# University Medical Centre Freiburg coordinates popular DFG priority programme

**The German Research Foundation (DFG) has granted the Medical Hospital in Freiburg and the German Cancer Research Centre in Heidelberg funding for a proposal applying to become one of the DFG's 18 priority programmes in 2009.**

Prof. Dr. med. Michael Lübbert from the Department of Haematology and Oncology coordinated the development of the proposal in Freiburg, together with the epigeneticist Prof. Dr. med Christoph Plass in Heidelberg. In total, 61 cooperative projects from all over Germany were submitted. This type of research funding is particularly attractive because it is – in contrast to the DFG's cooperative research centres (SFBs) – designed to bring together the competence of research groups from different German hospitals and institutions.

The joint project has been granted 6 million euros for a period of three years and the project groups will commence their work in 2010.

The Executive Medical Director and Chairman of the University Hospital, Prof. Dr. Wolfgang Holzgreve, is very happy about the success of the proposal: "This success is more proof of the importance of the research done at the University Medical Centre in Freiburg. The "Excellence University" of Freiburg thus receives another distinction, namely being a place where top research is carried out in the cutting edge topic of epigenetics."

The new priority programme, dealing with the "epigenetic regulation of normal haematopoesis and its disorder in myeloid neoplasias" is to investigate the correlation between healthy blood formation and disorders of the haematopoietic system. Special attention will be given to the biology and treatment of different kinds of leukaemia, dealing with "epigenetic" alterations in the cells. Epigenetic alterations refer to alterations that are not determined by the genetic code, i.e. that are not encoded in the DNA. For example, epigenetic factors control the maturation and growth of cells and their adaptation to stress. Over the last few years, the comprehensive importance of epigenetic mechanisms has become known among the professional world as a result of new molecular biology methods that allow the measurement of epigenetic changes.

It is the goal of the funded project to bring together the existing research activities in the field of epigenetic therapy and the molecular mechanisms of epigenetic gene regulation and use these to quickly advance new therapies. This is what researchers often refer to as "from the bench to the bedside – and back". The interdisciplinary network, which brings together 19 universities in nine German states, Switzerland and Great Britain, has outstanding skills in the examination of epigenetic changes in leukaemia and pre-leukaemia cells. These skills will be put to good use to the investigation of cell lines and animal models as well as in clinical studies. The researchers will use what are known as epigenetically active substances, i.e. drugs that are already used for the treatment of pre-leukaemia and a type of malignant lymphoma, in order to control the defective cell growth of malignant cells by reprogramming them. This is a therapeutic approach that has far fewer side effects than conventional chemotherapy and has increased in importance over the last few years as its excellent tolerability also allows older patients to be treated.

**Contact:**
Prof. Dr. Michael Lübbert<
Department of Haematology/Oncology at the University Medical Centre in Freiburg
Tel.: +49 (0)761/270-3534
Fax: +49 (0)761/270-3697
E-mail: michael.luebbert(at)uniklinik-freiburg.de

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