Interested in RNA, Plants & Molecular Biology? Join us for a thesis or an internship!

Are you looking to do more than just follow protocols and instead get hands-on experience with real research? We offer Bachelor's and Master's theses as well as research internships in a dynamic team working at the intersection of molecular biology, RNA technology, and plant science.

Depending on your interests, you can dive into fundamental scientific questions or contribute to application-oriented projects – for example, the development of innovative RNA-based plant protection strategies. You'll gain experience with state-of-the-art molecular techniques, contribute your own ideas, and receive close supervision throughout your work.

Join us on one of these exciting projects:

1. **Investigation of circular RNAs in the maize – *Ustilago* maydis pathosystem**
   - (circ)RNA biosynthesis and detection methods, RNA-spray application, northern blot analysis, nucleic acid extraction, qRT-PCR

2. **Analysis of RNA-dependent effects of the root microbiome**
   - RNA biosynthesis and detection methods, RNA-spray application, nucleic acid extraction

3. **Implement mRNA modifications to improve the feasibility of mRNA spray**
   - Construct cloning, RNA synthesis, RNA-spray application, protein extraction, western blot analysis, nucleic acid extraction, qRT-PCR

4. **Functional Analysis of dCas9-Effector Constructs and Modulation of gene expression in *Nicotiana benthamiana* via Agroinfiltration and Dual-Luciferase Assay**
   - Cloning [GreenGate, Golden Gate], Dual luciferase assay, CRISPR/Cas, agro-infiltration assay, confocal microscopy and image analysis

5. **Visualizing the cell-to-cell and long-distance mobility of sprayed RNA in plants**
   - Construct cloning, RNA synthesis, RNA-spray application, and confocal microscopy

6. **Investigation of RNA uptake mechanisms and RNA stability in different crops**
   - Microscopy, RNA synthesis, RNA application, RNA stability tests, molecular techniques, possibility to work on different plant species

Curious? Get in touch – we're always excited to work with motivated students with a passion for science!