

PRESS RELEASE

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LIST SPIN-OFF DETECTS CHEMICAL RESPIRATORY IRRITANTS EARLY IN PRODUCT DEVELOPMENT

INVITROLIZE opened its new lab on 27 April in Belvaux.

INVITROLIZE, the latest spin-off of the Luxembourg Institute of Science and Technology (LIST), inaugurated its new lab on 27 April at Belvaux.

Timely detection of respiratory allergens

Chemical-induced respiratory sensitization is a global health issue that can result in allergic respiratory tract diseases. However, commonly available and validated methods for identifying skin sensitizers do not differentiate between skin and respiratory allergens. An important challenge here is thus the lack of established in vivo or in vitro techniques for detecting and describing chemical respiratory allergens, as well as differentiating them from contact allergens. This creates a significant roadblock for industries as they are unable to determine if a new product is a sensitizer until it is already produced or in the market.

INVITROLIZE, a LIST spin-off created in 2022, has come up with a solution to this problem. With its innovative 3D alveolar in vitro model ALLsens™, it is for the first time possible to predict hazardous respiratory sensitization under realistic exposure conditions and early in product development. The in vitro models are built using human cell lines based on a patented methodology and the technology avoids animal testing.

From research to market

Created by LIST researchers within the Environmental Health Group of the Environmental Research and Innovation Department, the innovation has come a long way since its inception in 2008. Born as a self-funded project by LIST its evolution has followed the path of any such ambitious research enterprise. Following encouraging first results, two PhD students (Sebastien Klein and Aline Chary) were recruited to develop the technology. Two projects funded by the FNR (Luxembourg National Research Fund) and some ten years later the idea became a reality, a proof of concept / prototype was built and patented. Along the way, it has gone on to receive numerous prestigious prizes and have been tested in EU funded projects which have edged this frontier research closer to market.

INVITROLIZE has already proved its mettle with companies such as EVONIK and today, with the opening of its new lab, is now poised for further growth.

“It has been a lot of hard work involving many dedicated people in my group,” said Arno Gutleb, Managing Director of INVITROLIZE. “I look forward to start this new chapter of INVITROLIZE and in my career.”

About INVITROLIZE

INVITROLIZE was incorporated in 2022 and is a spin-off from the Luxembourg Institute of Science and Technology. The company offers innovative 3D alveolar in vitro models allowing to predict the hazard of respiratory sensitization and irritation.

For more information on INVITROLIZE, please visit the website: <https://invitrolize.com/>

About LIST

The Luxembourg Institute of Science and Technology (LIST) is a research and technology organization (RTO) under the auspices of the Ministry of Higher Education and Research, and its mission is to develop competitive and market-oriented prototypes of products and services for public and private stakeholders.

With 680 employees, 75% of whom are researchers or innovators from all over the world, LIST is active in the fields of information technology, materials, space resources and the environment, and works across the entire innovation chain, from basic and applied research to technology incubation and transfer.

By transforming scientific knowledge into intelligent technologies, data and tools, LIST:

- helps European citizens make informed choices
- helps public authorities make decisions
- encourages companies to develop

For more information about the Luxembourg Institute of Science and Technology, please visit: <https://www.list.lu/>

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