

**IBCH PAS RECRUITMENT PROCEDURE NO. 25/2022/SN  
FOR THE POSITION OF A POSTDOCTORAL RESEARCH ASSISTANT**

INSTITUTION: Institute of Bioorganic Chemistry, Polish Academy of Sciences,  
Department of Structural Biology of Eukaryotes  
CITY: Poznan  
POSITION: assistant professor (post-doc)  
POSITIONS AVAILABLE: 1  
SCIENTIFIC DISCIPLINE: chemistry  
PUBLICATION DATE: **21 December 2022**  
APPLICATION DEADLINE: **20 January 2023**  
WEBSITE: <https://portal.ibch.poznan.pl/homepage>

**KEY WORDS:** drug design, anticancer drugs, medicinal chemistry, enzyme inhibitors, macromolecular structure  
**Principal Investigator:** dr hab. Milosz Ruzkowski

**Research topic:** Cancer cells reprogram their proline metabolism to enable survival, proliferation and metastatic spread. In the final reaction of proline biosynthesis,  $\delta$ 1-pyrroline-5-carboxylate (P5C) reductase converts P5C into proline utilizing NAD(P)H as a cofactor. The aim of this project is to develop inhibitors of PYCR1, a human P5C reductase, which has emerged as a novel intervention point to deregulate the metabolism of malignant cells. To this end, we will combine high-throughput screening with rationalized drug design and use both wet-lab experiments and computer-aided methods. First, we will identify the so-called hit compounds, able to slow down PYCR1 activity to some extent. Then, we will optimize these molecules to produce more potent inhibitors. The optimization steps will be guided by 3D structures of these molecules binding to PYCR1, which will suggest changes to be made for improved efficacy. New compounds will be synthesized and their potency against PYCR1 activity will be tested *in vitro* and *in cellulo*.

We offer this position within the research project OPUS 22 nr 2021/43/B/NZ7/01611 entitled: **Search for Inhibitors of Human  $\delta$ 1-Pyrroline-5-Carboxylate Reductase 1 (PYCR1) as Lead Molecules for the Development of Novel Anticancer Drugs**, financed by the National Science Centre, Poland.

IBCH PAS is one of leading research institutes in Poland and conducts research in the field of chemistry, molecular biology and biomedicine. The Institute provides access to cutting-edge research equipment. The organic synthesis laboratory will be located at Poznan University of Medical Sciences (PUMS), which is a partner in the project consortium.

**I. Requirements for the candidates:**

1. PhD degree in chemistry or a related discipline. \*
2. Experience in organic synthesis, incl. capability of designing and planning synthetic routes.
3. Well-documented research output in the form of research papers.
4. Ability to make responsible decisions without supervision and adaptability to teamwork.
5. Good command of English, enabling efficient communication and preparation of research papers.
6. Experience in measuring enzyme inhibition, working with human cell lines, or computational chemistry will be considered as assets but are not a prerequisite.

\*In accordance with the requirements of the National Science Center, only those candidates who received their PhD degree no earlier than 7 years prior to the date of employment within the research project, excluding parental or related leaves governed by the stipulations of the Labor Code, rehabilitation period associated with rehabilitation allowances or other rehabilitation benefits, are eligible for recruitment. In such cases, the aforementioned 7-year period shall be extended by additional 18 months for every descendant or adoptee. Female applicants may choose the way of justifying breaks in their research career, which is more favorable in a given case.

Pursuant to the regulations of the National Science Center, only those candidates are eligible for the position who obtained their PhD degree at an institution other than the Institute of Bioorganic Chemistry, PAS, or accomplished at least a 10-month long, continual and documented post-doctoral internship at an institution other than the host institution, in a country other than the country where the doctoral degree was conferred.

## II. Job Responsibilities:

1. Leading role in organic synthesis, under partial supervision by prof. Marek Bernard (PUMS).
2. Assistance during the execution of high-throughput screening (at the Centre for Advanced Technologies, Poznan).
3. Setting up crystallizations and (after training) solving of protein-ligand complex structures.
4. Significant input during design of new compounds.
5. Assistance during *in cellulo* experiments; after training performing the assays unsupervised.
6. Manuscript preparation.
7. Day-to-day supervision of the PhD student.

## III. Required documents:

1. Cover letter of application to the Director of IBCH PAS featuring contact details to at least two referees.
2. Copy of the doctoral diploma.
3. CV featuring information on the candidate's scientific track record, including:
  - the list of papers published in journals listed in the Web of Science (WoS) database, stating the IF in accordance with WoS, number of citations and the H-index.
  - list of patents;
  - information on the previously managed projects or participation in project implementation;
  - information on the accomplished research internships;
  - information on the awarded prizes and distinctions.

## IV. Applications must be submitted via the eRecruiter portal

<https://system.erecruiter.pl/FormTemplates/RecruitmentForm.aspx?WebID=0f49be3d40884b859cd49ac106f0f322>

## V. The submission deadline is January 20, 2022.

## VI. Selection of candidates:

Following preliminary verification, on the basis of the application documents, selected candidates will be invited to an interview, as a result of which a candidate recommended for employment shall be appointed. The main criteria, taken into consideration during the selection of the candidates, will be: (i) research output (research papers published), (ii) compliance of the previous experience with the tasks planned within the framework of the project (in the following order: organic synthesis, enzyme inhibition assays, working with cell lines or computational chemistry), (iii) experience gained during a long-term, foreign internship.

## VII. The recruitment procedure shall be concluded no later than on January 31, 2022.

## VIII. Start and duration of the position.

Employment is available from the end of the recruitment procedure.

The position is available for the period of 43 months. The estimated gross salary is ca. **8 150 PLN/month**.

Employment shall take place in compliance with the provisions of the Labor Code of Poland.

**For more details, please contact:**

dr hab. Miłosz Ruszkowski

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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](mailto: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.*