Open position for: **Marie Skłodowska-Curie PhD position at Creatio, the Production and Validation Center for Advanced Therapies at the University of Barcelona**

Ref: CRE18-07

TITLE: "In vivo transplants of stem cells and artificial scaffolds to reconstitute brain tissues affected on HD"

CONTRACT: PhD scholarship at Creatio, University of Barcelona (www.ub.edu/creatio).

Closing date for receipt of applications: November 1 2018

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 "ASCTN-Training" within the Horizon 2020 programme of the European Union, starting July 1 2018. 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 and Health Sciences, University of Barcelona (Barcelona, Spain).

ASCTN-Training is a four-year project, funded by the European Union Horizon 2020 Programme (H2020-MSCA-ITN-2018) under the Marie Skłodowska-Curie Initial Training Network and Grant Agreement No. 813851. ASCTN-Training is addressing existing gaps within Human Stem Cell-based Neuronal disorders (NDs) Modelling (NDM) for research to develop new medicines for the treatment of neurological disorders (e.g. Parkinson´s (PD), Huntington´s (HD) and Demyelination's (DM) diseases), which occur as a result of acute or progressive loss of cells, glial or neuronal, and structures and function in the brain. ASCTN-Training sets out with the ambition to educate and train students within and across different scientific disciplines: **biotechnology** (Human Pluripotent Stem Cells (hPSCs) neuronal and glial differentiation using brain-on-chip technology and microfluidics, 3D tissue engineering/cerebral organoids and nanoengineering of culture conditions), **molecular biology** (Ex vivo gene expression, Direct cellular reprograming, mouse genetic modification, single cell analysis), ***In vivo*** **mouse manipulations** (Animal models of NDs, stem cell transplants into the brain, scaffold implantation, direct tissue engineering).

Main Duties

The intended PhD student will be a member of a multi-disciplinary team and will be responsible for the behavioral analysis of neural pre-differentiated pluripotent stem cells by:

1. Set-up systems to sort specific brain subpopulations by MACs using defined CD by our lab.

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2. Analyse short term behaviour of transplanted cells; survival, differentiation & integration.

3. Analyse if transplanted cells reproduce brain connectivity by animal behaviour, neurotracers and EPhys.

4. Study the effect of artificial scaffolds on survival of transplanted cells.

5. Study the effect of co-transplant of pre-differentiated PSCs and artificial scaffolds on differentiation and brain connectivity of transplanted cells.

The candidate will have to accomplish the following tasks:

- Spend external stays at Technische Universitaet Dresden, Poietis (subject to changes depending on project results).
- 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.

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

- Experience with cell cultures.
- Experience with transplantation in mouse models.
- Experience with microscopy.

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

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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 the University of Barcelona

Salary and appointment terms

The salary will be in line with the European Commission rules for Marie Skłodowska-Curie grant holders (Early-Stage Researchers, European 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 Creatio's facilities at the Faculty of Medicine and Health Sciences 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 and Dr. David Vanneste, e-mail: davidvanneste@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.

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