

## 1. Monday, 16th of June

### **Bloom Biorenewables**

Bloom Biorenewables is a spin-off, startup company originating from the École Polytechnique Fédérale de Lausanne (EPFL). Founded in 2019, Bloom Biorenewables has 21 employees and its core activity is focused on valuing the 3 main components of plant materials: cellulose, lignin and hemicellulose. The technology behind it focuses on separating and purifying these 3 chemical compounds from recovered plant biomass and, by means of chemical (and futurely biochemical) conversion, transforming these compounds into highly valuable compounds, such as biofuels, aromatic compounds and structured materials like bioplastics and textiles. The current main project of the company is developing aromatic compounds from lignin that can be sold to cosmetic companies.

### **Our visit**

Our trip to Bloom Biorenewables started early in the morning. After walking and navigating through the maze of a building full of different companies, we met with Dr. Florent Héroguel, co-CEO and co-Founder of the company, who welcomed us to the company with an introduction to the company's origins, values and technology. Dr. Florent then went on to more specifically introduce the company's technology, product portfolio, business model and market opportunities, emphasizing the versatility of the compounds they work with and the need of companies who purchase their products to become more environmentally friendly, which realizes the company's market opportunity. However, the availability of cheaper raw materials like petroleum (used to produce materials that compete with some of the company's products) is still a challenge for the company to enter other market areas (like the plastics' industry). Dr. Florent then walked us through the company's laboratory facilities where we got to see the instruments they work with, the whole production process, as well as meet some of their workers, to whom we got the opportunity to pose questions, not only about their jobs and the company, but also about life in Switzerland. We were given the opportunity, before and after the visit to the laboratories, to see, touch and smell some of the products the company produces. After the laboratory tour, we spent some more time talking with Dr. Florent about the company's prospects and how raising funding for a company works. We finished the trip by thanking our host with some jams and cookies from Sweden.



## 2. Tuesday, 17th of June

### Basilea

Basilea is a pharmaceutical company based in Basel that was founded in the year 2000. Today, it is a midsize company with approximately 150 employees, focusing on the development of antifungal and antibiotic pharmaceuticals for patients with severe infections. Basilea currently has two drugs on the market and several others in various stages of development, ranging from preclinical to drugs being evaluated in phase two studies.

### Our visit

During our visit to Basilea, we had the opportunity to learn more about the different stages involved in developing and bringing a new drug to the market. First, we met Mark Jones, who provided an overview of the company. His presentation was followed by Anna Berczi from the HR department, who described what it is like to work in a Swiss biotech company and their recruitment. Next, Laurenz Kellenberger and Karine Litherland gave presentations about drug discovery and translational development. Additionally, we learned more about the laws and ethics that regulate the pharmaceutical industry from Karsten Goedecke, and finally, Thomas Knobloch gave a presentation on the manufacturing processes.

After the presentations, we visited their laboratory facilities with the help of Markus Heubes, where we had the chance to see their analytical instruments and ask questions about their work. Our visit concluded with a nice lunch with Mark, where we had the opportunity to ask more questions and learn more about working and living in Switzerland in general.

FFB Study trip 2024  
17<sup>th</sup> -19<sup>th</sup> of June  
Participants: 9



## **Swiss TPH (Swiss Tropical and Public Health Institute)**

The Swiss TPH is a world-leading institute in global health with a particular focus on low- and middle-income countries. This institute strives for sustainable impact in over 130 countries, combining research, education and services to improve health and well-being of people through a better understanding of disease and health systems and by acting on this knowledge. With 950 staff and students from 95 nations, the Swiss TPH focuses on climate change, environment and health, infectious and non-communicable diseases, societal and cultural context, and health systems and policies.

The Department of Medical Parasitology and Infection Biology at Swiss TPH is a leading center for research, diagnostics, and education on parasitic diseases. It focuses on studying the biology, epidemiology, and control of parasites affecting human health globally. The department provides advanced diagnostic services, conducts epidemiological surveillance, and collaborates with international organizations to develop innovative strategies for disease prevention and control. Through its multidisciplinary approach, the department aims to improve public health outcomes and contribute to global health initiatives.

### **Our visit**

The study visit at Swiss TPH started with a welcome introduction and office tour by the responsible of the communications, Silija Körkel. Afterwards we had a guided tour together with Professor Sebastien Gagneux, where we got the opportunity to visit the facilities and laboratories of the Department of Medical Parasitology and Infection Biology, specifically in relation to research projects developed in relation to Tuberculosis. It was a great and different experience to see the work environment of highly regulated labs with different bio safety levels.

Subsequently, we have attended several seminars connected to research work at the same Department, respectively: *“Introduction to the Tuberculosis research at Swiss TPH”* (Professor Sebastien Gagneux, Head of the Department of Medical Parasitology and Infection Biology); *“Introduction to Malaria host interaction research at Swiss TPH”* (Professor Nicolas Brancucci, Head of Malaria Host Interactions Lab), and *“Introduction to drug development for parasitic worm infections”* (PhD Students at Helminth Drug Developing Unit). Finally, the laboratories have been toured along with the studies carried out by different doctoral students working with worms and parasites. Different PhD students shared their research experiences with us and presented their exciting research activities along with there experiences at the Swiss TPH.

