



Deutscher Akademischer Austauschdienst
German Academic Exchange Service



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Doctorate



IMPRS for Molecular Plant Science (IMPRS MolPlant)

Max Planck Institute of Molecular Plant Physiology • Potsdam



Overview

Degree	Doctoral degree
Doctoral degree or degree awarded by	University of Potsdam
In cooperation with	University of Potsdam
Teaching language	<ul style="list-style-type: none">English
Languages	The working language of the doctoral programme is English . All courses and seminars are held in English. The doctoral thesis can be written and defended in English or German.
Programme duration	6 semesters
Beginning	Only for doctoral programmes: any time
Application deadline	<p>Application deadlines are posted on our website. Application calls for PhD positions in the IMPRS are held once per year.</p> <p>Usually, the application deadline for funded positions is in January. The selection interviews for our IMPRS are usually held in late March or in April.</p> <p>After the interviews, successful candidates start their PhD projects between May and December.</p>
Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	No
Description/content	The International Max Planck Research School for Molecular Plant Science (IMPRS MolPlant) is a joint doctoral programme between the University of Potsdam (UP) and the Max Planck Institute of Molecular Plant Physiology (MPI-MP). We provide a unique opportunity for PhD research and

training in modern plant science.

Understanding the fundamental processes of **how plants grow, reproduce and interact with the abiotic and biotic environment** is at the focus of the IMPRS. We conduct curiosity-driven, basic research **centring around the following questions**

- How do primary physiological processes such as photosynthesis, central metabolism and respiration function, and how are their activities regulated?
- How do plants form their organs, tissues, cells and sub-cellular structures, and how is the formation of different organs and structures coordinated?
- How is epigenetic information established and transmitted and how do epigenetic processes impact on plant development?
- How do plants and soil fungi interact to establish arbuscular mycorrhiza (AM) symbiosis, and how are the accommodation of AM fungi inside root cells and the physiological and developmental state of the plant interconnected?
- How do environmental abiotic factors such as light, temperature, availability of water and nutrients influence plant physiology, development, and the interaction with microorganisms?
- What happens during viral infection of plant cells? How does the virus hijack molecular machinery to replicate? How do plants sense viral infection, protect themselves from excessive harm, and block transmission of the virus to the next generation?
- How are exogenous and endogenous signals perceived, and how is information transmitted and integrated to ensure plant health, survival, biomass acquisition and seed formation?
- How can we manage, analyse and integrate complex, large-scale genomic, epigenomic, transcriptomic, translomic, proteomic and metabolomic datasets to answer biological questions and generate new hypotheses?

To answer these questions, we use an interdisciplinary approach combining **molecular biology, genetics, genomics, epigenomics, metabolomics, biochemistry, biophysics and microscopy** with **bioinformatics and modelling**. We work with *Arabidopsis thaliana*, tobacco, tomato, *Lotus japonicus*, rice and other model plants, and make use of genetic diversity by studying natural accessions, closely related species, and introgression populations.

Research is at the core of the doctoral programme. We provide excellent research and training conditions, with **English** as a working language. Our faculty includes professors and group leaders from the [Max Planck Institute of Molecular Plant Physiology](#) and the [Institute of Biochemistry and Biology at the University of Potsdam](#) Faculty of Science. The doctoral researchers in our IMPRS come from a variety of backgrounds in the life and natural sciences – biology, biochemistry, bioinformatics, chemistry, and related fields – and share a strong passion for plant science.

Course Details

Course organisation

Research is at the core of the doctoral programme. The thesis research is carried out under the **direct supervision of one or more members of the IMPRS faculty**. In addition, each doctoral researcher is supported by an independent **PhD advisory committee (PAC)**. The PhD advisory committee comprises two to three members and is tailored to the needs of the student and the thesis project.

The **training programme** provides **interdisciplinary** scientific training through lectures, seminars, practical courses, participation at national and international **conferences** and/or summer schools, and teaching experience. The **scientific training** is complemented by **transferable skills courses** and workshops. We aim to be as flexible as possible in our scientific and transferable skills training so that the curricular activities fit the individual needs and interests of each doctoral researcher and his or her thesis project.

