Job Advertisement HKI-07/2020

The Leibniz Institute for Natural Product Research and Infection Biology – Hans Knöll Institute – (Leibniz-HKI, www.leibniz-hki.de) investigates the pathobiology of human-pathogenic fungi and identifies targets for the development of novel natural product-based antibiotics. The Department Bio Pilot Plant invites talented and highly gifted candidates to apply as

**Doctoral Researchers (f/div/m) – Microbial physiology/microbial electrochemistry**

**Research Area:**

The research group of Prof. Miriam Rosenbaum at the Dept. Bio Pilot Plant of the Leibniz-HKI is focused on elucidating and utilizing microbial interactions with electrochemical systems to develop new strategies for microbial bioprocesses. As pioneers in the work with microbial redox mediators, the group is looking for and utilizing connections of microbial metabolism with electrochemistry. The group conducts innovative cutting-edge research by combining electrophysiology with strategies from synthetic biology to develop new biocatalysts. With the recently awarded ERC Consolidator Grant “eMICROBe” to Prof. Rosenbaum, the energetic link between extracellular electron exchange and cellular ATP production will be investigated. We seek two talented and engaged PhD students to elucidate the energetics of natural mediator use in microbial pure- and synthetic co-cultures for respiration at the anode (first Doctoral Researcher) and energy consumption at the cathode (second Doctoral Researcher).

The successful candidates will design and develop biochemical assays to measure cellular energetics *in-situ*, employ advanced chemical and physiological analytics (omics) to derive physiological pathways and engage in metabolic engineering to advance the physiological performance of microorganisms. The candidates will work in a dynamic and highly motivated group. Within the group, the Doctoral Researchers will experience a strong support based on lively collaboration and friendly interaction between the interdisciplinary scientists and they will have access to state-of-art equipment. In addition, the applicants will have all possibilities to realize own innovative ideas and develop new projects while contributing to the organization within the Dept. Bio Pilot Plant.

**Main Requirements:**

- Degree/experience in microbiology, biochemistry, microbial physiology, metabolic engineering or related disciplines favorably with basic knowledge of electrochemistry
- Experience in microbial cultivations and metabolic engineering especially of bacteria
- Strong knowledge in microbial cultivation techniques and microscopy
- The candidate should be willing and able to work in an international, interdisciplinary research team
- Ability for team-oriented as well as creative and independent work
- Very good communication skills in English

**Preferred Skills:**

- Experience in microbial electrochemistry, microsystems or biomedical engineering would be an advantage.
- Advanced knowledge in performing omics investigations including bioinformatics data analysis
- Basic knowledge about co-culture cultivations

The research group is embedded in the outstanding scientific environment of the Beutenberg Campus providing state-of-art research facilities and a highly integrative network of life science- and technical science institutes and groups. We offer excellent technical facilities, work in a committed team, as well as strong scientific collaborations.

Salary is according to German TV-L (salary agreement for public service employees). As an equal opportunity employer the Leibniz-HKI is committed to increase the percentage of female scientists and therefore especially encourages them to apply. We are interested in filling the positions as soon as possible.
Further information:
Prof. Dr. Miriam Agler-Rosenbaum | +49 3641 532 1120 | career@leibniz-hki.de

Applications:
Complete applications in English should include a CV, a brief statement of work experiences and interests, the addresses of possible referees, and should be submitted by March 22, 2020 via the Leibniz-HKI online application system.