

## POST-DOCTORAL POSITION

Institute of Biochemistry and Biophysics

Polish Academy of Sciences

National Science Center OPUS GRANT

### "Mitigation of climate change effect on crop plants' immunity by engineering the thermostability of plant immune receptors"

Keywords: plant immunity, R receptors, high temperature, global warming effect

Type of position: post-doc / assistant

Type of contract: full time employment

Remuneration: ~ PLN 7,000

Employment period: 48 months

Principal Investigator: Dr Marta Grech-Baran (mgrech@ibb.waw.pl)

#### Project description:

Our laboratory focuses on uncovering crucial components of plant defence signalling networks by utilising advanced molecular biology and biochemistry techniques. Our main objective is identifying and characterising the mechanisms that regulate plant immunity. We are specifically interested in discovering new plant R immune receptors, determining their functions, and identifying recognisable effector factors and interaction partners (Grech-Baran et al., 2020; 2022).

This project is based on our previous expertise but will expand our research interests by exploring the mechanisms by which elevated temperature affects the function of crop plant immune receptors. This project aims to effectively design selected plant immune receptors so that they would be able to trigger an immune response at elevated temperatures.

The successful applicant will be responsible for executing laboratory-based research within the project. They will be responsible for mutating, isolating and purifying selected R proteins, conducting *in vitro* protein thermostability assays, and investigating resistance *in vivo* using different experimental approaches. The successful candidate should actively contribute to writing scientific papers, including data analysis, and present the project at internal and external meetings.

#### Expectations towards candidates:

- a Doctoral degree/ PhD in biology, chemistry, biochemistry or a related life science field for not more than 7 years before the position announcement
- proficiency in spoken and written English
- solid knowledge of molecular biology, plant physiology and/ or biochemistry
- experience in Western blot, protein concentrations assays and binding assays
- previous experience with phytopathology and virology will be an asset but is not mandatory
- research achievements presentation, including at least one publication in an international journal

#### List of documents (preferably merged in a single PDF file):

- CV including scientific achievements and a list of publications
- cover letter describing your research experience (with the description of the methodology used) and interests
- copy of PhD diploma
- contact addresses of two referees

All applications must contain the following statement to allow us to process your data: "I hereby give consent for my data included in the job offer to be processed for recruitment under the Data Protection Act 1997 (Dz. U. 2002 no. 101, item 926 with subs. changes)."

The evaluation process will start immediately upon receipt of the applications. Selected candidates will be invited for an interview. Due to the current situation we reserve the right to close this advertisement early if we find a suitable candidate.

Contact for formal and informal inquiries: Resumes should be sent via email to [recruitment@ibb.waw.pl](mailto:recruitment@ibb.waw.pl) with the message title "IBB\_rec-06/2024".

Deadline for submitting applications: 30th September 2024.