INTERNATIONAL MAX PLANCK RESEARCH SCHOOL CHEMICAL COMMUNICATION IN ECOLOGICAL SYSTEMS

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 2024 – January 2025. 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 11 **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 19, 2024.

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 4, 2024, at:
https://jobs.ice.mpg.de/en/jobposting/d8d15fb675724046e98eb0d613189ff83901956c4/apply

Projects offered in 2024

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 1: Structural basis of two-component system signaling
Supervisors: Prof. Dr. Ute Hellmich, Prof. Dr. Sarah O'Connor

Project 2: The molecular basis of aphid resistance to cereal defensive compounds
Supervisors: Dr. John Charles D'Auria, Dr. Grit Kunert, Prof. Dr. Jonathan Gershenzon

Project 3: World on vibration – how ants sense vibrations
Supervisors: Prof. Dr. Manuela Nowotny

Project 4: Host effectors in symbiosis maintenance
Supervisors: Dr. Tobias Engl, Dr. Roy Kirsch, Prof. Dr. Martin Kaltenpoth

Project 5: For the love of spice - plant secondary metabolites and recruitment of bacterial metabolic networks
Supervisors: Dr. Matthew Agler, Prof. Dr. Sarah O'Connor

Project 6: Learning strategies to avoid danger in the desert ant Cataglyphis
Supervisors: Dr. Markus Knaden, Dr. Yuko Ulrich

Project 7: Molecular networks rethought
Supervisors: Prof. Dr. Sebastian Böcker, Prof. Dr. Georg Pohnert

Project 8: Disentangling multipartite symbiont and pathogenic associations in a leafhopper plant pest
Supervisors: Dr. Heiko Vogel, Prof. Dr. Martin Kaltenpoth, Dr. Tobias Engl

Project 9: A miRNA taming floral homeotic genes
Supervisors: Prof. Dr. Günter Theißen, Dr. Lydia Gramzow, Prof. Dr. Jonathan Gershenzon

Project 10: Experimentally unravelling the evolution of an intracellular symbiosis
Supervisors: Prof. Dr. Martin Kaltenpoth, Dr. Tobias Engl

Project 11: Impact of immunity on olfactory circuits in flies and ants
Supervisors: Dr. Silke Sachse, Dr. Yuko Ulrich