



# INSTITUTE OF DENDROLOGY

## POLISH ACADEMY OF SCIENCES

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**Director of the Institute of Dendrology, Polish Academy of Sciences,  
invites applications for the position of Post-doc  
at the Department of Developmental Biology**

### I. REQUIREMENTS

1. Doctoral degree in the field of biological or closely related sciences\*
2. Knowledge about plant physiology, biochemistry, and molecular biology
3. Broad experience in application of molecular biology techniques (work with RNA and DNA) and protein biochemistry
4. Scientific output including publications indexed by Clarivate Analytics
5. Proficiency in English (speaking and writing)
6. An additional advantage will be an internship abroad or an internship in a research unit in Poland
7. Readiness to participate in scientific expeditions and training
8. High motivation for further development and ability to work in a team
9. Very good work organization

### II. POSSIBILITIES

1. Salary 120,000 PLN (about 27 875 EUR) annually
2. Possibility to cooperate with research centers in Poland
3. Unlimited scientific development

\* According to the criteria of the National Science Centre (Kraków, Poland), the candidates can be accepted only if they were awarded the PhD degree up to 7 years before employment in the project. This period excludes intervals due to maternity leave, adoption leave, paternity leave, parental leave, or parental care leave, granted according to the principles set out in the Labor Code, or else associated with receiving sickness benefits or disability benefits because of temporary inability to work, including those caused by a disease requiring therapeutic rehabilitation. In the case of women, the above-mentioned 7-year period can be extended with 18 months for each born or adopted child. Women can choose more favorable ways to document the intervals in their scientific career.

### III. PROJECT DESCRIPTION



The recruitment for 12 months concerns OPUS 16 project no. 2018/31/B/NZ9/01548, entitled "Effect of thiol regulators of redox state on seed quality and the process of seed aging", supported by the National Science Centre.

**Principal Investigator:** Dr hab. Ewelina Ratajczak, ID PAS Professor

**Key words:** seed categories, orthodox, recalcitrant, intermediate, seed aging, thioredoxins, thioredoxin reductase, peroxiredoxins, redox state regulation, protein S-nitrosylation and denitrosylation, nitric oxide, peroxynitrite, S-nitrosoglutathione reductase, target proteins, oxidative damage to DNA, intensity of seed respiration

**Project topics:** Regulation of redox homeostasis in plant cells plays an important role in modulating redox signals associated with plant growth processes and their adaptation to prevailing environmental conditions. This may allow the plants to produce high-quality seeds that can be stored and maintain a high viability. Preliminary studies have shown that the regulation of the redox state during seed development may be closely related to the maintenance of seed viability during storage, when the seeds are exposed to aging and loss of viability. Therefore, the main objective of the planned research will be to analyze the network of redox regulation processes involving various proteins, which differ in resistance to water loss and thus in the loss of viability during storage. As the participation of these proteins in the regulation of redox status is determined by their contribution to the S-nitrosylation and denitrosylation processes, we will analyze the level and location of selected compounds, enzymatic activity, and gene expression. Since the concentration of oxygen affects NO content, we will also analyze the intensity of respiration in the seeds.

The research material will include seeds of 3 species of trees, differing in sensitivity to water loss. **Seeds of Norway maple** (*Acer platanoides* L., category: **orthodox**) tolerate drying to moisture content <7% and storage at -10°C, **seeds of sycamore** (*Acer pseudoplatanus* L., category: **recalcitrant**) do not tolerate drying to moisture content <27% and conventional storage conditions, **seeds of common beech** (*Fagus sylvatica* L., category: **intermediate**) lose viability relatively quickly, as compared to orthodox seeds. For a detailed description of the network of interactions between the processes that affect redox state, the analyses will be performed at 10-15 time points, representing different developmental stages during seed maturation and in mature seeds during optimum storage and accelerated aging, as well as during germination.

**Tasks for the Post-doc:** The selected candidate will be involved in the following tasks in the project: identification of Trx proteins (analysis of 2D SDS-PAGE, analysis of the identified proteins by using SameSpot2D software), analyses of respiration in seeds during development, natural aging, and accelerated aging.

