

## PhD position in Plant Adaptation to Climate Change

A 4-year PhD position (100%) is available in the group of Plant Ecology and Evolution at the University of Basel, Switzerland (<https://duw.unibas.ch/en/plant-ecology-and-evolution/>). Research in the group focuses on plant adaptation to spatial and temporal change in climatic conditions. We estimate the extent to which climate adaptation is possible, what the sources of evolutionary constraints are, and how they will affect future species distribution under scenarios of global warming.

The evolutionary causes of climate niche limits are poorly known. Theory points to changes in the selection regime and genetic limitations. The selection regime may be important if environmental gradients are multivariate or steep in nature. Genetic limits may arise because of low genetic variation in individual environmental tolerances or because of genetic correlations antagonistic to the direction of selection.

### *Your Tasks*

Working with the plant *Arabidopsis lyrata*, the student will assess the tolerance of plants to stressful climatic conditions in greenhouse and outdoors, estimate genetic variances of tolerance and life history traits, and study the quantitative genetic and genomic underpinning of tolerance. Fieldwork will be an important part of the project and take place in eastern states of the US, in collaboration with local universities.

### *Your Profile*

Candidates should have an enthusiastic interest in plants and their evolution, and a strong background in quantitative thinking, experimental design, statistical analysis/bioinformatics, and rearing plants. Applicants must have a university degree in the natural sciences that allows entrance to a PhD program (ideally in evolutionary biology or ecology), and very good organizational, analytical, and scientific writing skills. Applicants should have a driver's license.

### *We offer*

The project is based at the Department of Environmental Sciences, University of Basel, Switzerland. The Department offers a stimulating environment, including a rich spectrum of research activities in life sciences (plant ecology, population genetics, evolutionary biology, plant physiology and molecular and cell biology). Students will be enrolled in the PhD program of the Zürich-Basel Plant Science Center. Basel is a mid-sized Swiss city, well connected and offering a broad range of cultural and recreational activities. Ideal starting date is October 2019 but is open to negotiation.

### *Contact*

For more information, contact Yvonne Willi ([yvonne.willi@unibas.ch](mailto:yvonne.willi@unibas.ch)). Motivated applicants should submit (1) a one-page letter that summarizes interests and relevant experience, (2) their CV, (3) copies of undergraduate and masters/diploma transcripts, and (4) contact information of two references (all as a **\*\*\*single PDF\*\*\***) to: [franziska.grob@unibas.ch](mailto:franziska.grob@unibas.ch). Applications are welcome until the position is filled and will be reviewed starting on July 21, 2019.