Biofabrication and bio-instructive materials

Politechnika Śląska | Uczelnia Badawcza | Narodowe Centrum Nauki

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: cell biology, biomaterials, biochemistry, chemistry or similar.

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 chronical 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 international proposal is to create a functional reconstruction of bone-tendon connection. To produce this complex tissue, we will utilize 3D printing techniques. The structural design of the supportive scaffolds for cells will be altered and influence of material structure and property on cell performance will be carefully studied.

The offered position is funded by NCN OPUS-LAP grant received by dr hab. inż. Malgorzata Wlodarczyk-Biegun.

LOCATION:
The Silesian University of Technology, Biotechnology Centre
Gliwice, Poland

WORKING HOURS:
Full-time

CONTRACT TYPE:
Employment

APPLICATION DEADLINE:
19th September 2025

STARTING DATE:
December 2025 / January 2026

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, biomaterials, biomedical engineering, material science, chemistry or similar is needed. Candidates should have **expertise** in eukaryotic cell biology, cell culture, and studying cell-material interactions, **experience** in biofabrication and microscopy (light, fluorescent, confocal); working with small bioactive molecules, growth factors, and peptides will be a plus. **Proficiency in English**, in speaking and writing, is required. Foreign internships and publications in international peer-review journals will be highly rated. Experience in people management and supervising lab will be also evaluated positively.
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. The connection between scaffolds mechanical properties, structure and cell performance will be in focus of your work. 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 and biological lab.

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 within an 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 compatibility of work and family life.
The temporary position is offered initially for a period of one year, which will be extended to 17.5 months in total after a positive evaluation. The competitive salary on the European level is offered (approx. 9000 PLN /month gross, ca. 2000 EUR/month gross (with years of service)), with an additional end year bonus of ca. 8000 PLN (ca. 1800 EUR), and holiday allowance (approx. 3000 PLN gross, ca. 675 EUR gross). Performance bonuses are available from the University.

About the organization:

This project will be performed in the Biotechnology Centre at 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 Centre gathers specialists from computer and environmental science, chemistry, and biology to work together on innovative projects in the field of bioinformatics, medical, environmental, and industrial biotechnology. The research lines include the development of new biomaterials, controlled cellular differentiation, modeling of bioprocesses. The institution has long-standing collaborations with medical doctors, which will facilitate knowledge exchange with specialists from the medical field and support project development into applied outcomes.

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 **end of September 2025.**

For more information about this position and the project, please contact dr hab. inż. Malgorzata Wlodarczyk-Biegun (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 diplomas; 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) personal data will be processed for the purpose of conducting the recruitment process for employment at the Silesian University of Technology;
4) the legal basis for processing personal data is Article 6(1)(c) of the GDPR (a legal obligation to which the controller is subject) in connection with Article 221 of the Labour Code and the Act of 20 July 2018 – Law on Higher Education and Science, as well as Article 6(1)(a) and Article 9(2)(a) of the GDPR (consent) in the case of personal data other than those indicated in Article 221 of the Labour Code;
5) personal data will not be disclosed to other entities, except in cases provided for by law. Personal data may also be transferred to partners providing technical and organizational IT support;
6) personal data will be stored for the period necessary to complete the recruitment process, or for up to 6 months after the conclusion of the recruitment process, if you have given consent for the processing of personal data for future recruitment processes;
7) 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;
8) 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;
9) providing data is voluntary, but necessary to achieve the purposes for which they are collected.