

Reproducing pulmonary function in the lab with AlveoliX

A journey inside the complex human lung – AlveoliX’s goal is to reproduce how this organ works within the human body. The organ-on-chip technology developed by the Bern start-up reproduces the functioning of the lung on a small scale.



The lung is a complex organ and reproduction of its function is no easy task. Yet this challenge has been taken up by researchers Nina Hobi and Janick Stucki, Co-CEOs of AlveoliX. When researchers develop a drug or study a disease in the lab, they use models and conduct in-vitro tests using, for example, petri dishes, or rely on animal testing. The test results are usually very limited, and the success rate for drug tests of the lung is less than 3%. AlveoliX has been working for several years to create a lung-on-chip. “Inside the chip, we simulate the micro-environment of the lung, including the breathing movement. This allows us to create an environment that helps the cells grown inside the device to maintain their properties, and thus to behave as they do in the human body,” explains Stucki. “With our technology, drug development will be more

efficient, safer and more personalised, as tests can be performed on different human cells inside the chips.”

“The goal was to bring something with big potential from research to the outside world and to have an impact on society. Unfortunately, many research projects are closed at the end of the funding period and shelved. The Innosuisse coaching programme has allowed us to interact with coaches from different fields, who have taught us many things. Innosuisse has also supported us financially: with innovation cheques and Innosuisse projects, we have been able to develop our technology,” says Stucki.

Innosuisse provides support to start-ups

Innosuisse offers the Training programme to help entrepreneurs develop their business idea. The training modules are led by entrepreneurs and take place all over Switzerland.

Entrepreneurs who have founded a start-up can apply for the Coaching programme, a personalised coaching programme designed to support promising companies in the field of science or technology. After acceptance, start-ups receive a voucher that allows them to call on the expert advice of coaches.

In order to develop a young company internationally, Innosuisse also offers camps in 10 global locations to help young companies penetrate these markets. In addition, Innosuisse allows young companies with global ambitions to participate in international trade fairs as visitors or exhibitors.

Finally, if a start-up with at least five FTEs has entered a growth phase and is looking to accelerate its development, Innosuisse also offers support through Scale-up coaching.



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Innosuisse – Swiss Innovation Agency

