Title of project:
“Could the virucidal plant extracts prevent infection of common carp (Cyprinius carpio L.) with CyHV-3 (Cyprinid herpesvirus 3)?”
Competition: OPUS 25
The PI of project: dr Agnieszka Troszok
The supervisor of the PhD student: Prof. dr hab. Michał Reichert
Project location:
National Veterinary Institute - National Research Institute in Puławy, Al. Partyzantów 57, 24-100 Puławy

Project description:
The preliminary studies revealed strong virucidal activity of extracts of St. John's wort and ribwort plantain against CyHV-3. This virus can cause high mortality in carp, reaching up to 100% of the population.
The objectives of this project aim to determine:
- whether virucidal extracts can prevent the transmission of CyHV-3 in carp population,
- whether virucidal extracts can modulate innate immunity and/or stimulate the development of adaptive immunity when present in the carp-rearing water,
- the optimal method and conditions for obtaining extracts displaying the strongest virucidal properties,
- which components of extracts are crucial for maintaining their virucidal properties,
- the maximum possible scale of use of virucidal extracts in aquaculture.
The planned studies will apply following techniques: in vitro cell cultures, work with a carp-infecting virus, work with carp, in vitro and in vivo toxicity tests, determination of cytopathic effect, qPCR, hematological, biochemical, histological, and FACS analyses.
Description of PhD student's duties:
The PhD student's duties will include:
- conducting *in vitro* experiments to compare the virucidal activity of selected extracts and their components,
- participating in *in vivo* experiments and conducting laboratory analyses of samples from these experiments,
- performing statistical analyses of the obtained data,
- discussing the obtained results at meetings,
- documenting the conducted experiments and the obtained data,
- preparing scientific publications.
Requirements:
1. Master's degree in biology, biotechnology, veterinary medicine, microbiology, or related fields;
2. Basic knowledge of cell culture, immunology, physiology, and molecular biology;
3. Excellent aptitude for working in sterile conditions;
4. Well-developed foresight, planning, and analytical thinking;

5. High commitment to assigned tasks and accuracy;
6. Knowledge of English in a communicative level and enabling working with English-language scientific literature;
7. Knowledge of Polish in a communicative level;
8. Flexibility and openness to changes;
9. Practical laboratory experience, preferably with techniques that will be used in the project;
Requirements for application:
1. Submitting the application documents specified in the application form;
2. Submitting a written statement describing what would do the PhD candidate in case the cell lines got infected with the mycoplasmas. The description should include the scope of work, information about proceeding with cell lines and samples obtained in mycoplasma positive cells. Candidates interested in the project are asked to provide a detailed description in English.
3. Selected candidates will be asked by the PI to submit their entire master's thesis before January 20, 2026, at 23:59 Eastern European Time. The submitted master's thesis should be in Polish or English, or should be previously translated into one of these languages. PDF and docx formats are preferred.
Recruitment Process:
• The applications will be evaluated according to criteria specified in the regulations for research scholarships in projects funded by the National Science Centre (NCN);
• Exclusively online applications will be considered;
• Candidates who achieved the highest scores will be invited to the interview, which will be conducted face-to-face or on-line;
• During interviews, candidates will be asked to deliver a 10-minute presentation regarding their master's thesis and scientific interests;
• Final search results will be published on the IAR&FR PAN website within 10 days of the final decision.

Supplementary Information:
• Distribution deadline: January 18, 2026 11:59 (Eastern European Time)
• Application method: via application form available at the website https://pan.olsztyn.pl/interdisciplinary-doctoral-school-of-agricultural-sciences/supplementary-recruitment-to-the-interdisciplinary-doctoral-school-of-agricultural-sciences/
• Interview dates: January 21-23, 2026
• Location: Puławy, Poland
• Duration of the PhD sholarship: 48 months
• Office opening date: December 2026
• Number of positions: 1
In addition to work within the project, the PhD student will participate in online courses and stationary courses organized as a week-long summer school in Olsztyn, as well as stationary

training sessions at the National Veterinary Institute – National Research Institute in Puławy (PIWet-PIB). The PhD student will also expand his or her practical skills by joining the Team for Viral Diseases of Aquatic Animals in the Department of Parasitology and Invasive Diseases, Bee Diseases, and Aquatic Animal Diseases.