Recruitment for the Poznań Doctoral School of the Institutes
of the Polish Academy of Sciences
at the Institute of Bioorganic Chemistry, PAS in Poznan
Procedure no. 22/2021/ICHB/PSD

INSTITUTION:	Institute of Bioorganic Chemistry, PAS
CITY:	Poznan
POSITION:	PhD student
POSITIONS AVAILABLE:	1
SCIENTIFIC DISCIPLINE:	biological sciences
PUBLICATION DATE:	30.07.2021
APPLICATION DEADLINE:	31.08.2021
IBCH PAS WEBSITE:	http://www.ibch.poznan.pl
PDS IPAS WEBSITE:	http://www.psd-ipan.ibch.poznan.pl/

Key words: cancer, genetics, non-coding regions

Research topic: Cancer encompasses a broad spectrum of heterogeneous diseases whose development (i.e., initiation, promotion, and progression) is associated with the accumulation of numerous genetic alterations in the cancer genome, which is the hallmark of all cancers. Numerous large cancer genome sequencing studies (mostly whole-exome sequencing, WES) have been performed, and hundreds of cancer-driving genes and thousands of cancer-driving mutations have been detected. Some of these genes/mutations, e.g., EGFR, BRAF, and JAK2, serve as important biomarkers for cancer-targeted therapies. As the overwhelming majority of the cancer genome studies have focused on protein-coding exons of protein-coding genes, the overwhelming majority of identified cancer driver mutations are in protein-coding sequences, which encompass barely 2% of the genome. To date, however, very little (close to nothing) is known about somatic mutations in the vast area of the non-coding part of the genome. Therefore, in this project, we are going to explore the hypothesis that there are numerous cancer-driving mutations in the non-coding part of the genome particularly in sequences coding for non-coding parts of RNA and non-coding RNAs. In this project in a large panel of cancer (predominantly lung cancer) samples, we will look for and characterize somatic mutations in untranslated regions of protein-coding genes (5'UTRs, 3'UTRs, and introns) and long non-coding RNAs (lncRNAs), to identify potential non-coding cancer drivers. Some of these drivers may become cancer biomarkers or event targets of cancer therapies.

Principal Investigator: Prof. Piotr Kozłowski

We offer the position of a PhD student within OPUS NSC research project entitled: *Identification of cancer-driver mutations in non-coding parts of protein-coding genes and long non-coding RNA genes*.

I. Project description

The main goal of the project is analysis and functional characterization of cancer somatic mutations in non-coding regions of protein-coding genes, i.e., 5'UTRs, 3'UTRs, and introns as well as in selected long non-coding RNAs (lncRNAs). The first step of the project will be extended whole-exome sequencing (WES+) of a large group of cancer and corresponding normal samples. We will also analyse external cancer genomic data, e.g., from a project as The Cancer Genome Atlas (TCGA).

INSTYTUT CHEMII BIOORGANICZNEJ
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Additional information:

1. Research and doctoral theses shall be carried out within OPUS 20 (2020/39/B/NZ5/01970) research project entitled: ***Identification of cancer-driver mutations in non-coding parts of protein-coding genes and long non-coding RNA genes***, 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 48 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. Holds a Master's degree in biology, biotechnology, compucional biology or related fields.
2. Knowledge of molecular biology techniques, i.e: cell culture, RT-PCR, electrophoresis, isolation and purification of RNA and proteins, primer design. Basic experience in compucional biology would be beneficial but is not strictly required.
3. Good command of spoken and written English.

III. Duties

1. Active involvement in the implementation of the project (i.e. planning and conducting experiments within the project, analysis of the results).
2. Participation in manuscripts preparations.
3. Presentation of the results in seminars and scientific meetings.

IV. Required documents

1. Application for admission to Poznan PHD School of Institutes of Polish Academy of Sciences (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://www.ibch.poznan.pl/uploads/studium%20doktoranckie/2019/ICHB%20-%20Application%20for%20admission%20(2019-09).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 does not have 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, and a potential list of publications.
4. A 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.

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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=8e0f3e8d227c4499a7359000bcb97515

VI. Submission deadline is **August 31st, 2021**

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 **September 30th, 2021.**

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:

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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:

> *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).*

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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.