The Frankfurt Institute for Advanced Studies (FIAS) and the Medical Faculty of the Dresden University of Technology offer a PhD position for up to three years related to the project **Multiscale Modeling of Insulin Secretion in Diabetes**

Diabetes is a very common disease of deregulation of insulin secretion. This project envisages understanding the mechanisms of this deregulation in a combined approach of Experimental Diabetology and Theoretical Biology. In a multiscale modeling approach the impact of measured molecular interactions on insulin secretion is analyzed. This shall help to identify suitable drug targets to reestablish normal insulin secretion in deregulated pancreatic beta cells. The predictions of the model might be verified in novel experiments by the PhD student her/himself or in collaboration with investigators at the Medical Faculty of Dresden.

FIAS is a fundamental research institute of excellence that is affiliated to the Johann-Wolfgang-Goethe-University in Frankfurt am Main (Germany) and stays in close connection with the local Center for Scientific Computing (CSC). FIAS is dedicated to interdisciplinary research, which makes it the right place to carry out this ambitious project, involving researchers from the fields of Theoretical Biology and Experimental Medicine. More information about FIAS and the comprised Ph.D. program of the Frankfurt International Graduate School for Science (FIGSS) is available at http://www.fias.uni-frankfurt.de/. The Laboratory of Experimental Diabetology (www.islets.de) at the Medical School in Dresden is affiliated with the Center for Regenerative Therapies Dresden (www.crt.d.de), the Dresden International Graduate School for Biomedicine and Bioengineering (www.digs-bb.de) and the nearby Max Planck Institute for Molecular Cell Biology and Genetics (www.mpi-cbg.de). The close connection between the groups at FIAS and in Dresden promises fruitful collaborations that are required to put theoretical achievements into practice.

The successful candidate for the Ph.D. position...
- ...holds a master degree in physics or other natural sciences or mathematics,
- ...is interested in complex biological systems,
- ...has a strong theoretical background with approved experience in numerical modeling,
- ...is open-minded and will therefore profit from the dense scientific and interdisciplinary surrounding of young theoretical and experimental researchers in medicine, biology, chemistry and physics at FIAS and at the TU Dresden.

Applications comprising a c.v., publications and/or theses, past and present research interests, and the addresses of two possible referees should be sent to:

Dr. Michael Meyer-Hermann, Frankfurt Institute for Advanced Studies Max von Laue Str. 1, 60438 Frankfurt am Main, Germany or by E-mail to: M.Meyer-Hermann@fias.uni-frankfurt.de

Prof. Dr. Michele Solimena Experimental Diabetology Medical Faculty, TU Dresden Fetschertrasse 74, 01307 Dresden, Germany Michele.Solimena@mailbox.tu-dresden.de