DZNE site Bonn

With regards to its future development, the German Centre for Neurodegenerative Diseases (DZNE) will benefit from well-established science and research partners already in the Bonn-Cologne-Jülich region. These include the departments of neurology and psychiatry at the University Hospital Bonn, both of which are renowned for their excellence in research and treatment of patients suffering from neurodegenerative disease. The Department of Epileptology performs top-quality research into neural connections. Genetic medicine and epidemiology of neurodegenerative disturbances are another strong research area where, in line with DZNE’s focus on population and clinical epidemiology, the aim is to understand associated risk factors and develop new, early-diagnosis procedures.

First-class basic research on the mechanisms of neurodegeneration, neuroinflammation, and stem cells is conducted at Bonn’s Venusberg clinics which make up the University Hospital.

In Cologne, research into Parkinson’s disease and new forms of treatment of excellence for geriatric research provides a key research platform or pathological ageing. The excellent imaging facilities being set up at the Research Centre Jülich also foster DZNE’s aim of providing new, advanced, non-invasive diagnosis procedures for neurodegenerative disease.

The research centre in Bonn will integrate existing diagnosis and treatment services provided at Bonn University Hospital into a dedicated dementia clinic. It will develop new diagnosis procedures which combine modern imaging technology (in cooperation with Research Centre Jülich) with new biochemistry procedures to allow examination of blood and cerebrospinal fluid (CSF) proteins. A new information centre will serve as a national focal point for dependents who care for relatives suffering from neurodegenerative disease. Coordinated clinical work performed in Bonn will allow the development of standard operating procedures (SOPs) which are indispensable in clinical examinations and tests. The creation of a national register for neurodegenerative disease and the introduction of EU-wide diagnosis and treatment standards are key to future treatment strategies. Clinical epidemiological studies and population studies will identify factors that harbour a heightened risk of neurodegeneration and those which are involved in normal ageing or age-related disease.

Basic research conducted in the Bonn-Cologne-Jülich region will concentrate on the mechanisms involved in early neuronal damage. This will aid the discovery of new treatment approaches and provide conclusive findings on the mechanisms common to a range of neurodegenerative diseases. Particular attention will be paid to loss of neural connections and plasticity.

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