



THE ADAM MICKIEWICZ UNIVERSITY, POZNAN

ANNOUNCES

A COMPETITION

for the position of Young Doctor (Postdoctoral Researcher)

at the Center for Advanced Technologies

Basic information

- 1. Research discipline (research field):**
Chemical Sciences, Biological Sciences, Material Science and Engineering,
- 2. Number of work hours per week including a task-based work schedule (if applicable):**
Full-time, 40 hours per week in a task-based work time system.
- 3. Type of an employment contract and expected duration of employment, i.e.: permanent/temporary/fixed-term contract for year/...years**
Temporary contract for 48 months with the first contract being a 3-month probationary period
- 4. Anticipated job starting date:**
01-01-2025
- 5. Workplace location:**
Center for Advanced Technologies, Uniwersytetu Poznańskiego 10, 61-614 Poznań, Poland.
- 6. Monthly salary:**
13 223,31 zł (PLN) gross
- 7. Application deadline and process:**
Electronic submission to jagoda.litowczenko@amu.edu.pl Application deadline: 28.12.2024.
Please note that the job reference number should be quoted in the application.

8. Required documents

- Application form/letter of the candidate (email);
- *Curriculum Vitae*;
- Diplomas or certificates issued by colleges and universities attesting to education and degrees or titles held (in case of academic degrees obtained abroad - the documents must meet the equivalence criteria set out in Article 328 of the Act of 20 July 2018 Law on Higher Education and Science (Journal of Laws of 2024, item 1571 ; Polish: Dz. U. z 2024 poz. 1571 t.j.);
- Information on the Applicant's research, teaching and organizational achievements,
- Other documents as determined by the competition committee.
- Consent to the processing of personal data as follows : *In accordance with Article 6 (1) (a) of the General Data Protection Regulation of 27 April 2016. (OJ EU L 119/1 of 4 May 2016) I consent to the processing of personal data other than: first name, (first names) and surname; parents' first names; date of birth; place of residence (mailing address); education; previous employment history, included in my job offer for the purpose of the current recruitment."*;

Conditions of the competition determined by the competition committee

I) Determination of qualifications: (researcher profile) according to the Euraxess guidelines

- (R2) **Recognised Researcher** (PhD holders or equivalent who are not yet fully independent)

Applicants without a doctoral degree may apply, provided they submit their doctoral diploma no later than at the time of signing the employment contract.

II) Job Offer description

The job offer concerns a position within the First Team FENG project funded by the Foundation for Polish Science (FNP), titled **“Opracowanie dwuskładnikowego hybrydowego biotuszu do biodruku 3D unaczynionych konstruktyw”/“Development of a two-component hybrid bioink for 3D bioprinting vascularized constructs”** (Project No. FENG.02.02-IP.05-0045/23). The project is supervised by the Principal Investigator, Dr. Jagoda Litowczenko-Cybulska. Project has received funding from **European Funds** and is carried out within the First Team programme of the Foundation for Polish Science co-financed by the European Union under the European Funds for Smart Economy 2021-2027 (FENG).

The aim of the project is to establish conditions for development of two-component hybrid bioink compatible for extrusion-based 3D bioprinting and new volumetric bioprinting. Two component bioink possess increased vascularization of thick 3D bioprinted constructs. Another original aspect of the project is the use of microspheres containing endothelial cells differentiated from human induced pluripotent stem cells (iPSCs) to enhance the vascularization process of 3D-printed constructs. The selected models will undergo long-term culture and functional tests, such as cultivation in a perfusion system and mechanical testing, to evaluate the usability of the bioink in these conditions and its potential for vascularization of these models ex vivo. The interdisciplinary study involve extensive material engineering,

bioprinting, and iPSC-based studies. The detailed impact of 3D-bioprinted thick constructs on encapsulated cell behavior as well as interactions between two types of human cell types will be studied *in vitro* and in a designed *ex vivo* bioreactor system.

The young doctor scientist will mainly be responsible for 3D bioprinting, chemical characterization, iPSC-related study as well as biomaterial characterization and biological investigation of cell-laden 3D bioprinted constructs and bioreactor setup.

