



Job opening, 2 PhD positions

Project description: Type 1 diabetes is an autoimmune disease where the islets are destroyed by the patient's own immune system. Clinical islet transplantation, in which the lost beta cells are replaced by donor islets is currently only applied when patients have severe and uncontrollable hyperglycemia with long-term complications. In this technique, the cells are delivered in the liver, which is a suboptimal environment.

We seek two PhD candidates for a JDRF-funded project to investigate the development and use of a retrievable islet delivery device made of microfabricated biomaterials. Candidates should have previously demonstrated their affinity for bioengineering, should be creative multidisciplinary thinkers, and should be prepared to work on in vivo models. We are an interdisciplinary and collaborate group, which is reflected in the work spanning biomaterials science, tissue engineering, cell biology, cell culture, biochemical analyses, immunohistochemistry, and microscopy. The project is milestone-driven and we aim to work according to GLP and GMP standards in light of a future clinical application.

Candidates with a background in biomedical engineering or the biomedical sciences are particularly encouraged to apply. Candidates with different backgrounds who are looking for a new challenge are also welcome. Good command of the English language is essential. We are looking for a new colleague with outstanding research skills, motivation, enthusiasm, ambition, and team spirit.

To apply, please send a CV, and a one page motivational letter, an electronic copy of the final year thesis (if already completed), and the names of a least two references to Dr Aart van Apeldoorn (a.vanapeldoorn@maastrichtuniversity.nl)

Start of research project: As soon as possible

Job description

PhD position. MERLN's activities operate at the interface of biology and engineering and provides a highly international and multidisciplinary scientific environment. The Department for Complex Tissue Regeneration within the MERLN Institute for Technology-Inspired Regenerative Medicine (<http://merln.maastrichtuniversity.nl>) invites applications for a full-time and fully funded PhD student position at the intersection of biomaterials and microfabrication, bioengineering, islets and type 1 diabetes.

Employer

<http://www.maastrichtuniversity.nl/>

Maastricht University (UM) is renowned for its unique, innovative problem-based learning system, which is characterized by a small-scale and student-oriented approach. Research at UM is characterized by a multidisciplinary and thematic approach, and is concentrated in research institutes and schools. The university has around 16,000 students and 4,000 employees. Reflecting the UM's strong international profile, a fair amount of both students and staff are from abroad. The



Maastricht University



university hosts 6 faculties, the Faculty of Health, Medicine and Life Sciences, the Faculty of Law, the School of Business and Economics, the Faculty of Humanities and Sciences, the Faculty of Arts and Social Sciences and the Faculty of Psychology and Neuroscience.

Department

Complex Tissue Regeneration

Research at the MERLN Institute for Technology-Inspired Regenerative Medicine is focused on developing novel and breakthrough technologies to advance the field of repair and regeneration of functional tissues and organs. Within MERLN's department of Complex Tissue Regeneration (CTR – <http://merln.maastrichtuniversity.nl/content/complex-tissue-regeneration-ctr>), the focus is on the development of advanced macro-, micro- and nanobiofabrication technologies in combination with fundamental knowledge on biology and materials chemistry towards the engineering of complex tissues and organs. The PhD will be conducted in collaboration with the Islet isolation and transplantation center at the Leiden University Medical Center headed by Prof. E.J.P. de Koning (Leiden, NL).