

# PhD position in Dortmund, Germany within HotBio, a Marie Skłodowska-Curie Doctoral network and Lead Discovery Center GmbH



## Horizon Europe MSCA DN HotBio

The HOTBIO project is a Horizon Europe MSCA Doctoral Network project that aims to train doctoral fellows in the field of marine biology and pharmacology.

HOTBIO is a marine biodiscovery project developing secondary metabolites from marine microorganisms into well-characterised compounds that can be applied in medicine, agriculture or aquaculture. This collaborative action comprises a network of leading institutions and offers a first-class research and training program in an international, multidisciplinary environment.

The consortium will welcome 13 early-stage researchers, who will develop their individual research projects for three years in one of our excellent beneficiary institutions. Within this network, the candidates will be introduced to every stage of the marine biodiscovery pipeline. High quality training in transferable skills will also be provided by the network. The main research activities of the PhD students will be accompanied by secondments at different sites, as well as meetings, courses and practical workshops specifically crafted for the project. The individual research projects of the PhD students will focus on certain aspects of the biodiscovery pipeline. Furthermore, the fellows will be enrolled in local doctoral schools, where they will get additional training and collaboration opportunities.

The goal of this extensive training program is to complement the day-to-day scientific training with the experiences and tools needed to pursue a future career in any sector of science, both inside and outside academia. Students graduating from HOTBIO will be in a unique position to enter a challenging labour market, as they will have received multidisciplinary training at world-leading research groups in academia and industry partners.

## Project background

The HOTBIO consortium will train a new generation of researchers to develop marine microbial natural products from the seabed to the bedside. This project expands a conventional marine biodiscovery pipeline by employing cutting edge technology, including computer aided drug design, chemical synthesis of optimised compounds (i.e. medicinal chemistry), target deconvolution and extensive ADMET profiling. This will advance the bioactive microbial secondary metabolites to the later stages of preclinical development.

Just like the field of marine biodiscovery, this consortium is highly multidisciplinary, with experts from the fields of microbiology, chemistry, innovation, commercialization, molecular biology, and computational chemistry. The partners will work synergistically to optimise the learning experience for the candidates.

The consortium is composed of seven European beneficiaries from six different countries as well as three partners from Switzerland and the United Kingdom. The project will be coordinated by UiT The Arctic University of Norway.

**LDC is partner of the HOTBIO network and is offering a**

## PhD position in Dortmund, Germany, to begin in January 2023, as part of the HOTBIO ITN network:

The goal of this PhD project is to elucidate the molecular targets and the modes-of-action of bioactive natural compounds. The selected candidate will develop an assay cascade suitable for the analysis, which will include biochemical, *in vitro* and *in silico* techniques. Once the methodology is established, it will be employed to find the molecular targets of known bioactive natural products. Additionally, the most promising candidate compounds identified within the HOTBIO network will also be characterized.

The candidate will also have the opportunity to carry out three international secondments throughout the course of this project. This will grant first-hand experience in the fields of computer-aided drug design, organic synthesis, and natural product screening against human pathogens.

### Lead Discovery Center

We are a translational drug discovery company that understands and works closely with both hemispheres: academia and industry. Many of us benefit from a scientific background, combined with many years of experience in the biotech and pharma industries. With our headquarters at the BioMedizinZentrum Dortmund, Germany, we cover all core drug research disciplines, in particular medical chemistry, assay development and screening, biology, pharmacology, and project management.

See also: [www.lead-discovery.de](http://www.lead-discovery.de)

### Benefits:

- 3-year full-time employment contract in accordance with the Marie Skłodowska-Curie Action regulations for Early Stage Researchers
- Access to state-of-the-art research and supervision by recognized experts
- Participation in network-wide training activities, schools and conferences
- Secondments periods at other network partners' labs

### Candidates must comply with the following requirements:

- Master of Science in Life Sciences (e.g. Molecular Biology, Biochemistry, Biological Chemistry)
- Have not been resident or have conducted main activity (studies, work, etc.) for more than 12 months within the last three years in the country where the project will take place
- Be in the first four years of their research career (measured from the date they obtained a degree that allows them to enrol in a PhD program)
- Be fluent in English

### Candidates are invited to send the following documents:

- Motivation letter (max. two pages)
- CV including the details of education/qualifications, work experience, language skills and other relevant skills; indication of at least two Scientists for reference letters;
- Certified/signed copy of a recent transcript of exams taken with relative mark. A certified/signed copy of Master of Science certificate or a letter from the Head of the degree course stating that the Student is going to finish before the end of 2022.

Applicants can apply for up to three (3) projects within the consortium, indicating the order of preference.

All applications will be checked for eligibility (in particular, the adherence to the mobility rule). Shortlisted candidates will be invited for an interview. Candidates will be notified of the outcome. Start of employment is foreseen Jan-March 2023.

**Please send your documents to: [application@lead-discovery.de](mailto:application@lead-discovery.de)**