

POSTDOCTORAL POSITION

Plant Cell Biology / Vacuolar Remodeling

Julian Lab · BOKU University · Vienna, Austria

<https://boku.ac.at/en/btlw/impb/julian-lab>



The project

Plants constantly face environmental stresses that challenge the integrity of their cells. Our recent work uncovered a previously unknown **vacuolar quality control (VQC) pathway**, in which stress triggers the recruitment of the autophagy machinery to the vacuolar membrane, promoting its remodeling and protecting cellular function.

The **FWF ASTRA-funded VITAL project (Vacuolar Integrity Through Adaptive Remodeling)** aims to understand how stress signals perceived at the cell surface are transmitted to the vacuole, how proteins such as **ATG8, ATG16 and the V-ATPase** drive vacuolar membrane remodeling, and how this response contributes to plant stress adaptation.

The position

We are looking for a postdoctoral researcher to investigate the **ultrastructural mechanisms of vacuolar remodeling**, with a particular focus on developing and applying **APEX2-assisted electron microscopy in plant tissues**.

The researcher will work closely with other members of the VITAL team, combining EM with complementary approaches including live-cell confocal microscopy, molecular genetics and proximity labeling/proteomics. The position offers substantial freedom to develop and optimize experimental approaches and to pursue mechanistic questions emerging from the project.

Depending on the interests and expertise of the successful candidate, there will also be opportunities to develop **additional research directions within the broader interests of the lab**.

Who we are looking for

We are looking for a **curious, proactive and highly motivated scientist** who enjoys developing new approaches and solving experimental problems.

The ideal candidate will have:

- A **PhD in plant biology, cell biology, molecular biology or a related field**.
- **Hands-on experience with electron microscopy of plant tissues**, including sample preparation and ultrastructural analysis.
- A strong interest in **plant cell biology, membrane biology and organelle dynamics**.
- The ability to work independently, troubleshoot experiments and proactively contribute new ideas.

- Good communication skills and the ability to work collaboratively in an international research environment.

Experience with **APEX2 labeling, CLEM, advanced fluorescence microscopy, molecular genetics or protein biochemistry** would be advantageous, but is not required.

What we offer

- A **two-year postdoctoral position funded by an FWF ASTRA Award**.
- The opportunity to contribute to an emerging research area at the interface of **plant stress sensing and organelle remodeling**.
- Freedom to develop new experimental approaches and scientific ideas within the broader scope of the project.
- Access to advanced **light and electron microscopy, proteomics, molecular biology and plant genetics** infrastructure at BOKU and through our collaborators.
- An international and collaborative research environment, with support for **conference participation, networking and career development**.
- The opportunity to join a **young and growing research group** and contribute to shaping its scientific and methodological development.

Position details

- **Duration:** 2 years
- **Working hours:** Full-time, 40 hours per week
- **Starting date:** Early 2027, with some flexibility
- **Salary:** According to the standard FWF personnel cost rates for postdoctoral researchers
- **Location:** BOKU University, Vienna, Austria

How to apply

Please send your application as a single PDF to jose.julian@boku.ac.at, including:

- Your **CV**, including a list of publications.
- A **one-page motivation/research statement** describing your previous research experience, your interest in the position, and how you could contribute to the project.
- The **contact details of two referees**.

Full consideration will be given to applications received by 30 September 2026. The position will remain open until filled.

Informal inquiries about the position and the project are very welcome.