Job function: PhD student

Peripheral Neuropathy Research Group: The PhD student will perform genome and transcriptome engineering with CRISPR/Cas to study neurodegeneration in the peripheral nervous system. Our longstanding interest in understanding the consequences of gene mutations causing inherited peripheral neuropathies led to the discovery of the first genetic cause for Charcot-Marie-Tooth (CMT) disease. Subsequently we were involved in the identification of additional CMT neuropathy associated genes which code for proteins that play a role in myelination, axonal transport and maintenance of the peripheral nervous system. The PhD project focuses on mutations in small heat shock proteins associated with peripheral nerve degeneration and neuromuscular disease. The student will make use of diverse molecular and cell biology tools (cell models, CRISPR/Cas genome and transcriptome editing, iPSCs and transgenic models) to understand the consequences of mutations in cells and peripheral nerves. We are affiliated to the Department of Biomedical Sciences and the Institute Born-Bunge, a center of excellence in neurodegenerative and neuromuscular diseases. We are part of the University of Antwerp research excellence center OEC µNEURO allowing access to on-site facilities with expertise in e.g. omics technologies, imaging, microscopy and bio-informatics.

Job description:
• A challenging PhD project in which we apply genome and transcriptome engineering with CRISPR/Cas.
• The research will be performed at the molecular, cellular and organismal level.
• The project will make use of several state of the art and rapidly advancing technologies in biochemistry, biotechnology, molecular biology, cell biology and neuroscience.
• The goal is to develop a precision medicine in the study model (iPSCs and mouse).
• The project will also offer training, participation to congresses and international collaboration.

Profile and requirements:
• Academic Master degree in biochemistry, biology, bioengineering, biomedical or pharmaceutical sciences with a strong focus on molecular, cell and gene technologies.
• Outstanding academic bachelor and master study performances; according to ECST grading scale and recognized by the EU.
• FELASA degree (or EU equivalent) for handling small model organisms is a plus.
• Expertise or knowledge in molecular and cellular biology, statistics and bioinformatics will be a plus.
• Strong motivation in basic research and molecular neuroscience.
• Excellent verbal and written English communication skills.
• Flexibility and team spirit in an international research environment.

Type of contract:
The applicant is expected to submit and defend an innovative PhD project at the FWO-Flanders (see guidelines: www.fwo.be) in January 2021 requiring intensive preparation in the second half of 2020. If not granted, obtaining adequate ranking for this competitive doctoral scholarship will result in a contract for a period of at least one year with possibility for re-application the next year.

How to apply:
Applications should be submitted via email to vincent.timmerman@uantwerpen.be before June 1st 2020. A reselection will be made based on the submitted motivation letters and CVs. Selected candidates will be invited for interview and will be informed about the remainder of the selection procedure. Importantly, we apply the same admission guidelines as the FWO, Flanders, Belgium. More details on the specific PhD project can be obtained by contacting: Prof. Dr. Vincent Timmerman, PhD

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