INSTITUTE OF PLANT GENETICS POLISH ACADEMY OF SCIENCES

Strzeszynska 34, 60-479 Poznan

Tel.: 61 6550200, secretary: 61 6550255 E-mail: office@igr.poznan.pl www.igr.poznan.pl/en/home-en/
VAT EU: PL7811621455 REGON: 000326204 BDO: 000017736

Recruitment for the Poznań Doctoral School of the Institutes of the Polish Academy of Sciences at the Institute of Plant Genetics, PAS in Poznan
Procedure no. 18/2025/IGR/PSD

INSTITUTION:	Institute of Plant Genetics, Polish Academy of Sciences
CITY:	Poznan
POSITION:	PhD student
POSITIONS AVAILABLE:	1
SCIENTIFIC DISCIPLINE:	agricultural sciences
PUBLICATION DATE:	09.07.2025
APPLICATION DEADLINE:	09.08.2025
IPG PAS WEBSITE:	http://www.igr.poznan.pl/en/home-en/
PDS IPAS WEBSITE:	http://www.psd-ipan.ibch.poznan.pl/index-en.html

KEYWORDS: genetics, genomics, bioinformatics, genotyping, phenotyping, quantitative trait loci mapping, gene expression, flowering time regulation, vernalization, photoperiod, lupin.

Research topic: The primary aim of our research is to identify and characterize the vernalization pathways in New World Lupins (NWLs) and to compare these pathways with those described for Old World Lupins (OWLs). Our study seeks to understand how flowering is induced, the vernalization response, and how NWLs adapt to changing environments. The findings will provide insights into the genetic and evolutionary relationships between species, the functional elements of genomes, and the mechanisms that drive genomic diversity and adaptation. Additionally, these results will serve as a foundation for developing new models of flowering and vernalization, potentially leading to the discovery of underutilized plant protein sources for food and feed production.

Principal Investigator: dr Sandra Rychel-Bielska

DESCRIPTION:

Place of employment: Department of Gene Structure and Function, Institute of Plant Genetics, Polish Academy of Sciences

Supervisor: dr hab. Michał Książkiewicz, **co-supervisor**: dr Sandra Rychel-Bielska

Goal of employment: implementation of the project OPUS 27 no. 2024/53/B/NZ9/01796

Scope of research: The doctoral thesis will investigate the hypothesis that the vernalization pathways in New World lupins are similar to those described for Old World lupins. However, it is anticipated that the evolutionary processes in the Andes may have introduced specific lineage- or species-related changes in New World lupins. To achieve this objective, we will conduct phenotyping under various environmental conditions, alongside molecular analyses of all the studied species. This will include whole-genome DNA sequencing, RNA sequencing, and genotyping using DArT-seq. By combining these results with sequencing data, we aim to identify candidate genes involved in the induction of flowering

in the species under study and compare these findings with the primary flowering regulators found in Old World lupins.

Duties in the project: The PhD candidate will participate in the research project according to the established research plan, collaborating with colleagues from the Department. Responsibilities include phenotyping, genotyping, and interpreting the obtained results. Additionally, the candidate will assist in preparing scientific publications and conference presentations, as well as contributing to other ongoing research initiatives within the Department.

Requirements for the candidates:

1. Master's degree in Biology, Biotechnology, or related fields
2. Laboratory experience in the field of molecular biology, in particular PCR, DNA, and RNA isolation.
3. Preferred experience in bioinformatics, knowledge of tools for sequence analysis, and publicly available genomic resources.
4. Basic knowledge of genetics, including understanding genetic mapping and QTL mapping.
5. Basic knowledge of gene expression regulation in eukaryotic organisms.
6. Knowledge of molecular control of flowering induction in plants.
7. Ability to use MS Office software, including Word and Excel.
8. At least good knowledge of spoken and written English.
9. Independence in performing experiments and teamwork skills.
10. **Candidates who are citizens of countries outside the European Union must provide current documentation verifying their right to reside in Poland.**
11. Readiness to start research no later than one month after the publication of recruitment results.
12. Knowledge of R/Python or related programming languages is welcome.
13. Additional scientific activity (publications, conference communications, and other forms of presenting results, participation in projects, scientific groups, etc.) and organizational activity (e.g., organizing workshops, training, and conferences) are welcome.

