

The Swiss Tropical and Public Health Institute (Swiss TPH) is a world-leading institute in global health with a particular focus on low- and middle-income countries. Associated with the University of Basel, Swiss TPH combines research, education and services at local, national and international level. 950 staff and students from 95 nations work at Swiss TPH focusing on climate change, environment and health, infectious and non-communicable diseases, societal and cultural context, and health systems and policies.

The Department of Epidemiology and Public Health (EPH) investigates distribution and causes of infections and non-communicable diseases. To understand and promote the well-being of people in different cultural and environmental contexts, EPH applies various methods ranging from anthropology and social science to biostatistics and mathematical modelling as well as observational cohorts with biobanks.

The Environmental Exposures and Health Unit invites applications for a

Trainee in Ultrafine Particles Measurements in Switzerland (80 – 100%)

Air pollution is a major environmental health risk, responsible for millions of premature deaths annually and globally. Ambient (outdoor) air pollution is estimated to cause 4.2 million deaths and indoor air pollution to cause 3.8 million deaths annually and globally (WHO). While particulate matter (PM₁₀, PM_{2.5}) is regulated, ultrafine particles (UFPs; <100 nm) remain largely unregulated despite growing evidence of their adverse health effects. The lack of high-resolution exposure models on UFPs limits epidemiological studies and policy interventions. The European MARKOPOLO project (<https://markersofpollution-markopolo.eu/>), in which this internship/thesis will be embedded, aims to address these gaps by conducting extensive measurement campaigns to quantify UFP concentrations and their health impacts.

The planned measurement campaigns will employ mobile and stationary monitoring approaches to capture the spatial and temporal variability of UFPs across urban, suburban, and rural areas in Switzerland. These data will feed into an advanced machine-learning-based exposure model, forming the basis for epidemiological studies linking UFP exposure to health outcomes.

YOUR VARIOUS RESPONSIBILITIES INCLUDE:

- Planning of and participation in fieldwork for three mobile air pollution measurement campaigns (summer, autumn, winter) across Switzerland using an electric car equipped with measurement instruments
- Checking and servicing of equipment for UFPs and co-pollutants (PM_{2.5}, NO₂, black carbon, brown carbon)
- Data downloading, management, data cleaning, and preliminary analysis
- Contribution to a scientific publication

YOU SHOULD HAVE THE FOLLOWING EXPERIENCES AND SKILLS:

- BSc or MSc degree in Environmental Sciences, Environmental Engineering, Environmental Epidemiology, Geosciences, Data Science or a related field
- Interest in environmental exposure science and epidemiology
- Driver's license Type B valid in Switzerland
- Strong motivation and ability to work independently as well as in a team
- Basic statistical and data analysis skills (training will be provided)
- Experience or affinity with environmental monitoring (training will be provided)
- Strong organizational skills and attention to detail

WHAT WE OFFER:

- Meaningful work in an international environment
- A modern workplace in our new building with its own canteen on the dynamic BaseLink site in Allschwil
- Being part of a committed and motivated team with short information and decision paths
- Versatile further education opportunities and mentoring

JOB CONDITIONS:

- This internship can be completed as part of a Master's program or in addition, or to gain further experience in a research environment.
- Start date: June or July 2025 (negotiable)
- Duration: 4-6 months, with an option of prolongation
- Percentage: 80-100%
- Location: Allschwil and fieldwork throughout Switzerland
- Travel required: Yes, the monitoring campaign covers all of Switzerland. Overnight stays might occasionally be required to allow for efficient coverage of areas in the South and East of the country
- Internal job title: Trainee

HOW TO APPLY:

Please submit your application online via <https://jobs.swisstph.ch/Jobs/All> with:

- CV
- Motivational letter including names and contact information (email or phone) of 1 – 2 references
- Reference letters and diploma

Together, we can make the world a healthier place. We look forward to receiving your application.

Please note that we can only accept applications via our online recruiting tool. As long as the position is online on our company website, we are open for new applications. Applications via e-mail or external recruiter will not be considered.

CONTACT:

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