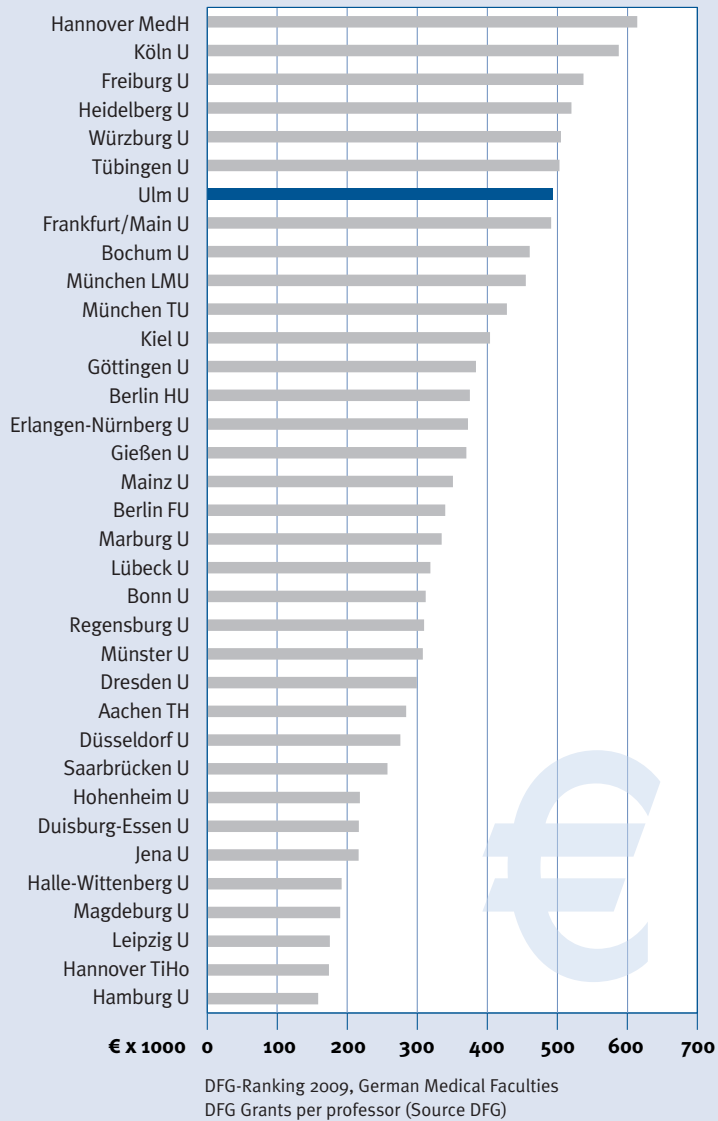




Scientific Profile and Infrastructure



Scientific Profile and Infrastructure

The *Universitätsmedizin Ulm* (University Medicine Ulm) is one of the top performing medical institutions in the fields of biomedical and clinical research in Germany. In a recent poll by the German Research Foundation (*Deutsche Forschungsgemeinschaft* – DFG) published in 2009, Ulm was ranked in position 7 with respect to funds per professorship.

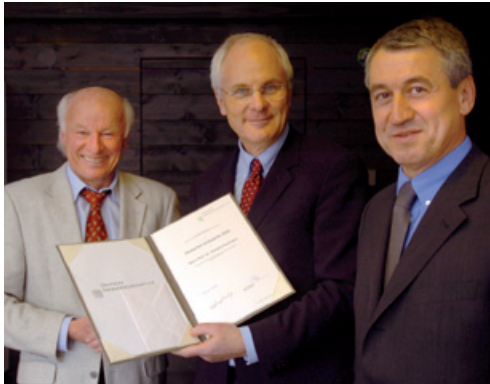
The research profile of the University Medicine Ulm covers the areas of hematology / oncology, stem cell biology / aging / programmed cell death (apoptosis), cardiometabolic diseases, neurosciences, and musculoskeletal research. Funding of these main areas of research totals approximately 40,5 Mio. Euros in 2009 and includes grants for collaborative research networks of the DFG, the Exzellenzinitiative des Bundes und der Länder (Excellence Initiative of the German federal and state governments), the BMBF (German Federal Ministry of Education and Research), the European Union, in addition to such foundations as the Deutsche Krebshilfe (German Cancer Aid) and the High Q Foundation (USA). The topics of these research networks are described in detail from page 11 onwards. They are grouped under common headings into scientific centers which act as nuclei for novel research networks. These centers include the Excellence Center Cellular Differentiation, the Excellence Center CardioMetabolic Diseases, the Center of Competence Geriatric and Ageing, the Center of Competence Musculoskeletal Research as well as the Transregional Center of Competence Child and Adolescent Psychiatry/Psychotherapy/Psychosomatics (run in conjunction with the medical faculties of Heidelberg and Mannheim). In 2009, the Center for Medicine and Society was founded with the mission to promote dialog between future-oriented research in the field of biomedical sciences and society within the context of the basic historical, theoretical and ethical principles of medical research and action. All these centers are financially supported by the State Ministry of Science, Research and the Arts of Baden-Württemberg (*Ministerium für Wissenschaft, Forschung und Kunst Baden-Württemberg*). In 2007, the Comprehensive Cancer Center Ulm (CCCU, which is supported by a grant from German Cancer Aid) was established with the goal of combining state-of-the-art clinical research with clinical care and the education and training of junior researchers and clinicians for the direct benefit of tumor patients. Research in

