

Science2Start ideas competition winners from Stuttgart and Tübingen receive their prizes

3D-printed optical lenses and sustainable bioplastic

(Stuttgart) – The winners of the 2021 Science2Start ideas competition were announced yesterday. Due to the pandemic, the award ceremony took place as a photocall. First place went to a team from the University of Stuttgart that is using 3D printing technology to manufacture optical lenses for endoscopes with new capabilities. Taking second place are two researchers from the University of Tübingen who are developing sustainable bioplastic with the aid of bacteria. And third place was awarded to a start-up from Tübingen that is aiming to use AI to deliver automated routine diagnostics for day-to-day lab work. The winners were originally to have been announced at a celebration on 6 December 2021, held to mark the 20th anniversary of the STERN BioRegion, but the event had to be postponed due to the pandemic.

The winners received prize money totalling 4,500 euros that was donated, as in previous years, by Voelker & Partner, a firm of lawyers, tax consultants and auditors. Dr. Gerrit Hötzel und Dr. Christian Lindemann presented the teams in Stuttgart and Tübingen with their cheques along with Dr. Klaus Eichenberg, the Managing Director of BioRegio STERN Management GmbH. “It’s a great pity we can’t give them the big ceremony our anniversary party would have provided,” declared Eichenberg. “The outstanding ideas of these scientists certainly merit such a celebration.”

The winners of the 2021 Science2Start ideas competition:

First place: 3D-printed endoscope optics

Dr. Simon Thiele and Nils Fahrback are developing a new class of endoscopes for medical applications. The performance of conventional endoscope optics is usually limited by spherical or hemispherical lenses. Using additive manufacturing techniques, also known as 3D printing, the researchers can produce completely different shapes and designs that open the door to new functions and miniaturisation. The idea offers

huge innovative potential for medical technology that the company founders would like to commercialise through their start-up, Printoptics GmbH i.G., which is based at the University of Stuttgart.

Second place: CyaPlas – sustainable bioplastic from sunlight and CO₂

Prof. Karl Forchhammer from the Interfaculty Institute of Microbiology and Infection Medicine at the University of Tübingen and Dr. Moritz Koch are researching the polymer PHB (polyhydroxybutyrate), which exhibits excellent biodegradability and processing characteristics. The polymer is obtained from cyanobacteria, also known as microalgae. By genetically modifying these bacteria, the scientists have been able to increase their intracellular PHB content to more than 80 per cent of dry cell mass. CO₂, water and sunlight are almost the only other components that would be needed to produce bioplastics both efficiently and at low cost when using this process.

Third place: Cytolytics – automated medical analyses using AI

Serina Pinar, Can Pinar, Christoph Zimmermann and their team are developing a modular software platform that uses cutting-edge machine-learning methods and algorithms to facilitate the fully automated evaluation of medical data. Through their Tübingen-based start-up, Cytolytics, they aim to supply a solution that is suitable for everyday lab use and can efficiently analyse the overwhelming volumes of data that state-of-the-art medical devices generate. The first software module is starting with fully automated data analysis for flow cytometry, a routine diagnostic technique that is used in immunology, haematology, infectiology, oncology and other areas.

About BioRegio STERN Management GmbH:

BioRegio STERN Management GmbH promotes economic development in the life sciences industry, helping to strengthen the region as a business location by supporting innovations and start-up companies in the public interest. It is the main point of contact for company founders and entrepreneurs in the Stuttgart and Neckar-Alb regions, including the cities of Tübingen and Reutlingen.

The STERN BioRegion is one of the largest and most successful bioregions in Germany. Its unique selling points include a mix of biotech and medtech companies that is outstanding in Germany and regional clusters in the fields of automation technology and mechanical engineering.

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