

Two PhD positions in Plant-Pollinator-Pathogen Interactions

As part of a recently funded collaborative research project between Germany and Belgium, we offer **two PhD positions**. One position will be based at the **Technical University of Munich (TUM) Campus Weihenstephan in Freising (Germany)**, the second position will be based at the **University of Ghent (UGhent) in Ghent (Belgium)**. There will be close collaboration and frequent exchange between the two positions.

Project description

Plant pollen and nectar are highly important food resources for bee pollinators. The chemical composition of these resources plays a major role in determining which plants are visited by bees for food collection and how they affect bee health and fitness. In particular pollen chemistry additionally affects the bees' resistance to pathogens. However, the interplay between pollen chemistry, pathogens and bee health is still poorly understood and represents the focus of this collaborative project.

Position 1 at TUM:

The TUM position will primarily focus on the role of chemistry in driving wild bee health and fitness. Particular interest is given to the identification of chemicals which are highly influential for bee health and hence their resilience to pathogen infections. The position is available at the **Plant-Insect Interactions group (Prof. Sara D. Leonhardt)** as part of the **TUM Department of Life Science Systems**. **Starting date is summer/fall 2025**. The position is fixed-term (36 months). Salary scale: TV-L 13, 65%. As part of the assigned duties, there will be ample opportunity to conduct the independent scientific research necessary for the completion of a doctorate. The limitation complies to § 2, 1 WissZeitVG.

Job profile – We require

- Strong interest and motivation in conducting biodiversity research at different levels.
- MSc/Diplom (DE) in a field related to ecology (e.g. pollination, chemical or molecular ecology).
- Strong experience with statistical data analyses.
- Experience in or willingness to learn analytical chemical analyses and data processing.
- Excellent command of English language (written & oral) and experience with scientific writing.
- Driver's license valid in Germany.

We offer

- Friendly and inspiring working atmosphere in a highly international young research work groups, as part of a vivid ecological department.
- Graduate Education at an excellent university ranked number 1 in Germany and 12th worldwide.
- Direct admission to Biodiversity Exploratories, a renowned large scale experiment maintained by a large group of internationally renowned scientists, associated PhD students and Postdocs.
- Free access to transferable skill and statistical courses as part of the TUM Graduate School and the Biodiversity Exploratories.

Salary & Conditions

TUM strives to raise the proportion of women in its workforce and explicitly encourages applications from qualified women. Applications from disabled persons with essentially the same qualifications will be given preference. As part of your application, you provide personal data to the Technical University of Munich (TUM). Please view our privacy policy on collecting and processing personal data in the course of the application process pursuant to Art. 13 of the General Data Protection Regulation of the European Union (GDPR) at <https://portal.mytum.de/kompass/datenschutz/Bewerbung/>. By submitting your application you confirm to have read and understood the data protection information provided by TUM. Find out more about us at www.tum.de.

How to apply

We invite applications from highly motivated candidates with passion for and experience in plant/insect research, and ideally with experience in fieldwork and chemical analyses. Please **send any inquiries to Sara Leonhardt (sara.leonhardt@tum.de) and your application via eMail to Cornelia Wenske (cornelia.wenske@tum.de)** as a single PDF document until **30th of April 2025**. Applications should include a motivation letter, a short summary of research interests and experience, CV, list of publications, certificates, and contacts of two potential referees.

[Position 2 at Ghent University:](#)

- You will analyze metabolomic profiles and metabolic changes in bees, with a primary focus on those affected by pathogens.
- In close collaboration with the Plant-Insect Interactions group at TUM, you will examine the effects of key nutritional molecules on bee health, which includes working with live bee species.
- The goal is to identify molecules that contribute to bee tolerance and/or resistance to pathogens while completing a doctoral degree.
- Science communication and data management is an important aspect.

You will work at the faculty of bioscience engineering in the ecological entomology group (Prof. Dr. Ivan Meeus) part of the Department of Plants and crops. Starting date is summer/fall 2025.

[ABOUT Ghent University](#)

Ghent University is a world of its own. Employing more than 15.000 people, it is actively involved in education and research, management and administration, as well as technical and social service provision on a daily basis. It is one of the largest, most exciting employers in the area and offers great career opportunities.

With its 11 faculties and more than 85 departments offering state-of-the-art study programmes grounded in research in a wide range of academic fields, Ghent University is a logical choice for its staff and students.

[Job profile – We require](#)

- Strong analytical thinking, a solution-oriented mindset, and thrive as a team player in an international and multicultural environment
- You hold a Master's degree preferably a Master of Biochemistry and Biotechnology, Master of Bioscience Engineering, Master of Biology, Master in Bioinformatics.
- You will work at the interface of molecular biology, ecology, and insect physiology. Experience in some of these fields is an asset.
- Experience in or willingness to learn metabolomics, statistical data analyses, data processing and R.

[We offer](#)

- We offer a full-time position as a doctoral fellow, consisting of an initial period of 12 months, which - after a positive evaluation, will be extended to a total maximum of 48 months.
- Your contract will start in summer/fall 2025 at the earliest.
- The fellowship amount is 100% of the net salary of an AAP member in equal family circumstances. The individual fellowship amount is determined by the Department of Personnel and Organization based on family status and seniority. A grant that meets the conditions and criteria of the regulations for doctoral fellowships is considered free of personal income tax. [Click here for more information about our salary scales](#)
- All Ghent University staff members enjoy a number of benefits, such as a wide range of training and education opportunities, 36 days of holiday leave (on an annual basis for a full-time job) supplemented by annual fixed bridge days, bicycle allowance and eco vouchers. [Click here for a complete overview of all the staff benefits](#) (in Dutch).

[How to apply](#)

Applications should include a motivation letter, a short summary of research interests and experience, CV, list of publications, certificates (copy of your diploma - if already in your possession), and contacts of two potential referees.

Please **send any inquiries and/or your application via eMail to Ivan Meeus (ivan.meeus@ugent.be)** as a single PDF document until **30th of April 2025**.