FFB Study trip 2024  
17<sup>th</sup> -19<sup>th</sup> of June  
Participants: 9



FFB Study visit 2024

19<sup>th</sup> of June, 09:00 – 12.30

Address: Switzerland, Zurich, Schmelzbergstrasse 7, E Floor, Office 20

Participants: 5

Contact: [peter.fischer@hest.ethz.ch](mailto:peter.fischer@hest.ethz.ch)

### **ETH Zürich**

Is one of the world's leading universities in science and technology and is known for its cutting edge research and innovation. ETH Zurich sees continuing education as a transfer of knowledge and technology between university and practice.

### **Our visit**

We visited the Department of Health Sciences and Technology, Laboratory of Food Process Engineering. The group focuses on process-structure-property interactions in food/biomaterial systems. We met Prof. Peter Fischer, his research activities

FFB Study trip 2024  
17<sup>th</sup> -19<sup>th</sup> of June  
Participants: 9

focus on soft matter and food material sciences, in particular on interfaces and emulsions, viscoelastic surfactant solutions and biopolymers. Peter gave us a tour through the rheology Lab, where we had the opportunity to see different equipment and discuss different methods they use. He showed us the facilities in different labs and explained about ongoing research projects. We also visited their pilot plant facility and could see different equipment of different capacities that are used to process the food. Then we went to the ETH Zurich's second campus located in Hönggerberg where we could visit other Lab's and interacted with PhD students. We offered Peter some gifts brought from Sweden to thanks for their hospitality.



**FFB - PhD students at Food Process Engineering Laboratory - ETH Zürich.**

FFB Study trip 2024  
17<sup>th</sup> -19<sup>th</sup> of June  
Participants: 9

## Visit at ETH Zurich BioNMR group

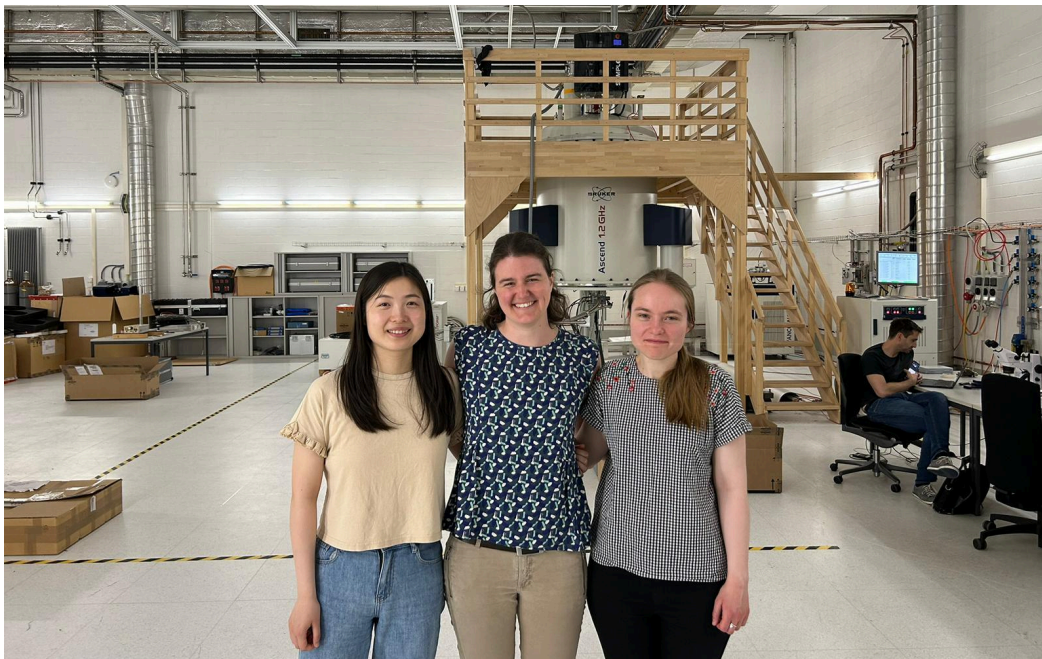
19<sup>th</sup> of June, 09:30 – 13.30

Address: Institute for Molecular Physical Science, Vladimir Prelog Weg 2, HCI F 223, 8093 Zurich, Switzerland

Participants: Tarja Wiegel, Luying Wang, Piera Wiesinger

### Our visit

We started our visit at the BioNMR group at ETH Zurich by presenting SLU and our PhD projects to the group and engaging in interesting discussions and questions about our topics. Afterwards two PhD students, Luca Wenchel and Henry Wetton, gave us a tour through their laboratories, NMR spectrometer facility and cryo-EM facility. On our tour we had the opportunity to meet several group members who shortly presented their projects to us. Among others we gained insights about their projects bringing forward computational aspects of NMR spectroscopy, research on amyloid structures and assembly and amyloid prebiotic chemistry. We really enjoyed the welcoming atmosphere in the group and are thankful for the time they took to show us their facilities and share their work with us. During a lunch with PhD students we also had the opportunity to exchange information about life and work in Sweden and Switzerland. This visit was highly valuable to network with a group with outstanding work in Biomolecular NMR spectroscopy.



FFB Study trip 2024  
17<sup>th</sup> -19<sup>th</sup> of June  
Participants: 9



## **The University of Zurich**

The University of Zurich is one of the leading research universities in Europe and offers the widest range of degree programs in Switzerland.

### **Our visit**

During the visit at The University of Zurich, I met two PhD students from Molecular Biology group. In the morning, we shared our own PhD project with each other, and had a deep discussion about 'Proteases and its substrates in plant' and how to identify them. Later, they gave me a tour through their labs and facilities. Also, we shared different PhD life between Sweden and Switzerland, and how to deal with tricky scientific problems and how to get a balance between PhD study and life.