



PhD Student in Stable Isotope Physiology, 100%

Start Date early 2021

The Physiological Plant Ecology group of the University of Basel investigates the ecophysiological processes in plants that determine the fluxes of water, nitrogen, and carbon in natural and agricultural ecosystems. The goals of our research are to understand how plants operate in the context of their environment and to reveal how plants shape the functioning of terrestrial ecosystems. The open position is within the ERC project HYDROCARB, where we seek to determine the potential of stable hydrogen isotope ratios ($\delta^2\text{H}$ values) to assess the carbon metabolism in plants. Such a new application of $\delta^2\text{H}$ values would be highly relevant to address important scientific questions encompassing global change ecology, plant breeding, and paleohydrology.

Your Tasks

The key objectives of the advertised PhD project are to optimize analytical methodologies for the analysis of $\delta^2\text{H}$ values from plant carbohydrates, and to apply these in experiments with different vascular plant species under controlled or closely monitored environmental conditions to identify the processes that shape cellulose $\delta^2\text{H}$.

Your Profile

We are looking for a dynamic, reliable, and motivated student with M.Sc./Diploma in biology, biochemistry, organic geochemistry, or related disciplines. Strong interest in process-oriented research in plant physiology and biochemistry and hands-on experience with analytical instruments (gas chromatographs, stable isotope mass spectrometers) are beneficial. Teamwork within the group and project partners requires advanced spoken and written English language skills.

We offer

The research will be carried out within a 3-year project starting in the spring of 2021. We offer an interesting position in an international, interdisciplinary research environment at the University of Basel. Salary and social benefits are provided according to University of Basel rules.

Contact

Please send your complete application (letter of motivation, CV, contact information of three references) to Ms. Maura Ellenberger (maura.ellenberger@unibas.ch). Please submit your application to maura.ellenberger@unibas.ch at your earliest convenience but no later than January 31st. Further information can be obtained from the supervisors, Dr. Holloway-Phillips (m.holloway-phillips@unibas.ch) and Dr. Daniel Nelson (daniel.nelson@unibas.ch).