

## Advertisement

The *Computational Systems Biochemistry Group* at the Institute of Biochemistry of the Charité (Prof. Holzhütter) offers a position from October 2009 as

# PhD Student

Research project:

## Modeling of phospholipids biogenesis in *T. gondii*-infected human host cells

Our research group *Computational Systems Biochemistry* is part of the Collaborative Research Centre SFB 618 with the project C7 „Membrane Biogenesis Modeling of a *Toxoplasma gondii*-Infected Human Cell and Deduction of Underlying Principles Dictating the Parasite–Host Interactions”.

The main goal of the SFB 618 is the development of theoretical concepts, mathematical models and data analysis methods to discover „principles of design” of living systems and to analyze their functions.

### Goal of the project

The focus of your work will be on the modeling of phospholipids biogenesis in *T. gondii*-infected human host cells. You will reconstruct the metabolic network of membrane lipid synthesis and degradation in the host and parasite based on information coming from the literature and the experiments of the cooperating experimental group. You will compile available enzyme-kinetic data and establish a comprehensive kinetic model of the interacting networks. Using flux balance methods, you will carry out optimization calculations to account for the interrelations between both networks.

More details [http://www.biologie.hu-berlin.de/forschung/SFB\\_618/projects/projectc7/](http://www.biologie.hu-berlin.de/forschung/SFB_618/projects/projectc7/)

### Requirements

As successful candidate you hold a degree in a natural scientific field with superior results. Ideally, you have skills in modeling, simulation and analysis of biological systems. Working independently, an interest in new challenges and English communication skills are expected.

The opportunity of pursuing a PhD degree is granted. Compensation will be based on BAT-O IIa/E13 50%. The project is currently fixed until June 30, 2013.

### Application

We are looking forward to receiving your application, preferential via email, until September 1, 2009.

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