The **Central Institute of Mental Health (CIMH)** in Mannheim was founded on April 8, 1975 as foundation of the state Baden-Württemberg together with Volkswagen Foundation. Its structure realizes a highly efficient model integration of patient-centered care, research and teaching. Description of the institution can be found here: **www.zi-mannheim.de**

Patient Treatment

The tasks of the CIMH are among others the in-patient, partial in-patient and out-patient care of mentally ill persons of all ages in our four departments that offer a modern treatment based on the international level of research in their special fields.

Research at the Central Institute of Mental Health

The research at the Central Institute of Mental Health (ZI) has set itself the task of developing new treatment options for mental illness and improving existing therapies. The primary objective is to identify, establish and personalize psychotherapeutic and pharmacological mechanisms of action for mental disorders.

In its research, the ZI uses a translational approach: firstly, the basic research aims at the identification of neurobiological mechanisms in the human brain and secondly, it is taken into account in the research that mental disorders arise from an interaction of processes of a psychosocial and behavioural biological nature.

At the ZI there is a link from experimental medicine and mechanistic neuroscience research. In addition, an interdisciplinary combination of biomarkers and imaging research as well as experimental psychopharmaceuticals and psychotherapeutic research will facilitate the custom-made treatment of psychiatric patients.

Description of the Department of CAP

The department consist of 53 beds with 4 wards. Its mission is to provide state of the art mental health care for the population of Mannheim and the surrounding communities in the Rhine-Neckar County; all child and adolescent psychiatric disorders (n = 450 per year) are treated according to the most innovative quality standards, with the exception of withdrawal treatment for addiction patients.

Cooperative networks and projects

Research is conducted in close intramural cooperation with the CIMH Departments of Neuropsychology, Genetic Epidemiology, Addiction Medicine and the WG ADHD in Adulthood.

The national cooperations with the CAP departments at the Faculty of Medicine of the Universities of Heidelberg and Ulm were established as a Transregional Center of Competence “Child and Adolescent Psychiatry”, following a recommendation of the Medizin-Struktur-Kommission (MSK; federal governmental board for the evaluation of medical faculties) and funded until 2012. Another national network, in which the CIMH CAP department (TB) is critically involved, is the German ADHD-net (www.zentrales-adhs-netz.de) established on behalf of the German Ministry of Health. It aims at supporting a broad health management for patients of all ages suffering from ADHD and promotes national and international interdisciplinary cooperation.

Furthermore, the CIMH CAP department is building up cooperative research networks with various international partners. Members of the the CAP department are part of the European Network for Hyperkinetic Disorders (Eunethydis), respectively the ADHD Guidelines Group of the Eunethydis.

Tthe CIMH CAP department is also involved in the IMAGEN project, a European-Commission funded international multi-site research project which aims to identify biological and environmental factors that might have an influence on risk taking behaviour and mental health in teenagers.

Moreover, the CIMH CAP department is participating as work package leader in various other EU-funded projects (such as the PERS project (studies with risperidone in conduct disorder and psychotic disorders), STOP project ('medication-related suicidality' focusing on the effects of selective serotonin re-uptake inhibitors), ADDUCE project (studies on the long-term safety of stimulant medication for the treatment of ADHD), TACTICS project (focusing on addictive and/or compulsive behaviour in children and adolescents: translating pre-clinical results into therapies).

Clinical capabilities

The Department of CAP at CIMH and its research groups have been capable to recruit for and perform clinical trials in various paediatric patient groups (ADHD, CD, ASD, OCD, MDD, Schizophrenia, Bipolar Disorder, Tics/Tourette, ..), both with public and pharma industry sponsoring.

This included a number of placebo-controlled trials in this age group (6 - < 18 y.).

Technical capabilities

The RG Developmental Clinical Neurophysiology (RG, established 2009) focuses on multimodal imaging of developing brain functions and structures in children and adolescents, their impairment in disorders such as ADHD (Attention Deficit-/ Hyperactivity Disorder), and their modulation through neurofeedback treatment, childhood risks, or gene x environment interactions.
Advanced imaging tools are used to study plasticity induced by development, stress, and treatment in brain systems implicated in child psychiatric disorders or risk factors. To this end, multimodal functional neuroimaging (simultaneous EEG- fMRI for high temporal and spatial resolution) was implemented in cooperation with other research groups (ADHD; Child and Adolescent Neuropsychology) and Departments at the CIMH (Neuroimaging, Neuropsychology, Clinical Psychology and Adult Psychiatry) and in Switzerland (Child and Adolescent Psychiatry, University of Zurich),

The RG Paediatric Psychopharmacology represents this relatively new field within child and adolescent psychiatry (CAP) both in teaching and research. With respect to the execution of clinical trials with children and adolescents, it is also involved in the clinical work of the department of CAP. The main objectives of the group are fostering of clinical studies in paediatric psychopharmacology with sponsoring from both public funding agencies and the pharmaceutical industry, development of international study site networks for multi-centre trials, collaboration with adjacent departments in translational research projects and advancement of cooperation between the pharmaceutical industry and the academia.

The research activities of the RG ADHD in Childhood/Adolescence focus above all on biological issues pertaining to the etiology, subtyping, course, prognosis and innovative

therapy of ADHD. The WG ADHD of the CIMH CAP provides thorough expertise on innovative nonpharmacological treatment strategies for ADHD exemplified e.g., by a large multicenter RCT on neurofeedback in children with ADHD (DFG HO 2503/4-0; 2008-2013), and an ongoing fMRI-/EEG-neurofeedback study (DFG SFB 636). Within a third-party-funded prevention project CIMH CAP has studied the effects of a home-based treatment for families of children with ADHD and antisocial behavior after a first criminal offense.

The expertise of the RG Neuropsychology in Childhood/Adolescence lies in the field of developmental psychopathology. Tracking the development of psychiatric disorders from infancy into adulthood and identification of pathogenetic factors during different developmental stages has been the longstanding focus of the group's work. Our research activities draw heavily on a comprehensive epidemiological cohort study, the – now widely recognized – „Mannheim Study of Children at Risk" (MARS), an ongoing longitudinal study.

Research activities of the RG Autism focus on biological, cognitive and behavioural correlates of social deficits in both ASD and healthy populations. We investigated brain connectivity in children with ASD, in order to learn more about brain growth trajectories and neural organization in ASD, and how these characteristics are related to autistic symptoms. We also investigated the influence of genetic polymorphisms, personality and reward learning on autism-related traits in in a large multicenter study (IMAGEN) on healthy adolescents.