



5 PhD positions in Molecular and Chemical Ecology and Evolution

International Max Planck Research School “Chemical Communication in Ecological Systems”

The International Max Planck Research School (IMPRS) "Chemical Communication in Ecological Systems" in Jena, Germany, invites applications for **5 PhD positions** beginning in September 2025 – January 2026. The overarching research topic is the use of molecular, chemical and neurobiological techniques to experimentally explore ecological interactions under natural conditions. The main focus is on the relationship between plants, microbes and herbivores, and their environment, as well as the evolutionary and behavioral consequences of these interactions. We offer **8 exciting projects** focusing on different organisms and approaches. The complete list of projects offered including project descriptions is available on our website (<https://www.ice.mpg.de/296576/advertised-projects>).

We are looking for enthusiastic PhD students with strong interests in the above-described central topic. Applicants should have or be about to obtain a Masters or equivalent degree in one of the following fields: entomology, neurobiology, molecular biology, biochemistry, analytical chemistry, plant physiology, genetics, ecology, evolutionary biology, bioinformatics, and mathematics and computer science. All our projects are highly integrative and require willingness to closely collaborate with researchers of different backgrounds.

The Research School is a joint initiative of the Max Planck Institute for Chemical Ecology and the Friedrich Schiller University. We offer state-of-the art equipment, an excellent research environment, supervision by a thesis committee and a structured training program including scientific courses, training in transferable and outreach skills and participation in research symposia. Successful candidates will receive a Max Planck support contract. There are no tuition fees and the working language is English.

Application deadline is April 23, 2025.

For detailed information on the IMPRS, projects offered and application requirements, please visit our website: <https://www.ice.mpg.de/296548/current-call>

Please apply online from March 12, 2025, at:

<https://jobs.ice.mpg.de/en/jobposting/cb945467f8e7b4be13340a03ed3a05491257c44/apply>

Projects offered in 2025

Please find below a list of projects we offer for this year's recruitment. All projects are highly integrative and require the collaboration between different research groups. Applicants can identify up to three projects of interest.

[Project 1](#): With six feet on the ground – How insects sense vibration

Supervisors: [Prof. Dr. Manuela Nowotny](#), [Dr. Yuko Ulrich](#)

[Project 2](#): Molecular mechanisms of membrane proteins underlying social insect behavior

Supervisors: [Prof. Dr. Ute Hellmich](#), [Dr. Yuko Ulrich](#)

[Project 3](#): Structural basis of two-component system signaling

Supervisors: [Prof. Dr. Ute Hellmich](#), [Prof. Dr. Sarah O'Connor](#)

[Project 4](#): Sensing the unseen: How diatoms detect and respond to highly dilute sex-inducing pheromones

Supervisors: [Prof. Dr. Georg Pohnert](#), [Dr. Markus Knaden](#)

[Project 5](#): Metabolic exchanges, regulation and equilibrium of an ancient insect symbiosis

Supervisors: [Dr. Mariana Galvão Ferrarini](#), [Prof. Dr. Martin Kaltenpoth](#), [Dr. Tobias Engl](#)

[Project 6](#): A miRNA taming floral homeotic genes

Supervisors: [Prof. Dr. Günter Theißen](#), [Dr. Roy Kirsch](#)

[Project 7](#): Plant secondary metabolites and the barley microbiome

Supervisors: [Dr. Matthew Agler](#), [Dr. John Charles D'Auria](#)

[Project 8](#): Molecular mechanisms of adaptation and counter-adaptation between Brassica and beetles

Supervisors: [Prof. Nicole van Dam](#), [Dr. Franziska Beran](#)