

BioTechMed-Graz is a cooperative initiative between the University of Graz, the Medical University of Graz and the Graz University of Technology at the interface of basic biomedical research, technological developments and medical applications with the goal of conducting joint health research.

Within the cooperative project BioTechMed-Graz, the three partner universities are pursuing the goal of joining the forces of their existing competences within the four major research areas of 'Molecular Biomedicine', 'Neurosciences', 'Pharmaceutical and Medical Technologies' and 'Quantitative Biomedicine and Modelling' through the establishment of a joint cooperative platform.

BioTechMed-Graz is – besides other projects – focusing on the Postdoc-Pool, which aims at promoting young scientists with international background and integrating them in the framework of BioTechMed-Graz in order to support innovative research in Graz.

#### For the project

"Bacterial metabolite signal molecules in the intestinal microbiota: Who is talking? Who is listening?" the Institute of Molecular Biosciences at the University of Graz is seeking to appoint a

# Postdoc

(fixed-term employment for the period of 2 years; position to be filled as of now)

#### Contact person

Ao. Univ.-Prof. Dr. Ellen L. Zechner, Institute of Molecular Biosciences, University of Graz, E-mail: <u>ellen.zechner@uni-graz.at</u>, Phone: +43 (0)316 380 - 5624

#### **Research partners**

Ass.-Prof. PD Dr. Gregor Gorkiewicz, Institute of Pathology, Medical University of Graz Dr. Gerhard G. Thallinger, Bioinformatics Group, Institute for Knowledge Discovery, Graz University of Technology

#### **Research topics**

The human gut microbiota is a complex community of microbes with enormous metabolic potential. Bacterial metabolites mediate host interactions and antibiotic-induced disruptions of this ecosystem impact human health. This project will apply next generation sequencing technology to understand the functional contribution of a previously identified enteric metabolite in altering gut microbial composition and host-microbe interactions in a well-defined model of antibiotic-induced colitis.

We will perform metagenomic sequencing to assess in detail the composition of the microbial community in stool samples of patients and rodent models of disease. We will also perform metatranscriptomics to analyze gene expression profiles of the host and the microbial community in response to environmental changes such as antibiotic stress or introduction of a pathogen. We expect to clarify the activity of molecules/metabolites derived from bacteria in inter-bacterial communication and host interaction pathways with impact on both health and disease.

#### **Professional qualifications**

Applicants should have a PhD degree in molecular biology, microbiology or related fields. A successful candidate will have a strong background in gut microbiota research and host-microbe interactions. The project requires planning and practical experience with animal models of gastrointestinal infection, expertise with bacterial S2 pathogens, and molecular microbiology. Extensive experience with whole genome sequencing, functional and comparative genomics and bioinformatics tools for analysis of metagenomic and metatranscriptomics data is sought. International postdoctoral experience, English competence and experience in university instruction is desirable as the candidate will co-supervise doctoral students in related research projects and participate in PhD training courses for microbiota research and next generation nucleic acid sequencing technologies.

## Personal profile

- Communicative and organizational skills
- Responsible attitude, reliability
- Ability and interest to work in an interdisciplinary team
- High level of motivation, outstanding commitment and goal orientation

The minimum salary as stated in the collective agreement for universities and according to the classification scheme (B1) is EUR 3,483.30 gross/month (Postdoc).

### Application Deadline: October 21, 2014

Applicants should send a single PDF file including 1) a full CV, 2) brief statement of past achievements, and 3) names and contact details of three references to: ellen.zechner@uni-graz.at.

Karl-Franzens-Universität Graz Institut für Molekulare Biowissenschaften Humboldtstraße 50 8010 Graz

If you have any questions, please contact Ao. Univ.-Prof. Dr. Ellen L. Zechner, Institute of Molecular Biosciences, E-mail: <u>ellen.zechner@uni-graz.at</u>, Phone: +43 (0)316 380 – 5624.

Further information can be found at www.biotechmedgraz.at