

## Faculty of Geosciences and Environment

The Institute of Earth Surface Dynamics (IDYST) opens a position of

### Doctoral assistant (Assistant-e diplômé-e) in Soil Biogeochemistry

Starting date :	Jan 1 <sup>st</sup> 2024 or upon mutual agreement.
Position duration :	1 year initially. The contract will then be renewed 2x for 2 years. The maximum total duration is 5 years.
Level of activity :	70-100%.
Work location :	University of Lausanne, Institute of Earth Surface Dynamics (IDYST), Lausanne Moulins (Géopolis).
Supervisor:	Prof. Dr. Marco Keiluweit

#### Presentation:

The Soil Biogeochemistry group of Prof. Dr. Marco Keiluweit is looking for **a PhD student in Soil Biogeochemistry** with a focus on rhizosphere processes. The position is fully funded for up to 5 years.

#### Your responsibilities:

The candidates will join a strong and growing Soil Biogeochemistry group studying the response of the soil carbon cycle to environmental change. The successful candidate will perform research on rhizosphere processes and their vulnerability to climatic drivers. Specifically, this project will address how plant roots and associated microbes impact soil carbon storage under different climatic conditions. This work will include laboratory-, growth chamber- and field-based experiments to disentangle the underlying plant-microbe-mineral interactions. The results of this research will significantly advance conceptual models of the soil carbon cycle and improve future climate change predictions and mitigation strategies.

This project will include both laboratory- and field-based experiments, as well as cross-ecosystems comparisons. The candidate will be trained in cutting-edge geochemical and biological analyses, including stable isotope tracers, spectro/microscopic techniques, and molecular biology tools. The work will be performed within the context of an SNF project, which involves close collaborations with a suite of international colleagues across Europe and the US. The successful candidate will work on this project with an SNF postdoctoral researcher.

A PhD at the University of Lausanne takes between 3 and 5 years. The contract is initially for 1 year, renewable. Most of the PhD student's time will be dedicated to research, but contributing to some teaching activities is expected and there is the additional possibility of supervising master students. A maximum of 20% of the workload will consist of teaching support for Bachelor and Master-level soil biogeochemistry courses, and with technical and administrative tasks related to the activities of the Institute.

The employment conditions are available [HERE](#)

### **Your qualifications:**

In order to expand our Soil Biogeochemistry group, we are looking for someone with the following background:

- The chosen candidate will have a master's degree in biogeosciences, environmental sciences, plant & soil sciences, microbiology or related field.
- Excellent knowledge of biogeochemical processes and an interest in plant physiology is a requirement.
- Prior experience in basic wet-chemical lab procedures and analyses and data analysis is recommended.
- Familiarity with plant biology, spectro/microscopic, and -omics tools is an advantage.
- Commitment to conducting PhD thesis research on plant-soil interactions regulating soil carbon dynamics.
- Well-developed interpersonal skills and an ability to work well in a multicultural team and institute.
- Excellent skills in written and oral English are required. Working knowledge of French is preferable but not necessary.

### **What the position offers you:**

We offer a fully funded PhD position at a competitive salary (~50K CHF/year, maximum of 5 years) in a vibrant academic environment.

UNIL is a leading international teaching and research institution, with over 5,000 employees and 17,000 students split between its Dorigny campus, CHUV and Epalinges. As an employer, UNIL encourages excellence, individual recognition and responsibility.

The Soil Biogeochemistry group within the Faculty of Geoscience and Environments offers a nice work place in a multicultural, diverse and dynamic academic environment. The resources available in the

Faculty and UNIL more broadly offer extensive opportunities for technical and professional training, international collaboration, personal growth.

### **Application documents :**

Motivation letter, Curriculum Vitae, copy of university degrees certificates and transcripts of marks/grades awarded, an electronic version of a research output (MSc diploma thesis, research report, proceedings paper or other scientific publication), and the contact information for two academic references. Only applications made through this website will be taken into account.

### **Contact for further information:**

Questions regarding the application can be addressed by email to Prof. Dr. Marco Keiluweit ([marco.keiluweit@unil.ch](mailto:marco.keiluweit@unil.ch)).

### **Application deadline :**

Oct 31, 2024

### **Additional information:**

UNIL is committed to equal opportunities and diversity.  
[www.unil.ch/egalite](http://www.unil.ch/egalite)  
UNIL supports early career researchers.  
[www.unil.ch/graduatecampus](http://www.unil.ch/graduatecampus)