

Research Initiative on Membrane Biology (RIMB)



„Membrane Transport: From Molecular Principles to Physiological Relevance“

The Research Initiative on Membrane Biology brings together nine research groups of the faculties of Biology, Chemistry and Physics which comprise in total about 150 scientific and non-scientific employees. Research on membrane transport has been a central focus of the life sciences in Kaiserslautern for many years. The Research Initiative on Membrane Biology was founded in 2008 to concentrate the research activities in Kaiserslautern on a timely and important field. Main goals of the initiative are to foster collaborations among the different departments on the campus, to specifically support young investigators, to increase the visibility of the life sciences in Kaiserslautern and, last but not least, to improve the conditions for internationally competitive funding programs.

All research groups of the initiative study different aspects of the transport of ions, metabolites or proteins across biological membranes. Membrane proteins are positioned at the interface of cells and their environment or between cellular compartments and, hence, represent essential mediators of cargo and information transfer. This, in addition to their good accessibility to drugs, makes membrane proteins the primary targets of the pharmaceutical industry.

Despite their outstanding relevance for biological and medical research, our knowledge on the structure and function of membrane transporters is still scarce. The development of strategies to overcome the technical difficulties associated with the characterization of hydrophobic proteins is a major challenge of the future both for basic and for applied life sciences.

Research on membrane proteins is a main focus at the University of Kaiserslautern. Groups in the departments of Biology, Chemistry and Physics are headed by internationally recognized scientists who study various aspects of membrane transport processes in different biological systems. This focus led (together with the University of Homburg) to research programs like the Sonderforschungsbereich („Collaborative research cluster“) 530 or the Graduate School 845 on „Membrane Transport“ which are of outstanding importance for both research and scientific education at the University.

The groups of the research initiative actively interact with many national and international researchers. At present, collaborations exist for example with laboratories in the US, Canada, England, France, Sweden, Israel, Italy, Austria and Switzerland. It is intended to further improve the possibilities for the exchange of graduate students and post docs in the future. To this end, it is planned to team up with researchers at the University of Alberta in Edmonton, Canada, in order to found together an International Graduate School on Membrane Transport.



The Research Initiative specifically supports young researchers

Contact



Research Initiative on Membrane Biology (RIMB)

Chair: Prof. Dr. Johannes Herrmann
Technische Universität Kaiserslautern

Erwin Schrödinger-Straße 13
D-67663 Kaiserslautern

Phone: +49 (0)631 / 205 2406
Fax: +49 (0)631 / 205 2492

hannes.herrmann@biologie.uni-kl.de
www.uni-kl.de/wcms/rimb.html

Research Areas

- Unravelling of the mechanistic principles of the transport of molecules across biological membranes
- Analysis of the physiological relevance of individual transport processes, e.g. for hearing, for the generation of cellular energy supplies or for plant metabolism
- Structural support of young researchers for their development of independent research groups

www.uni-kl.de/wcms/rimb.html