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We'll show you how at Fraunhofer.

**MICROBIOLOGY GUIDED NATURAL PRODUCTS RESEARCH IS YOUR TOPIC? THE FRAUNHOFER IME, PROJECT GROUP BIORESSOURCEN LOCATED IN GIESSEN (GERMANY) SEEKS FOR A HIGHLY MOTIVATED STUDENT TO FILL IN A**

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## **PHD STUDENT POSITION IN MICROBIOLOGY – INDUCTION OF ANTIBIOTICS PRODUCTION IN STRAINS OF NOVEL PRODUCER PHYLA**

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Fraunhofer as the largest research organization for applied science in Europe has joined forces with the multinational pharmaceutical company Sanofi to fund the Sanofi-Fraunhofer Natural Product Center of Excellence in Frankfurt, Germany. Scientists of the project group Bio-resources of the Fraunhofer Institute for Molecular Biology and Applied Ecology (IME) work together at the same benches with scientists of the pharmaceutical company Sanofi-Aventis Germany with the goal to identify and develop innovative drugs for the treatment of bacterial infections.

This multi-disciplinary team is currently building up new tasks, in which the announced position needs to be filled by a highly motivated and responsible PhD student. The main focus for this position to implement strategies for gene cluster induction in recently cultured bacteria from promising antibiotics producer phyla to unravel their potential in the production of antibiotics active against Gram negative bacteria. This includes the culture independent evaluation prioritized strains using genomics

and transcriptomics tools for the induction of gene cluster expression as well as the design of inducer media and/or the application of specific inducer molecules. The support of our center in all activities related to microbiology and molecular biology is expected, which includes the implementation of novel strategies for antibiotics discovery in standard processes. Being embedded in a group that spans the entire discovery pipeline from the access of novel producer bacteria using untapped bio-resources up to structure elucidation and lead structure evaluation is the main advantage of the announced position. The application of innovative molecular and microbiological techniques on yet underexplored bacterial phyla is seen as one of the ultimate goals in natural products discovery. Sanofi and Fraunhofer has set up a multidisciplinary team of scientists in an industrial environment to accomplish this task.

**Your tasks:**

- Implementation and application of innovative approaches to activate gene cluster expression to facilitate antibiotics discovery and their integration into established drug discovery pipelines
- Participation in drug discovery programs
- Interaction with all groups of our discovery pipeline, especially innovative cultivation, screening and chemical analytics

**What we expect from you**

- A qualifying university degree in the fields of Molecular Microbiology or Molecular Biotechnology
- Experience in genome analysis and gene regulation
- Sound knowledge in the cultivation and physiology of a wide range of microorganisms
- An interest in natural products and their analysis
- Team spirit and excellent communication skills as well as efficient organization of your work and experience in the guidance of technical staff
- An interest to work in a multi-cultural, interdisciplinary team
- Excellent English

**What you can expect from us**

- Highly interesting research projects in Applied and Molecular Microbiology
- Experience in lead structure identification and evaluation
- An environment that allows team-oriented work with a focus on drug discovery and development
- Excellent infrastructure
- A network with academic and industrial cooperation-partners
- Further education and training in your field of expertise

Appointment, remuneration and social security benefits based on the public-sector collective wage agreement (TVöD).

Additionally Fraunhofer may grant performance-based variable remuneration components.

The working time consists of 39 hours per week.

The position is initially limited until 31.12.2019.

In case of identical qualifications, preference will be given to severely disabled candidates.

The Fraunhofer-Gesellschaft is committed to providing equal career opportunities for men and women.

This vacancy is also available on a part-time basis.

Fraunhofer is Europe's largest application-oriented research organization. Our research efforts are geared entirely to people's needs: health, security, communication, energy and the environment. As a result, the work undertaken by our researchers and developers has a significant impact on people's lives. We are creative. We shape technology. We design products. We improve methods and techniques. We open up new vistas.

**For questions about this position please contact Ms. Ricarda Döring.**

**Please apply directly online by clicking on the blue "Apply" button. Please abstain from submitting paper copies for environmental reasons.**

**<http://www.ime.fraunhofer.de>**

Job Reference: **IME-BR-2017-12**

Closing Date: **10.09.2017**

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