

Newsletter May 2016

Welcome to the first AlveoliX newsletter aimed at keeping you up to date in the exciting world of organs-on-chip development for drug discovery and toxicity assessments.

AlveoliX aims at changing the way drug development research is conducted today by providing in-vitro models that reproduce the in-vivo environment in an unprecedented way. These in-vitro models, called organs-on-chips, will make it possible to better predict drugs' responses in humans than standard in-vitro and in-vivo models. In addition they may significantly reduce animal testing.

AlveoliX is a start-up from the University of Bern, which was created in July 2015. It received a number of awards amongst others the Ypsomed and Venturekick awards, as well as financial supports from the Bernese Economic Development Agency and the Swiss Commission for Technology and Innovation.

A lung-on-chip array will be AlveoliX first product, an in-vitro model that accurately mimics key aspects of the lung alveoli. This system was recently presented to the President of the Swiss Confederation.

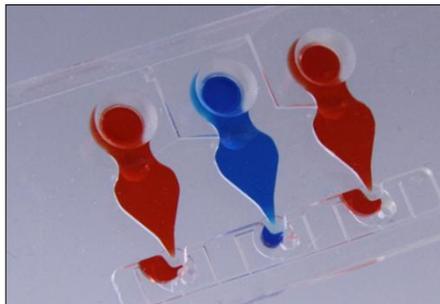
We look forward to hearing from you and hope you will find our newsletter informative.

Best regards,

Dr. Olivier Guenat, CEO
for the AlveoliX founders team

Bio-inspired Lung-on-Chip

In the human lung, the ultra-thin air–blood barrier is constantly exposed to the cyclic mechanical stress induced by the respiration movements. This physiologic stress plays a key role in a number of phenomena such as alveolar stability, tissue stiffness, cellular proliferation and many other cellular processes.



AlveoliX lung-on-chip array with three alveoli (the basolateral side of the alveolar membrane is filled with dyed solutions)

The AlveoliX lung-on-chip has been carefully designed to best serve the needs of the research and pharmaceutical communities. It combines a close reproduction of the lung alveolus microenvironment with a simple handling. The AlveoliX lung-on-chip in brief:

- Ultra-thin air-blood barrier
- Physiologic 3D cyclic breathing movements
- Co-cultures on both sides of the ultra-thin membrane
- Lung alveoli array
- Multichannel pipette compatible
- Easy to use

Assays and possible applications

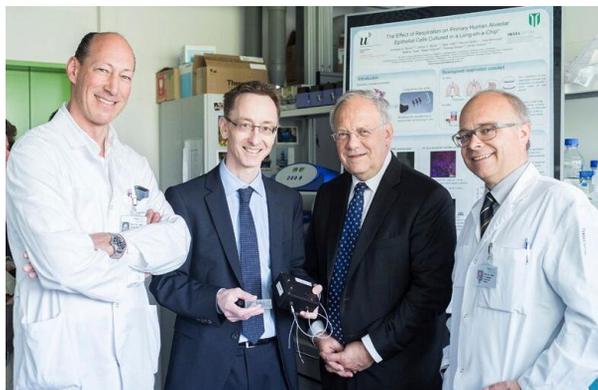
The AlveoliX lung-on-chip allows for the following assays:

- ELISA
- PCR / NGS
- Microscopy, immunostaining
- Barrier permeability
- FACS and more

Contact us for your specific needs. We will help you develop an individual assay to efficiently test your compounds.

Ref: Stucki et al., Lab Chip 2015

The Swiss President visits AlveoliX and the Organs-on-Chip Laboratory of the University of Bern



Great honor for AlveoliX

On April 27th, the President of the Swiss Confederation, Mr. Johann Schneider-Ammann visited the Organs-on-Chip laboratories of the University of Bern, where the AlveoliX lung-on-chip was presented. The visit of the President was aimed at highlighting the support of the Swiss Commission for Technology and Innovation (CTI) for start-ups. AlveoliX was recently awarded a 320kCHF grant from the CTI to develop a lung fibrosis in-vitro model in collaboration with the University and the University Hospital of Bern.

The President of the Swiss Confederation, Mr. J. Schneider-Ammann (second from the right) with Prof. O. Guenat (CEO AlveoliX), Prof. Th. Geiser (far right), director of the Pulmonary Medicine Division and Prof. R. Schmid (far left), director of the Thoracic Surgery Division both from the University Hospital of Bern.