**postdoc position: ”liquid phase electron microscopy of drug resistant cancer cells”**

A postdoctoral position is available at the INM-Leibniz Institute for New Materials in Saarbrücken within the project entitled “Examining long-term response in Trastuzumab-treated metastatic gastric- or gastroesophageal junction cancer patients via molecular HER2 surface and pathway analyses” funded by the German Cancer Aid organization together with the University Medical Center Mannheim.

Despite recent medical progress, the prognosis for patients with HER2-positive, advanced gastric adenocarcinomas remains poor due to drug treatment failure. It is therefore essential to learn what causes treatment failure. Recent data suggest two major factors: 1) higher intratumoral heterogeneity, and 2) stronger interactions between HER2 and other signaling receptors of the HER family. The ongoing research aims at quantifying both factors using liquid phase electron microscopy of patient’s biopsy samples. The project is conducted together with the Institute for Pathology in Mannheim, where histopathological-based protein and gene analyses are carried out.

Liquid phase electron microscopy is a recently developed analytical method for studying proteins within intact cells at the nanoscale (single molecule). It has already been successfully applied to both cancer cell culture and biopsy samples. The postdoctoral researcher will carry out detailed analysis of different patient groups in a retrospective study. Several different molecular markers for drug resistance development will be tested. Extensive cooperation is planned with clinical research. The project is integrated in the core research activities of the group. We use a state-of-the-art facility including a scanning transmission electron microscope, a scanning electron microscope, a fluorescence microscope, and a fully equipped cell-biological lab.

The applicant should have a PhD degree in human biology, biochemistry or biophysics, with experience in light microscopy and/or electron microscopy, and preferably with cancer research and growth factor receptors. S/he should have a strong interest in experimental biological work, microscopy, and data analysis. The candidate should be a team player with an open mind for unconventional ideas and should be interested to work in an interdisciplinary team group. S/he should also exhibit excellent writing and oral communication skills in English, including the ability to write first author papers.

INM is an equal-opportunity employer with a certified family-friendly policy. We promote the professional opportunities of women and strongly encourage them to apply. Full-time jobs can generally be divided.

Contact

Please send your motivation letter via email to the attention of Prof. Niels de Jonge including a detailed CV, copies of diplomas, university transcripts, and at least one letter of recommendation before April. 15, 2021. The attachment should be a single pdf-file <5 MB:   
E-mail: **niels.dejonge@leibniz-inm.de**   
Reference: “liquid phase electron microscopy of drug resistant cancer cells”

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

CONTACT

INM – Leibniz-Institut fuer   
Neue Materialien gGmbH  
Campus D2 2  
66123 Saarbruecken Germany  
[www.leibniz-inm.de](http://www.leibniz-inm.de)

Prof. Dr. Niels de Jonge

Head of Innovative Electron Microscopy

Email: niels.dejonge@leibniz-inm.de