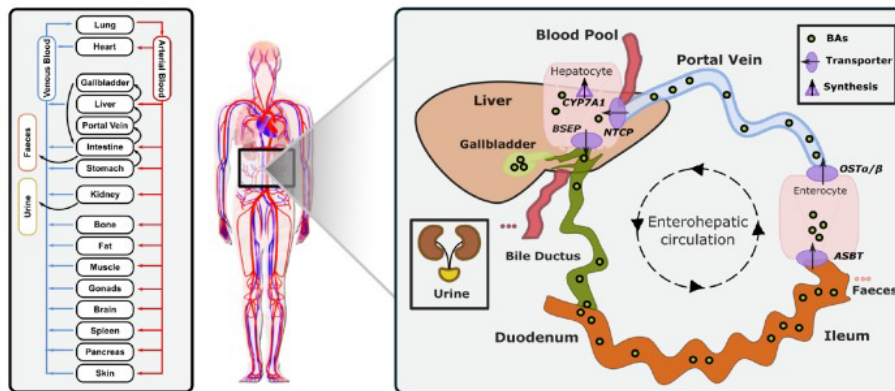


## PhD position in PBPK modelling of drug-induced cholestasis

Drug-induced cholestasis is a severe adverse drug reaction which is among the main reasons for termination of pharmaceutical development programs. In brief, cholestasis is a disorder of bile acid metabolism and may result from drug interactions at various liver transporters.

In this project, a physiologically-based computer model of bile acid metabolism (Baier et al., 2019; Baier et al., 2022) will be used to study changes in the distribution of bile acids in the body for various pharmaceutical compounds. Physiologically-based pharmacokinetic (PBPK) models will be developed for different hepatotoxic drugs and coupled to a the computational model of bile acid metabolism. The computational models will be extended with specific experimental data from collaboration partners. Thereby, it will be possible to assess the cholestatic risk of various drugs at an early stage.



Baier et al., 2019, 2021

### Goals of the PhD thesis

- development of various PBPK models;
- coupling of PBPK physiologically-based models of bile acid metabolism;
- comparative analyses of the cholestatic risk potential of different drugs.

### What do we expect from you?

We are looking for a highly motivated individual with an interest in computational biomedicine and physiology. The candidate should have a master in computational biology, natural sciences, pharmacology, engineering or informatics. She/he should furthermore be interested in PBPK modelling and have a quantitative mindset.

### What do we offer?

We offer you a PhD thesis in the emerging field of PBPK modeling. You will become part of a great team at the Joint Research Center for Computational Biomedicine at the University hospital in Aachen. Expertise in PBPK modeling is of great interest for pharmaceutical industry to support preclinical research and clinical studies.

### Contact

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