Additional information:

1. Research and doctoral theses shall be carried out within the OPUS 27 project no. 2024/53/B/NZ9/01796, entitled “Journey of a thousand miles along the vernalization paths of the Old and New World Lupins”, funded by National Science Centre, Poland.
2. The PhD student will receive a scholarship in the amount of PLN 4270,00 gross/PLN 3700,00 net, for a period of 24 months. After a positive mid-term evaluation, the PhD scholarship will increase to PLN 5340,90 gross/PLN 4739,00 net for a period of 24 months.
3. PhD students shall be subject to social insurance, pursuant to the article. 6 section 1 passage 7b of the act of October 13th, 1998, on the social insurance system (Journal of Laws of 2019, items 300, 303, and 730).

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 http://www.igr.poznan.pl/en/main-en/ids-en/poznan-doctoral-school
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

ATTENTION: at the stage of the recruitment process, there is no requirement to present documents certified by the apostille clause nor the requirement of nostrification of diplomas. These requirements must be met if the candidate is accepted.

3. **Scientific Europass 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. Additional information are available at: https://europass.europa.eu/en
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. The contact details of at least one previous scientific supervisor or another researcher who is entitled to issue an opinion on the candidate.

Documents in the electronic form (in 1 pdf file) must be sent by e-mail to psd@igr.poznan.pl with the following title: **PhD student – Gene Structure and Function Team**, supplemented by the **number of the procedure: 18/2025/IGR/PSD.**

The submission deadline is 09.08.2025

Criteria for evaluation of candidates:

1. Candidate's research achievements, according to the grades obtained in the course of studies, scientific publications, awarded scholarships, and distinctions resulting from conducting scientific research, 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, and experience in other sectors, including industry.
3. Candidate's knowledge of the following disciplines: horticulture and agriculture, agriculture sciences.
4. Knowledge of the subject matter described in the recruitment advertisement.

ATTENTION: The candidate should fulfill the Europass CV document in a clear and well-organized way. Education section should include at least full name of the University, data of graduation and the theme of master thesis; professional experience section shuld include the exact period of every activitis, the role and the main tasks; workshops, training and internship section should consist of the time period, full name of the organization, name of academic supervisor, lecturer; the conferences and publications record should include complete bibliography information and the DOI number. **Only the data well described and organized will be taking into consideration. In case of missing data the corresponding record will not be evaluated.**

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.

For additional information, please contact:

Principal Investigator: dr Sandra Rychel-Bielska

e-mail: sandra.rychel-bielska@upwr.edu.pl

Announcement of the results: Within one month from the deadline for applications.

Information clause:

Pursuant to 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 (hereinafter General Data Protection Regulation - GDPR), the Employer informs that:

a) the administrator of personal data obtained, collected and processed as a part of the implementation of this agreement is the Institute of Plant Genetics, Polish Academy of Sciences, 34 Strzeszyńska str., 60-479 Poznań,
b) contact with the inspector of personal data protection of the Institute of Plant Genetics, Polish Academy of Sciences in Poznan, is possible at the following e-mail address: iodo@igr.poznan.pl,
c) the basis for data processing is art. 6 par. 1 letter b) and c) of the Regulation referred to above,
d) all personal data provided to the Employer will be kept for the duration of the contract and for a period of 5 years after its completion,
e) in relation to the personal data obtained, the Employer will not make decisions in an automated manner,
f) The Employee is entitled to:based on Article.
   - 15 GDPR - access to personal data
   - based on Article. 16 GDPR - rectify personal data;
   - based on Article. 18 GDPR - request the administrator to restrict the processing of personal data, except to the cases referred to in art. 18 para. 2 GDPR;
   - the right to file a complaint to the President of the Office for Personal Data Protection, if the Employee considers that the processing of personal data by the Employer violates the provisions of the GDPR.