INSTITUTE OF BIOORGANIC CHEMISTRY
Polish Academy of Sciences

Noskowskiego 12/14, 61-704 Poznań
tel.: +48 61 852 85 03, secretariat +48 61 852 89 19
fax: +48 61 852 05 32, e-mail: ibch@ibch.poznan.pl
REGON 000849327 VAT no. PL 7770002062
http://www.ibch.poznan.pl

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. 2/2026/ICHB/PSD

INSTITUTION:	Institute of Bioorganic Chemistry, PAS
CITY:	Poznań
POSITION:	PhD student
POSITIONS AVAILABLE:	2
SCIENTIFIC DISCIPLINE:	biological/chemical sciences
PUBLICATION DATE:	08.01.2026
APPLICATION DEADLINE:	09.02.2026
IBCH PAS WEBSITE:	https://portal.ichb.pl/homepage/
PDS IPAS WEBSITE:	https://psd-ipan.ichb.pl/index.php/en/home/

KEY WORDS:
influenza virus, RNA structure, dynamic RNA structures, RNA pseudoknots, RNA G-quadruplexes, PNA, peptide nucleic acids, small molecules, ligands, new antiviral drugs.
Research topic: Dynamic RNA structures including pseudoknots and G-quadruplexes of influenza type A virus RNAs as targets for designing novel peptide nucleic acids for inhibition and modulation of viral replication.
Principal Investigator: Prof. Elżbieta Kierzek, PhD

I. Project description:

Influenza A virus (IAV) causes seasonal epidemics of flu, worldwide and can cause severe disease in people of all ages. Even more dangerous are fast spreading flu pandemics which occur relatively often. The IAV genome continuously evolves mutations that allow the virus to escape immunity from prior infection or vaccination. Therefore, there is a need to deepen our knowledge about IAV toward finding a new, strain-independent, efficient cure.

In the project we focus on viral RNA and its structural conserved motifs, universal for all IAV strains, as a target for new therapy. The goal is to study dynamic conserved RNA structural motifs of IAV, including pseudoknots and G-quadruplexes, for deeper knowledge of their function. Next step will be modulation of their function with novel peptide nucleic acids (PNA) and the creation of PNA-conjugate inhibitors of virus replication.

In detail, the study includes:
1/ Designing and studies of binding properties of novel PNAs;
2/ High-throughput screening (HTS) of small molecule libraries for selection of ligands (small molecules, SMs) specific for IAV conserved RNA motifs;
3/ Tests of the selected PNAs and PNA conjugates with small molecules in cell cultures, using: (a) functional assay, (b) minireplicon and (c) native influenza A and mutated viruses;
4/ Evaluation of inhibitory properties of selected PNAs and its conjugates in laboratory mouse models against IAV.

The realization of the project will lead to a better understanding of influenza virus biology and designing new, efficient and universal antivirals. Planned studies are multi-threaded, innovative and multidisciplinary and engage

highly advanced methods. The project includes international collaboration with an expert of PNA - Gang Chen from the Chinese University of Hong Kong, Shenzhen (CUHK-Shenzhen).

Additional information:

1. Research and doctoral theses shall be carried out within the project SHENG 4 No. 2025/56/Q/NZ1/00465 entitled "Dynamic RNA structures including pseudoknots and G-quadruplexes of influenza type A virus RNAs as targets for designing novel peptide nucleic acids for inhibition and modulation of viral replication", funded by National Science Center.
2. Employment is available from February 2, 2026.
3. PhD students shall receive a stipend in the gross amount of ca 4300 PLN (ca. 3800 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 (approx. 5590,00 PLN gross).
4. 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 chemistry/biology 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 or bioorganic chemistry or virology.
3. Experience working with biomolecules is desirable, for example, in research with nucleic acids and their complexes, participation in structural studies of biomolecules, or studies using cell lines.
4. Knowledge of basic issues related to the project's research topic.
5. High motivation for further professional development and the ability to work in a team.
6. Very good spoken and written English.

III. Duties in project:

1. Participation in the design of PNA conjugates targeting influenza A virus RNA.
2. Studies of PNA and PNA-SM complexes with G-quadruplexes and other dynamic motifs of influenza RNA.
3. Studies of structural changes in RNA induced by PNA tools on model RNAs and in cells.
4. Studies of functional changes in influenza virus induced by PNA tools using minireplicon and native and mutant influenza A virus (IAV).
5. Analysis and documentation of results, preparation of manuscripts for publication.
6. Presentation of results at departmental and institute seminars, and 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=495a7584401f475db1410c93eb603d96

VI. Submission deadline is **09.02.2026.**

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 or chemical sciences.
4. Knowledge of the subject matter described in the recruitment advertisement.

VIII. The recruitment procedure shall be concluded no later than **25.03.2026.**
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:
Elżbieta Kierzek
e-mail: elzbieta.kierzek@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