

## POSITION FOR PHD STUDENT

The new Junior Research Group at INM, **Bioprogrammable Materials**, combines synthetic biology and biomaterials to develop smart platforms for therapeutics and sensing applications. One exciting research line involves the development of Living Therapeutic Materials, which are smart drug-release systems made of genetically engineered living bacteria encapsulated within polymeric matrices. The bacteria produce the drugs and are engineered to do so in response to external triggers such as small-molecules or light. The matrix keeps the micro-organisms happy, prevents them from escaping, while allowing the drug to be released. Towards therapeutic applicability, we plan to program such functions in human microbiome-associated bacteria such as *Corynebacteria*, *Staphylococcus epidermis*, *Lactobacilli*, etc. In this respect, we are seeking to fill an open position for a **PhD student**.

### Major duties/responsibilities

- Programming stimuli-responsive drug-production genetic circuits in plasmids and the genome of human microbiome-associated bacteria.
- Analysis and optimization of drug-release performance of the modified bacteria
- Encapsulation of bacteria in polymeric matrices and analysis of viability, growth and performance
- Active participation in the research activities of the group in close collaboration with other team members.
- Publish scientific papers resulting from this research and present results at international meetings.

We are seeking a person with a degree in biotechnology, biochemistry or biomedical engineering, particularly with experience in genetic engineering of human microbiome-associated bacteria. Experience with hydrogels, biopharmaceuticals or protein engineering is an added benefit. Candidates should be self-motivated, have good interpersonal, communication and presentation skills, and a demonstrated ability to interact effectively with staff at all levels. The ability to work as a member of an international, multi-disciplinary team is a critical asset, and proficiency in English is mandatory.

Interested candidates should submit their complete application, including a CV, publication list, a one-page motivation letter, and contact details of 2 references before Jan 31st, 2020. We prefer to receive your application electronically (single pdf file smaller than 5 MB) addressed to Dr. Shrikrishnan Sankaran under [shrikrishnan.sankaran@leibniz-inm.de](mailto:shrikrishnan.sankaran@leibniz-inm.de). The INM is an equal-opportunity employer with a certified family-friendly policy. We promote professional opportunities for women and strongly encourage them to apply.

Do you want to know more about the project? Just contact us! We are looking forward to your application!

The INM – Leibniz Institute for New Materials is located in Saarbrücken/Germany, at the heart of the German/French/Luxembourg/Belgian Greater Region. We are an internationally leading center for materials research, a scientific partner to national and international research institutions, and a provider of research and development for companies throughout the world. The INM is an institute of the Leibniz Association and has about 250 employees.



### CONTACT

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