



University of Zurich (UZH) and Eawag, the Swiss Federal Institute of Aquatic Science and Technology (Duebendorf, Switzerland), are internationally recognized institutes that are committed to the ecological, economical and social management of water. They offer excellent laboratory and field facilities for interdisciplinary research, large-scale experimental facilities, and long-term research programs and data sets. These institutions share common goals towards education, research, and technology transfer at the highest international level.

**The Altermatt lab** at the Department of Evolutionary Biology and Environmental studies (UZH) and the Department of Aquatic Ecology (Eawag) **has a vacancy for a**

## Postdoc position (3+1 years)

### “eDNA metabarcoding to assess distribution, diversity and indicator status of groundwater amphipods in Swiss drinking water wells (*AmphiWell*)”

Amphipods are among the most common invertebrates in streams, rivers and lakes. They play a key role in the functioning of these ecosystems and are regularly used for monitoring and bioindication. While the diversity and distribution of the epigeal (above ground) amphipods is well documented, there is a significant and largely unknown diversity of amphipods in hypogean (below ground) habitats. The project *AmphiWell* will establish scientific baseline data about the diversity and distribution of amphipods (especially genus *Niphargus*) in Swiss groundwaters. The Postdoc project will establish eDNA metabarcoding methods to monitor groundwater from a biological perspective. The tools will be developed in close collaboration with respective stakeholders, such that they can be directly used and implemented by water providers. The project is aligned with a parallel PhD project that focuses on biogeography and species diversity of amphipods in groundwater. Goals of the Postdoc project are:

- 1) Establish environmental DNA (eDNA) techniques as a monitoring tool for groundwater amphipods to fit into existing drinking water monitoring frameworks.
- 2) Using a metabarcoding eDNA approach to describe whole communities of groundwater habitats (e.g. including molluscs, isopods, possibly bacteria).
- 3) Analyse the occurrence of groundwater amphipods with respect to chemical parameters/descriptors of the groundwater.

**The postdoctoral fellow will use** our established collection of groundwater amphipods (genus *Niphargus* sp.) to build a reference barcode library, develop appropriate primers for eDNA analyses, and plan, conduct and analyse an eDNA sampling campaign in collaboration with drinking water providers to assess biodiversity of groundwater amphipods. The project builds on existing data from an ongoing project ([www.amphipod.ch](http://www.amphipod.ch)). The project is co-funded by the Swiss Federal Office for the Environment (BAFU/FOEN) and some interest in stakeholder interactions would be wanted.

**Competitive applicants have** previous experience in eDNA analyses, metabarcoding and bioinformatics. Strong expertise in spatial ecology, biodiversity sciences and statistics is desired. Applicants will be highly motivated, enthusiastic and independent scientists. They must have a good conceptual understanding of ecological theory and strong laboratory skills. Excellent communicational and writing skills in English, experiences with publishing scientific articles, good work ethics, and creative thinking are a must. A PhD in Ecology or related subject is necessary for admission.

**To apply**, you must have a PhD degree in Ecology, Molecular Ecology or a closely related science field and should have a valid driver licence. The successful applicant will be based in the group of Prof. Dr. Florian Altermatt ([www.altermattlab.ch](http://www.altermattlab.ch)) at Eawag and UZH in Duebendorf/Zurich. Dr. Roman Alther (Eawag/UZH) and Prof. Dr. Cene Fišer (University of Ljubljana) are further project partners. The position is for a period of 3 years with a 1 year extension option, and should start in summer 2020.

**We are looking** for a highly motivated, enthusiastic and independent person with a passion for science to join our highly international team. Zurich hosts many other research groups in ecology and biodiversity research, and is among the world's leading cities in terms of science, culture and quality of life. Applications from women are especially welcome.

**For further information** about the position please consult [www.altermattlab.ch](http://www.altermattlab.ch) or contact Prof. Dr. Florian Altermatt: [florian.altermatt@eawag.ch](mailto:florian.altermatt@eawag.ch).

**Applications must be submitted by April 15 2020.** Your application should include a letter of motivation, a complete CV, relevant diplomas, and names and contact information for three references.

**We look forward to receive your application** through this webpage. *Any other way of applying will not be considered.* Please click on the link below, this will take you directly to the application form.

<https://apply.refline.ch/673277/0780/pub/1/index.html>