

ENG

Title of the project:

“Could the virucidal plant extracts prevent infection of common carp (*Cyprinus carpio* L.) with CyHV-3 (Cyprinid herpesvirus 3)?”

Competition: OPUS 25

PI: dr Agnieszka Troszok

DESCRIPTION OF THE PROJECT:

Preliminary studies revealed that the extracts of St. John`s wort and ribwort plantain displayed strong virucidal activities against CyHV-3, a virus which might cause up to 100% mortality in common carp population.

The goals of this project are:

- elucidate whether virucidal extracts might prevent transmission of CyHV-3 from infected to naïve carp,
- elucidate, whether presence of virucidal extracts in carp-rearing water can modulate innate immune response and/or stimulates adaptive immune response,
- establish the best method and conditions of extraction of herbs to generate the most potent virucidal extracts,
- indicate which compounds of extracts are crucial to maintain virucidal activity of the extracts,
- determine the maximal possible scale of application of virucidal extracts in aquaculture.

Within this project following techniques will be applied: *in vitro* cell culture, viral work, work with common carp, examination of toxicity *in vitro* and *in vivo*, determination of cytopathic effect, qPCR, hematologic, histological and biochemical analysis as well as FACS.

For more information, please, see the [description](#) of project at the NCN website.

DESCRIPTION OF PhD STUDENT’S TASKS:

- comparing virucidal activity of selected plant extracts and their compounds in experiments *in vitro*,
- contributing to *in vivo* experiments and performing laboratory analysis of the samples,
- analysing the obtained data in a statistical programme,
- discussing the results during the meetings,
- documenting the experiments and the obtained data,
- preparing a scientific publications.

REQUIREMENTS:

1. A master`s degree in biology, biotechnology, veterinary, microbiology or equivalent (expected before October 1st 2024);
2. Basic knowledge in cell culture, immunology, physiology and molecular biology;
3. Excellent predispositions to work under sterile conditions;
4. Well-developed anticipating, planning and analytical thinking skills;
5. High commitment to assigned tasks and accuracy;
6. Communicative spoken and written English, enabling work with English-language scientific literature;
7. Flexible and open for changes;
8. Practical experience in laboratory work, preferably with techniques which will be applied within the project;

ELIGIBILITY CRITERIA:

1. Documents as required in application form;
2. Written statement in which candidate describes how would she/he proceed with experiments, cell lines, with the scope of laboratory work and how would she/he organise the work in the laboratory in case the cell lines would became infected with mycoplasma. Please, provide as many details as you can imagine. The description should be in English.
3. Selected candidates can be asked by the Project PI to submit entire master`s thesis before Sep 4th, 2024, 23:59 Eastern European Time (it can be in a draft form, preferably in PDF or docx format); Important: The master`s thesis should be **written in/or translated to English or Polish**.

RECRUITMENT PROCESS:

- Applications will be assessed in accordance with the criteria set out in the regulations for awarding research scholarships in research projects financed by the National Science;
- Only on-line applications will be considered;
- Candidates evaluated with the highest score will be invited to an actual interview, which will take place face-to-face or online;
- During the interview, the candidate will be asked to deliver a 10-minute speech. presenting his/her Master thesis and research interests;
- Final results of the recruitment will be published on IAR&FR PAS webpage within 10 days after final decision.

IMPORTANT INFORMATION:

- Application deadline: **Sep 2nd, 2024, 23:59 (Eastern European Time)**;
- Application method: **application form**
- Interviews: **9-13.09.2024**
- Location: **Puławy, Poland**;
- Duration of the scholarship: **48 months**;
- Date of position opening: **October 1st, 2024**;
- Number of positions: **1**.

APPLICATION FORM:

APPLY NOW