



We are announcing a position as

Postdoctoral Researcher

in the Biofabrication and Bio-Instructive Materials research group

TOPIC: 3D printing of gradient hybrid scaffolds for interface tissue engineering.

PROFILE: biology, biomedical engineering, material science, additive manufacturing or similar.

Outstanding Candidate needed. Are you willing to take up the challenge?

Job description:

As a consequence of increasing average life expectancies and increasing physical activity, such as high impact sports, our bodies constantly experience high loads, which may lead to contusions. The number of musculoskeletal injuries, causing dysfunctions and chronic pain, requiring medical interventions, is constantly growing. Especially vulnerable are zones where different tissue types are in contact, such as hard bone and soft muscle. They are characterized by a complex structure, with a gradual change in the architecture, composition, cell types and properties. Therefore, the healing is very difficult and currently available medical solutions are not satisfactory. The main aim of our research program is to create a functional reconstruction of interface tissues by combining melt electrowriting technique with 3D hydrogel bioprinting to obtain gradient, multifactorial, bio-instructive scaffolds.

The offered position is funded by NAWA Polish Returns homing grant and NCN OPUS grant received by dr hab. inż. Małgorzata Włodarczyk-Biegun, prof. PS.

LOCATION:

Silesian University of
Technology, Biotechnology
Center

Gliwice, Poland

WORKING HOURS:

Full-time

CONTRACT TYPE:

Employment

APPLICATION DEADLINE:

31st May 2024

STARTING DATE:

July/August 2024

Requirements:

We are looking for a highly motivated, open-minded, and creative person who enjoys working with other people in a multidisciplinary environment. **A PhD degree** in biology, biomedical engineering, material science, additive manufacturing, or similar is needed. Candidates should have **expertise** in cell biology, cell culture, and studying cell-material interactions; working with small bioactive molecules, growth factors, and peptides; microscopy (light, fluorescent, confocal) and preferentially bioprinting. Experience in research on immunomodulatory or antibacterial materials is a plus. **Proficiency in English**, in speaking and writing, is required. Foreign internships and publications in international peer-review journals will be highly rated.

You will contribute to the goals of the project by focusing on studying the biological performance of the scaffolds obtained in the different stages of the project, including cell seeding and culture, performing the biochemical assay, immunostaining, and imaging of cells. You will be responsible for the design of the biological tests, thorough data analysis, and proper interpretation of the obtained results. You will also contribute to project-related dissemination activities, present at national and international conferences, publish results in peer-reviewed scientific journals. We expect you to support the Principal Investigator in supervising the other members of the Team.

Offer:

We offer a great opportunity to participate in an exciting project that deals with relevant societal challenges. You will work in an attractive, interdisciplinary environment with a newly formed international, enthusiastic Research Group. The part of the Group is located in Groningen, The Netherlands, which facilitates international collaborations and will lead to the increased impact and quality of conducted work. We provide very good conditions for the development of your independent career and international scientific network. The family-friendly working environment allows for the compatibility of work and family life.

The temporary position is offered initially for a period of one year, with a minimum salary of 8800 PLN /month gross (ca. 2000 EUR/month gross). The option of contract prolongation for two more years is possible after a positive evaluation. Performance bonuses are available from the University.

About the organization:

This project will be performed in the Biotechnology Center at the Silesian University of Technology (SUT) in Gliwice. SUT is one of the leading scientific institutions in Poland (ranked within the top 10 Polish research institutions), equipped with state-of-the-art infrastructure. The Biotechnology Center gathers specialists from computer and environmental science, chemistry, and biology to work together on innovative projects in the fields of bioinformatics, medical, environmental, and industrial biotechnology. The research lines include the development of new biomaterials, controlled cellular differentiation, and modelling of bioprocesses. The Włodarczyk-Biegun lab, established in 2019, is equipped with several printers, including a multifunctional GeSiM bioprinter with melt electrowriting printhead, a Felix bioprinter, and FDM printer, an advanced rheometer with DMA function, a goniometer, and has own biological and chemical labs. The group has a solid experience in the field of biofabrication, developing new printable materials, new printing tools for hydrogel-based inks, electrowriting for the reconstruction of hierarchical structures and detailed characterization of (bio)inks and printed scaffolds (e.g. rheology, SEM, research mechanical).

Additional information:

The offers which are incomplete or submitted after the deadline will not be considered. We will contact only selected candidates who meet the criteria of the competition. The expected date of the final selection is **15th June**.

For more information about this position and the project, please contact dr hab. inż. Malgorzata Włodarczyk-Biegun, prof. PS (Associate Professor): gosia@biofabrication.group

How to apply:

1. Submit your application in English by e-mail to: recruitment@biofabrication.group
2. In the subject include "Postdoctoral Researcher" and your first and last name.
3. Your application should contain: a motivation letter describing your research interests; a short CV with the description of your key achievements; a list of up to 5 of your (best) publications; a copy of your diploma; your contact details (e-mail and telephone number); names and contact details of at least two potential referees.
4. Please include the following statement in your application: "I hereby agree to the processing of my data included in the application documents by Silesian University of Technology, Gliwice, Poland, to carry out the recruitment process."

Informative clause:

According to art. 13 of the Regulation on Personal Data Protection of 27 April 2016, please be informed:

- 1) The controller of your personal data is the Silesian University of Technology with its registered office at Akademicka 2A St, 44-100 Gliwice,
- 2) The Silesian University of Technology has appointed the Data Protection Officer who can be contacted via the email address: iod@polsl.pl,
- 3) Your personal data will be processed in order to carry out the recruitment process for work at the Silesian University of Technology,
- 4) the basis for the processing of your personal data is art. 221 of the Labour Code and, if you agree to use your CV in future recruitments at the Silesian University of Technology, art. 6 clause 1 point a of the GDPR Regulation shall apply,
- 5) only employees authorized to process personal data to the necessary extent will have access to your personal data within the organizational structure of the Silesian University of Technology,
- 6) Your personal data shall not be disclosed to other entities, except in cases provided for by law,
- 7) Your personal data shall be stored for the period necessary to carry out the recruitment process or for the next 9 months from the end of the recruitment process, if you authorize the processing of personal data in future recruitment processes,
- 8) You have the right to request the access to the content of your data and, to the extent provided for by applicable regulations, the right to: rectify, delete, limit processing, raise objections; if you consent to the processing of data, you have the right to withdraw your consent at any time,
- 9) You have the right to lodge a complaint with the President of the Office for Personal Data Protection if you feel that the processing of your personal data violates the provisions of the General Data Protection Regulation,
- 10) providing data is voluntary, but necessary to achieve the purposes for which they are collected.