



MARIE SKŁODOWSKA-CURIE EUROPEAN TRAINING NETWORK "EUROoC" (H2020-MSCA-ITN-2018) FOR ADVANCING ORGAN-ON-A-CHIP TECHNOLOGY IN EUROPE

JOB POSTING

PhD position

Recruiting organisation:

Jena University Hospital, Germany
INSPIRE Lab (PI: Dr. Alexander Mosig)

Subproject title:

Emulation of liver zonation and physiological metabolic patterning in an integrated microfluidic liver-on-chip platform for drug development.

Starting date:

01.06.2019

Job description:

The advertised subproject will be carried out by a PhD student ("Early-stage Researchers") at Jena University hospital over a period of 36 months. The recruited researchers will work in the INSPIRE Lab headed by PD Dr. Alexander Mosig, at the Center for Sepsis Control and Care.

She/he will develop and apply a novel Organ-on-a-chip system emulating human liver function

- 1) to establish bioengineered hiPSC derived human liver-on-chip models;
- 2) to develop a microfluidic platform with non-invasive sensor readout technologies for metabolic analysis of liver function;
- 3) to establish metabolic patterning of hepatocytes and non-parenchymal cells as complex in vitro model for drug testing and disease modeling.

Secondments are planned as follows:

- Universite du Luxembourg, Luxembourg for 2 months;
- Technical University Graz, Austria for 2 months;
- Boehringer Ingelheim Pharma GmbH & Co. KG

This subproject is fully funded by the Marie Skłodowska-Curie European Training Network „EUROoC“ (H2020-MSCA-ITN-2018). The monthly salary consists of a living allowance, mobility allowance and family allowance (if applicable). Please visit the [EC MSCA webpage](#) for more information. The recruited researcher will have the opportunity to work as part of an international, interdisciplinary team of 15 PhD students, based at universities and industrial firms throughout Europe. She/he will gain a unique skill-set comprising microfabrication, biomaterial science and stem cell differentiation, as well as an overview of different organ-on-a-chip technologies and their implementation at industrial level. She/he is expected to finish the project with a PhD thesis and to disseminate the results through patents (if applicable), publications in peer-reviewed journals and presentations at international conferences.

Background information:

Marie Skłodowska-Curie European Training Networks (ETNs) are joint research and training projects funded by the European Union. Funding is provided for PhD students from both inside and outside Europe to carry out individual project work in a European country other than their own.

The European training network "EUROoC" is made up of 11 core and 10 associate partners from academia, industry and regulatory agencies, coordinated by Fraunhofer IGB. The network will recruit a



total of 15 PhD students for project work lasting for 36 months.

Organ-on-a-Chip (OoC) technology is advancing at breath taking pace due to its potential impact in drug development and personalised treatments of disease. New researchers entering this field must be equipped with a multidisciplinary background ranging from biology to microfluidic chip engineering. EUROoC offers the first complete and coherent European training program on OoC by gathering multidisciplinary participants (biologists, physicists, chemists, engineers) in a multi-sectoral network composed of six companies, three regulation entities and twelve academic institutions.

EUROoC will qualify the next generation of interdisciplinary scientists for all aspects of OoC development and utilisation, including understanding of commercialisation pathways and regulatory aspects. EUROoC furthermore comprises a collection of innovative research projects addressing the development of advanced OoC systems with higher physiological significance going beyond current in vitro testing.

Requirements:

Qualifications / experience:

- Early-stage researcher: a researcher without a PhD, who is in the first four years (full-time equivalent research experience) of her/his research career, measured from the date when she/he obtained the degree, which would formally entitle her/him to embark on a doctorate.
- Graduation in the field of biology, microbiology, biomedical engineering or related fields – M.Sc. preferred.
- Basic knowledge of cell culture, bioengineering, 3D cell models

- Practical experience of stem cell culture & differentiation and fluorescence microscopy is a plus.
- Basic knowledge of data and image analysis and Microsoft Office.
- Well-structured and autonomous working style, good organizational and communication skills.
- Fluency in written and spoken English is a must, German is a plus.

Mobility:

The applicant must not have resided or carried out her/his main activity (work, studies etc.) in Germany for more than 12 months in the past three years.

How to apply:

Please send your CV, a half-page summary of master/diploma thesis, a letter of motivation (up to 2 pages) which states your research experience and interests, and names and contact information of at least two academic referees who could write a letter of recommendation by e-mail to the following address, quoting the reference „EUROoC-JUH-ESR5“:

EUROoC@igb.fraunhofer.de

For questions, please contact:

Dr. Alexander Mosig
alexander.mosig@med.uni-jena.de

Application deadline: 31st January 2019

Interviews are planned for February/ March 2019.