

**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. 17/ICHB/PSD**

INSTITUTION: Institute of Bioorganic Chemistry, PAS
CITY: Poznań
POSITION F/M: PhD student
POSITIONS AVAILABLE: 1
SCIENTIFIC DISCIPLINE: biological.sciences
PUBLICATION DATE: 9th September 2026
APPLICATION DEADLINE: 10th October 2026
IBCH PAS WEBSITE: <https://portal.ichb.pl/homepage/>
PDS IPAS WEBSITE: <https://psd-ipan.ichb.pl/index.php/en/home/>

KEY WORDS: miRNA, cancer, somatic mutations, the non-coding genome, interpretation of variants in miRNA genes, pathogenicity modeling.

Research topic: Global analysis of the functional consequences of sequence variants in miRNA genes.

Principal Investigator: dr Paulina Gałka-Marciniak.

I. Project description:

Genetic variation within microRNA (miRNA) genes represents an underexplored yet potentially powerful source of regulatory dysfunction contributing to human disease, including cancer. Until recently, very little (close to nothing) was known about the occurrence and role of mutations in miRNA genes. This important and largely unexplored topic has been addressed primarily in pioneering studies by our team. Although an increasing number of mutations are being discovered in miRNA genes, they are largely ignored due to a lack of knowledge and suitable tools for their analysis and interpretation. Existing variant-effect prediction tools are not designed for miRNA genes and therefore fail to capture miRNA-specific mechanisms, including the structural and sequence requirements for efficient precursor processing by cellular RNases as well as the determinants of precise miRNA:target interactions. Consequently, the field still lacks a systematic framework for interpreting the biological consequences of sequence variants within miRNA genes, similar to “the genetic code” for variants in protein-coding sequences.

The project will undertake comprehensive analyses aimed at investigating the functionality of sequence variants within miRNA genes, with a particular focus on their pathogenic potential. We will perform high-throughput genome editing to generate variants in miRNA genes using the CRISPR system. Their consequences will be assessed using a state-of-the-art single-cell sequencing platform, which enables simultaneous profiling of hundreds of genomic loci together with associated transcriptomic changes, providing a high-resolution and precise map of variant effects across thousands of cells. The experimentally determined effects will then be integrated with multiple available metrics capturing the impact of sequence changes on miRNA-specific features, including precursor structure, evolutionary conservation, alterations in regulatory motifs, functional genomics datasets, and results from pri-miRNA variant screens. Together, these data will allow us to identify characteristic patterns and systematic trends associated with variants having the greatest functional impact, providing the basis for the development of a scoring system for the classification and prioritization of variants in miRNA genes. The resulting platform will enable researchers and clinicians to systematically interpret miRNA variants identified in genomic studies and, ultimately, support their application in diagnostics, risk stratification, and precision oncology.

The PhD student will participate mostly in wet lab analyses, but the project also offers an opportunity to gain experience in bioinformatics and large scale data analysis.

The Institute of Bioorganic Chemistry of the Polish Academy of Sciences (ICHB PAS) is one of the leading scientific institutions in Poland in the fields of chemistry, molecular biology, and biomedicine, as demonstrated by the number and quality of its scientific publications and successfully obtained research grants. The work will be carried out in a young and dynamic research team, offering excellent opportunities for high-quality publications. The project will provide strong opportunities for professional development, further experience in genetics and bioinformatics, and access to state-of-the-art technologies. The experience gained at ICHB PAS and within the research team will provide an excellent foundation for future applications for various research grants, as well as for pursuing further independent research positions and academic degrees.

Additional information:

1. Research and doctoral theses shall be carried out within the project 2025/59/B/NZ2/03193, entitled “How deleterious are miRNA gene variants? A global analysis of their functional consequences”, funded by National Science Center
2. PhD students shall receive a stipend in the gross amount of ca 5555 PLN (4930 PLN net) for the period of 48, and with the possibility of increasing the amount of the stipend after the mid-term evaluation (in accordance with the current decision of the Director - 5750 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).

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 molecular biology, genetics, or biotechnology. Familiarity with molecular biology techniques, such as cell culture, electrophoresis, and RNA isolation and purification, is highly desirable. Basic knowledge of bioinformatics techniques will be an additional advantage.
3. Very good spoken and written English

III. Duties in project:

1. Active involvement in the implementation of the project, including planning and conducting experiments and analyzing the results.
2. Reviewing and analyzing scientific literature related to the project.
3. Participation in the preparation of manuscripts.
4. Presentation of results at seminars and scientific meetings.

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 consent 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=9b9e0a4d1f7a4725894111f0c5d4aefa>

VI. Submission deadline is 10th October 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 20th November 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 Paulina Gałka-Marciniak

e-mail: pgalka@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>