



The Altermatt lab at the Department of Aquatic Ecology at Eawag and the Department of Evolutionary Biology and Environmental Studies (IEU) at the [University of Zurich](https://www.unizh.ch) have a vacancy for a

Postdoc position in spatial genomics of aquatic invertebrates (3 years)

Genetic diversity is the foundation for natural selection and adaptation to environmental change and captures contemporary and past population dynamics. Its understanding is thus central both from an academic and a management perspective. However, contemporary understanding of genetic diversity is still scattered, and largely based on a small set of genetic markers. Recent advances in the analysis of whole-genome sequencing data provide unprecedented opportunities to characterize intraspecific genetic diversity, population structure and adaptive diversity in much greater detail. They also enable the reconstruction of recent demographic history, including patterns of inbreeding and changes in effective population size (N_e), thereby allowing the identification of populations that are particularly vulnerable.

OneBioNet-G: Genetic diversity of key species of invertebrates in small water bodies in Switzerland is a cross-measure project funded by the 2nd Swiss Biodiversity Action Plan (AP SBS II) of the Swiss Federal Office for the Environment's (FOEN/BAFU). Our aim is to integrate genetic/genomic diversity across multiple aquatic invertebrates in Switzerland to understand their genetic composition and connectivity and to associate it with future climate and land-use change at large scale.

In this PostDoc project, you will establish and analyse genomic diversity of multiple aquatic keystone species in a spatially explicit approach. This specifically includes a) de-novo sequencing and assembly of draft genomes for multiple aquatic insect (may-, stone, and caddisfly, EPT) and amphipod species, b) establishing genomic data for ~2,000 individuals across dozens of populations (using whole genome sequencing / ddRAD approaches), c) infer genetic diversity, connectivity and adaptive genetic variation, including retrospective changes in inbreeding and effective populations sizes, d) conduct spatially explicit analyses of the genetic/genomic diversity and associate it to river network topology, environmental variables and biogeographic drivers, and e) assess feasibility, strengths and potential limitations of population genomic monitoring approaches for a national genetic diversity monitoring program.

The project is fully funded by FOEN/BAFU, links to the OneBioNet initiative "*Advancing functional connectivity of ecologically valuable areas through a Social-Ecological System*" and is building on a [Swiss pilot study for monitoring genetic diversity](#) (see also [here](#)). The project has a strong focus on establishing baseline genomic data for Swiss aquatic invertebrates and is conducted in close collaboration with stakeholders.

The position is to be filled with a motivated candidate capable of taking a leading role in advanced genetic analyses, and a strong expertise in genomics, incl. laboratory, bioinformatic and spatial analyses.

This project builds on organisms collected within representative sampling campaigns (Swiss Biodiversity Monitoring and Amphipod.ch). You will establish draft genomes for a selected set of 3–5 EPT and 2–3 Amphipod species, establish population level WGS and/or ddRAD sequencing data per species (leading the project, yet with extensive laboratory technician support), and analyse genome-wide genetic diversity, adaptive genetic diversity, genetic connectivity and spatial network structure, inbreeding and effective population sizes. You will lead the analysis, implementation of these indices, and develop possible monitoring strategies for genetic monitoring together with stakeholders.

To apply, you must have a PhD degree in Molecular Ecology, Ecology, Biodiversity Sciences or a closely related science field. You must have proven laboratory and bioinformatics experience in whole genome sequencing and/or ddRAD sequencing approaches, and knowledge on analysing genomic data. Experience in bioinformatics, spatial distribution modelling or programming is an asset. A strong conceptual background in molecular ecology and a good understanding of ecological theory and data analysis are expected. Proven skills in scientific writing are needed. The working language in the groups is English. Fluency in speaking and writing is required. Additional German or French language skills are desirable for stakeholder interactions.

The overall project is led by **Prof. Dr Florian Altermatt** at [Eawag/UZH](https://www.eawag.ch). The successful applicant will be based and hired at Eawag (Duebendorf, Switzerland). The project involves collaborations with stakeholders at FOEN/BAFU, WSL, University of Lausanne and the Genetic Diversity Centre (GDC) at ETH Zurich. The project offers a high independence and leadership to the successful applicant. The position is fully funded for three years and is expected to start in fall 2026.

We are looking for a highly motivated, enthusiastic and independent person with a passion for science and implementation.

At Eawag, we have a working environment in which people with different experiences, strengths, and perspectives can fully contribute and further develop. Here, you can help us advance! We promote genuine participation, exchange, and mutual understanding. We create structures that enable the compatibility of work and other areas of life, such as care work, and continuously make efforts to reduce barriers.

Do you have specific requirements regarding the application process or the position, or do you need additional information? Talk to us about it—we will be happy to support you with possible flexible workplace, working hours, and job design solutions. For further information please visit our website about [Eawag](#) as well as our [conditions](#) of employment.

Applications must be submitted by 9 August 2026. Your application should include a letter describing your interests and their relevance to this position, a complete CV, university diplomas, and the names and contact information for three references (all in one pdf file).

For further questions, consult www.altermattlab.ch or contact [Prof. Dr Florian Altermatt](#).

We look forward to receiving 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/673277/1363/pub/1/index.html>