INSTITUTE OF BIOORGANIC CHEMISTRY
Polish Academy of Sciences

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Recruitment for the Poznań Doctoral School of the Institutes of the Polish Academy of Sciences at the Institute of Bioorganic Chemistry, PAS in Poznań
Procedure no. 29/2025/ICHB/PSD

INSTITUTION:	Institute of Bioorganic Chemistry, PAS
CITY:	Poznań
POSITION:	PhD student
POSITIONS AVAILABLE:	1
SCIENTIFIC DISCIPLINE:	biological sciences
PUBLICATION DATE:	22.12.2025
APPLICATION DEADLINE:	25.01.2026
IBCH PAS WEBSITE:	https://portal.ichb.pl/homepage/
PDS IPAS WEBSITE:	https://psd-ipan.ichb.pl/index.php/en/home/

KEY WORDS: RNA biology, non-coding RNAs, regulatory RNAs, miRNAs, circRNAs, gene expression regulation, neurobiology, pituitary gland, neuroendocrine cells.

Research topic: From the third ventricle of the brain to the pituitary gland: Regulatory RNA networks in posttranscriptional modulation of gene expression in neurosecretion.

Principal Investigator: dr hab. Monika Piwecka

I. Project description:

The research and doctoral work will be conducted as part of the trilateral Polish-German-Swiss project co-financed by OPUS LAP NCN, number 2024/55/I/NZ3/02929, entitled "From the Third Ventricle to the Pituitary Gland: Regulatory RNA Networks in Post-Transcriptional Modulation of Gene Expression in Neurosecretion," funded by the Polish National Science Centre. Collaborating research units include the University of Lausanne (Switzerland) and the Berlin Institute of Health at the Charité Medical University (Germany). Principal Investigator in Poland: Dr. Monika Piwecka.

This project focuses on the hypothalamus and pituitary gland, which are anatomically and functionally linked to form the neuroendocrine system. Malfunctioning of any part of this system results in serious physiological and systemic consequences, such as metabolic problems (e.g., obesity), hormonal dysregulation and related thyroid problems, reproductive problems (e.g., infertility), and pituitary tumors. In the era of single-cell genomics, researchers are striving to understand gene expression programs within specific cell populations in the brain to help address these and other medical needs. In this project, we will explore and discover regulatory non-coding RNAs that influence gene expression in various unique cell types of the hypothalamus and pituitary gland. To this end, we will employ advanced molecular, cellular, and systems biology methods and tools.

The main goal of the project is to expand our understanding of the intersection of hypothalamic-pituitary communication and the molecular biology of the individual cell types that comprise the hypothalamic-pituitary axis. We will apply cutting-edge molecular biology tools and techniques to generate high-throughput information on miRNA, circRNA, and mRNA profiles in specialized cell populations: ependymal cells, tanycytes, gonadotrophs, and thyrotrophs. These analyses will be conducted under homeostatic and energy imbalance and/or stress conditions. We will monitor how miRNAs respond to various stimuli and interact with their mRNA targets. We will obtain detailed information on whether and how circular RNA Cdr1as and various miRNAs are involved in molecular

pathways in the investigated cell types. We will study and validate new circRNAs specific to hypothalamic-pituitary cells types of interest.
This project will be implemented due to the joint forces of three laboratories from three different countries, Poland, Switzerland and Germany, and three different leading expertise: RNA biology, neuroendocrinology, and bioinformatics. We expect that this interdisciplinary, innovative and ambitious project will generate a solid foundation for understanding the molecular underpinnings of homeostatic and malfunctioning neurosecretion as well as the regulation of genes upon energy imbalance.

