SWISS BRIDGE

INVEST IN CANCER RESEARCH WORLDWIDE

PRESS RELEASE

Novel targets in precision oncology: half a million Swiss francs for two research projects

Zurich, 28.10.2025 – Two researchers from Germany and Switzerland have been awarded the SWISS BRIDGE Award 2025 for their innovative research projects in the field of precision oncology. The prize money of CHF 250,000 each is intended to contribute to the development of more targeted and effective cancer therapies.

Cancer develops as a result of genetic changes that vary from tumor to tumor. Precision oncology uses these findings to identify new therapeutic targets and tailor treatments to individual patients. This approach enables more effective and better tolerated therapies, particularly in complex or advanced diseases. To ensure that cancer patients can benefit from these advances as early as possible, new therapeutic targets must be further developed and precision medicine treatments consistently integrated into clinical practice.

This year's call for the SWISS BRIDGE Foundation cancer research award was dedicated to research into novel targets in precision oncology. Research into these targets is crucial as it enables more targeted cancer therapies, helps to overcome resistance and promotes personalized treatments. It also contributes to a better understanding of cancer biology and opens up new possibilities for the treatment of cancers that are difficult to treat.

Two studies on innovative therapies win the award

A total of 61 young researchers from Europe applied for the SWISS BRIDGE Award 2025. In a two-stage evaluation process, a distinguished jury ultimately prioritized two research projects. Dr. Inmaculada Martínez Reyes from the German Cancer Research Center (DKFZ) and Charité Universitätsmedizin Berlin and Prof. Dr. Andreas Moor from ETH Zurich will each receive CHF 250,000 to carry out their promising research projects.

Targeted attack on dormant cancer cells in pancreatic cancer

The study conducted by Dr. Martínez Reyes and her team focuses on the development of engineered, specialized immune cells, known as T cells, to specifically attack and eliminate dormant, therapy-resistant tumor cells. Following anti-cancer therapies, a population of cells can enter a state known as cellular senescence, in which they temporarily stop dividing. These dormant cells can, however, “wake up”, becoming a major cause of recurrence in pancreatic cancer and other types of cancer. The aim of the project is to eliminate these senescent, therapy-resistant cells using a novel, personalized immunotherapy. "Our research shows that therapy-resistant, senescent cancer cells display a distinct set of small protein fragments, known as antigens, on their surface." explains Dr. Martínez Reyes. “These unique antigens can be leveraged to guide immune cells to specifically recognize and eliminate cells that would otherwise eventually drive cancer relapse.” The researchers are developing T

cells equipped with specific receptors to recognize these antigens and precisely eliminate the therapy-resistant tumor cells. If successful, this approach could establish a new class of immunotherapies and help prevent relapses, improving long-term treatment outcomes for pancreatic cancer and other tumors with similar mechanisms.

Smart protein targeting against liver metastases in colorectal cancer

The team led by Prof. Moor is researching innovative approaches to preventing liver metastases in colorectal cancer, which occurs in around one third of all patients and significantly increases mortality. The researchers have discovered that a protein called PlexinB2 on liver cells promotes the spread of colorectal cancer to the liver. To specifically prevent this progression, the team has developed "smart" molecules that recognize and break down PlexinB2 and similar metastasis-promoting proteins in liver cells. "We use a special delivery protein that serves as a navigation aid for the liver and combine it with a mini-protein that specifically binds to target proteins such as PlexinB2. This allows them to be selectively destroyed," explains Prof. Moor. The aim of the project is to develop several of these smart protein molecules, improve their effectiveness and test them in animal models. This innovative approach could help prevent liver metastases in the future and thus significantly improve treatment outcomes for colorectal cancer.

The SWISS BRIDGE Foundation has raised over 45 million Swiss francs for global cancer research over the past 25 years, investing in innovative and high-quality research projects. In addition, the SWISS BRIDGE Award, with at least 500,000 Swiss francs awarded annually, is one of the most prestigious awards for groundbreaking cancer research and enjoys significant national and international recognition.

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