

Ph.D. Position on Mass Spectrometry-Based Analysis of Metabolites 100%, start in May 2018 or upon mutual agreement

The Translational Medicine Research Group headed by Prof. Pablo Sinues at the University Children's Hospital Basel (UKBB) –Department of Biomedical Engineering (University of Basel) –is an internationally leading research group in the field of novel diagnostic tools development, aiming to be the future standard of care.

Your task:

This Ph.D. position is part of the new research project “Diagnosis of Bacterial Pneumonia by Exhaled Breath Analysis” funded by the Swiss National Science Foundation (SNF). It will be implemented at the UKBB, where we will have direct access to patients. The main goal of the project is to diagnose bacterial pneumonia using a non-invasive breath test, that will deliver a positive/negative response and will identify a subset of causing pathogens in 15 min, enabling a rapid and individualized treatment.

In your Ph.D. thesis, you will develop a framework for the analysis of exhaled metabolites of pediatric patients with suspected pneumonia. On this basis, you will complete an in-depth chemical analysis using state-of-the-art mass spectrometric tools available in our lab. A crucial aspect will be the computational analysis and interpretation of large mass spectrometric data sets. Your experimental work will be the input for further computational modeling by another member of the group. An integral part of your work is publishing your results in peer-reviewed journals and presenting them at international conferences.

Your profile:

Your qualifications should include a master level university degree in chemical engineering, chemistry or similar studies with excellent grades. A background in analytical chemistry with experience in organic trace analysis (GC-MS and/or LC-MS) would be highly appreciated. Interest in modeling and programming will be an advantage.

We offer:

The research will be carried out within a 4-year project. We offer a friendly, professional, international and interdisciplinary working environment. Your employment will be contracted according to standard regulations at University of Basel. The project will start in May 2018 or upon mutual agreement.

Application/Contact:

Applicants are requested to submit their documentation electronically as a single PDF file by email with the subject “PhD Student Application: Position DINEBRA“. This document should include a motivation letter, CV, university transcripts and names and contact details of two references. For applications and questions please contact Prof. Dr. Pablo Sinues (pablo.mlsinues@ukbb.ch). For further information about the research group please visit our website www.ukbb.ch/en/sinueslab