Additional information:

1. Research and doctoral theses shall be carried out within the project 2024/55/I/NZ3/02929, entitled "*From third ventricle to pituitary gland: regulatory RNA networks in posttranscriptional modulation of gene expression in neurosecretion*", funded by National Science Center
2. PhD students shall receive a stipend in the gross amount of ca 4 300 PLN (3 800 PLN net) for the period of 24 months with the possibility of extending up to 48 months, and with the possibility of increasing the amount of the stipend after the mid-term evaluation (ca 5590 PLN gross).
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).
4. The PhD student will have the opportunity to receive full social benefits, including: subsidized vacations, Christmas subsidies, reimbursement for contact lenses/glasses, subsidized Multisport cards (or a one-time half-year reimbursement of tickets to cultural events), and the option to join group medical insurance.
5. Access to internal IBCH PAS grants dedicated to young scientists, such as travel grants for attending international conferences.
6. PhD students are entitled to 40 days of vacation days per year.

II. Requirements for the candidates:

1. MSc degree in biology, biotechnology or a related field, or fulfilling the conditions stipulated in article 186, section 2 of the act of July 20th, 2018 Law on Higher Education and Science (Journal of Laws of 2018, item 1668, as amended).
2. Experience in laboratory work in the field of molecular biology and/or biochemistry.
3. Experience in the field of data analysis, e.g., genomic or transcriptomic data, and/or experience in cell culture methods will be advantageous.
4. Willingness to expand skills in the context of conducting transcriptomic research.
5. Ability to search the scientific literature and to use online databases.
6. Strong independent and teamwork skills.
7. Strong organizational skills and enthusiasm for scientific research.
8. Very good spoken and written English.

III. Duties in project:

1. Culturing pituitary cell lines and/or primary cell lines and/or primary cells obtained from the brain and pituitary gland.
2. Cell culture experiments including the induction of hormone secretion, introducing stress conditions, and molecular perturbations, such as silencing of gene expression and/or introducing genetic mutations.
3. Purification of nucleic acids and proteins, studies on RNA-protein interactions, and application of various molecular biology and transcriptomic techniques in the project, including high-troughput miRNA profiling analysis.
4. Contact with Polish, German and Swiss research team members, readiness for short-term trips and exchanges.
5. Documentation, analysis and interpretation of the results.

6. Preparing the results for scientific publication.
7. Presentation of results at internal seminars at the Department and in the Institute, as well as for attending international and national 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: IBCH Application for admission
   Applications without the aforementioned constent will not be considered.
2. Certified copy of the diploma confirming graduation or a certificate confirming graduation (in the case of diplomas issued by foreign higher education schools - the diploma entitling to apply for conferment of a doctoral degree in the state of origin). 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. If a document that raises doubts is submitted, the application will not be considered because the time required for its verification would make it impossible to complete the competition within the set deadline. **We recommend a submission of the Individual Recognition Statement,** obtained from the SYRENA system or another government institution, such as the Regional Authentication Center, **which can significantly speed up the recruitment process.**
3. The candidate will be obliged to present the originals of the aforementioned documents before or on the day of commencement of the education at the doctoral school PDS IPAS.
4. 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.
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=9782a53536314b1c908c6af6aace7791

VI. Submission deadline is January 25, 2026**.**

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 March 05, 2026. The results of recruitment will be announced at the PDS IPAS website: https://psd-ipan.ichb.pl/index.php/en/home/

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

For additional information please contact the Principal Investigator:
dr hab. Monika Piwecka
e-mail:monika.piwecka@ibch.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:

1. *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).*
2. *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.*
3. *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.*
4. *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.*
5. *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.*
6. *The personal data of the candidates shall not be transferred to any third country.*
7. *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.

Protection for whistleblowers

In the case of reporting violations using a dedicated system for whistleblowers, the reporting person's data will be processed in accordance with applicable provisions on the protection of personal data, including the above-mentioned Regulation (EU 2016/679 of 27 April 2016). We ensure confidentiality and protection of the identity of reporting persons, and that their data will not be disclosed without their consent, unless the law provides otherwise.

Detailed rules regarding the protection of personal data and procedures for reporting violations of the law can be found in our Regulations on internal reporting at the Institute of Bioorganic Chemistry, Polish Academy of Sciences, available at the link:

https://portal.ichb.pl/wp-content/uploads/2024/10/INTERNALREPORTINGREGULATIONS.pdf