III) Requirments and qualifications

The competition is open to individuals who meet the requirements specified in Article 113 of the Law on Higher Education and Science of 20 July 2018 (Journal of Laws of 2024, item 1571 ; Polish: Dz. U. z 2024 poz. 1571 t.j.) and who meet the following requirements:

1. PhD in chemical sciences, biological sciences or materials engineering.
2. Obtaining a doctoral degree within maximum 7 years from the announcement of the competition.
2. They fulfilled formal requirements regarding the date of obtaining the doctoral degree in accordance with the regulations of the Foundation of Polish Science.
3. Applicants without a doctoral degree may apply, provided they submit their doctoral diploma no later than at the time of signing the employment contract.
4. Proven record of productivity and publications in indexed journals.
5. Experience in the field of development of biomaterial (hydrogels) formulations for 3D bioprinting, their optimization, and the performance of physicochemical analyses on the obtained cellular scaffolds, as well as evaluation of biopolymer crosslinking efficiency using Raman spectroscopy, FTIR, and UV-vis methods, and rheology.
6. Experience in the field of stem cells (iPSC) culture, differentiation, or isolating of mesenchymal stem cells and molecular biology (real time PCR, Western Blot) as well as immunocytochemistry and confocal imaging
7. Supervision of students
8. Experience in the implementation of research grants as contractor.
9. Young doctor/Postdoc will be responsible for managing experiments in 3D bioprinting and characterization, as well as in cell biology (iPSC cell culture, molecular biology, cell imaging).

IV) Required languages

1. **Language:** English - Fluent

V) Required research, teaching or mixed experience

- Proven experience in biomaterials development, 3D bioprinting chemical characterisation of hydrogels (FTIR, Raman spectroscopy, UV/VIS spectrophotometer).
- Proven experience in stem cells (e.g human induced pluripotent stem cells) culture, differentiation and characterisation (PCR, Western Blot).
- Knowledge of stem cell biology, molecular biology techniques, Real-Time PCR, confocal microscopy methods.
- Independence, good organization of work, ability to work in a team.
- Experience in writing scientific publications and conference presentations.
- Excellent knowledge of relevant software such as: OriginLab, Fiji.
- Experience with working in an international environment will be highly appreciated

VI) Benefits

- ✓ financial bonuses for high-impact publications
- ✓ an atmosphere of respect and cooperation
- ✓ supporting employees with disabilities
- ✓ flexible working hours
- ✓ co-financing of language learning courses
- ✓ co-financing of training and courses
- ✓ additional days off for education
- ✓ life insurance
- ✓ pension plan
- ✓ savings and investment fund
- ✓ preferential loans
- ✓ additional social benefits
- ✓ leisure-time funding
- ✓ subsidizing children's vacations

VII) Eligibility criteria

1. Matching the candidate's scientific profile with the advertisement.
2. Number, scientific level of the candidate's scientific publications.
3. Number, scientific level and of the candidate's scientific conference presentations.
4. Grade on the diploma.
5. Internships and participation in research projects.

VIII) The selection process

1. Competition committee begins working no later than 14 days after the deadline for submission of documents.
2. Formal evaluation of submitted proposals.
3. Call to provide additional or missing documents if necessary.
4. Selection of candidates for the interview stage.
5. Interviews for candidates who meet the formal requirements.
6. The committee has the right to request external reviews of candidates' work or to ask candidates to conduct teaching assignments with an opportunity for student evaluation.
7. The chair of the competition committee announces the results and informs the candidates. This information will include justification with a reference to candidates' strengths and weaknesses. Submitted documents will be sent back to candidates.

IX) Prospects for professional development

- supervision in building a scientific profile through the publication in high-impact scientific journals,
- assistance in writing grant applications in domestic (FNP, NCN) and foreign (Horizon) research projects,
- establishing cooperation with renowned research centres in the world.

RODO Information Clause :

Pursuant to Article 13 of the General Data Protection Regulation of 27 April 2016. (Official Journal of the EU L 119 of 04.05.2016) we inform that:

1. The controller of your personal data is Adam Mickiewicz University, Poznań with the official seat: ul. Henryka Wieniawskiego 1, 61 - 712 Poznań.
2. The personal data controller has appointed a Data Protection Officer overseeing the correctness of the processing of personal data, who can be contacted via e-mail: iod@amu.edu.pl.
3. The purpose of processing your personal data is to carry out the recruitment process for the indicated job position.
4. The legal basis for the processing of your personal data is Article 6(1)(a) of the General Data Protection Regulation of 27 April 2016 and the Labour Code of 26 June 1974. (Journal of Laws of 1998 N21, item 94 as amended).
5. Your personal data will be stored for a period of 6 months from the end of the recruitment process.
6. Your personal data will not be made available to other entities, with the exception of entities authorized by law. Access to your data will be given to persons authorized by the Controller to process them in the performance of their duties.
7. You have the right to access your data and, subject to the law, the right to rectification, erasure, restriction of processing, the right to data portability, the right to object to processing, the right to withdraw consent at any time.
8. You have the right to lodge a complaint to the supervisory authority - the Chairman of the Office for Personal Data Protection, ul. Stawki 2, 00 - 193 Warsaw.
9. Providing personal data is mandatory under the law, otherwise it is voluntary.
10. Your personal data will not be processed by automated means and will not be subject to profiling.