



# INSTITUTE OF PLANT GENETICS POLISH ACADEMY OF SCIENCES

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## Recruitment for the Poznań Doctoral School of the Institutes of the Polish Academy of Sciences at the Institute of Plant Genetics, PAS in Poznań Procedure no. 8/2022/IGR/PSD

INSTITUTION: Institute of Plant Genetics, PAS  
CITY: Poznań  
POSITION: Ph.D. student  
POSITIONS AVAILABLE: 1  
SCIENTIFIC DISCIPLINE: agriculture and horticulture/biological sciences  
PUBLICATION DATE: March 01, 2022  
APPLICATION DEADLINE: June 15, 2022  
IPG PAS WEBSITE: <http://www.igr.poznan.pl/en/home-en>  
PDS IPAS WEBSITE: <http://www.psd-ipan.ibch.poznan.pl/>

**KEY WORDS:** winter-hardiness, frost tolerance, cold acclimation, de-acclimation, forage grasses, proteome, metabolome, lipidome, photosynthetic apparatus, enzymatic antioxidant system

**Research topic:** The main objective of our project is to recognize key physiological and molecular components of plant metabolism involved in acquiring/loss of frost tolerance with respect to the sequence of cold acclimation (CA), de-acclimation (DA), and re-acclimation (RA). The research will be performed using the valuable plant models from a group of *Lolium-Festuca* forage grasses, *F. arundinacea* (tall fescue) and the introgression forms of *L. multiflorum* (Italian ryegrass)/*F. arundinacea* with different levels of winter-hardiness, selected in the variable conditions, including oscillating temperatures. The objectives of the project will be focused on: (i) Analysis of cellular proteome, primary metabolome, and lipidome; (ii) Analysis of reactive oxygen species and plant antioxidant capacity; (iii) Monitoring of plant photosynthetic capacity and cellular membranes integrity. The particular experiments will be conducted at precisely defined time-points of CA, DA and RA periods and in the control conditions (optimal growth conditions).

**Principal Investigator:** dr. Dawid Perlikowski

### DESCRIPTION:

**Place of employment:** Plant Physiology Team, Institute of Plant Genetics, Polish Academy of Sciences

**Supervisor:** dr. Dawid Perlikowski and prof. Arkadiusz Kosmala

**Goal of employment:** implementation of OPUS22, no. 2021/41/B/NZ9/00782

**Scope of research:** Analysis of plant physiological performance (membrane integrity and photosynthetic capacity) in the sequence of processes: cold acclimation, de-acclimation, and cold re-acclimation. Detection of reactive oxygen species and analysis of antioxidant system activity. Analysis of proteome, metabolome and lipidome at the selected time-points of the experiment. Examination of frost tolerance of the plants in the selected time-points of the experiment.

**Duties in project:** Conducting experiments. Analysis and interpretation of results. Preparation of publications and other forms of presentation of results.

**Requirements for the candidates:**

1. Experience in laboratory work in the field of plant physiology and basics molecular biology techniques.
2. Knowledge of the basics of plant physiology, including plant reaction to abiotic stresses.
3. At least good knowledge of spoken and written English.
4. Independence and teamwork skills at the same time.
5. Additional scientific activity (publications, conference announcements and other forms of presenting results, participation in projects, research clubs, etc.) and organizational activity (eg organization of workshops, trainings, conferences) is welcome.
6. Mobility is welcome: internships, workshops, training, etc.

**Additional information:**

1. Research and doctoral theses shall be carried out within the OPUS22, no. 2021/41/B/NZ9/00782, entitled "Comprehensive analysis of frost tolerance mechanisms in the sequence of cold acclimation, de-acclimation and re-acclimation processes in forage grasses.", funded by National Centre of Science.
2. PhD students shall receive a stipend in the gross amount of ca. 4270,50 PLN (3685,00 PLN net), for the period of 48 months.
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).

**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 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.

Documents in the electronic form (in 1 pdf file) must be sent by e-mail to: [psd@igr.poznan.pl](mailto:psd@igr.poznan.pl) putting in the title: **PhD student – Plant Physiology Team IPG PAS**

**Submission deadline is 15 June 2022.**

**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 plant physiology and molecular biology.
4. Knowledge of the subject matter described in the recruitment advertisement.

**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 the Principal Investigator:**

dr Dawid Perlikowski

**e-mail:** [dper@igr.poznan.pl](mailto:dper@igr.poznan.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 Poznań, is possible at the following e-mail address: [iodo@igr.poznan.pl](mailto: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.