New Thinking. New Materials.

POSITION FOR PHD STUDENT

The INM research group ***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 Materials for smart drug delivery using genetically engineered living bacteria encapsulated within polymeric matrices. The bacteria are engineered to produce drugs on-demand, in response to external triggers such as small-molecules, light, heating, etc. Towards therapeutic applicability, we plan to program such functions in probiotic Lactobacilli and for such projects, we are seeking to fill an open position for a ***PhD student***.

Major duties/responsibilities

- Programming stimuli-responsive production of a therapeutic protein in E. coli and Lactobacilli by designing and incorporating various genetic modules in plasmids and bacterial chromosomes
- Analysis and optimization of release profiles and bioactivity of the therapeutic protein from the modified bacteria. This will also involve in vitro experiments with mammalian cells
- Encapsulation of bacteria in polymeric matrices and analysis of their 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

To propel training in this new field, the student will also be provided access to the activities and resources of the Leibniz Science Campus on Living Therapeutic Materials (https://www.lsclifemat.de/) - a multidisciplinary consortium of research groups within the campuses of the Saarland University, working together on this topic.

We are seeking a person with a degree in biotechnology, biochemistry or biomedical engineering, particularly with experience in genetic engineering of probiotic 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 by email to Dr. Shrikrishnan Sankaran (Shrikrishnan.sankaran@leibniz-inm.de) with the following:

- Motivation letter (included in the text of the email - max. 1 page)
- CV (max 2 pages)
- Publication list
- Contact details of 2 references

The deadline for submission is ***Dec 1st, 2020***.

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.

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.

INM

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CONTACT

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