The Department of Biotechnology and Food Science, Institute of Computational Biology is currently seeking a

## Postgraduate Research Associate

## project employment

(Reference code 53)

**Extent of employment:** 30 hours per week
**Duration of employment:** 1st of June 2026, limited to 31st May 2029
**Workplace:** 1190 Vienna
**Allocation in compliance with the Collective Agreement for University Staff to job group:** B1
**Gross monthly salary:** (depending on previous eligible experience) at least: **€** 2.832,10 (payable 14 times per year)

This project is about identifying and interpreting structural variation (SV) across wild and cultivated beets of the genus Beta. The aim is to build a comprehensive SV landscape using whole-genome alignments, lllumina resequencing data from more than thousand beet accessions, and machine learning approaches, with emphasis on genome architecture, adaptation, and disease resistance.

## Responsibilities

- Detection and analysis of large structural variation via pairwise whole-genome comparisons and based on short-read and long-read sequencing data; benchmarking of existing methods and implementation of improved workflows
- Application of machine learning methods to identify taxon- and cultitype-specific structural variants, relating variants to phenotypes with a focus on disease resistances
- Collaborate with other team members working on beet genomics, contribute to publications and data releases, write first-author publications, present work at national and international conferences

## Required skills and qualifications

- Diploma degree in bioinformatics or other equivalent university degree
- Language skills: English
- MSc (or equivalent) in bioinformatics, computational biology, computer science, biology with bioinformatics focus, or related field

- Competence with Linux and high-performance computing systems, experience in shell commands and scripting, programming skills (Python and/or Perl and/or R, but not exclusively R)
- Knowledge in plant genomics and applications of high-throughput sequencing
- Enthusiasm, dedication, problem-solving skills, and ability to work in a team

## Desirable skills and qualifications

- Experience with genomic sequencing data, especially genome assemblies and whole-genome re-sequencing data
- Structural variation detection and genome alignment
- Repeat analysis and disease-resistance gene prediction
- Machine learning for genomics and graph/pangenome frameworks

## What we offer

- PhD position in an interdisciplinary team with access to comprehensive data sets (re-sequencing data and reference assemblies) and strong computational resources
- Mentoring and the option to apply for the BOKU doctorate school "AgriGenomics" with additional financial support (e.g. conference attendances, research stay abroad)
- Well-connected working place close to metro station Wien Heiligenstadt

Applications can be submitted until: 21st of April 2026

University of Natural Resources and Life Sciences Vienna seeks to increase the number of its female faculty and staff members. Therefore qualified women are strongly encouraged to apply. In case of equal qualification, female candidates will be given preference unless reasons specific to an individual male candidate tilt the balance in his favour.

People with disabilities and appropriate qualifications are specifically encouraged to apply.

Please send your job application incl.

- Motivation letter
- CV
- Contact details for 2-3 referees
- Email a single PDF, email subject: "KZ 53 - PhD Plant SV genomics- [your last name]"
- We welcome applications from all qualified candidates and strongly encourage applications from underrepresented groups

to HR Management, BOKU University, Peter-Jordan-Straße 70, 1190 Vienna;
E-Mail: recruiting@boku.ac.at. **(Reference code: 53)**

We regret that we cannot reimburse applicants travel and lodging expenses incurred as part of the selection and hiring process.

**www.boku.ac.at**