



Conducting research for a changing society: This is what drives us at Forschungszentrum Jülich. As a member of the Helmholtz Association, we aim to tackle the grand societal challenges of our time and conduct research into the possibilities of a digitized society, a climate-friendly energy system, and a resource-efficient economy. Work together with around 7,500 employees in one of Europe's biggest research centres and help us to shape change!

Do you want to contribute to sustainable plant use with your work? Then you are exactly right at the institute's department Bioinformatics (IBG-4) of the Institute for Bio and Geosciences at the Forschungszentrum Jülich. The institute processes and develops methods and algorithms to achieve a basic understanding of, in particular, high-dimensional data and processes in bioeconomy. The team focuses on knowledge management and data integration, classic bioinformatics, and machine learning, in particular for predicting phenotypes on biological issues that concern transcriptional reprogramming of plants during abiotic stress response, identification of metabolic pathways for secondary metabolites and understanding plant cell wall biosynthesis.

**We are offering a**

## **PhD position in the field of plant sciences/transcriptome analyses**

### **Your Job:**

Crops are heavily exposed to the influence of climate change. Associated extreme temperatures as well as drought can negatively affect the yield and quality of crops. You will investigate the drought tolerance of old crops and the influence of drought stress on gene expression, with a particular focus on the biosynthesis pathways of secondary plant metabolites (flavonoids).

Your tasks will include:

- Applying controlled stress treatments
- Phenotyping stress responses with various sensors and gene expression studies in real-time PCR
- RNA sequencing and transcriptome analysis with corresponding bioinformatic evaluations

You will document your work, analyze and interpret the measured values obtained in a scientific context. You will present your results at project meetings and national and international conferences and publish your results in scientific journals. Finally, you will

We look forward to receiving your application until 24.10.2025 via our **Online-Recruitment-System!**

**Questions about the vacancy?**

Get in touch with us by using **our contact form.**

Please note that for technical reasons we cannot accept applications via email. [www.fz-juelich.de](http://www.fz-juelich.de)

summarize the results and publications obtained in your doctoral thesis.

#### **Your Profile:**

- An academic degree in the field of biology, horticulture, agriculture, completed at least with the overall grade “good”
- knowledge and experience in plant cultivation under drought stress
- Knowledge and experience in the phenotyping of plants
- Practical experience in working with RNA (RNA extraction, RT-PCR, RNA sequencing)
- Knowledge in programming languages like R or Python for data manipulation and analysis
- Experience in quantifying plant metabolites with LC-MS
- High level of self-sufficiency
- Reliable and conscientious working style
- Excellent communication skills for exchange with colleagues and cooperation partners
- Impressed team capacity and the ability to cooperate cooperatively

#### **Our Offer:**

We work on the very latest issues that impact our society and are offering you the chance to actively help in shaping the change! We offer ideal conditions for you to complete your doctoral degree:

- Excellent scientific and technical infrastructure
- Possibility to participate in (international) conferences and project meetings
- Continuous professional support by your scientific supervisor
- Part-time position with 19,5 hours per week and flexible working hours
- 30 days of annual leave (depending on agreed working time arrangements) and provision for days off between public holidays and weekends (e.g. between Christmas and New Year)
- A large research campus with green spaces, offering the best possible means for networking with colleagues and pursuing sports alongside work
- Further development of your personal strengths, e.g. through an extensive range of training courses; a structured program of continuing education and networking opportunities specifically for doctoral researchers via JuDocS, the Jülich Center for Doctoral Researchers and Supervisors: <https://www.fz-juelich.de/en/judocs>
- Targeted services for international employees, e.g. through our International Advisory Service

The position is initially for a fixed term of 3 years. Pay in line with 65% of pay group 13 of the Collective Agreement for the Public Service (TVöD-Bund) and additionally 60 % of a monthly salary as special payment („Christmas bonus“). Pay higher than the basic pay may be possible. The monthly salaries in euro can be found on the BMI website: <https://go.fzj.de/bmi.tvod.entgelt> Further information on doctoral degrees at Forschungszentrum Jülich (including its various branch offices) is available at <https://www.fz-juelich.de/en/careers/phd>

We welcome applications from people with diverse backgrounds, e.g. in terms of age, gender, disability, sexual orientation / identity, and social, ethnic and religious origin. A diverse and inclusive working environment with equal opportunities in which everyone can realize their potential is important to us.

Further information on diversity and equal opportunities: <https://go.fzj.de/equality>