FORM FOR EMPLOYERS

INSTITUTION . **MUSEUM AND INSTITUTE OF ZOOLOGY POLISH ACADEMY OF SCIENCES**

.CITY Warsaw

POSITION Postdoctoral Researcher

DISCIPLINE Biological sciences

POSTED April 23, 2026

EXPIRES July 31,2026 godz. 23:59 (CET)

WEBSITE

KEY WORDS Entomology, insects, biogeography, phylogenomics, taxonomy, deserts

DESCRIPTION (field, expectations, comments

I. Basic Information

Institution:
Museum and Institute of Zoology, Polish Academy of Sciences
Position:
Postdoctoral Researcher
Supporting
OPUS 28 + LAP Project no. 2024/55/I/NZ6/01932
Project
Galleria mellonella as a model for nutritional immunology: The role of fatty acids in enhancing the host immune response against fungal infection.
Start Date:
Negotiable; preferred start date: 01.07.2026 godz. 23:59 (CET)
Duration:
12 months with the possibility of extension for another 18 months
Employment Type:
full-time employment based on a fixed-term contract
Keywords:
Galleria mellonella as a research model; nutritional immunology; fungal infection; fatty acid supplementation
Application Deadline:
31.05 2026, 23:59 (CET)
Application Method:
Applications should be submitted by email to: **akaczmarek@miiz.waw.pl**

Subject line: OpusLap

II. Job Description

Fatty acids (FA) play a key role in regulating metabolism, membrane structure, and immune system function. The aim of this project is to investigate how selected FA modulate immune responses and enhance resistance to fungal infections using the insect model *Galleria mellonella*. A particular focus is placed on the fungus *Conidiobolus coronatus*, an opportunistic pathogen infecting both insects and mammals.

The project integrates approaches from nutritional immunology, microbiology, and molecular biology, employing advanced bioanalytical techniques. The research includes:

- **Dietary supplementation:** feeding larvae with FA-enriched diets and assessing effects on survival and development;
- **Infection assays**: analyzing the course of fungal infection and immune responses;
- **Immunological and molecular analyses**: transcriptomic, proteomic, and biochemical studies to identify mechanisms regulating immune responses;
- **Metabolomic and lipidomic profiling**: analysis of hemolymph composition using chromatographic methods.

The project offers an opportunity to work at the interface of immunology, molecular biology, and bioanalysis in an international research environment, in collaboration with the Czech Academy of Sciences.

Main Responsibilities

- Design and conduct experiments to evaluate the effects of fatty acid (FA) supplementation on fungal resistance and immune responses in *G. mellonella* larvae;
- Perform molecular and biochemical analyses, including proteomic and transcriptomic studies, to investigate host–pathogen interactions;
- Analyze and interpret experimental data and identify relevant molecular biomarkers;
- Collaborate with international project partners, including coordination of experimental protocols and data exchange;
- Prepare scientific publications, conference presentations, and project reports;
- Develop and implement innovative research approaches related to immune responses to fungal pathogens.

III. Qualifications

Required Qualifications

- A PhD in Immunology, Biochemistry, Molecular Biology, or a related field;
- Hands-on experience with molecular and biochemical techniques, including RNA and protein isolation and biochemical assays (e.g. spectrophotometric measurements, enzme activity assays such as caspases);
- Strong background in experimental design and hypothesis-driven research, with the ability to independently solve research problems;

- A track record of publications in peer-reviewed journals, ideally in immunology or host–pathogen interactions;
- Good command of English (both written and spoken).

Preferred Qualifications

- Experience with experimental models; familiarity with invertebrate models, especially *G. mellonella*, will be an advantage;
- Experience in infection studies and working with animal models, preferably involving fungal or other microbial pathogens;

IV. Application Materials

All application materials should be prepared in English and submitted by email to dr Agata Kaczmarek **akaczmarek@miiz.waw.pl**

Required documents:

- CV including education, research experience, publications, and scientific achievements;
- Motivation letter describing research interests and suitability for the position;
- Copy of PhD diploma;
- Contact details of at least one referee (or a reference letter);
- Proof of English proficiency (e.g. certificate or statement in CV);
- RODO statement.

V. Recruitment Process

The recruitment procedure consists of two stages:

1. **Pre-selection of candidates** by the Selection Commission, based on submitted documents.
2. **Interviews** with pre-selected candidates.

Interviews are planned for June and may be conducted online.
The Selection Commission will make a final decision within one month of the recruitment deadline.
Only pre-selected candidates will be invited for an interview. The Commission reserves the right to close the competition without selecting a candidate. The decision of the Selection Commission is final and not subject to appeal.

VI. Job Benefits

- Salary: 9772 PLN gross per month, in accordance with NCN regulations for postdoctoral positions;
- Full-time employment based on a fixed-term contract (12 months with the possibility of extension for another 18 months);
- 36 working days of annual leave;
- Work in a dynamic and interdisciplinary research environment;
- Opportunity to publish in high-impact international journals.