2 PhD positions at University Hospital Bonn to (1) study the role of enteric glial cells in anastomotic leakage, and (2) study the pathogenesis of post-operative ileus and anastomotic leakage.

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
30 April 2019 18:00h - Europe/Brussels
LOCATION
- University Hospital Bonn / Universitätsklinikum Bonn (Germany)

TYPE OF CONTRACT
Temporary, 36 months.
JOB STATUS
Full-time
HOURS PER WEEK
38,5
OFFER STARTING DATE
Flexible starting June – October 2019
EU RESEARCH FRAMEWORK PROGRAMME
H2020 / Marie Skłodowska-Curie Actions / European Industrial Doctorates
MARIE CURIE GRANT AGREEMENT NUMBER
814168

University Hospital Bonn is looking for two Early Stage Researchers (ESRs). One ESR (GROWTH ESR project 5) will study the role of enteric glial cells in anastomotic leakage and the role of ischemic glial cells on barrier integrity and enterocyte function. The second ESR (GROWTH ESR project 6) will study the pathogenesis of post-operative ileus and anastomotic leakage. These ESR positions are part of the GROWTH consortium, a Marie-Sklodowska Curie Innovative Training Network (European Industrial Doctorates) that starts on the 1st of June 2019.

About UNIVERSITY HOSPITAL BONN

The University Hospital Bonn (UKB) is one of the top comprehensive university clinics in Germany located in North-Rhine Westphalia. UKB is part of the University of Bonn which has currently ±34.000 students. The department of Surgery, Immune Pathophysiology of UKB participates in GROWTH. The scientific research of the department of Surgery complements basic science with translational and clinical research. This department is particularly focused on identifying (neuro)-immunological mechanisms contributing to acute (postoperative) and chronic functional disturbances of the gastrointestinal tract. Prof. Sven Wehner and Prof. Wouter de Jonge will be supervising the ESR projects at UKB.

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:

- Gut Research BV (The Netherlands)
- University Hospital Bonn (Germany)
- Imperial College London (United Kingdom)
- Reckitt Benckiser (United Kingdom)
- Academic Medical Center (The Netherlands)
- Cherry Biotech (France)
- VU Medical Center (The Netherlands)
- TNO Research (The Netherlands)
- Radboud University Medical Center (The Netherlands)

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 PROJECTS

The PhD students will be enrolled in the Bonn International Graduate School of Immunosciences and Infections and supervised by an academic and non-academic supervisor, equally exposing the candidate to the academic and non-academic sector.

GROWTH ESR PROJECT 5 (supervisor: Prof. Sven Wehner)

This PhD student will study the role of enteric glial cells in anastomotic leakage by (1) NGS analysis of leaking and non-leaking anastomosis in a mouse model, (2) analysis on anastomotic healing upon an ischemia/reperfusion injury (I/R), (3) transcriptional analysis of enteric glial cells in vivo in Sox10ERT-Ribotag mice upon I/R, (4) confirmation of the in vivo data in primary enteric glial cell cultures, and (5) analysis of anastomotic healing in mice after administration of new identified enteric glia derived mediators. The second part of this project entails the investigation of the role of ischemic glial cells on barrier integrity and enterocyte function using mouse and human fetal organoids and (enterocyte and enteric glial) cell lines. Also, he/she will analyse metabolic changes of enteric glial during and upon ischemia in vitro.

COLLABORATORS IN THIS ESR PROJECT:

- GUT RESEARCH BV (Amsterdam, The Netherlands)
- Academic Medical Center (Amsterdam, The Netherlands)

SECONDMENTS:

will have the opportunity to spend 18 months at GUT RESEARCH (Amsterdam, The Netherlands) to develop and validate advanced disease tissue models (human and mouse tissue) using organoid technology (e.g. ischemic, 2D-3D cultures). He/she will use these tools to study the role of ischemic glial cells on barrier integrity and enterocyte function under

supervision of Dr Rene van den Wijngaard. GUT RESEARCH premises are closely affiliated to the Academic Medical Center (Amsterdam) and the University Hospital Bonn emphasizing the open and collaborative atmosphere in our company. The GUT RESEARCH team in Amsterdam consists of scientists, business developers and technicians lead by a principle scientist.

CANDIDATE REQUIREMENTS ESR-5

REQUIRED EDUCATION LEVEL
A degree (MSc, or equivalent) in Health or Life Sciences (Biology, Microbiology, Molecular Biology, Immunology, Biomedical Sciences, Biochemistry or closely related fields). Candidates in the final stages of obtaining their degree are eligible to apply.

REQUIRED LANGUAGES
ENGLISH: Excellent, both written and spoken.

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

GROWTH ESR PROJECT 6 (supervisor: Prof. Wouter de Jonge)

This PhD student will study the pathogenesis of postoperative ileus and anastomotic leakage. First, he/she will conduct clinical research using pre- and post-operative fecal samples from the ongoing REVEAL trial (patients with anastomotic leakage after colorectal surgery). In specific he/she will isolate DNA and perform microbiota (16S) and mycobiota (ITS1) analyses of anastomotic leakage vs. non- anastomotic leakage samples and post-operative ileus vs. non-post-operative ileus samples. The second part of this project includes preclinical work with on transplantation of germ-free mice to associate microbiota to anastomotic leakage, perform anastomotic leakage model on transplanted mice and validate these findings in human trial material. Eventually, he/she will identify therapeutic targets and develop interventional strategies.

COLLABORATORS IN THIS ESR PROJECT:
- GUT RESEARCH BV (Amsterdam, The Netherlands)
- Academic Medical Center (Amsterdam, The Netherlands)
    - Microbiota Center Amsterdam
- Maastricht University Medical Center (The Netherlands)
- TNO, Microbiology & Systems Biology (Zeist, The Netherlands)

SECONDMENTS:
During this ESR project, the candidate will be seconded for 18 months to GUT RESEARCH BV (Amsterdam, The Netherlands) to employ microbiota (16S) and mycobiota (ITS1) sequencing analysis on fecal samples, identify therapeutic targets and develop interventional (nutritional) strategies for anastomotic leakage under supervision of Drs. Paul Bessems.

CANDIDATE REQUIREMENTS ESR-6

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 ((Paediatric) Surgery, Internal Medicine). Candidates in the final stages of obtaining their degree are eligible to apply.

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, biochemistry, cell biology, immunology and/or microbiology, 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 UKB, 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 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 (http://growth-horizon2020.eu/apply-for-a-growth-position). Please note that applications that do not meet these requirements WILL NOT BE CONSIDERED.

Please send the complete package as 1 PDF file via email to info@growth-horizon2020.eu before 30 April 2019 18:00h - Europe/Brussels.

Please familiarize yourself also with the other 6 postings (PhD positions) within the GROWTH consortium (www.growth-horizon2020.eu). Selected applicants will be invited to an Onsite Recruitment Event in Amsterdam on 13 May 2019. Awarding decisions will be announced shortly thereafter, and candidates are expected to be available to start their projects between June and October 2019.

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 Gut 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.