



University of Zurich (UZH) is Switzerland's largest university with 28,000 enrolled students. Founded in the year 1833, UZH was Europe's first university to be established by a democratic political system. Today, UZH is one of the foremost universities in the German-speaking world. UZH is committed to excellence in research, teaching and innovation in an multi-cultural environment.

The Institute of Plant and Microbial Biology offers a position as

## **Postdoctoral researcher in microbial bioengineering**

located at the main life science campus at Irchel park in Zurich. The position is to be filled within the dynamic and young research group on predatory bacteria lead by Dr. Simona Huwiler (<https://www.botinst.uzh.ch/en/research/microbiology/huwiler.html>).

Most cancer therapies lead to undesirable side effects that could be minimised with more precise spatial and temporal control of the therapy. Certain pathogenic bacteria can inject damaging proteins specifically into eukaryotic cells using a molecular syringe (the type III secretion system, T3SS). Some therapeutic applications of this injection system are hampered by the strong human immune response against pathogenic bacteria. In contrast, certain predatory bacteria that attack other bacteria, but not human cells, elicit a lower immune response. The aim is to transfer a functional T3SS into a predatory bacterium in a collaboration with group leader Dr. Andreas Diepold at the Max Planck Institute for Terrestrial Microbiology in Marburg (Germany). With this newly bioengineered system, we want to pave the way for a new platform technology, which could be used e. g. for targeted killing of tumour cells in vivo.

We are looking for a motivated early career researcher to continue our journey to develop a low-immunogenic and efficient bacterial delivery system for precise and well-targeted drug delivery into human cancer cell lines.

### **Your responsibilities:**

- development of an exciting microbial bioengineering project with highly promising preliminary data
- collaboration in a small and enthusiastic research team
- publication of research findings

### **Your profile:**

- we are looking for a highly motivated early career researcher
- excellent PhD in molecular biology, microbiology, cell biology or similar field (or prospective defense by March 2023)
- familiar with molecular biology work (e.g. cloning, Western blots, ELISA), as well as bacterial and cell cultivation
- previous experience in the field of bacterial secretion and/or experience in widefield microscopy and preferably super resolution and/or expansion microscopy is of advantage
- able to work independently and in an organized way
- great team player, the research groups value an inclusive and open team spirit



- you will work on a collaborative project, hence effective and clear communication is required
- solid English language skills (working language in the laboratory)

**What we offer:**

- work on a newly developed platform technology with potential for industrial application
- access to cutting-edge imaging facilities at UZH
- intense knowledge exchange and short-term research stays with collaborator at the Max Planck Institute in Marburg, Germany
- supportive colleagues and supervisory team
- guided transition into the research topic/introduction by experienced postdoc
- highly competitive salary in accordance with the salary guidelines of the canton of Zurich
- flexible working hours in dynamic working environment, valuing diversity and equality
- UZH offers ample opportunity for additional courses on entrepreneurship and continuing education

Start of employment by middle of March 2023 or by arrangement. The 100% employment has a duration of 20 months in a fixed-term contract. The main place of work is UZH, Winterthurerstr. 190, CH-8057 Zurich, Switzerland (Main Life Science Campus UZH). Short-term research stays will take place at the Max Planck Institute for Terrestrial Microbiology, Marburg, Germany.

Contact for further information is Dr. Simona Huwiler, available by email: [simona.huwiler@uzh.ch](mailto:simona.huwiler@uzh.ch).

**Interested? How to apply:**

We look forward to receiving your application as ONE PDF file by **23<sup>rd</sup> January 2023 (23:00h CET)** containing:

- a cover letter/motivation letter
- CV including full list of publications
- names and contact details of two reference persons (position, address, relation to applicant, email and phone number)

Please send your application to [simona.huwiler@uzh.ch](mailto:simona.huwiler@uzh.ch). All applications will be processed adhering to above structure. We cannot issue any confirmation of receipts. Thank you for your understanding.

Applications will be reviewed after 23<sup>rd</sup> January 2023, until the position is filled.