

## PHD CANDIDATE (M/F/X) UNIVERSITY OF LIEGE DESIGN OF DEGRADABLE POLYMER PARTICLES AS SCAFFOLDS FOR TISSUE ENGINEERING

START DATE: FROM 01/06/2026 | DEADLINE: 04/04/2026

Located in the French-speaking part of Belgium, the University of Liège welcomes nearly 27,000 students of 123 different nationalities in a dynamic, multicultural city less than an hour away from Brussels and Cologne, two hours from Paris and three hours from London and Amsterdam. ULiège is spread across 4 campuses and boasts over 5,700 staff members, including 3,600 teachers and researchers active in all areas of the humanities and social sciences, science and technology, and health sciences.

As a key player in social change and environmental awareness, ULiège promotes ethical, transdisciplinary and open science. It contributes to the socio-economic development of its region through numerous partnerships with several institutions, including the university hospital (CHU). Given its international orientation, the University participates [in the European University of Post-Industrial Cities \(UNIC\)](#) initiative and has one of the most extensive collaborative networks in the world.

ULiège offers attractive career prospects [in a high-quality working environment](#) where well-being, diversity and equality of opportunity are promoted. Since 2011, ULiège has been proud to display the European [Human resources strategy for researchers \(HRS4R\)](#) label, which reflects its commitment to open, transparent and merit-based procedures. In addition, it upholds quality and diversity in line with the recommendations of the [Coalition for Advancing Research Assessment \(CoARA\)](#). ULiège encourages its academic staff to travel internationally and welcomes international researchers through its EURAXESS center.

### ABOUT THE RESEARCH PROJECT

Spinal MMORPHOS is a joint research project between the University of Liege (Belgium) and the University of Aachen (Germany). It aims to develop an *in vitro* spinal cord tissue model to establish a spinal cord injury (SCI) model with different levels of complexity to test the established Anisogel-based regenerative therapy developed in Aachen. To achieve this, ULiège will develop a polyphosphoester (PPE) technology platform to produce spherical or rod-shaped microgels of controlled mechanical and (bio)chemical properties, degradation rates, and magnetic responsivity. These microgels will be assembled with induced pluripotent stem cells (iPSCs) to create a microporous annealed particle (MAP) 3D construct for tissue growth. The PPE copolymers can be varied (e.g., architecture, molecular weight, functional groups) during the synthesis to later control the microgel properties that will govern the MAP scaffold formation and its interaction with cells. Since a lot of parameters can be modified, a high-throughput screening platform will be used, consisting of an automated pipetting system, robotic arm, and spinning disc confocal microscope. A wide variety of PPE microgels will be investigated in MAPs and media conditions to

analyze stem cell expansion and differentiation into spinal cord cell types. The project also aims to guide neuron extension in a unidirectional manner with magnetic-responsive microgels that align in low external fields to introduce anisotropy. The functionality of the formed tissue models will be analyzed by confirming their ability to transmit electrical signals. In addition, we will study whether the microgel network, which porosity ensures diffusion of oxygen and nutrients in millimeter-scale constructs, can be degraded and replaced by newly formed perfusable blood vessels. Selected conditions will then be further used to create a larger spinal cord model, mimicking the dimensions of a rat spinal cord segment, and eventually achieve an SCI model.

## JOB DESCRIPTION

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In the frame of the Spinal MMORPHOS project, the **Center for Education and Research on Macromolecules (CERM)** at the **University of Liege (ULiege, Belgium)** is looking for an enthusiastic researcher to join our team and engage in a doctoral thesis, as a full-time, **3-year PhD position** funded by the National Funds for the Scientific Research (FNRS) in the field of polymer microparticle **scaffolds for cell culture and tissue engineering** is opened.

## PROFILE

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- **REQUIRED SKILLS :**
  - ▶ MSc degree in Chemistry or Chemical Engineering.
  - ▶ Strong background in material science.
  - ▶ High level of motivation and initiative
  - ▶ Good writing and oral communication skills (English)
  - ▶ Ready to implement scientific rigor, integrity and ethics....
- **HUMAN SKILLS :**
  - ▶ Enthusiasm to work as part of a team
  - ▶ Ability to adapt to different teams.
- **LANGUAGES :**
  - ▶ English, including written and spoken scientific English

## TERMS OF EMPLOYMENT

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- ▶ **TYPE OF CONTRACT:** Full-time fixed-term scholarship
- ▶ **CONTRACT DURATION:** Full-time fixed-term scholarship Three years, renewable each year.
- ▶ **EXPECTED START DATE :** around 1<sup>st</sup> June 2026

## OUR OFFER

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The Centre for Education and Research on Macromolecules (CERM) of the University of Liege is a multidisciplinary group internationally renowned for its expertise in macromolecular chemistry which offers a very stimulating environment for a research of quality.

- State-of-the art equipment

- A monthly salary of € 2000

## HOW TO APPLY?

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Please send the following documents to [c.jerome@uliege.be](mailto:c.jerome@uliege.be) and [s.boulangier@uliege.be](mailto:s.boulangier@uliege.be) in CC.:

- A cover letter of at most 1 page A4, explaining specific interests/motivation for the application and the suitability of your profile for this project.
- A full Curriculum Vitae.
- A letter of reference or contact details (name, affiliation, phone number and e-mail) of one person who can provide a reference letter.

## SELECTION PROCEDURE

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- ▶ Pre-selected candidates will be interviewed in person or via Teams.

**Our corporate policy is based on diversity and equal opportunity. We select candidates on the basis of their skills and do not discriminate on grounds of age, sexual orientation, origin, beliefs, disability or nationality.**

## CONTACT DETAILS

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Informal inquiries about the project are welcome. Please feel free to contact Prof. Christine Jérôme by email [c.jerome@uliege.be](mailto:c.jerome@uliege.be)

Release date: 27/02/2026

## Privacy policy

Personal data collected following your application will be processed by Christine Jérôme of the University of Liege for the sole purpose of recruitment.

The data will be processed within the framework of pre-contractual measures (art. 6-1, b. of the General Data Protection Regulation) and kept for up to 9 months after the publication of the vacancy. Your personal data will not be passed on to any third parties.

In accordance with the provisions of the GDPR (EU 2016/679), you may exercise your data protection rights (right of access, rectification, erasure, restriction, and portability) by contacting ULiège Data Protection Officer (dpo@uliege.be - Mr. Data Protection Officer, Bât. B9 Cellule "GDPR", Quartier Village 3, Boulevard de Colonster 2, 4000 Liège, Belgium). You may also lodge a complaint with the Data Protection Authority (<https://www.autoriteprotectiondonnees.be> , contact@apd-gba.be).