#### IV. CONDITIONS OF EMPLOYMENT

Full-time employment contract.

Employment period: 12 months.

## V. LIST OF REQUIRED DOCUMENTS

1. Application for employment, addressed to the Director of the Institute of Dendrology, Polish Academy of Sciences;
2. Personal data questionnaire valid at the Institute, with a photograph;
3. Tertiary education diploma or its confirmed copy;
4. Description of previous scientific, teaching, and organizational activity of the job applicant, with documentation confirming his/her achievements.

The documents should be submitted till **16<sup>st</sup> April 2021** by e-mail to the Department of Scientific Information, Institute of Dendrology, Polish Academy of Sciences (Mrs. Magdalena Łukowiak, MSc lukowiak@man.poznan.pl) with a note: application for the position of Post-doc at the Department of Developmental Biology.

### Recruitment

The selection will take place in 2 stages:

1. First stage: the committee will evaluate the submitted documents. On this basis, a group of candidates will be selected to participate in the second stage of recruitment.
2. Second stage: interviews with the recruitment committee. The selected candidates will be informed by e-mail about the date and time of the interview.

The final decision will be published till **30<sup>th</sup> April 2021**

The Institute of Dendrology, Polish Academy of Sciences, does not provide any flat for the candidate

We encourage the candidates to contact the Principal Investigator, who can provide additional details:

Dr hab. Ewelina Ratajczak, ID PAS Professor, email:eratajcz@man.poznan.pl, phone: +48 61 8170033

Kórnik, 2<sup>nd</sup> March 2021

dyrektor  
INSTYTUTU DENDROLOGII  
POLSKIEJ AKADEMII NAUK  
  
dr hab. Andrzej M. Jagodziński, prof. ID PAN

Job applicants who are interested in starting to work at the Institute of Dendrology, Polish Academy of Sciences, Kórnik, are asked to submit also the following statement:

**“I hereby declare that I agree to processing of my personal data during the process of recruitment for the position of ....., conducted by the Institute of Dendrology, Polish Academy of Sciences, Kórnik (62-035, ul. Parkowa 5)”**

In compliance with article 13 of the General Data Protection Regulation (EU) 2016/679 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 the Directive 95/46/EC (general directive on data protection), hereafter referred to also as “GDPR”, the Institute of Dendrology, Polish Academy of Sciences, informs that:



The personal data included in the job application (and the documents attached to it) will be administered by the Institute of Dendrology, Polish Academy of Sciences, address: 62-035 Kórnik, Parkowa 5 (hereafter referred to also as "Administrator").

The Administrator can be contacted via an e-mail message sent to [iod.idpan@man.poznan.pl](mailto:iod.idpan@man.poznan.pl) or a letter sent to the address: Institute of Dendrology, Polish Academy of Sciences, 62-035 Kórnik, Parkowa 5, marked as "Dane osobowe" (= "Personal data").

Your personal data will be processed by the Administrator to conduct the process of recruitment for the position indicated in the recruitment announcement.

The legal basis for personal data processing is the consent (article 6, paragraph 1(a) of GDPR). At any time you have a right to withdraw consent, with no effect on the compliance with the right to process, which was implemented on the basis of the consent before its withdrawal. If the consent is withdrawn, the data covered by the consent, processed on its basis, will be removed immediately.

The consent can be withdrawn via an e-mail message sent to [iod.idpan@man.poznan.pl](mailto:iod.idpan@man.poznan.pl) or a letter sent to the address: Institute of Dendrology, Polish Academy of Sciences, 62-035 Kórnik, Parkowa 5, marked as "Dane osobowe" (= "Personal data").

The personal data will be processed until the end of the recruitment process and will be removed within 3 months after the end of the recruitment.

The predicted categories of recipients of the data are: providers of job announcement publication services, providers of systems for recruitment management, providers of IT services, such as providers of information systems.

A handwritten signature in blue ink, appearing to read 'Krzysztof Jędrzejewski', is located in the lower right quadrant of the page.