INSTITUTE OF BIOORGANIC CHEMISTRY
Polish Academy of Sciences

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IBCH PAS CALL FOR APPLICATIONS NO. 2/2022/T FOR THE POSITION OF A SENIOR SPECIALIST

INSTITUTION:	Institute of Bioorganic Chemistry, PAS
CITY:	Poznan
POSITIONS AVAILABLE:	1
SCIENTIFIC DISCIPLINE:	biological sciences
PUBLICATION DATE:	25/02/2022
APPLICATION DEADLINE:	24/03/2022
IBCH PAS WEBSITE:	https://www.ibch.poznan.pl/

KEY WORDS: bioinformatics, imaging, programming, neurodegeneration, neurobiology

The Institute of Bioorganic Chemistry PAS in Poznań is looking for CONTRACTOR in Horizon2020 EuroHPC program

Project titled: „Adaptive multi-tier intelligent data manager for Exascale - Brain Super-Resolution Imaging" **Principal Investigator:** Dr. Maciej Figiel

Project summary: Neurodegenerative disorders are a growing problem due to the increasing average age of the population, which contributes to the increased risk of developing the disease. The availability of high-throughput confocal microscopy in conjunction with artificial intelligence algorithms in image analysis opens up new possibilities for discovering hitherto unknown mechanisms of pathogenesis and faster ways to test potential treatments. Genetic polyglutamine diseases are models of diseases for the study of neurodegenerative processes resulting from abnormal protein folding. To better understand the mechanisms of neurodegeneration in the brain, HPC methods will be combined with brain imaging and data analysis. Microscopic imaging will be performed using a high-throughput microscope. The obtained images will be used to create high-resolution maps of the brain using SRRF (Super-Resolution Radial Fluctuations). The obtained high-resolution images of the brain will then be used to learn machine learning algorithms, indicating the differences between the image from the brain with neurodegeneration and the image from the healthy brain.

I. Requirements for the candidates:

- Master's degree in biology, neurobiology, bioinformatics or related
- Basic knowledge of bioinformatics and statistics
- Knowledge of the English language at the communicative level
- Knowledge of the Linux system environment (bash)
- Basic knowledge of programming languages (R or Python)
- Knowledge of ImageJ software
- Knowledge of issues in the field of microscopic imaging and immunocytochemical staining
- Great ability to think analytically, interpret experiments and formulate conclusions
- Very high motivation for further development and ability to work in a team
- Ability to think analytically, interpret experiments and formulate conclusions
- Ability to multitask, including both laboratory work and bioinformatics analyzes

II. Knowledge of techniques and skills which will be an advantage of the applicant:

- Experience in conference presentations, participation in research clubs, research internships and co-authorship of publications
- Knowledge of issues related to computer image analysis, neural networks and artificial intelligence
- Creating scripts and pipelines for data analysis using Bash, R, Python or other technologies
- Ability to work with transgenic animals (mice)

III. Responsibilities:

- Creative implementation of all aspects of research project
- Participation in classes at the Poznań Doctoral School
- Interpretation and reporting of the results of the analyzes carried out
- Preparation of scientific reports in the form of publications and participation in scientific conferences

IV. Required documents:

1. Letter of application to the Director of IBCH PAS
2. CV
3. A copy of the MSc diploma or higher degree diploma.

IV. Applications should be submitted via the eRecruiter portal at

https://system.erecruiter.pl/FormTemplates/RecruitmentForm.aspx?WebID=b0b86027fb384e099bd0a96e369756e5

V. The deadline for submitting the application is 24/03/2022

VI. We offer:

- Employment for a period of 24 months (0.5 FTE) with possibility of extension up to 36 months and participation at the Poznań Doctoral School as PhD student
- Salary 6170 zł / PLN (total employer's costs)
- Work in a dynamic research group and an unlimited opportunity for scientific development
- Access to state-of-the-art experimental technologies.

VII. The recruitment procedure shall be concluded no later than 31/03/2022.

VIII. Employment shall take place in compliance with the provisions of the Labor Code of Poland

For additional information please contact the Principal Investigator, Dr. Maciej Figiel
e-mail: mfigiel@ichb.poznan.pl

Information clause:

Pursuant to the stipulations of the 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), further referred to as GDPR, we hereby inform that:

- *The Institute of Bioorganic Chemistry, Polish Academy of Sciences, seated in Noskowskiego St. 12/14, 61-704 Poznan; REGON 000849327, NIP 777-00-02-062 is the administrator of the collected personal data (further referred to as the Institute).*
- *The Administrator appointed a Data Protection Officer, who can be contacted in writing, via traditional mail, by sending a letter to the following address: Z. Noskowskiego St. 12/14, 61-704 Poznan, or by sending an e-mail to: dpo@ibch.poznan.pl.*
- *The personal data of the candidates is processed for the purposes of fulfilling the tasks of the administrator, associated with conducting the recruitment procedure for a vacant position.*
- *The legal basis for processing personal data is the Act of 26 June 1974 – The Labor Code, Act of 30 April 2010 on the Polish Academy of Sciences or the consent of the person whose data shall be subjected to processing.*
- *Your personal data shall be subjected to processing for period of 3 months upon the date of decision of the recruitment committee. Following this period, the data will be irretrievably and effectively destroyed.*
- *The personal data of the candidates shall not be transferred to any third country.*
- *The person whose data shall be subjected to processing has the right to:*

  - request access to his/her personal data, and to amend it or delete it, pursuant to articles 15-17 of GDPR;
  - limit data processing, in the events stipulated in article 18 of GDPR;
  - data transferring, pursuant to article 20 of GDPR;
  - withdraw consent at any moment, without influencing compliance with the law of the processing that was executed prior to consent withdrawal;
  - file a complaint to the Inspector General for Personal Data Protection.

Providing personal data in the scope stipulated in article 22 (1) of the Act of 26 June 1974 – The Labor Code is mandatory, whereas providing data in a broader scope is voluntary and requires consent for its processing.