



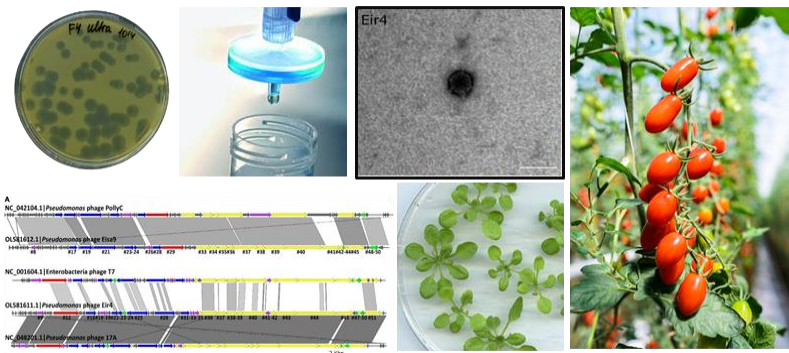
PhD position, starting from **September 2024**

Phages of phytopathogenic bacteria as a driving force in plant-microbiome interactions

Plant bacterial diseases cause losses of up to 10% of global food production every year. As the EU regulations still limit genome editing of plants, and in the context of increasing antibiotic resistance, we explore the potential of bacteriophages as biocontrol agents. The candidate will be involved in research of phage role in plant phyllosphere (root-associated and leaf-associated microbiome), and how this can be applied to treat/prevent bacterioses of Solanaceae and Brassicaceae plants. The project combines approaches of molecular biology, microbiology, metagenomics, bioinformatics, advanced microscopy and plant physiology.

We aim to:

- 1) find out how phages shape the root- and leaf-associated microbiome, and how can we use this to enhance plant productivity
- 2) understand how phages interact with plant defence system
- 3) isolate and characterize new bacteriophages with ability to prevent/treat bacterioses.



We offer: high quality research and training, dynamic scientific environment, international group and collaboration network. The work will be performed in the Laboratory of Pathological Plant Physiology in the Institute of Experimental Botany <https://iebpathofyz.wixsite.com/patofyz1> ; <http://www.ueb.cas.cz/en>. Student will be enrolled to the doctoral program. The Czech study program runs for 4 years, students receive a stipend + part-time contract at the IEB Prague, social and health insurance and performance-based benefits. The project is co-funded by a grant of Czech Technological Agency and benefits from COST action CA22158.



Requirements to candidates: Master degree in Biochemistry, Microbiology, Virology, Plant physiology or other relevant discipline. Interest in multidisciplinary research, knowledge of lab work and basic data processing/statistics (molecular biology, microbiology or cell biology experience is a plus). Ability to communicate, read and write in English (knowledge of the Czech language is not required). Interested candidates are welcome to send their CV and motivation letter to **Dr. Tetiana Kalachova** kalachova@ueb.cas.cz until March 31st.