International elements

- Training in intercultural skills
- Projects with partners in Germany and abroad

Description of other international elements	The IMPRS is embedded in a very international research environment : more than 60% of the doctoral researchers in the programme are international students, the research community at the Max Planck Campus in Potsdam-Golm is very international.
Teaching/work obligations or opportunities	The Faculty of Science at the University of Potsdam requires doctoral candidates to gain a small amount of teaching experience during their doctorate, for example, by co-supervising students in practical courses. The teaching duty amounts to approximately 25 to 30 hours in total.
Special promotion / funding of the programme	<ul style="list-style-type: none"> • IMPRS
Course-specific, integrated German language courses	No
Course-specific, integrated English language courses	No

Costs / Funding

Tuition fees per semester in EUR	None
Semester contribution	<p>The semester fee at the University of Potsdam is approx. 310 EUR per semester. A large portion of this fee pays for a public transport ticket for Potsdam, Berlin, and surrounding areas.</p> <p>There are two semesters per academic year: winter semester (October to March) and summer semester (April to September).</p>
Costs of living	<p>Accommodation costs make up the largest portion of monthly living expenses for doctoral researchers. The monthly cost of housing in Potsdam and Berlin for one person can range from under 600 EUR to 750 EUR or more. This depends on the type (room in shared flat / furnished studio apartment / unfurnished one-room flat) and location of the accommodation. For further information, see the following websites:</p> <p>FAQ on the IMPRS website: https://www.mpimp-golm.mpg.de/6458/General_Information</p> <p>Website of the Welcome Center at the University of Potsdam: https://www.uni-potsdam.de/en/welcomecenter/preparation/housing</p>
Funding opportunities within the university	No

Requirements / Registration

Academic admission requirements	Applicants for the programme should hold or be about to obtain a Master's or equivalent degree in a subject relevant to our programme (biology, biochemistry, chemistry, physics, bioinformatics, mathematics, or related fields). The academic performance should be excellent (rank at or near top of class).
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Doctoral candidates register with the **Faculty of Science at the University of Potsdam**. A university degree with at least four years of study, very good results, and a research thesis are required to be accepted as doctoral candidate at the university. If you are unsure whether you fulfil the degree requirements, please contact the doctoral programme coordinator.

Language requirements

The **working language of the programme is English** both within the curriculum and for the scientific communication between our scientists. Thus, students who would like to pursue a doctorate within the IMPRS should have a very good knowledge of written and spoken English.

Candidates should **support their application with proof of proficiency in English**, for example, scores of internationally valid language exams like TOEFL, IELTS, MTELP, or other tests. If no English test is submitted, proficiency in English may be evaluated during a personal interview.

We do not require any knowledge of German. Nevertheless, some knowledge of German is useful for getting around Potsdam and Berlin. German language courses for those interested in learning some German are offered at regular intervals by the university and in collaboration with the Language School at the Potsdam Science Park (course levels: beginners and advanced 1).

Application deadline

Application deadlines are posted on [our website](#). Application calls for PhD positions in the IMPRS are held **once per year**.

Usually, the **application deadline** for funded positions is in **January**. The **selection interviews** for our IMPRS are usually held in **late March or in April**.

After the interviews, successful candidates **start their PhD projects** between **May and December**.

Submit application to

Online application portal (open during application calls)

Please see the **website of our IMPRS** for further information:
<https://www.mpimp-golm.mpg.de/IMPRS-PhD>

E-mail contact: research-school@mpimp-golm.mpg.de

Services

Accommodation

Initial accommodation in the guest house on the Max Planck Campus Potsdam-Golm is possible for up to three months if rooms are available. This allows for time to look around for accommodation in Potsdam or Berlin. Please note that doctoral researchers are not eligible for accommodation in student housing run by Potsdam or Berlin Student Services (Studentenwerk Potsdam or Berlin).

Selection of Internet resources and private student housing:

- ["WG Gesucht"](#) (Internet portal for flats, shared flats, rooms, etc.; many offers are private offers; you can search by city)
- [ImmobilienScout 24](#) (Internet portal for flats, houses, etc.; you can search by city and enter preferences for location, kitchen, balcony, etc.)
- [BaseCamp Potsdam](#) (private student apartments in Potsdam-Golm, in walking distance from MPI-MP and UP)
- [The Twenty](#) (private student apartments in Potsdam-Golm, in walking distance from MPI-MP and UP)
- [Studentendorf Schlachtensee](#) (private student housing in the south-west of Berlin)

More resources on the website of the Welcome Center at the University of Potsdam: <https://www.uni-potsdam.de/en/welcomecenter/preparation/housing>

Structured research and

Yes

supervision

Research training / discussion

Yes

Career advisory service

Informal career advice is provided by the PhD supervisors, advisory committee members, and the programme coordinator. Job application and career-related courses are offered by the Potsdam Graduate School, the Max Planck Society's Planck Academy, and through the IMPRS. Online seminars featuring Max Planck alumni and their career paths are organised centrally by the Max Planck Society.

