

Johannes Gutenberg University Mainz (JGU) is one of the largest universities in Germany. Thanks to its location in the Rhine-Main science region, the university can unfold to its full potential and showcase its innovative power and dynamism. Its status as a comprehensive university allows for multidisciplinary learning and teaching and has great potential for internationally renowned, interdisciplinary research. Almost all of its institutes are located on a single campus close to the Mainz city centre – creating a lively academic culture for researchers, teaching staff, and students from every continent.

Faculty 10: Biology / Institute of Molecular Physiology / Molecular Plant Science of Johannes Gutenberg University Mainz

PhD student: Plant RNA Biology

part-time (65%)

The Wachter group investigates mechanisms and functions of alternative RNA splicing in plants (<https://mps-imp.biologie.uni-mainz.de/>). In this PhD project, the possible link between R-loops and alternative splicing will be examined in the context of the 4R graduate program "R-loop Regulation in Robustness and Resilience". R-loops are RNA-DNA hybrid structures and previous studies indicated their involvement in the regulation of gene expression including alternative splicing. This project will use state-of-the-art techniques such as next-generation sequencing to examine the coupling of these processes. Furthermore, their possible mechanistic link will be studied, e.g. by analysing CRISPR/Cas mutants with altered activity of enzymes that can resolve R-loops.

Your tasks:

Your research aims at a better understanding how alternative splicing and R-loops are interlinked in the model organism *Arabidopsis thaliana*. The investigations will be focused on the phase of early and light-dependent seedling development. You will use a combination of experimental approaches from the fields of biochemistry, molecular biology, and physiology to address these novel and exciting aspects of gene regulation. Moreover, you will contribute to our group's teaching activities for BSc and MSc students.

Your profile:

In addition to the general requirements according to public services law, applicants must meet the recruitment requirements stipulated in § 57 of the *Hochschulgesetz* of Rhineland-Palatinate.

- A successfully completed scientific university degree in Biology or in a related field
- Experience in a spectrum of molecular methods
- A background in plant molecular biology and/or RNA biology
- Very good English language skills (at least level B2)
- You are fascinated about science, have very good communication skills, and enjoy working in a team

What we have to offer:

- Working in an expert team within the 4R graduate program (<https://4r-rtg.de/>), which has 14 participating groups with a strong background in R-loop research and other aspects of RNA biology
- An interdisciplinary and international research environment
- Various training opportunities in experimental and soft skills
- You can be integrated in the international PhD programme (IPP) in Mainz
- State of the art equipment, a completely new research infrastructure, and extensive expertise as well as various core facilities
- Jobticket, optional for the entire Rhine-Main area
- Extensive human resources development offer
- Flexible working time arrangements

The position is paid according to **EG 13 TV-L** and to be filled by 4/1/2025. The position is limited initially to a period of 3 years and serves the purpose of academic qualification to obtain a doctorate (PhD).

JGU is diverse and welcomes qualified applications from people with various backgrounds.

We aim to increase the number of women in the field of research and teaching and therefore encourage female researchers to apply.

Candidates with severe disabilities and appropriate qualifications will be given priority.

Are you ready for a new challenge and interested in this varied and responsible position? Then submit your complete application [*cover letter, CV, certificates (with German recognition if applicable), references, and, if applicable, a list of publications*] by **2/28/2025**, preferably via the „Apply now“ button.

For questions and further information please contact Prof. Dr. Andreas Wachter by e-mail: jobs-aw@uni-mainz.de.

[Data protection information](#)

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UNIVERSITÄT MAINZ