinally assessed phenotypes, genomic, proteomic, as well as transcriptomic (e.g. microRNA, lncRNS) and epigenomic studies. Our initial fMRI results show functional alterations in neuronal networks associated with disease progress in the longitudinal course and provide evidence for potential neuroimaging biomarkers with reference to disease outcome parameters. In line with the overall idea of the consortium, we will also present data on different endophenotypes of psychiatric diseases in animal models targeting candidate genes of psychiatric diseases. We will show how the neurobiology lab enables us to perform controlled and targeted manipulation of environmental factors, leading to differential expression of psychiatric endophenotypes in investigated mouse mutants.

Symposium 32

Saturday, March 25, 2017
8:30 – 10:30, Lecture Hall 102

Chairs: *Peter G. Falkai and Thomas G. Schulze, München*

08:30 **Opening Remarks**

08:40 Monica Budde and André Fischer, München
DISEASE TRAJECTORIES IN SCHIZOPHRENIA AND BIPOLAR DISORDER AND THE GENOME-ENVIRONOME INTERFACE (S32-1)

09:05 Sarah Trost and Sarah Wolter, Göttingen
FMRI FINDINGS IN THE LONGITUDINAL COURSE OF PSYCHOSIS (S32-2)

09:30 Nirmal Kannayian, Munich
THE SCHIZOPHRENIA RISK GENE TCF4 CONTROLS COGNITION AND NEURONAL PLASTICITY (S32-3)

09:55 Heike Bickeböller, Göttingen
GENOTYPE-PHENOTYPE RELATIONSHIPS OF THE LONGITUDINAL COURSE OF PSYCHOSIS – STATISTICAL ASPECTS (S32-4)

10:20 **Concluding Remarks**