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 Poznan
Procedure no. 23/2020/IGR/PSD

INSTITUTION:	Institute of Plant Genetics, PAS
CITY:	Poznan
POSITION:	Ph.D. student
POSITIONS AVAILABLE:	1
SCIENTIFIC DISCIPLINE:	biological sciences
PUBLICATION DATE:	Oct. 21, 2020
APPLICATION DEADLINE:	Nov. 21, 2020
IPG PAS WEBSITE:	http://www.igr.poznan.pl/en/home-en
PDS IPAS WEBSITE:	http://www.psd-ipan.ibch.poznan.pl/index-en.html

KEY WORDS: plant biotechnology, biopharming, plant-derived vaccines, plant-derived antigen, HBcAg carrier, cysteine protease, Virus-Like Particles (VLPs), *Fasciola hepatica*, oral immunisation, injection-oral immunisation

Research topic: The aim of the project is to determine the sex-dependent factors that determine the immune response of animals to an antigen produced in plants and administered orally and/or via injection-oral immunisation route, on the example of the chimeric antigen HBcAg-cysteine protease, with the function of a potential vaccine against the liver fluke - a parasite of the digestive tract. Part of the project carried out at IGR PAN includes the production of the vaccine antigen in various plant expression systems (transgenic and transplastomic plants, transient expression) and the preparation of this antigen for the purpose of obtaining effective vaccine preparations, together with the determination of factors influencing both processes.

Principal Investigator: dr hab. Małgorzata Kęsik, prof. IChP – the whole project; prof. dr hab. Tomasz Pniewski – part of the project carried out at IGR PAN

DESCRIPTION:

Place of employment: Bioengineering team, Department of Biotechnology, Institute of Plant Genetics of the Polish Academy of Sciences

Supervisor: prof. dr hab. Tomasz Pniewski

Goal of employment: implementation of the OPUS18 project, No.2019/35/B/NZ6/04002

Scope of research: Obtaining of transgenic and/or transplastomic plants producing chimeric – mosaic or monoantigenic, virus-like particles (VLPs) assembled by HBcAg carrier and cysteine protease of *Fasciola hepatica*. Generation of VLPs by the method of transient expression. Analysis of the expression of transgenes. Purification of VLPs for immunisation by injection. Preparation of plant material for oral vaccine. Analysis of the accumulation of VLPs in plants and derivative preparations. Analysis of the immune response in an animal model.

Duties in project: Planning and conducting of research in the field of biopharming and participation in experiments on animals. 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 molecular biology.
2. Preferred additional experience in plant transformation and/or experience in plant tissue cultures.
3. Knowledge of theoretical and practical basics of protein structure and analysis, including ELISA.
4. Knowledge of the basics of plant biotechnology - especially biopharming, including protein production - especially VLPs in various expression systems.
5. Basic knowledge in immunology.
6. Ability to combine molecular techniques, experimental approaches and protein analyses in order to formulate and verify hypotheses regarding the optimisation of VLPs production and processing of plant material into functional forms of vaccines.
7. Ability to use MS Office and search databases.
8. At least good knowledge of spoken and written English.
9. Independence and teamwork skills at the same time.
10. 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.
11. Mobility is welcome: internships, workshops, training, etc.

Additional information:

1. Research and doctoral theses shall be carried out within the OPUS18 project, No.2019/35/B/NZ6/04002, entitled “Host sex effect on immunity and protection after oral immunization with *Fasciola hepatica* cysteine protease and the parasite challenge”, 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** putting in the title: **PhD student - Bioengineering team IPG PAS**

Submission deadline is 21 November 2020.
dd / month / year

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, plant biotechnology.
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:

prof. dr hab. Tomasz Pniewski

e-mail: tpni@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 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.