the field of neurosciences has been strengthened by the interdisciplinary Neuroscience Center Ulm operated by the faculties of Medicine, the Natural Sciences as well as Engineering and Computer Science. Research topics in this center range from molecular basics to neurological and psychiatric syndromes based on the concept from gene to behavior. The Transfer Center for Neurosciences and Learning (Transferzentrum für Neurowissenschaften und Lernen, ZNL) was established in 2004 with the financial support of the State Foundation of Baden-Württemberg (*Landesstiftung Baden-Württemberg*) and the Free State of Bavaria (*Freistaat Bayern*) with the aim of putting the neuroscientific findings of basic research into teaching practice in order to improve both teaching methods and learning performance. The ZNL employs an interdisciplinary approach with a team that comprises psychologists, physicians, and educationalists.

One of the most important tasks of the Medical Faculty and the University Medical Center Ulm is to provide a comprehensive infrastructure and supportive environment to assist scientists and junior researchers to focus on their projects. For instance, our program, *Gerok Positions*, offers young clinicians the possibility of concentrating on their research for a period of one to two years free of any clinical obligations. Several graduate and postgraduate programs have also been introduced to support PhD students and postdocs. These programs, which are described in detail on page 34, start with attractive fellowships and lead to financial support for subsequent research projects.

The research infrastructure includes modern laboratories such as our Life Science Building inaugurated in 2008 as well as a variety of core facilities that include a DNA-Chip Facility, a Cell Sorting Facility, a Transgenic Mouse Facility, a Biobank Facility, an Electron Microscopy Facility, the Facility Model Organisms in Tumortherapy, and a Bioinformatic Facility. Additional facilities are also being planned such as a Deep Sequencing Facility as well as the extension of our Bioinformatic Facility into a Department of Bioinformatics and Systems Biology in order to meet the rapid development in this area of biomedical research .





Prof. Guido Adler, Vicepresident for Medicine of Ulm University (middle) with the two prizewinners of the German Cancer Award in 2005, Prof. Richard Hautmann (left) and Prof. Thomas Wirth (right).



Awarding of the Gottfried Wilhelm Leibniz Prize 2009 to Prof. Karl Lenhard Rudolph (left) by Prof. Matthias Kleiner, President of the German Research Foundation (DFG), (right).



Awarding of the Gottfried Wilhelm Leibniz Prize 2009 to Prof. Frank Kirchhoff (left) by Prof. Matthias Kleiner, President of the German Research Foundation (DFG), (right).

How can we rate the success of all of these initiatives? Third-party funding, the extensive publication of papers, and the many awards received all bear witness to the measure of this success. As described on page 163, scientists of the Medical Faculty and the University Medical Center Ulm receive more than 40,5 Mio Euro in third-party funds each year and this is steadily increasing. In 2009, they published 960 papers and have been honored with a growing number of recognized awards, for example, the German Cancer Award (2005) (Prof. Richard Hautmann and Prof. Thomas Wirth), the Descartes Prize (2007) (Prof. Klaus-Michael Debatin), the Gottfried Wilhelm Leibniz Prize (2009) (Prof. Karl Lenhard Rudolph and Prof. Frank Kirchhoff), Hertie Senior Professorship (2009) (Prof. Frank Lehmann-Horn), the Georg Zimmermann Medal (2009/2010) (Prof. Rolf Kreienberg), and the Anita- and Cuno-Wieland Award (2010) (Prof. Hartmut Döhner) to name but a few.



Awarding of the Hertie Senior Professorship 2009 to Prof. Frank Lehmann-Horn by Prof. Annette Schavan, Federal Minister, Federal Ministry of Education and Research.



Georg Zimmermann Medal (2009/2010) to Prof. Rolf Kreienberg



Anita- and Cuno-Wieland Award (2010) to Prof. Hartmut Döhner

We are extremely proud of these achievements. However, according to the motto to stand still is a step backwards, we are always striving to improve our infrastructure and to recruit the best scientists for our institutes and departments with the aim of strengthening not only our scientific profile but also our firm position in the national and international scientific community. For instance, novel Collaborative Research Networks have been initiated to cover such topics as Leukemias and Lymphomas, Stem Cell Biology, and Aging to mention the most advanced initiatives being undertaken. In addition, we plan to construct a new Stem Cell Center in the next few years and wish to establish a Center for Translational Oncology so that the results of basic research can be transferred to the clinic as soon as possible for the benefit of our patients. The last two points in particular are a major challenge and will be a guiding factor in the future development of the *Universitätsmedizin Ulm*.