Support for international students and doctoral candidates

- Visa matters

General services and support for international students and doctoral candidates

Support is offered for visa matters, registration with the Potsdam city authorities, opening of a bank account, etc., either by the international office at the MPI-MP, the Welcome Center at the Potsdam Science Park or the Welcome Center team at the University of Potsdam (UP). The Welcome Center team at UP also offers a "Buddy Programme" and organises excursions for international researchers.

Advice and support for formal matters with the University of Potsdam (registration as doctoral student, etc.) is offered by the programme coordinator. Doctoral researchers in the IMPRS are registered as doctoral candidates with the Faculty of Science at the University of Potsdam.

Our Partners



— Max Planck Institute of Molecular Plant Physiology —



Max Planck Institute of Molecular Plant Physiology

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The **IMPRS for Molecular Plant Science** is embedded in a vibrant research community. Around 80 doctoral candidates study under the guidance of our faculty, their groups, and departments.

The **Max Planck Institute of Molecular Plant Physiology** is an internationally leading centre for basic **plant research**, especially in the areas of **plastid biology, plant development and cell biology, plant-microbe interactions, and metabolism**. Around 20 PhD researchers and guest students join the MPI-MP every year for their doctoral research. Watch some of the short videos in the [MPI-MP's media library](#) to learn more about the institute and our research.

The **University of Potsdam** ranks within the top 250 universities worldwide for the subject area “Life Sciences” in the 2023 Times Higher Education World University Ranking. The University of Potsdam has about 21,000 students, more than 15% of them international. Several faculty members of the IMPRS are professors of the University of Potsdam's Faculty of Science, at the Institute of Biochemistry and Biology which is located at the Potsdam Science Park in Potsdam-Golm.

The **Potsdam Science Park** hosts the University of Potsdam, three Max Planck Institutes, two Fraunhofer Institutes, and a centre for start-up companies. This provides an **excellent infrastructure for cross-disciplinary training, discussion and exchange of ideas**. The Science Park management offers a [welcome service](#) and [language school](#), and it organises networking and interdisciplinary training [events](#). Several sports and other cultural activities take place on campus – for example, students can join the MPI's football team or enjoy a game of beach volleyball.

Within the University of Potsdam, the **Potsdam Graduate School (PoGS)** unites many individual doctoral candidates and more than twenty PhD programmes in different disciplines and faculties under one roof and offers support, for example, through seminars and transferable skills courses.

The **Welcome Center at the University of Potsdam** provides information, support, and service for international scientists at the University of Potsdam. Their activities include a monthly newsletter, a buddy programme, and excursions.



Location

The **Potsdam Science Park** in Potsdam-Golm, which hosts the Max Planck Institute of Molecular Plant Physiology and several institutes of the University of Potsdam, is in a green area outside the centre of Potsdam, but is **well connected with the Potsdam city centre and Berlin** by train or bus.

Potsdam is an attractive city with a population of about 200,000. It is home to the famous Sanssouci Palace, many lakes, and beautiful parks. Within Potsdam, it is easy to get around on foot and by bike or public transport.

Berlin, the capital of Germany and, with a population of 3.7 million, Germany's largest city, is **very close to Potsdam**. The typical commuting time by public transport between the centre of Berlin and Potsdam-Golm is about one hour. Four universities and several research institutions are located in Berlin and it is not difficult for Potsdam students to attend events and scientific talks in Berlin.

A wealth of cultural life can be enjoyed in Potsdam and Berlin. To find out more, see:

- the official website for [Potsdam](#)
- the official website for [Berlin](#)

Contact

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🌐 Course website: <https://www.mpimp-golm.mpg.de/IMPRS-PhD>

📘 <https://www.facebook.com/MPIMP.PotsdamGolm/>

🐦 https://twitter.com/MPIMP_Potsdam

🌐 <https://www.linkedin.com/company/max-planck-institute-of-molecular-plant-physiology>

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GATE-Germany

Consortium for International Higher Education Marketing
www.gate-germany.de

Disclaimer

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