New Ideas. New Materials.

PHD CANDIDATE IN BIOPHYSICS ON "LIQUID PHASE ELECTRON MICROSCOPY OF BREAST CANCER CELLS"

The Innovative Electron Microscopy group at INM is seeking a PhD candidate in biophysics for the project "Investigation of the Influence of Breast Cancer Drugs on HER2 Dimerization at the Molecular Level in Individual Cells Aiming to Find Clues for Causes of Drug Resistance: **HERe**" funded by the Else Kröner-Fresenius Stiftung.

This biomedical research project studies the influence of drugs on HER2 positive breast cancer cells thereby taking cancer cell heterogeneity into account using the unique analytical capabilities of liquid-phase scanning transmission electron microscopy. HER2 positive breast cancer is an aggressive form of cancer, diagnosed in about 20% of breast cancer patients. Although it can be treated with the HER2-targeted antibody drugs, drug resistance is often inevitable for which we hope to develop new remedy strategies. The project cooperates with the German Cancer Research Center in Heidelberg, and with the Saarland University, in particular the DFG Collaborative Research Centre (SFB) 1027.

Objectives

The objectives of the PhD thesis are to examine interactions of drugs with HER2 receptors in breast cancer cells and patient biopsies, improve techniques for electron microscopy of cancer cells, and conduct statistical data analysis of spatial receptor distributions. The PhD student will play an active role in the project team, participate in teaching activities of the group, write scientific papers, and present results at conferences.

Required qualifications

We are looking for an enthusiastic, motivated, and skilled student holding a Master's degree in physics, or biophysics. The applicant should be open to interdisciplinary research and should be fluent in spoken and written English. Knowledge of cell biology, electron microscopy, and data analysis is a plus.

About us

The INM – Leibniz Institute for New Materials, situated in Saarbrücken, Germany, is an internationally leading center for materials research. Chemists, physicists, biologists, and materials scientists shape the work at INM. Its main research fields are Nanocomposite Technology, Interface Materials, and Biointerfaces. INM has about 250 employees and is an institute of the Leibniz Association. Saarland University is the degree-awarding institution for enrolled PhD students.

INM is an equal-opportunity employer with a certified family-friendly policy. INM promotes the professional opportunities of women and strongly encourages them to apply.

Contact

Please send your application before February 4, 2018 via email to the attention of Prof. Niels de Jonge including a detailed CV and at least two references along with a motivation letter. The attachment should be a single pdf-file <10 MB:
E-mail: Diana.Loeb@leibniz-inm.de.
Reference: "PhD Candidate HERe"

Group website: http://www.leibniz-inm.de/en/research/innovative-electron-microscopy/

INM

Leibniz Gemeinschaft

Zertifikat seit 2012 audit berufundfamilie

CONTACT

INM – Leibniz-Institut für Neue Materialien gGmbH
Campus D2 2
66123 Saarbrücken Deutschland
www.leibniz-inm.de

Prof. Dr. Dr. h.c. Niels de Jonge
Head of Innovative Electron Microscopy

Email to:
Diana.Loeb@leibniz-inm.de