ADAM MICKIEWICZ UNIVERSITY, POZNAN

ANNOUNCES

A COMPETITION

for the position of Post-doctoral scientisit

**at the Centre for Advanced Technologies
in the project: Sonata 19 entitled:**

"Is metformin having a cardioprotective role in mouse model of autoimmune myocarditis.

Evaluation of the mechanism of action using multiomics approach."

Number: UMO-2023/51/D/NZ7/00609

Basic information

1. **Research discipline (research field):**
   Biological sciences

2. **Number of work hours per week including a task-based work schedule (if applicable):**

   Full-time employment- 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**
   Fix-term contract for 36 months from 01.10.2024 – 30.09.2027

4. **Anticipated job starting date:** 01.10.2024
5. **Workplace location:** Centre for Advanced Technologies, Adam Mickiewicz University Poznań

6. **Monthly salary:** Approximately 8900 PLN gross

7. **Application deadline and process:**
   Application submission deadline: September 25, 2024
   E-mail: monika.marta.stefanska@gmail.com
   Please mention the competition number in your application: POST-DOC_Sonata19_MS

8. **Required documents**

- Application form/letter of the candidate;
- *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 2023, item 742 ; Polish: Dziennik Ustaw 2023 poz. 742 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

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

☐ **(R1) First Stage Researcher** (up to the point of PhD)
X (R2) Recognised Researcher (PhD holders or equivalent who are not yet fully independent)
☐ **(R3) Established Researcher** (researchers who have developed a level of independence)
☐ **(R4) Leading Researcher** (researchers leading their research area or field)

(definition of qualification level and professional experience according to Euraxess guidelines https://euraxess.ec.europa.eu/europe/career-development/training-researchers/research-profiles-descriptors)

II) **Job Offer description**
Myocarditis is a serious cardiovascular disease. It may be caused by bacterial, parasitic or viral infections, including COVID-19 infection. Myocarditis may also be caused by autoimmunity. The disease often leads to dilated cardiomyopathy and cause damage to the heart muscle. The diagnosis of the disease is complicated by its non-specific symptoms and often requires an invasive endomyocardial biopsy. Additionally, the molecular mechanisms of the disease and its progression are unknown. Metformin is a drug commonly used to treat type 2 diabetes. Little is known about the potential use of metformin in the treatment of myocarditis. Although recent studies demonstrate the cardiopreventive effect of metformin in the setting of myocarditis, the mechanisms controlling this process are unknown. To address the scientific goals of this project, we will use both basic and the most advanced methods, such as single-cell transcriptomics, spatial transcriptomics and metabolomics. Using these techniques, we will describe the action of metformin at the single cell level, we will be able to identify both single molecules and describe in detail the cell populations on which the drug acts, which is an incredible advantage over currently used biological methods.

The post-doc will be employed full-time for three years of the project (36 months). His/her work will focus on detailed molecular and cellular analyzes of the effect of metfromin on

myocarditis and dilated cardiomyopathy. His work will also include the preparation of cDNA libraries for single-cell RNA sequencing and spatial transcriptomics, as well as the subsequent analysis of the output data (under the supervision of PI).

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 2023, item 742, Article 113 as amended) and who meet the following requirements:

1. A doctoral degree in biology, biotechnology or a related field obtained at an institution other than the host institution
2. Knowledge of molecular biology techniques and working with in vitro cultures, knowledge of the single-cell RNAseq technique is an advantage
3. Having at least one publication with a leading author in the field of sequencing
4. H-index at least 5
5. Knowledge of basic biostatistical/bioinformatics methods, supported by courses and internships, is welcome

IV) Required languages
English – fluent
Polish – good level

V) Required research, teaching or mixed experience
As in point III

VI) Benefits

- an atmosphere of respect and cooperation
- supporting employees with disabilities
- flexible working hours
- funding for language learning
- 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
- "13th" salary

VII) Eligibility criteria

1. Knowledge of molecular biology techniques/scRNA-seq
2. Ability to conduct bioinformatics/biostatistical analyses
3. Number of publications, their impact factor, h-index

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

As part of the project, the candidate for the post-Doc position will have the opportunity to develop his skills in the field of NGS techniques - sn/scRNA-seq and spatial transcriptomic, proteomics and metabolomics. He will also gain experience in conducting bioinformatic analyzes of data obtained from NGS experiments planned in the project. Moreover, during the project, trips to domestic and/or foreign conferences related to the project topic are planned. Due to the cooperation planned as part of the project, visits to an international collaborator (University of Glasgow) are planned to conduct data analysis.