

Open position for: **Marie Skłodowska-Curie PhD position at the Laboratory of Stem Cells and Regenerative Medicine (University of Barcelona)**

TITLE: “Trophic Factor (ThF) production by stem cells as a therapeutic approach for neuronal disorders.”

CONTRACT: PhD scholarship at the Laboratory of Stem Cells and Regenerative Medicine, Department of Biomedical Sciences, Faculty of Medicine, University of Barcelona.

Closing date for receipt of applications: 5.00 pm on Friday January 27th 2017

Job Summary

We offer an interesting and challenging job in an international environment focusing on education, research, public-sector consultancy and innovation, which contribute to enhancing the economy and improving social welfare. We strive for academic excellence, collegial respect and freedom tempered by responsibility.

Applications are invited from suitably qualified candidates for a position funded by the Marie Skłodowska-Curie project “Training4CRM” within the Horizon 2020 programme of the European Union, starting February 1st 2017. The appointment will be on a temporary basis for a maximum period of 3 years (PhD student) and will be placed at the Department of Biomedical Sciences, Faculty of Medicine, University of Barcelona (Barcelona, Spain).

Training4CRM is a four-year project, funded by the European Union Horizon 2020 Programme (H2020-MSCA-ITN-2016) under the Marie Skłodowska-Curie Initial Training Network and Grant Agreement No. 722779. Training4CRM addresses existing gaps within Cell-based Regenerative Medicine for treatment of neurodegenerative disorders like Parkinson’s and Huntington’s diseases (PD and HD respectively), and Epilepsy), which occur as a result of progressive loss of structure, function and/or death of neurons in the brain. Training4CRM sets out with the ambition to educate and train students within and across different scientific disciplines to be able to master the design, fabrication and testing of completely new tools and materials within the fields of: Micro- and Nanoengineering (nano/microstructures, 3D scaffolds and 3D lab-on-a-chip devices of different materials, geometries, architectures and properties, wireless electronic components; Biotechnology (human stem cells, human induced pluripotent stem cells, optogenetics, tissue engineering; Pre-clinical studies for the purpose of investigating in vivo, in experimental animals, how the developed cells, materials, structures affect the animal at the physiological and behavioral levels, unravelling the therapeutic effects of the developed strategies.

Main Duties

The intended PhD student will be a member of this multi-disciplinary team and will be responsible for developing and characterizing human stem cells that produce trophic factors (ThFs) and analyzing the autocrine/paracrine effects:

1. Develop the tools to genetically modify hSCs for the constitutive release of ThFs and characterisation.
2. Genetically modify hSCs for the regulated production of ThFs (e.g: Tet-On).

3. Determine the phenotypic effects of the production of the ThFs on the producing cells themselves, by autocrine or paracrine mechanisms.
4. Identify the most interesting combination of neurotransmitter and factors for PD, HD.
5. Design the successive components/elements of ThFs – releasing cells under GMP conditions.

The candidate will have to accomplish the following tasks:

- Spend external stays at the Autonomous University of Madrid (UAM; Spain), University of Lund (Sweden) and Biomodics (Denmark).
- Participate in training events for researchers and Principal Investigators involved in the program.
- Report to the Project Manager which includes contributing to periodic scientific reports.
- Contributing to the reporting of project milestones and deliverables in accordance with EU deadlines.
- Promote and disseminate results involved in the program, which includes contributing to newsletters and participating in outreach events.
- Willingness and ability to collaborate in a multidisciplinary team.

Requirements

Candidates should have a master's degree in Biomedical Sciences, Neurosciences (or a similar degree) with background knowledge in neurodegenerative disorders and neuroprotective therapies.

Relevant scientific background, including one but preferably several of the following:

- Experience with cell cultures.
- Experience in genetic modifications.
- Experience in brain sections and immunohistochemistry.

Essential:

- Less than 4 years full time equivalent research experience and not yet been awarded a doctoral degree (PhD)
- Resided less than 12 months in Spain in the 3 years prior to selection
- Excellent communication and organisation skills
- Fluent in spoken and written English
- Excellent writing and presentation skills
- Flexibility and ability to work in a team environment
- Availability to travel nationally and internationally two to three times a year

Desirable:

- Experience with outreach events
- A keen interest in pursuing pre-clinical research into Neurodegenerative diseases

Approval and Enrolment

The scholarships for the PhD degree are subject to academic approval and the candidates will be enrolled in one of the general degree programmes of UB.

Salary and appointment terms

The salary will be in line with the European Commission rules for Marie Skłodowska-Curie grant holders (Early-Stage Researchers, Initial Training Network).

<http://ec.europa.eu/research/mariecurieactions/index.htm>. The period of employment is 3 years.

Workplace

The main work will be conducted at the Laboratory of Stem Cells and Regenerative Medicine at the Faculty of Medicine of the University of Barcelona (Barcelona, Spain) but it also includes mandatory 6 months of external research stays at different partner places described above.

Expression of interest

Applications must be submitted as one pdf file containing all materials to be given consideration. To apply, please send the documentation by e-mail to Dr. Josep M Canals, e-mail: jmcanals@ub.edu

The file must include:

- A motivation letter describing your research career goals, skills and experience (cover letter)
- Curriculum vitae
- Grade transcripts and BSc/MSc diploma (in Spanish/English or with a translation into English)
- Two letters of recommendation.