A Full-Time Doctoral Researcher Opportunity (M/F)

Position : INTERNAL / EXTERNAL RECRUITMENT
Faculty / Service : Faculty of Sciences
Department : Department of Chemistry / Laboratory of Inorganic Materials Chemistry (CMI) / Department of Biology / Laboratory of Biochemistry and Cell Biology (URBC-NARILIS)
Category : Doctoral position
Contract : 48 months
Starting date : 1st January or February 2024

We are seeking a highly motivated candidate with a Master degree in Biology or Chemistry (or equivalent with a good knowledge of cell biology) to conduct research in a starting ARC/CRA (Action de Recherche Concertée/Concerted Research Action) project entitled: "Differentiation and Encapsulation of β-like cells for the treatment of Type 1 Diabetes Mellitus". The proposal aims to develop innovative capsules containing beta-like cells derived from iPSCs that could correct and regulate glycemia in the context pre-clinical studies of Type I diabetes, an autoimmune disease that leads to the destruction of pancreatic β-cells and thus hampers an effective glycaemia regulation. The research program will deal with the differentiation of hiPSCs into insulin secreting β-like cells, the design of a hybrid capsule with a core/shell structure with controlled porosity, the synthesis of microcapsules via an innovative droplet-based microfluidic approach, the assessment of *in vitro* cell viability and metabolic activity as well as *in vivo* biocompatibility and glycaemia regulation.

We are looking for a highly self-motivated, audacious, tenacious and creative Master student or bioscience engineer. The candidate must be able to work independently, as well as demonstrate a strong commitment to the team-based work with strong organization skills as the candidate will work in a strong collaboration with a Post-Doctoral researcher. The candidate should:

- Hold a Master of Science degree in one of following disciplines: bioscience engineering, chemistry biotechnology, biochemistry, biology or equivalent
- Show proof of proficiency in French or English (or both), both in oral and written communication
- Be a team player who can work autonomously but also as a team-player, pro-actively and is able to meet deadlines
- Be willing to spend part of her/his time abroad for research activities and participation in workshops and conferences

Candidate with a good knowledge of material chemistry and/or stem cell biology and a certificate in laboratory animal science and experimentation will be considered as an advantage.

Related recent publications from the labs

1) Leroux-G et al., Hybrid Alginate@TiO_2 Porous Microcapsules as a Reservoir of Animal Cells for Cell Therapy, *ACS Appl. Mater. Interf.*, 2018, **10**, 37865−37877
2) Leroux-G et al., Alginate@TiO_2 hybrid microcapsules as a reservoir of beta INS-1E cells with controlled insulin delivery, *J. Mater. Sci.*, 2020, **55**, 7857–7869
3) Leroux-G et al., Alginate@TiO_2 hybrid microcapsules with high *in vivo* biocompatibility and stability for cell therapy, *Colloids Surf., B: Biointerf.*, 2021, **203**, 111770

Further information and Contacts: Prof. Bao-Lian Su (bao-lian.su@unamur.be), Director of the Laboratory of Inorganic Materials Chemistry (CMI), Department of Chemistry, University of Namur. Prof. Thierry Arnould (thierry.arnould@unamur.be), Director of the Laboratory of Biochemistry and Cell Biology (URBC), Department of Biology, University of Namur.

The salary/doctoral grants applied in the University of Namur can be consulted on our website https://www.unamur.be/universite/jobs/baremes

How to apply : The application that will contain a detailed curriculum vitae with the list of your publications, contact addresses of three references and a letter of motivation, should be sent to Prof. Bao-Lian Su, by e-mail to bao-lian.su@unamur.be **AND** Prof. Thierry Arnould (thierry.arnould@unamur.be) by **December 10, 2023** at the latest. Selected candidates will then be interviewed in December 2023 for a start on January or February 1st, 2024.