

**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 9/2020/ICHB/PSD**

INSTITUTION: Institute of Bioorganic Chemistry, PAS
CITY: Poznań
POSITION: PhD student
POSITIONS AVAILABLE: 1
SCIENTIFIC DISCIPLINE: biological sciences
PUBLICATION DATE: June 23rd, 2020
APPLICATION DEADLINE: July 22nd, 2020
IBCH PAS WEBSITE: <http://www.ibch.poznan.pl>
PDS IPAS WEBSITE: <http://www.psd-ipan.ibch.poznan.pl/>

KEY WORDS:

Research topic: Comprehensive analysis of the *Schmidtea mediterranea* transcriptome – identification of non-coding RNAs involved in cell lineage development during regeneration

Principal Investigator: Dr. Paulina Jackowiak

I. Project description

With the advent of regenerative medicine and tissue engineering as crucial segments of the future healthcare of ageing societies, regeneration has become one of the central problems in molecular biology. Despite accumulating evidence on the role of proteins and RNA in regeneration, many aspects of this phenomenon remain unclear. Currently, systematic interrogation of transcriptomes during regeneration emerges as a key requirement to describe the steps leading from pluripotent stem cells to differentiated ones. Planarians (free living flatworms, *Platyhelminthes*), including *Schmidtea mediterranea*, have been recognized as excellent models to study regeneration, because in these animals all cell lineages, from progenitors to differentiated cells, are constantly present in an adult organism.

The long-term goal of this project is to reveal how do non-coding RNAs (ncRNAs) impact the regeneration of *S. mediterranea*. To reach this objective, we will provide a comprehensive characterization of the *S. mediterranea* transcriptome. Then, we will test how does regeneration proceed upon a disruption of the RNA metabolism, induced by silencing of selected ribonucleases. In particular, we will focus on ribonucleases associated with the pathomechanism of human genetic diseases. To characterize the transcriptome and assess the impact of ncRNA on cell lineage development during regeneration, we will apply robust next generation sequencing (NGS) techniques on Illumina and PacBio platforms and single-cell RNA sequencing.

Additional information:

1. Research and doctoral thesis shall be carried out within the **OPUS 18** project no. **2019/35/B/NZ2/02658**, funded by the National Science Centre.
2. PhD student shall receive a stipend in the gross amount of 4 200 zloty, for the period of 48 months. The net amount shall be ca. 3 700 PLN.
3. PhD student 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 molecular biology, bioinformatics, chemistry, biotechnology or related sciences 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); BSc title holders can also apply but will need to obtain their MSc title before they start working in the project.;
2. Experience in bioinformatic analysis.
3. Proficiency in at least one coding language, e.g. Python or R.
4. High motivation and enthusiasm for scientific work.
5. Willingness to accept responsibility for assigned tasks.
6. Ability to work independently, as well as in the team.
7. Very good command of English.
8. Experience in NGS data analysis pipelines will be an advantage.

III. Responsibilities in the project:

Accomplishment of research tasks – bioinformatic part: data acquisition, analysis and processing, implementation of data management plan. Research tasks:

1. Analysis and characterization of the *S. mediterranea* transcriptome.
2. Analysis of the impact of RNA metabolism disorder on *S. mediterranea* regeneration.
3. Identification of: (i) cell lineages affected by RNA metabolism disorder and (ii) candidate ncRNAs associated with the aberrant development of cell lineages.
4. Functional screening of ncRNAs associated with the aberrant development of cell lineages.

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://www.ibch.poznan.pl/uploads/studium%20doktoranckie/2019/ICHB%20-%20Application%20for%20admission%20\(2019-09\).docx](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 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, list of publications (if applicable), information on involvement in scientific activities (participation in student research groups, attendance at scientific conferences, accomplished internships and training, awarded prizes and distinction).
4. Cover letter featuring a short description of research interests, scientific accomplishments, a list of publications, information on involvement in scientific activity (membership of student scientific groups, participation in scientific conferences, completed internships and training courses, prizes and distinctions received) and reasons for wishing to study 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=d2b936d55034496fb099b03569c50058>

VI. Submission deadline is **July 22nd, 2020** .

VII. Criteria for evaluation of candidates:

1. Knowledge in biology and bioinformatics related to the project.
2. 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.
3. 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.
4. Knowledge of the subject matter described in the recruitment advertisement.

VIII. The recruitment procedure shall be concluded until **August 5th, 2020**.

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 strong and weak sides of their applications.

For additional information please contact the Principal Investigator:

Dr. Paulina Jackowiak, Department of Molecular and Systems Biology

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Information clause:

According to the content of art. 13 of Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of individuals 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), hereinafter referred to as GDPR, we inform that:

1. *The administrator of the collected personal data is the Institute of Bioorganic Chemistry of the Polish Academy of Sciences, Noskowskiego 12/14, 61-704 Poznan, Poland, VAT No. PL 777-00-02-062 (hereinafter referred to as the Institute).*
2. *The administrator has appointed a Data Protection Inspector who can be contacted in writing, by traditional mail, writing to the Institute's address: Data Protection Inspector, Institute of Bioorganic Chemistry of the Polish Academy of Sciences, Noskowskiego 12/14, 61-704 Poznan, Poland or by sending an e-mail to: dpo@ibch.poznan.pl.*
3. *Personal data are processed in order to implement the administrator's tasks related to the recruitment to the Poznań Doctoral School of the Institutes of the Polish Academy of Sciences.*
4. *The legal basis for data processing is the Act of 26 June 1974 - Labor Code, the Act of 30 April 2010 on the Polish Academy of Sciences, the Act of 20 July 2018 Law on Higher Education and Science and consent of the data subject.*
5. *Personal data collected in the current recruitment process will be stored for 3 months from the moment the recruitment process is resolved. After this period, personal data will be effectively destroyed.*
6. *Personal data will not be conveyed to a third country.*
7. *Personal data of the candidate selected in the competition may be made available to third parties authorized under the law.*
8. *The person whose data is processed has the right to:*
 - *access to the content of your personal data, demand their correction or deletion, on the terms set out in art. 15-17 GDPR;*
 - *set restrictions on data processing, in cases specified in art. 18 GDPR;*
 - *data transfer, on the principles set out in art. 20 GDPR;*
 - *withdrawal of consent at any time without affecting the lawfulness of the processing that was carried out on the*

basis of consent before its withdrawal;

- lodging a complaint to the President of the Office for Personal Data Protection.

Providing personal data in the scope resulting from art. 22 (1) of the Act of 26 June 1974 - Labor Code, is mandatory, providing data in a broader scope is voluntary and requires consent to their processing. Refusal to provide personal data prevents the application from being considered.