

2017 CTI Swiss Medtech Award: Boosting the immune system in cancer patients

Berne, 13.06.2017 - The 2017 CTI Swiss Medtech Award, presented at the Swiss Medtech Day on 13 June, has gone to the biotech company MaxiVAX. MaxiVAX and the Geneva University Hospitals received the CHF 15,000 prize for developing a new vaccine designed to help the immune system in cancer patients fight their own tumor cells. The award was presented by Federal Councillor Johann N. Schneider-Ammann before around 600 guests in the Kursaal, Bern.

Mr Schneider-Ammann and Gábor Székely, CTI board member and head of CTI Medtech, presented Dr Dimitri Goundis of MaxiVAX SA and Prof. Nicolas Mach of the Geneva University Hospitals with the award and a cheque for CHF 15,000. “All three nominated project teams were worthy of the prize. Their ideas and developments are driving progress in their sector and are helping to make medical technology an important industry in the Swiss economy,” said Mr Schneider-Ammann in his speech paying tribute to the nominated start-ups. The winning project was selected live by the 600 or so representatives of medtech research and the medtech industry who attended Swiss Medtech Day 2017.

Capsules continuously strengthen the immune system

It has long been known that immune system boosters optimise the vaccine-based treatment of tumours. The only question was how to deliver the booster to patients most effectively. For a long time the problem seemed impossible to resolve, until a few years ago when Mach decided to try delivering the booster using capsules loaded with genetically engineered cells. Human cells are genetically engineered to produce the potent immune system booster (GM-CSF). The cells are loaded into a small bio-compatible hollow fibre capsule, which when placed under the patient’s skin allows continuous delivery of the booster, thus strengthening the immune system. Studies show that the treatment is safe, well-tolerated and effective, particularly in patients with a fairly robust immune system. The vaccine MVX-ONCO-1 is now being tested on 40 head or neck cancer patients in a trial conducted in four or five hospitals. “MVX-ONCO-1 is personalised medicine and has the potential to fight all types of cancer,” says Dr Dimitri Goundis, CEO of MaxiVAX. The company is currently testing further effects of the new treatment and is looking into working with large pharmaceutical companies.

Revolution in locomotion therapy and new ways to develop medicines

The other two projects nominated for the 2017 CTI Swiss Medtech Award were equally promising. The first of these is The FLOAT, a new rehabilitation system for secure locomotion training developed by Balgrist University Hospital, the University of Basel and Lutz Medical Engineering AG. Neurological and orthopaedic patients are fitted into a harness which supports their bodyweight, leaves their arms and legs free and gives therapists a free view of the patient. The system is now being optimised in a clinical context.

In the third nominated project, researchers at the University of Bern and the spin-off AlveoliX AG are discovering new ways to develop medicines. Conventional testing on cell cultures in petri dishes and on animals is often imprecise and fail when applied in clinical trials on humans. With the new ‘lung-on-chip’ technology, the project team wants to replicate as closely as possible in in-vitro applications the conditions in lung cells, so that certain clinical

trial phase tests can already be conducted in the pre-clinical phase. Diseases can be simulated and medicines tested on the chip. This makes much animal testing unnecessary and, what is more, reduces pharmaceutical research costs.

Sector's biggest event

This was the second time since 2016 that the Swiss Medtech Day has been held under the sponsor-ship of the CTI, Medical Cluster and FASMED, the latter two having merged to form the association Swiss Medtech on 12 June of this year. The event provides the biggest platform for industry, trade, research and start-ups in the medical technology sector. Five breakout sessions formed the centre-piece of this year's Swiss Medtech Day. A range of topics were reported on and discussed by the many experts present, from trends in medical technology and biomaterials, health technology assessments and the value of partnerships, to digitalisation in medical technology and the protection of intellectual property and brands. Participants presented their promising ongoing innovation projects in the Science Slam, and in the poster session participants were able to view some of the latest developments in medtech research and from the medtech industry.

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