

Press Release, October 2010

## **Transplantation: Mechanisms Influencing Long-Term Success**

**New Clinical Research Unit "ELITE" at the University Hospital  
Regensburg funded by the DFG for 3.5 Million Euros**

In general, early success rates for organ transplantation (kidney, liver, heart, pancreas) and bone marrow stem cells are currently quite good. However, late transplant outcome is often complicated by immune reactions against allogeneic (non-self) tissues, resulting in both complications and allograft rejection. To impede this rigorous immunological response, a life-long regimen of immunosuppressive drugs must be prescribed, which suppress the entire immune system and is thus associated with a myriad of side-effects.

The long-term success of organ transplantation is often determined within the first few weeks after the operation. During this critical phase, it is important to identify which processes affect the recipient's immune response, what role other transplant impairments such as infection might play, and establish an optimal immunosuppressive treatment regimen.

To investigate these important issues, a Clinical Research Unit (KFO) funded by the Deutsche Forschungsgemeinschaft (DFG) has been established at the University Hospital Regensburg. In this KFO 243 ELITE project, "Early Immunological Determinants of Late Transplant Outcome" 14 scientists and clinicians from various interdisciplinary research groups at the University of Regensburg work closely together under the direction of Professors Hans Schlitt and Edward Geissler (both Department of Surgery). The project is dedicated to

investigating the early molecular and cellular immunological factors that determine the long-term success of transplanted allografts. Based on the findings, the ultimate goal is to develop novel therapeutic strategies to control and monitor pathologic post-transplant alloreactivity, thereby translating innovative basic science concepts into the clinical transplant setting and improving long-term transplant outcome.

To accomplish these goals, the KFO 243 research project, which is ultimately planned to run for a total of six years, has received funding from the Deutsche Forschungsgemeinschaft in the amount of approximately 3.5 million Euros over the next three years. In Clinical Research Units, the DFG explicitly supports "outstanding and experienced scientists." In conjunction with a previously established Clinical Research Unit (KFO 146: Zellvermittelte Suppression von auto- und alloreaktiven Immunreaktionen), under the direction of Professors Reinhard Andreesen and Matthias Edinger from the Department of Haematology and Internal Oncology, dealing with the influences of the immune system and cell therapy, the two primary strategic areas of interest of the University of Regensburg Medical Faculty, "Transplantation Medicine" and "Immunopathology - Immunotherapy" can be further enhanced. Based on their notable clinical and research expertise in both of these areas, the University Hospital Regensburg is considered to be one of the leading transplant centers in Germany.

Website: [www-kfo.uni-regensburg.de](http://www-kfo.uni-regensburg.de)

**Clinical Research Units (KFO)** (Source: <http://www.dfg.de>)

Clinical Research Units provide outstanding researchers the opportunity to carry out close, medium-term cooperation in a special research project from the field of disease or patient-oriented clinical research. This cooperation is expected to produce findings which could not have been achieved with the support available under the Individual Grants Programme or Priority Programme.

Clinical Research Units bring together researchers working at one or more locations to carry out a specific project. The program provides the staff and material resources required for intensive medium-term cooperation. These units often contribute to establishing new research directions.

### **The University Hospital Regensburg at a glance:**

The University Hospital Regensburg is one of the most modern hospitals in Germany and provides high quality medical services to various regions in northeastern Bavaria. In addition, the responsibilities of the medical faculty of the University of Regensburg include medical and dental training as well as state-of-the art scientific research. The University Hospital provides 833 patient beds as well as 40 day-hospital treatment facilities and has over 3,500 employees.

Currently there are 1,700 medical and dental school students registered in the University of Regensburg Medical School. Furthermore, over 22 in-patient and out-patient clinics plus research institutes ensure maximum-care medical treatment, as well as medical training at the very highest level and the conduct of internationally renowned scientific research.

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