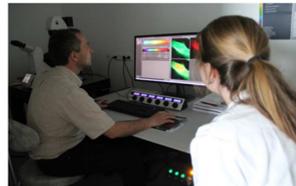
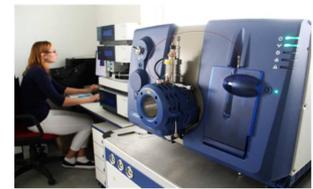
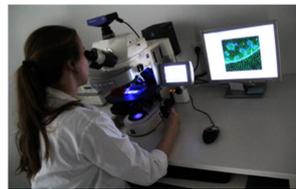


The National Institute of Mental Health (NIMH) in Klecany, Czech Republic home to clinical research and techniques applied in basic neuroscience laboratories promotes truly interdisciplinary research opportunities to advance our understanding of mental health and what causes mental illness. Many research groups have allied in disciplines such as experimental neurobiology, social psychiatry, applied neurosciences and brain imaging, epidemiological and clinical research of addictions, sleep medicine and chronobiology, brain electrophysiology, diagnostics and treatment of mental disorders to create a detailed map of brain mechanisms involved in complex behavior, including those associated with mental illnesses.



The experimental neurobiology research program employs over 50 scientists, staff and students dedicated to research related to the neurobiology of physiological and pathological ageing, addictions and serious mental disorders. Combining biochemistry, physiology, pharmacology, and behavioral animal research in laboratories minimizing physical and intellectual boundaries support highly collaborative and interactive research. This environment not only promotes the flow of knowledge and expertise to synergize the process of discovery but provides the framework for basic neuroscience research at NIMH.

Research activities of applied neurosciences focus on diagnosing and prevention and remediation of risk factors jeopardizing mental health. To achieve this goal, we conduct large, continuously ongoing, controlled, prospective studies, gathering extensive data obtained from narrowly defined patient cohorts (first episode schizophrenia, bipolar affective disorder and OCD). Densely phenotyped data are acquired through neuroimaging (3T Siemens Prisma scanner), genomic microarrays, neuropsychology and biochemistry. Our second assignment is to automatically detect signifiers of episodic relapse through the continuous monitoring of multi-parametric indicators with the use of in-house designed advanced hardware platforms and mobile technology.

The brain electrophysiology research program serves as a key platform for non-invasive electrophysiological methods (EEG, QEEG, ERP, hdEEG) allowing for the evaluation of brain functions and neuronal circuits under normal and pathological conditions with a high temporal resolution. Together with fMRI, neuropsychological and behavioural tests, the research program contributes to the clarification of open issues in the dynamics of complex brain functioning, as well as in terms of changes elicited by various therapeutic approaches (pharmacotherapy, psychotherapy, rTMS, tDCS etc.).