

**Department of Stem Cell Bioengineering, Mossakowski Medical Research Centre Polish Academy of Sciences is recruiting PhD student to the NCN Opus project:**

**“Deciphering the effect of PGC1a on mitochondrial biogenesis and neural differentiation during early development of human cerebral organoids”**

**Leader:** prof. dr hab. Leonora Bużańska

**The project:**

The main project objective is to identify and 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-1 $\alpha$ , 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-1 $\alpha$  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. PhD student 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.

**Location and duration:**

Department of Stem Cell Bioengineering, Mossakowski Medical Research Centre Polish Academy of Sciences in Warsaw, 02-106 Poland, Pawinskiego street 5 (<http://www.imdik.pan.pl/en/research-groups/departments/113-department-of-stem-cell-bioengineering>)

PhD student will be recruited for 48 months with the stipend in a range of 3500-4500 PLN net per month, starting October 2020, under supervision of prof. Leonora Bużańska for the following research 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”**

Recruitment for 4 years to Doctoral School of Information and Biomedical Technologies (Szkola Doktorska Technologii Informacyjnych I Biomedycznych Instytutów PAN

<http://tib.ippt.pan.pl/>

**Requirements:**

1. MSc. or equivalent in biology, bioinformatics, biotechnology, medicine, or other related fields.
2. Very good command of English and practice in writing/presentation of scientific data.
3. Knowledge of basics of molecular biology techniques and cell culture methods.
4. Knowledge of immunofluorescent and confocal image acquisition.
5. Skills of mixed bioinformatics-laboratory profile will be highly appreciated (RNA-Seq database analysis and quantitative 3D image analysis)

**How to apply:**

Documents should be send until September 4<sup>d</sup> 2020 to prof. dr hab. Leonora Bużańska: [buzanska@imdik.pan.pl](mailto:buzanska@imdik.pan.pl)

- CV in English
- Motivation letter
- Contact to MSc University supervisor

**Selected candidates will be invited for an interview between 7<sup>th</sup> and 10<sup>th</sup> of September 2020.**

Mossakowski Medical Research Centre PAS hereby informs:

1. The Controller of your personal data is the Mossakowski Medical Research Centre, Polish Academy of Sciences, A.Pawińskiego 5 St., 02-106 Warsaw, Poland ("MMRC 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)
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 MMRC PAS.
4. MMRC 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 (uniformed text: Dz.U. of 2018, item 917) or Your consent (the Article 6.1.a of the GDPR).
5. Provision of data in the scope stipulated in the Labour Code is mandatory, and the remaining data are processed according to your consent for processing of personal data.
6. With regard to processing of Your personal data for purposes mentioned in p. 3, Your personal data might be shared with the following recipients or categories of recipients: entities supporting MMRC PAS in its business processes, in particular administrative and economic service.
7. Your personal data will be processed for the period necessary to serve the purposes indicated in p. 3 -for a maximum of one month and then your personal data will be deleted. If you agree to participate in subsequent recruitment processes, please include the following statement in the submitted application: I hereby agree for my personal data to be processed and stored for the purposes of the recruitment process and subsequent recruitment processes by the Mossakowski Medical Research Centre. If you agree to participate in subsequent recruitment processes your personal data will be stored for subsequent recruitment processes and will be deleted within 6 months of the end of the month when current recruitment process is completed.
8. MMRC PAS wishes to assure You that all persons whose personal data are being processed by the MMRC PAS, are entitled to use their rights resulting from GDPR. You are entitled to the following:
  - right of access to the personal data, including a right to obtain a copy of such data;
  - right to correct or complete your personal data –in case the data are inaccurate or incomplete;
  - right to obtain the restriction of processing of personal data;
  - right to receive or transmit the personal data,
  - right to withdraw the consent at any time.
9. You have the right to lodge a complaint to the President of the Office for the Protection of Personal Data