



→ Understanding and
combating viruses

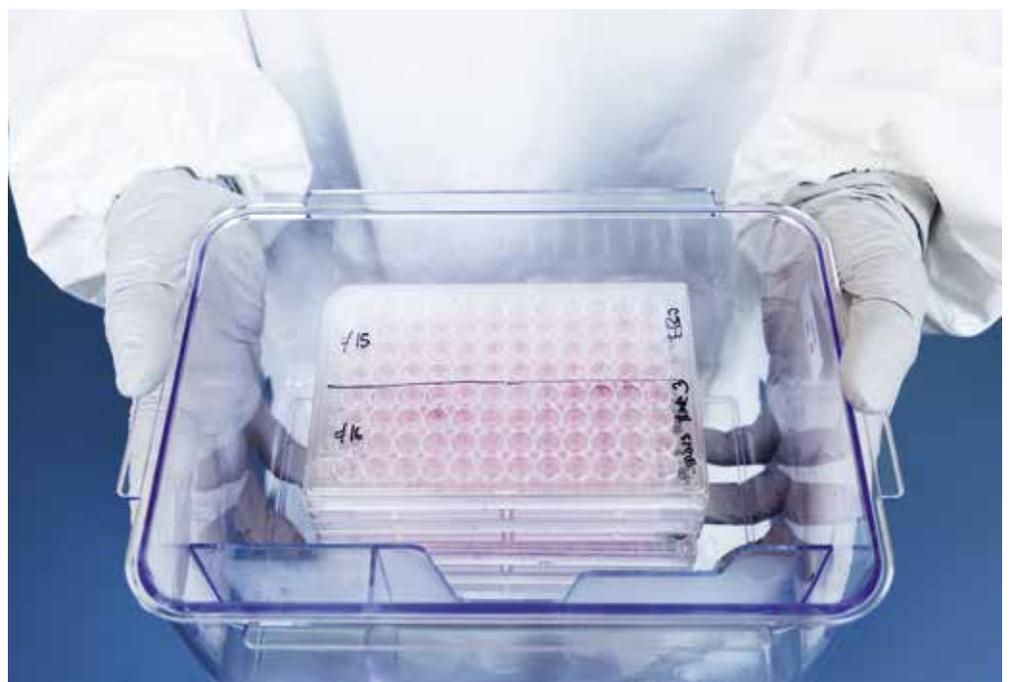
“It is easier for viruses to spread in a globalised world. The Lassa virus is widespread across West Africa. It causes high fever and bleeding, often leading to death. There is still no vaccine or treatment. Using modern biochemical and microscopic methods, we are now trying to establish how this virus infects human cells. The results will hopefully lead to the development of effective drugs.”

Stefan Kunz, virologist at the
University of Lausanne

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Researchers who study viruses have to protect themselves. The team led by Stefan Kunz is conducting some of the studies in the laboratory of the Swiss Confederation in Spiez. It is the only Swiss laboratory that offers the highest level of biological protection, level 4. The objects of study include frozen virus samples (below at left) and the blood serum of people who survived the illness (below at right).





Snow research, for example here on the Weissfluhjoch in Davos, relies on precipitation, wind, temperature and radiation measurements. Hendrik Huwald and Franziska Gerber, both members of Michael Lehning's team, examine the snow cover with a laser scanner (below left). Snow samples are also an important data source. They are CT-scanned and the structure is then replicated using a 3D printer (bottom left).



→ From snow to ice

“One of the unknowns in climate research concerns changes in the polar ice. In our project, we are analysing the impact of the snow cover on the sea ice and ice sheets in the Antarctic region. The measurement data comes from our international research partners, and we also collect some data ourselves. Based on the analyses, we can generate snow accumulation and ice formation models. Eventually, this should make it possible to calculate the overall ice mass also for the future.”

Michael Lehning, snow researcher, EPF Lausanne and Institute for Forest, Snow and Landscape Research (WSL)

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Study of three Swiss towns: many new flats are being built in Bulle, Canton of Fribourg. Businesses mainly provide for regional needs, the majority of people in work are commuters. Belp in the Canton of Bern is a typical small town with an industry sector that is mostly low-tech (below at left). Thun, on the other hand, is home to a number of high-tech enterprises. Susanne Szenkuti, Michael Gassner and Florian Kühne from Thun's planning office are making use of results obtained in Heike Mayer's research project (below at right).

→ Size isn't everything

“Small and medium-sized towns are often seen as the poor relations of metropolitan areas. However, since 2001, towns in the EU15 countries have been experiencing stronger economic growth than big cities. In Switzerland, too, the economic and political importance of small and medium-sized towns is likely to increase further. We are studying the roles, particularities and potentials of such towns. The results will provide a basis for future funding and development.”

Heike Mayer, economic geographer, University of Bern

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