

PhD student position in symbiosis research on “Plant pathogens in insect microbiome”

University of Vienna, Austria
Centre for Microbiology and Environmental Systems Science
Division of Microbial Ecology

Deadline: 31st Oct 2026

Start date: From the 8th January 2027 (negotiable)

Supervisor: Dr. Alejandro Manzano Marín (<https://besymblab.univie.ac.at/>)

Project Background: Insects play a key role in the emergence and spread of plant diseases worldwide - both through direct feeding and by transmitting dangerous pathogens. A particularly important group is the Hemiptera (or true bugs), which are the most significant vectors of economically important plant diseases. At the same time, they host diverse communities of symbiotic microorganisms, with some being essential for insect survival and others of facultative nature. This project aims to identify which bacteria found in insect microbiomes are true plant pathogens, how frequently they occur, how they evolve, how the host's ability to transmit plant pathogens is influenced by facultative symbionts, and whether modifying an insect's microbiome could alter this capacity. This specific PhD project will investigate the identity, genomic composition and potential interactions between insect symbionts and plant pathogens in hemipteran samples using experimental and bioinformatic approaches, including: genomic, metagenomic, and transcriptomic analyses, microbial cultivation, microscopy, and field sampling.

This position is part of an FWF/NCN-funded Weave [project](#) in collaboration with [Dr. Anna Michalik](#) (Jagiellonian University, Poland). Close interaction with the Polish team and secondments with the Polish partner are planned.

Work environment: You will join a vibrant and internationally-visible research community at the *University of Vienna*. You will be a member of Alejandro Manzano Marín's team and you will be enrolled in the *Doctoral School in Microbiology and Environmental Science* at the *Centre*. The *Doctoral School* assembles an international, ambitious and committed team and offers an interdisciplinary scientific environment, cutting-edge laboratories and a creative working atmosphere. The working language of the group and the *Centre* is English.

Your tasks:

- Design and perform genomics/laboratory experiments
- Process, analyse and interpret data
- Present research results at conferences and publish in peer-reviewed journals
- Supervise students
- Take ownership of the project and contribute to its development
- Collaborate with others: in the group, the *Centre* and external collaborators
- Be a responsible and active member of the lab-group

Your profile: We welcome applicants with a background in microbiology, evolution, and/or entomology. Experience with any of the following is advantageous: genomics, molecular techniques, symbioses, bioinformatics/computational analysis, and hemipterans.

Requirements:

- Completed/or soon to be completed Masters in Biology or related area (proof of completion required before start of the contract)
- Passion, curiosity and motivation for research
- Bioinformatics-based research experience
- Willingness to learn new techniques, and to work both independently and as part of a team
- Problem-solving skills
- Excellent command of written and spoken English
- Excellent communication and organisation skills

What we offer:

- A position within a cutting-edge, interdisciplinary research environment
- Access to advanced analytical and computational infrastructure
- A supportive environment for scientific development and career growth
- Opportunities for international networking and conference participation
- Integration into a dynamic research community at the *University of Vienna*
- Membership in the *Vienna Doctoral School Microbiology and Environmental Science*

Duration of contract: The employment duration is up to 4 years. Initially limited to 1 year, extended after a positive prelim evaluation to be completed before the first 12 months of employment have passed.

Position: This is a paid, fully-funded position with an employment contract in line with the standards of the University of Vienna.

Application: Your application should be written in English and should consist of:

1. A letter of motivation (1 page max)
2. Your academic CV
3. University certificates/transcripts from your Bachelor and Master's degree (including grades)
4. Two reference letters – please ask for your reference letters to be directly sent to the email address below (subject: "open.positions.PhD.reference.LastnameFirstname")

Please combine your application files into 1 pdf and email it to:

alejandro.manzano.marin@univie.ac.at (subject: "open.positions.PhD.LastnameFirstname")

Deadline: 31st October 2026

Contact: If you have any questions, please contact Dr. Alejandro Manzano Marín (alejandro.manzano.marin@univie.ac.at; subject: "open.positions.PhD.query")

The *University of Vienna* pursues a non-discriminatory employment policy and values equal opportunities, as well as diversity (<http://diversity.univie.ac.at/>).