

**Recruitment for the Poznań Doctoral School of the Institutes of the Polish Academy of Sciences
at the Institute of Bioorganic Chemistry, PAS in Poznan
Procedure no. 46/2022/ICHB/PSD**

INSTITUTION: Institute of Bioorganic Chemistry, PAS
CITY: Poznan
POSITION: PhD student
POSITIONS AVAILABLE: 1
SCIENTIFIC DISCIPLINE: Biological sciences
PUBLICATION DATE: November 7th, 2022
APPLICATION DEADLINE: December 6th, 2022
IBCH PAS WEBSITE: <https://portal.ichb.pl/homepage/>
PDS IPAS WEBSITE: <https://psd-ipan.ichb.pl/index.php/en/home/>

KEY WORDS: neurodegenerative disease, SCA3, spinocerebellar ataxia 3, ataxin-3, ATXN3, SCA3 mouse, knock-in, mutant protein, PolyQ, CAG repeats, autophagy, proteasome

Research topic: Investigation of a new therapeutic strategy to lower mutant protein in SCA3 / MJD

Principal Investigator: Maciej Figiel

I. Project description

Neurodegenerative diseases, including polyglutamine diseases and Alzheimer's disease, are currently incurable. A model disease in this group is spinocerebellar ataxia type 3 (SCA3), which is a genetic neurodegenerative disease caused by a particular type of mutation that results in an increased number of CAG nucleotide repeats in the ATXN3 gene sequence. The mutation in the ATXN3 gene results in the defective protein ataxin-3, which forms toxic aggregates in the cell and also increases the cellular level of beta-amyloid. Ataxin-3 plays a crucial role in controlling which proteins and organelles should be cleared in the cell through two related cellular mechanisms called autophagy and UPS. Ataxin-3 recognizes a protein tag called ubiquitin that directs a protein or cell fragment for breakdown, and detaches this tag from the protein, thereby preventing premature removal of the proteins from the cell. In this project, we will investigate whether forcing the controlled removal of cell fragments by small molecule drugs will repair the disrupted cellular processes resulting from the ATXN3 mutation.

We hope that thanks to this project, we will learn more about the specific role of one of the key pathogenic processes in neurodegenerative diseases related to the dysfunction of protein clearance mechanisms. A detailed study of this mechanism will provide a better understanding of SCA3 and other neurodegenerative diseases, which will enable the design of appropriate treatments.

Additional information:

1. Research and doctoral theses shall be carried out within the 2021/41/B/NZ2/03881 project, entitled "Investigation of a new therapeutic strategy to lower mutant protein in SCA3 / MJD" funded by National Science Centre, Poland.
2. PhD students shall receive a stipend in the gross amount of ca 4300 PLN (3800 PLN net), for the period of 36 months with possible extension
3. PhD students shall be subject to social insurance, pursuant to article. 6 section 1 passage 7b of the act of October 13th, 1998 on the social insurance system (Journal of Laws of 2019, item 300, 303 and 730).

II. Requirements for the candidates:

1. Master's degree in one of the following: stem cell biology, cell biology, molecular biology or neurobiology
2. Excellent grades from studies
3. Excellent manual skills in performing experiments
4. Very high motivation for further development and ability to work in a team
5. Above-average self-organization and the ability to manage time pressure in a 4-year project
6. Knowledge of basic molecular biology techniques and cell culture techniques

7. Fluency in English (both in speech and in writing)
8. Positive attitude of the applicant to work with lab animals

Selected skills, knowledge of which may be helpful:

1. Experience in working with primary cell lines (neurons, glial cells)
2. Experience in the transfection of eukaryotic cells
3. Chromatographic techniques and protein preparation
4. Working with a spinning disc microscope and flow cytometry
5. Ability to work with transgenic animals (mice)
6. Multiomic and bioinformatics techniques III.

III. Duties in the project:

1. Creative implementation of the research project
2. Carrying out experiments in the field of molecular biology, neurobiology, in vivo on animal models
3. Interpretation and reporting of the results of the conducted analyzes
4. Continuous broadening of knowledge in the field of the project from scientific literature
5. Preparation of scientific reports in the form of publications and participation in scientific conferences

IV. Required documents:

1. Application for admission to PDS IPAS along with the consent for processing personal data upon the recruitment procedure and a statement on having acknowledged the regulations of recruitment for PDS IPAS, using form downloaded from https://portal.ichb.pl/wp-content/uploads/2021/10/ICHBApplication_for_admission_202110.docx
2. Certified copy of the diploma confirming graduation or a certificate confirming graduation (in the case of diplomas issued by foreign higher education schools, diploma stipulated in article 326, section 2, passage 2 or article 327, passage 2 of the act of July 20th, 2018 – Law on Higher Education and Science (Journal of Laws of 2018, item 1668, as amended), entitling to apply for conferment of a doctoral degree in the state in where such a certificate was issued by the relevant higher education school. In the event when the candidate is not in possession of the aforementioned documents, he/she is obliged to submit them prior to admission to PDS IPAS. Additional information on foreign school diplomas are available at: <https://nawa.gov.pl/en/recognition/recognition-for-academic-purposes/applying-for-admission-to-doctoral-studies>
3. Scientific CV encompassing track record of previous education and employment, information on involvement in scientific activities (participation in student research groups, attendance at scientific conferences, accomplished internships, and training, awarded prizes and distinction), and list of publications.
4. A
5. cover letter featuring a short description of research interests, achievements and justification for the intention to commence education at the doctoral school.
6. Certificates or other documents confirming the degree of proficiency in English, if the candidate is in possession of such materials.
7. Contact details of at least one, previous scientific supervisor or another researcher who is entitled to issue an opinion on the candidate.

V. Applications should be submitted via the eRecruiter portal at

<https://system.erecruiter.pl/FormTemplates/RecruitmentForm.aspx?WebID=615554678c4b4998968b6c0792440d66>

VI. Submission deadline is **December 6th, 2022**

VII. Criteria for evaluation of candidates:

1. Candidate's research achievements, pursuant to the grades obtained in the course of studies, scientific publications, awarded scholarships and distinctions resulting from conducting scientific research or student activities or other achievements.
2. Candidate's scientific and professional experience, pursuant to participation in conferences, workshops, training sessions and internships, implementation of research and commercial projects, involvement in

scientific trusts and societies, international and professional mobility, experience in other sectors, including industry.

3. Candidate's knowledge on the following discipline: biological sciences.
4. Knowledge of the subject matter described in the recruitment advertisement.

VIII. The recruitment procedure shall be concluded no later than **January 5th, 2023**

IX. The description of the recruitment process is stipulated in the Regulations of Recruitment for PDS IPAS. Following the recruitment procedure, the unadmitted candidates shall be informed on the number of points obtained at both stages.

Incomplete applications will not be considered.

For additional information please contact the Principal Investigator:

Maciej Figiel

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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.