Job advertisement no. 115/2021

The department Biological Barriers and Drug Delivery, headed by Prof. Dr. Claus-Michael Lehr, at the Helmholtz-Institute for Pharmaceutical Research Saarland (HIPS) in Saarbrücken, is offering a position as

Doctoral Researcher (f/m/d)

Project title:
New platforms for dual mRNA delivery of antigen and endogenous adjuvants for fine-tailored systemic and local protective mucosal immune responses

Project description:
The project aims in the development of an advanced vaccine platform to promote protective mucosal immunity by co-delivery of mRNAs encoding antigen(s) and human endogenous adjuvants. This requires adaptation of the nanocarrier design for co-delivery of different mRNAs with distinct expression kinetics. The approach encompasses the selection of relevant antigen and endogenous adjuvants for mucosal vaccination, and a proof-of-concept study with a vaccine-relevant antigen showing stimulation of protective immunity against viral infection. The project represents a strong and close cooperation with the Department of Vaccinology (Prof. Dr. Carlos A. Guzman) at the Helmholtz Center for Infection Research (HZI) in Braunschweig.

Thus, the candidate will have the challenging task to work at the interphase of nanocarrier design and immunology to develop new mRNA based vaccination strategies. The candidate will design and produce innovative nanocarriers based on polymers, lipids and vaccine formulations thereof for controlled release of mRNAs. In vitro testing on cells and tissue for observation of transgene expression (both reporter molecules and antigen/adjuvant candidates) is performed for optimization of the delivery system on transfection efficacy and expression kinetics. The candidate will also travel to our collaboration partner to exchange and share techniques and reagents.

Qualifications:
- Master’s Degree or equivalent in pharmacy, biology, or a related field within the life sciences
- Excellent English communication skills (written and spoken)
- Ability to work independently and as part of an international team
- A strong interest in nucleotide delivery and vaccination as well as some experience with cell culture and knowledge in immunology are highly beneficial
- The project demands a well-structured and communicative working style
- Experience on nanocarrier production and characterization is an advantage

Disabled persons are given preference in the case of equal professional qualification. The HIPS aims for professional equality between women and men. The position is suitable for part-time work.
We offer you:

- participation in an International Graduate School
- challenging and varied tasks in a dynamic and international research environment
- close ties to both Saarland University and the HZI
- unique network of excellent partners to support your research endeavors.
- most modern workplace equipment
- 30 days annual leave
- flexible working hours

Starting date: 1st December 2021 - Initial contract for 3 years
Salary: alike TVöD E13 (55%)
Probation period: 6 months
Published on: 30th July 2021
Closing date: 12th September 2021
Application: Applicants are required to complete the online application form here: https://hzi.opencampus.net/. (Please select Job No. 115/2021).

For more details regarding the position, please contact Prof. Dr. Lehr via email: Claus-Michael.Lehr@helmholtz-hips.de or Dr. Brigitta Loretz Brigitta.Loretz@helmholtz-hips.de

Further information about the institute and the research group of Prof. Dr. Lehr can be found on our website https://www.helmholtz-hips.de/en/research/teams/team/drug-delivery-across-biological-barriers/