

A successful result – 14 research and development projects worth a total of 9 million euros have been approved

biohymed – the collaborative network setting a trend for the future

(Stuttgart/Tübingen) – From April 2017 to May 2020, funding to set up the “biohymed” collaborative network was provided under the Central Innovation Programme for SMEs (ZIM) run by the German Federal Ministry of Economic Affairs and Energy (BMWi). BioRegio STERN Management GmbH, in cooperation with universities, hospitals and scientific institutes in the region, in addition to SMEs, specifically set about promoting the development of new biohybrid products and techniques within the field of medical technology. The project, which ran for three years, resulted in the creation of an active ZIM collaborative network comprising 22 companies and 14 research institutes. In October 2021, pantaQ was the 14th and final biohymed project to receive funding approval. This means the research and development projects are now worth in excess of nine million euros altogether. The funding is being used to link up expertise within the STERN BioRegion and get pioneering developments off the ground.

All biohymed partners have been offered ideal conditions for innovative research and development projects. At the start of the funding phase, BioRegio STERN Management GmbH facilitated the initiation of joint projects by organising networking and matching events in addition to round-table discussions. As the project progressed, the participating companies and research institutes were given support to prepare their applications. A total of 14 biohymed projects are being funded and their innovative developments supported right through to market launch. The biohymed network has thus established itself as a successful model. The four projects described below are the most recent ones to have been approved.

pantaQ – digital and semantic laboratory process design for standardising and automating the documentation of workflows

pantaQ is a software platform being developed by Heidelberg-based pantaBio AG in partnership with the Natural and Medical Sciences Institute (NMI) in Reutlingen. Geared towards the design and documentation of processes in the life sciences laboratory, pantaQ uses formal, semantic notation to describe and document laboratory processes on a future-proof basis to make data easier to trace, transfer and find. pantaQ offers multiple benefits – laboratory automation can be developed more efficiently, data can be annotated for Big Data, less training is needed for new staff members, digital support can be provided for laboratory courses in universities and the costs involved in meeting regulatory requirements relating to documentation are lower.

SensoBike – sensor-supported analysis for orthopaedic prevention

In the SensoBike project, HB Technologies in Tübingen and Böblingen-based BitifEye Digital Test Solutions GmbH are working in partnership with the German Research Centre for Artificial Intelligence (DFKI) and the German Sport University Cologne to develop an innovative training and mobility system that simplifies the orthopaedic prevention of osteoarthritis of the knee and can be integrated into everyday life. The system is based on a pedelec ergometer that actively controls orthopaedic loading thanks to sensor-supported analysis of the position of the knee and intelligent training feedback. The SensoBike system is designed to make it easy to plan training, enable doctors to seamlessly monitor their patients' conditions and give people who are training the option to work through safe and intelligently managed training units.

“KI-BeProdPlan” – sales planning software supported by artificial intelligence (AI)

macs Software GmbH in Zimmern ob Rottweil, in cooperation with Furtwangen University, has set out to design inventory and production optimisation software supported by AI. Thanks to algorithms supported by AI, a self-learning system is being created that identifies fluctuations at an early stage and enables companies to optimise their inventories and production and sales forecasts in line with demand.

BiomTraining & BioFit – sport combined with bioinformatics to boost gut health

Fitness centre MAPET GmbH, in Tübingen and Rottenburg, in partnership with the Quantitative Biology Center (QBiC) at the University of Tübingen, is going to make it possible to analyse personal fitness levels by testing the microbiome, thanks to the “BiomTraining” dynamic training concept and the “BiomFit” bioinformatic tool. This innovative approach will help improve gut health. The bio-informatic correlation analysis, combined with data-based, personalised training, has far-reaching potential for other healthcare applications, such as diabetes prevention or the treatment of various diseases associated with the bowel.

Looking back on the past four and a half years, Dr. Verena Grimm, Project Leader at BioRegio STERN Management GmbH, is very positive about biohymed: “The collaborative network has brought funding in excess of five million euros into the region and given rise to 14 collaborative partnerships, which have given the companies involved a technological advantage.” Project Manager Nina Zabel adds that, “for some companies, biohymed has been something of a trendsetter in the life sciences sector. Their first contact with the life sciences left them wanting more and encouraged them to remain active in this field.”

You can find more information about this and other projects supported by BioRegio STERN Management GmbH at <https://www.bioregio-stern.de/en/projects>

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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