

PhD position at VU Medical Center to develop a diagnostic test for sepsis and necrotizing enterocolitis in neonates.

RESEARCH FIELDS

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

RESEARCHER PROFILE

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

APPLICATION DEADLINE

30 April 2019 18:00h - Europe/Brussels

LOCATION

- VU Medical Center, Amsterdam, The Netherlands
- Academic Medical Center, Amsterdam, The Netherlands

TYPE OF CONTRACT

Temporary, 36 months employed by VU Medical Center followed by 12 months Academic Medical Center (total 48 months).

JOB STATUS

Full-time

HOURS PER WEEK

36

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

The VU Medical Center (VUmc) in Amsterdam is looking for an Early Stage Researcher (ESR). This ESR will develop a diagnostic test for sepsis and necrotizing enterocolitis NEC in neonates using a large collection of daily fecal samples (>17.000) of 1,500 preterm and term neonates combined with a close clinical follow-up on health status from 9 Neonatal Intensive Care Units in The Netherlands. This ESR position is part of the GROWTH consortium, a Marie-Sklodowska Curie Innovative Training Network (European Industrial Doctorates) that starts on the 1st of June 2019.

About VU MEDICAL CENTER

The VUmc is one of the largest healthcare and research institutions in the Netherlands with over 750 beds and 5.600 employees. VUmc houses a large tertiary neonatology intensive care unit and all fecal samples from participating neonatology wards are stored at this center. As of 1 January 2018, VUmc merged with the Academic Medical Center (AMC), turning the combination into one of Europe's largest university medical centre ("Amsterdam UMC").

The department of Paediatric Gastroenterology of VUmc and AMC participate in GROWTH. The scientific research performed at these departments focuses on fecal microbiota analyses and volatile organic compounds in the (early) detection of paediatric and adult gastro-intestinal diseases, including colorectal cancer and inflammatory bowel disease. Dr Tim de Meij, Dr Nanne de Boer (both Paediatric Gastroenterology, VUmc), Prof. Marc Benninga (Paediatric Gastroenterology, AMC) and Prof. Wouter de Jonge (Tytgat Institute, AMC) will be supervising this ESR project.

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 PROJECT

The PhD student will be enrolled in the AMC Graduate School and supervised by an academic and non-academic supervisor, equally exposing the candidate to the academic and non-academic sector.

This PhD student will continue the collection of fecal samples from 9 NICUs in The Netherlands. Furthermore, he/she will perform measurements of fecal Volatile Organic Compounds (VOCs), originating from (patho)physiological metabolic processes in the human body. Fecal VOCs can be measured by electronic nose (eNose) devices, deploying pattern recognition algorithms for the discrimination of VOC combinations. The VOC pool harbours a magnificent source of information with the potential to serve as noninvasive diagnostic biomarkers and as markers of disease activity, discriminating medical from surgical NEC. In addition, VOC analysis may increase understanding of pathophysiological metabolic pathways underlying neonatal sepsis and NEC, important for new therapeutic strategies. Next, these fecal samples will be used to establish molecular microbiota analyses using Next Gen Sequencing for microbiota detection, facilities are available at VUMC/AMC.

COLLABORATORS IN THIS ESR PROJECT:

- Reckitt Benckiser (London, United Kingdom)
- University of Warwick (United Kingdom)
- TNO, Microbiology & Systems Biology (Zeist, The Netherlands)

SECONDMENTS

During the first 36 months of the ESR project, the candidate will have the opportunity to spend 18 months at Reckitt Benckiser (United Kingdom) to apply sensor systems (e.g. Artificial Olfactory Systems) for the detection of gaseous phase bio-markers of disease under supervision of Dr Gabriele Gross.

CANDIDATE REQUIREMENTS

REQUIRED EDUCATION LEVEL

A degree (MSc, or equivalent) in Medicine. Candidates in the final stages of obtaining their degree are eligible to apply.

REQUIRED LANGUAGES

Preferably DUTCH: Excellent, both written and spoken to support the sample collection, but this is not mandatory.

ENGLISH: Excellent, both written and spoken.

SKILLS/QUALIFICATIONS

We expect a Master's degree (or equivalent) in 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 VUmc, 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 7 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.