**Job Vacancy is announced**

**by the Director of Mossakowski Medical Research Institute, Polish Academy of Sciences**

for the position of

**Post-doctoral Research Assistant or Post-doctoral Assistant Professor\***

Recruitment is related to the project: **“Deciphering the effect of PGC1a on mitochondrial biogenesis and neural differentiation during early development of human cerebral organoids”, OPUS 18, no. 2019/35/B/NZ3/04383, funded by The National Science Centre, Poland** inDepartment of Stem Cell Bioengineering, Mossakowski Medical Research Institute Polish Academy of Sciences.

City: Warsaw

Scientific discipline: medical sciences

Announcement date: September 17th, 2021

Application deadline:**October 1st, 2021**

Expected date of the interview: the first half of October 2021

Expected date of competition results announcement: the second half of October 2021

Expected date of taking the position: November 2021 (The job starting date may change depending on the regulations related to COVID-19 epidemy)

Link to page: http://www.imdik.pan.pl

Key words: post-doc, assistant, assistant professor, brain organoids, mitochondrial biogenesis, neural differentiation, transcriptomic analysis.

*\* Depending on the assessment of the candidate's qualifications, the Recruitment Committee may recommend employment as an assistant or assistant professor.*

**The area of the research in which the candidate would participate:**

The main project objective is to identify an unravel molecular mechanisms of the cross-talk between mitochondria and neural fate commitment during development of human cerebral organoids. Our group has previously proved important role of mitochondrial biogenesis in neural stem cells fate specification. Accordingly, in our experiments neuronal to glial switch along differentiation of human induced Pluripotent Stem Cells (iPSC) correlated with upregulation of PPARGC1A gene expression (encoding PGC-1α, positive master regulator of mitochondrial biogenesis). In this project we aim to verify hypothesis, that developmental stage-dependent neural fate specification in human cerebral organoids is regulated by PGC-1α pathway and is linked to the mitochondrial biogenesis.

Generation of human cerebral organoids from iPSC is a novel field of research with tremendous potential for basic science research as well as for diagnostic and therapeutic use. Human stem cells derived cerebral organoids provide a tractable, alternative model system of the early neural development, that is responsive to pharmacological and genetic manipulations, not possible in humans. Post-Doc will have possibility to contribute to the project using cutting–edge technologies: development of cerebral organoids from iPSC, gene editing, optogenetics, live confocal imaging as well as bioinformatics with large scale datasets. Title of project task: **“Transcriptomic assessment and live cell imaging analysis of human cerebral organoids to reveal common and unique patterns of developmental trajectories upon stimulation of mitochondrial biogenesis”.**

**Necessary Requirements:**

* PhD degree in biological sciences, medical sciences, pharmacy, veterinary, or related sciences,
* experience in laboratory techniques in biochemistry, molecular biology (e.g. isolation of DNA, RNA, proteins and small molecule compounds, western blot; qPCR; immunohistochemistry; spectrophotometric/fluorometric techniques),
* experience in planning and conducting in vitro procedures,
* ability to analyze data and competence in statistical methods used in scientific research,
* bioinformatic competence to work with raw and processed large scale omics data (e.g. RNA-seq, exome-seq, proteomics, metabolomics), in silico molecular pathway analysis, systems biology, biostatistics,
* documented scientific achievements including publications in journals from JCR list,
* participation in scientific conferences and internships,
* working knowledge of statistical software (e.g. GraphPad Prism, SPSS, R, Statistica),
* ability to work in a team and independently,
* excellent knowledge of English, allowing effective communication and preparation of scientific manuscripts,
* indication of Mossakowski Medical Research Institute Polish Academy of Sciences as a first place of employment.

**Desirable Requirements:**

* experience in working with stem cells cultures,
* knowledge of modern omics research techniques (ATAC-seq, ChIP-seq, scRNAseq),
* knowledge of genome editing methods.

**Description of duties:**

* carrying out research, formulating biological hypothesis,
* planning and performing in vitro experiments, using cell culture methods,
* implementing biochemistry, molecular biology and imaging methods (light and confocal microscopy),
* analyzing the experimental data,
* presenting the results at seminars within the Institute and at scientific forum, including international conferences,
* preparation of scientific publications,
* implementing new research technologies and establishing cooperation with external entities.

**We offer:**

* Full-time employment contract for the project,
* Opportunity to work in the friendly environment of experienced research team,
* Scientific cooperation with other research centers in Poland and abroad,
* Opportunity to participate and present obtained results at international conferences,
* Substantive and administrative support in accessing scholarships and grants.

**How to Apply**

**Documents should be sent** to e-mail: **buzanska**[**@imdik.pan.pl**](mailto:mwegrzynowicz@imdik.pan.pl)and[**sekretariat@imdik.pan.pl**](mailto:sekretariat@imdik.pan.pl)

**Application Deadline:** **October 1st, 2021**

Please include the reference number **(ZBKM-111-2/2021)** in your correspondence.

Required documents:

* motivation letter with description of candidate’s scientific interests, scientific work, scientific independency, participation in publications and research grants,
* CV listing candidate’s education, professional experience, scientific achievements, authored or co-authored publications and conference abstracts, internships and training,
* copy of the PhD (or equivalent) diploma,
* references (optionally).

For more information about the project, please contact with Prof. dr hab. Leonora Bużańska, Leader of the project,   
e-mail: [buzanska@imdik.pan.pl](mailto:buzanska@imdik.pan.pl)

**INFORMATION CLAUSE ON PERSONAL DATA PROCESSING**

Pursuant to Article 13 of Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), Mossakowski Medical Research Institute, Polish Academy of Sciences hereby informs:

1. The Controller of your personal data is the Mossakowski Medical Research Institute, Polish Academy of Sciences, A. Pawińskiego 5 St., 02-106 Warsaw, Poland (“MMRI PAS”)
2. The Controller has designated the Data Protection Officer who can be contacted via the following e-mail address: [daneosobowe@imdik.pan.pl](mailto:daneosobowe@imdik.pan.pl) or the post address of Controller.
3. Your personal data will be processed for the purpose of carrying out a recruitment process and selecting an employee and concluding a contract for employment at the MMRI PAS.
4. MMRI PAS processes Your personal data in relation to a legal obligation (the Article 6.1.c of the GDPR) pursuant to Article 221 § 1 of the Act of 26 June 1974 Labour Code or Your consent understood by sending them to MMRI PAS (the Article 6.1.a of the GDPR) for data not listed on Labour Code, and their application does not affect the possibility of participating in the recruitment / competition. If you do not want us to process additional data, please do not include it in the documents.
5. By submitting your candidacy, you consent to the fact that if you win the recruitment / competition, your name and surname together with information about the recommendation for employment will be posted on the MMRI PAS website.
6. Your application with personal data will be processed for period necessary for realization of purposes indicated in p. 3 - for a maximum of one month and then your application with personal data will be deleted.
7. With regard to processing of Your personal data for purposes mentioned in p. 3, Your personal data might by shared with following recipients or categories of recipients: entities supporting MMRI PAS in its business processes, in particular administrative and economic service and authorized entities.
8. Within the limits and on the terms set out in the GDPR, you have the right to request access to your personal data, rectification, deletion or limitation of processing, as well as the right to submit a declaration of withdrawal of consent to the processing of personal data at any time. Withdrawal of consent does not affect the lawfulness of the processing which was carried out on the basis of consent before its withdrawal, as well as the processing of data processed by the administrator on the basis of other provisions.
9. You have the right to lodge a complaint to the President of the Office for the Protection of Personal Data (ul. Stawki 2, 00-193 Warszawa).