

PhD position at MoKi Analytics for molecular imaging of the microbiome in different non-communicable inflammation-driven diseases

RESEARCH FIELDS

Biological sciences › Biology, Biomedical Sciences, Biotechnology or Molecular Life Sciences

RESEARCHER PROFILE

Early Stage Researcher (≤ 4 years of research experience at time of recruitment)

APPLICATION DEADLINE

31 January 2021 18:00h - Europe/Brussels

LOCATION

- MoKi Analytics GmbH (Berlin, Germany)
- Charité – Universitätsmedizin Berlin (Berlin, Germany)

TYPE OF CONTRACT

Temporary, 36 months.

JOB STATUS

Full-time

HOURS PER WEEK

40

OFFER STARTING DATE

Starting March 2021

EU RESEARCH FRAMEWORK PROGRAMME

H2020 / Marie Skłodowska-Curie Actions / European Industrial Doctorates

MARIE CURIE GRANT AGREEMENT NUMBER

814168

We are looking for an Early Stage Researcher (ESR) with a focus on using the molecular imaging technique fluorescence in situ hybridization (FISH) to elucidate the role of the microbiome in different non-communicable inflammation-driven diseases. This ESR project is part of the GROWTH consortium, a Marie-Sklodowska Curie Innovative Training Network (European Industrial Doctorates).

About MoKi Analytics

MoKi Analytics GmbH is a young and innovative company, started from the Charité – University Hospital Berlin in 2017. We offer high-end products and expert services for the detection of microorganisms in clinical samples. Our focus are innovative imaging methods at the interface of molecular biology, histology and pathology. Among other services dedicated to cutting-edge microbiome research, MoKi Analytics delivers a unique combination of the microscopic technique fluorescence in situ hybridization (FISH) with Next Generation Sequencing (NGS). MoKi Analytics premises are affiliated closely to the Charité-University Hospital (Berlin) emphasizing the open and collaborative atmosphere in our company. The MoKi Analytics team consists of medical and biological scientists and technicians.

About GROWTH

The GROWTH consortium, funded by the European Commission (2019-2023), is made up to train a new generation of researchers working on new pathological insights, biomarker diagnostics and personalized nutritional interventions for intestinal failure in neonates and preterm infants. Academic and industry partners, covering various disciplines ranging from

fundamental research to clinical paediatrics and analytical chemistry to organoid and gut-on-chip applications, have teamed up in the EU:

- DSCN Research BV (The Netherlands)
- University Hospital Bonn (Germany)
- Imperial College London (United Kingdom)
- Academic Medical Center (The Netherlands)
- VU Medical Center (The Netherlands)
- MoKi Analytics (Germany)

GROWTH is a European Industrial Doctorate programme that requires PhD students to spend at least 50% of their time (18 months) in the non-academic sector.

GROWTH website url: <http://www.growth-horizon2020.eu/>

About the ESR Project

The PhD student will be enrolled in the Charité – University Hospital Graduate School and supervised by an academic and non-academic supervisor, equally exposing the candidate to the academic and non-academic sector. Academic supervisor will be PD Dr. Annette Moter.

The ESR will perform molecular microscopic studies to understand the role of microbial and mycobacteria communities in a spatial context. FISH in combination with 16S rRNA amplification and sequence analysis (Sanger and NGS) will be employed to analyze microbial communities in in vitro samples, samples from in vivo models and ex vivo clinical samples with focus on the gastro-intestinal tract starting from the oral cavity. Preliminary data suggest: 1) gut anastomoses are associated with specific microbial communities, 2) visualization of microbiota and mycobacteria might play a key role in the interpretation of NGS results. Therefore, imaging by FISH in combination with sequencing, needs to be established for oral biofilms and the gastro-intestinal tract.

COLLABORATORS IN THIS ESR PROJECT:

- Academic Medical Center (Amsterdam, The Netherlands)
- University Hospital Bonn (Bonn, Germany)

Secondments

During the 36 months of the ESR project, the candidate will have the opportunity to spend

- 18 months at Academic Medical Center (Amsterdam, The Netherlands) to acquire skills in analytical methods for 16S and ITS pipeline, as well as bioinformatics analyses and computing

Candidate Requirements

REQUIRED EDUCATION LEVEL

A degree (MSc, or equivalent) in Health and Life Sciences (Biology, Microbiology, Molecular Biology, Immunology, Biomedical Sciences, Biochemistry or closely related fields) or Medicine.

REQUIRED LANGUAGES

ENGLISH: Excellent, both written and spoken.

SKILLS/QUALIFICATIONS

We expect a Master's degree (or equivalent) in Health and/or Life Sciences or Medicine. Furthermore, the applicant should be able to perform team-oriented as well as independent work. Desirable methodological skills: excellent background in molecular biology, microbiology, biochemistry, cell biology and/or immunology, hands-on knowledge of analytical methods.

ADDITIONAL INFORMATION

ELIGIBILITY

Applicants can be of any nationality and must be Early Stage Researchers and shall at the date of recruitment by MoKi Analytics, be in the first four years (full-time equivalent research experience) of their research careers and have not been awarded a doctoral degree. Furthermore, the applicant must **not** have resided or carried out his/her main activity (work, studies, etc) in the country of his/her host organisation (in this case Germany) for more than 12 months in the 3 years immediately prior to his/her recruitment.

RENUMERATION

The per annum MSCA PhD student living and mobility allowance (plus family allowance if applicable, family status is assessed at recruitment) is in line with EU-MSCA requirements. This amount will be subject to tax and employee's National insurance deductions and will be paid in EURO.

HOW TO APPLY

Complete applications in English should include the GROWTH Application Form and its mandatory attachments (<https://growth-horizon2020.eu/research/project-8>). Please note that applications that do not meet these requirements WILL NOT BE CONSIDERED.

Please send the complete package as one PDF file via email to info@growth-horizon2020.eu before 31 January 2021 18:00h - Europe/Brussels.

Selected applicants will be invited to a video conference call. Awarding decisions will be announced shortly thereafter, and candidates are expected to be available to start their projects not later than March 2020.

HOW YOUR DATA IS KEPT

The data submitted in the Application Form will be used for recruitment purposes only and shared by members of the GROWTH consortium. The data will be held securely at DSCN Research BV (network coordinator of GROWTH) and shared by secure cloud-based storage. Data is intended to be kept for a maximum of four years (the life-span of the project). Further information may be collected from the above-named institutes. Candidates can request deletion of their data by contacting info@growth-horizon2020.eu.