



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 2023 – January 2024. 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 **9 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 16, 2023.

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 February 27, 2023, at:

<https://jobs.ice.mpg.de/en/jobposting/0bd162d1c63cf7b7e0388f7d9490a03d55fd83db4/apply>

Projects offered in 2023

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](#): Fungal life in soil: attachment and microbial communication

Supervisors: [Prof. Dr. Erika Kothe](#), [Dr. Katrin Krause](#), [Prof. Dr. Jonathan Gershenzon](#)

[Project 2](#): Adapting SIRIUS and beyond for Electron Ionization fragmentation

Supervisors: [Prof. Sebastian Böcker](#), [Prof. Dr. Georg Pohnert](#)

[Project 3](#): Processing of olfactory and auditory cues in the insect brain

Supervisors: [Prof. Dr. Manuela Nowotny](#), [Dr. Silke Sachse](#)

[Project 4](#): A miRNA taming floral homeotic genes

Supervisors: [Prof. Dr. Günter Theißen](#), [Dr. Lydia Gramzow](#), [Dr. Axel Mithöfer](#), [Prof. Dr. Jonathan Gershenzon](#)

[Project 5](#): Genetic determination and phenotypic plasticity of color polymorphisms in grasshoppers

Supervisors: [Prof. Dr. Holger Schielzeth](#)

[Project 6](#): Structural basis of two-component system signaling

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

[Project 7](#): Give and take – substrate shuttling in microbial communities on macroalgae

Supervisors: [Prof. Dr. Georg Pohnert](#), [Prof. Dr. Martin Kaltenpoth](#)

[Project 8](#): Evolutionary significance of mixtures of defense chemicals in trophic interactions

Supervisors: [Prof. Dr. Stefan Schuster](#), [Prof. Dr. Jonathan Gershenzon](#)

[Project 9](#): The molecular basis of symbiosis establishment in beetles

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