

20 years of successful start-ups in the STERN BioRegion

Turning ideas into success stories – from exoskeletons for operating theatres and lab-style analysis for runners to genetic analyses for the perfect beer

(Stuttgart) – BioRegio STERN Management GmbH has been supporting innovations and start-up companies in the public interest for over 20 years, making it the main point of contact for company founders and entrepreneurs in the Stuttgart and Neckar-Alb regions, including the cities of Tübingen and Reutlingen. It has already assisted approximately 80 start-ups, many of which are now enjoying considerable success with their products and services and demonstrating the high level of innovative strength in the region. With its recent market launch of the “noac” exoskeleton, Hellstern medical GmbH is just one example. Thanks to this globally unique high-tech innovation, which company founders Sabrina Hellstern and Claudia Sodha developed with their team in record time, surgeons can operate without becoming fatigued.

noac is the world's first exoskeleton using intelligent motion tracking to support surgeons in any desired position at the operating table. A team made up of engineers Harald Rager and Alexander Strobel, electronics and software developers, and medical practitioners developed this innovative high-tech product with its numerous patents that enables surgeons to operate without fatigue creeping in, even if procedures last several hours. This feat was accomplished in the record time of just 15 months – despite the coronavirus pandemic. Based in Wannweil, in the district of Reutlingen, the company even also briefly manufactured face visors for doctors and nursing staff when supplies of personal protective equipment were completely exhausted. However, **Hellstern medical GmbH** then once again focused its full attention on noac. “It's a big success for us as a start-up and for business development in the region,” says Sabrina Hellstern. The company has made 3.2 million euros – even though, as Hellstern emphasises, only just over five percent of female company founders in the medtech sector generate more than one million

euros. noac is now available on the market and is helping not just surgeons, whose efficiency and precision are measurably better, but also patients, who are now benefiting from optimum operations.

Users who don the SensoRun set with its various sensors want to avoid an operation if at all possible! The mobile measuring device analyses the way runners move and determines the biomechanical stresses directly on their legs. This enables stresses and malalignments to be identified early on. Initiator Dr. Steffen Hüttner is, amongst other things, CEO of HB Technologies AG and is helping to pioneer digitalisation in the medtech and biotech sectors. The long-distance runner from Tübingen is the founder of **SensoRun GmbH & Co. KG**. He and his team have developed an artificial intelligence solution that interprets running data in a way that means professional athletes and amateur runners can carry out lab-style analyses to avoid injuries and ensure pain-free movement. Now available from a major mail order company selling sports goods, the SensoRun set is soon likely to become a standard piece of kit on running tracks and jogging routes.

Researchers, too, require a great deal of stamina, and sometimes that final impetus to start up a business – a little push in the right direction. That is why, 14 years ago, BioRegio STERN Management GmbH initiated the Science2Start ideas competition to identify commercially promising life sciences ideas in the region – and provide scientists with extra motivation for their start-ups.

In 2012, for instance, Dr. Sebastian J. Schultheiss was amongst the winners. At the heart of his prize-winning idea was technology that enables particularly high-quality analysis of DNA sequence data. Today, **Computomics GmbH** in Tübingen – with Schultheiss at the helm as Managing Director – is celebrating its tenth anniversary. And the company is growing just as reliably as the seeds it analyses, because its technology platform is in global demand when it comes to cultivating new varieties of rice, maize and grain. Even the world's largest beer group, AB InBev, obtained support to cultivate brewing barley that combines the ability to withstand the challenges of climate change with outstanding quality for malt production. Based on machine learning, the Computomics technology processes all available data – such

as genotypes, phenotypes, climate details and soil conditions – to ensure the Belgian brewer can cultivate ideal varieties for beers in the future, too.

One area that **Variolytics GmbH** is involved in is linked to the ultimate result of drinking beer! Amongst other things, this Stuttgart-based start-up's analysis platform, with technology developed at the Fraunhofer Institute for Interfacial Engineering and Biotechnology (IGB), enables operators of sewage treatment plants to save energy and cut emissions of environmentally harmful gases. Following their successful market launch, the measuring devices with patented real-time analytics for monitoring the emissions of sewage treatment plants are providing targeted help in limiting the generation of greenhouse gases such as nitrous oxide and methane in the aeration tanks of such plants. AI-based control not only significantly reduces undesirable gases, but also the amount of energy and chemicals used.

"Many of the innovations offer answers to the pressing questions of our society regarding energy use, environmental protection and the future of medicine," says Dr. Klaus Eichenberg, Managing Director of BioRegio STERN Management GmbH. "The founders just need a genuine chance to make a success of their ideas. Supporting and encouraging them remains vital," he adds. The team at BioRegio STERN Management GmbH has been assisting start-ups for over 20 years. For their part, these businesses have already created over 3,000 high-quality jobs. To date, the region's 110 biotech companies have secured investment totalling three billion euros and funding of 550 million euros from Germany's federal government.

The application phase for this year's Science2Start ideas competition runs until 15 May 2023. Both up-and-coming scientists and company founders from the life sciences sector in the STERN BioRegion are invited to put their start-up ideas to the test. Every idea submitted will be rated based on its scientific excellence and commercial potential.

<https://www.bioregio-stern.de/en/projects/science2start>



Kofinanziert von der
EUROPÄISCHEN UNION
Europäischer Fonds für
regionale Entwicklung



Baden-Württemberg

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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