At the professional education centre in the capital of Laos, Vientiane, young women receive basic training in industrial sewing (left). In the country's largest clothes factory, seamstresses earn 250 francs a month for an eight-hour day (bottom left). Principle investigator of the research project in Laos is Professor Bounseng Khammounty (on the right) from the National University, pictured here with a scientific collaborator, Houamboune Keonakhone (bottom right).

→ How effective is professional education?

"Developing countries are hoping that professional education will become a driver of economic growth. Switzerland, too, is financing such initiatives. We are identifying the factors on which their success depends. The study is being conducted in six Asian and African countries in interdisciplinary collaboration with locally based researchers. In particular, we want to know what is most effective in reducing poverty: providing training for low-skilled jobs or for higher professional qualifications?"

Markus Maurer, education scientist, University of Teacher Education in Zurich

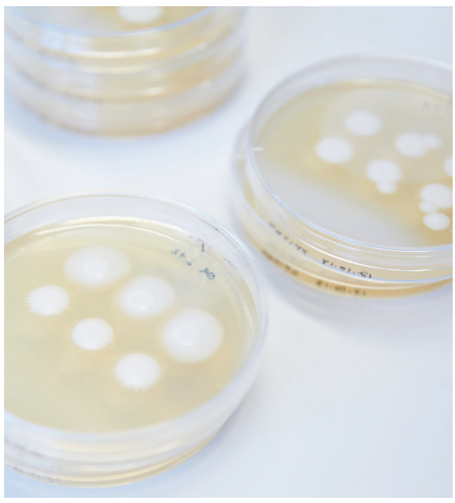
→ p3.snf.ch/project-169470 (SNSF/DEZA)

→ The fight against yeast fungus

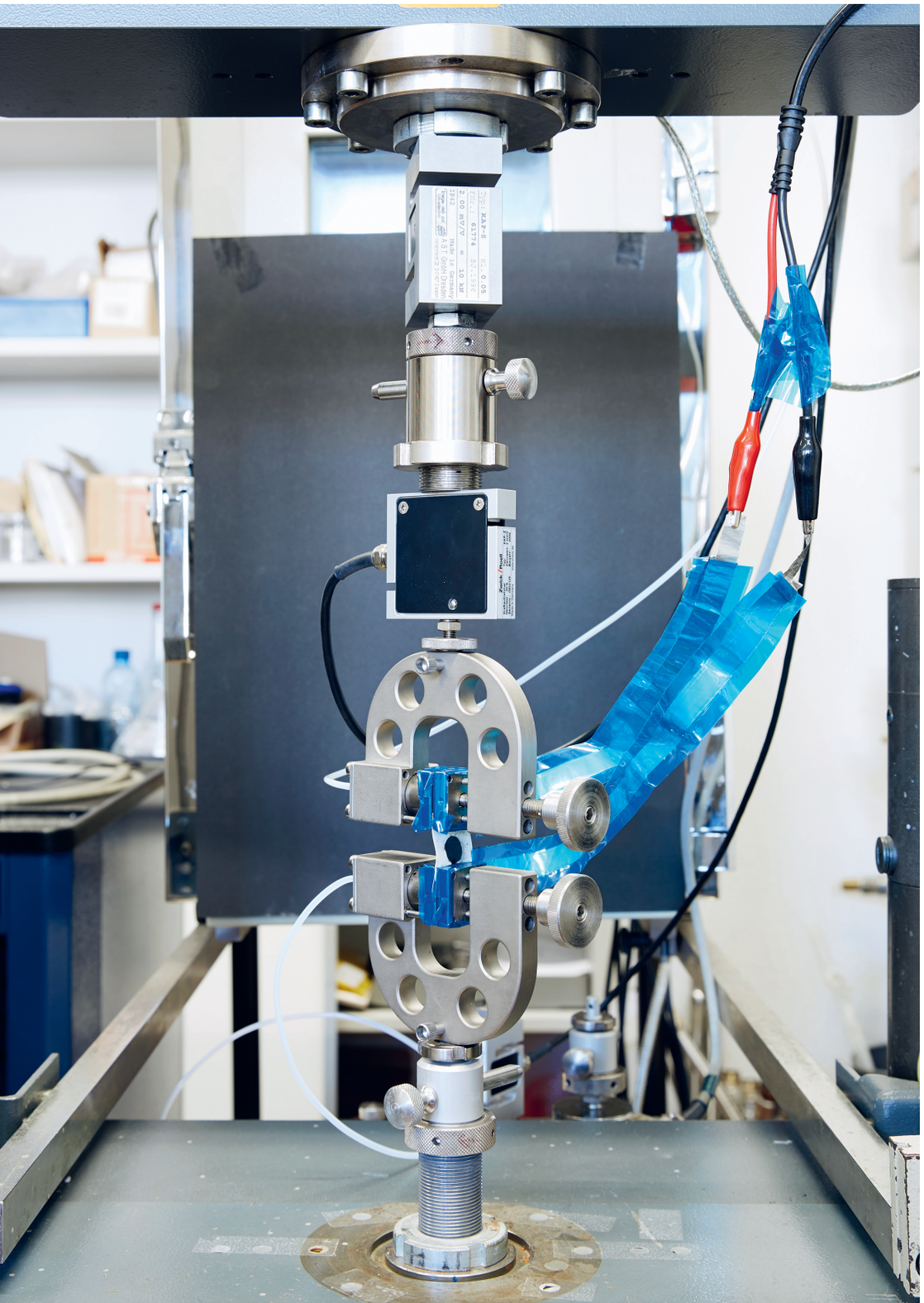
"*Candida albicans* is a common cause of fungal infections. It poses a major health risk, particularly for people with a weak immune system. Together with researchers in Lausanne and Paris, we are analysing natural genetic variants of the fungus. To what extent do the differences between them determine whether a person gets infected? The results will help to prevent and fight illnesses."

Salomé LeibundGut-Landmann, immunologist, University of Zurich

→ p3.snf.ch/project-173863



The virulent properties of *Candida albicans* can be observed in Petri dishes, for instance the growth of cell threads (above). Immune resistance against the fungus is tested in mice. Kontxi Martinez de San Vicente (on the left) and Christina Lemberg check on their state of health (left). The pathogenicity of yeast fungus is reflected in its connection to epithelial cells, which Anne-Céline Kohler is studying with the aid of microfluidics (top left).



Samples of elastomers (top left). They consist of thin films of a composite material made up of electromagnetic nanoparticles and elastic silicon. On both sides, the films have a layer of silver nanowire as an electrode. They are made in a clean-room, which Sina Abdolhosseinzadeh enters wearing protective clothing (top right). In the testing lab, Empa is looking for the ideal mixture of the composite material (left). The machine stretches and contracts the rubber. This deformation creates voltage.

→ Electricity from rubber
“We develop elastic plastics, so-called elastomers, which produce electricity when they are stretched or pressed. As an implant, the rubber could for instance run a battery-less pacemaker. At the same time, we are working on elastomers that respond to both electrical and magnetic fields. They could be used as coolers, sensors, energy harvesters or muscles. We are doing this research together with the University of Buenos Aires.”
Dorina Opris, chemist,
Empa Dübendorf
→ p3.snf.ch/project-172693
→ p3.snf.ch/project-173358