

**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. 27/2023/ICHB/PSD**

INSTITUTION: Institute of Bioorganic Chemistry, PAS  
CITY: Poznań  
POSITION: PhD students  
POSITIONS AVAILABLE: 2  
SCIENTIFIC DISCIPLINE: biological or chemical sciences  
PUBLICATION DATE: **18.09.2023**  
APPLICATION DEADLINE: **22.10.2023**  
IBCH PAS WEBSITE: <https://portal.ichb.pl/homepage/>  
PDS IPAS WEBSITE: <https://psd-ipan.ichb.pl/index.php/en/home/>

**KEY WORDS: RNA, crystallography, ligands, small molecules, RNA-ligand complexes, development of therapy of human disorders, neurodegenerative disorders .**

Principal Investigator: dr hab. Agnieszka Kiliszek, Assoc. Prof.

Research topic: Crystallographic analysis of RNA complexes with synthetic molecules

### **I. Project description**

The aim of the project is crystallographic analysis of complexes of synthetic ligands with disease-related RNA molecules. The research object is a group of small compounds recognizing unique pattern of nucleobases, engaged in non-canonical pairing or located in single stranded regions of RNA molecules. Target molecules are RNA involved in pathogenesis of large group of neurodegenerative disorders, such as Huntington's disease, fragile X-associated tremor ataxia syndrome, myotonic dystrophies and spinocerebellar ataxias. In the course of the project we will investigate four groups of synthetic ligands developed by the group of prof. Kazuhiko Nakatani from Osaka University. Each group recognize different nucleobases and sequences. The main technique used in the project will be x-ray crystallography (or complementary methods) supplemented by biochemical evaluation of RNA-ligand complexes. The structural information derived from the crystallographic models will help to rationally design and optimise lead compounds, opening new avenues for future clinical interventions. The final goal of the project is determination of general structural requirements and guidelines for rational design of small molecules targeting RNA.

### **Additional information:**

1. Research and doctoral theses shall be carried out within the OPUS 23 (Project No. 2022/45/B/NZ7/03543), entitled "Crystallographic analysis of RNA-ligand complexes. Towards rational design of lead compounds for development of therapies against neurodegenerative disorders", funded by National Science Centre
2. PhD students shall receive a stipend in the gross amount of ca 4300 PLN (3800 PLN net), for the period of 37 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. 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. Basic experience in laboratory work, encompassing molecular biology/biochemistry/chemistry
3. Knowledge regarding basic issues related to the research topic of the project

4. Ability to independently solve scientific problems, communicativeness, enthusiasm for experimental work and the ability to work in a team
5. Very good spoken and written English
6. Additional attribute will be some experience in bio-crystallography or crystallography of small molecules

### **III. Duties in project:**

1. Planning and conducting experiments within the project, analysis of the results.
2. Involvement in the preparation of scientific publications.
3. Review and analysis of scientific articles on topics important for the project development.
4. Presentation of the results at 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 [https://psd-ipan.ichb.pl/wp-content/uploads/2023/05/ICHBApplication\\_for\\_admission\\_10\\_05\\_23.docx](https://psd-ipan.ichb.pl/wp-content/uploads/2023/05/ICHBApplication_for_admission_10_05_23.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. Cover letter featuring a short description of research interests, achievements and justification for the intention to commence education at the doctoral school.
5. Certificates or other documents confirming the degree of proficiency in English, if the candidate is in possession of such materials.
6. 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=17af1be7d1d6405bb63bff5188b7d508>

**VI.** Submission deadline is **22.10.2023**.

### **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 **05.12.2023**.

**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:

dr hab. Agnieszka Kiliszek, Assoc. Prof.

e-mail: kiliszek@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:*

- *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.*