

International ZIM network supports research by 4base lab AG from Reutlingen

## **“smart analytics” – quality assurance for mRNA vaccines**

**(Stuttgart/Reutlingen) – The Zentrales Innovationsprogramm Mittelstand (ZIM, the Central Innovation Programme for small and medium-sized enterprises), which is run by the German Federal Ministry for Economic Affairs and Energy (BMWi), has been helping to establish the international “smart analytics” network since May 2020. This network is geared toward developing innovative analytical methods and applications for use in healthcare, industry and the research sector. Funding has now been announced for the first research and development project, which will see Reutlingen-based 4base lab AG develop new approaches for the testing and quality control of mRNA-based vaccines.**

In 2016, the WHO approved a new substance class for vaccines based on messenger RNA (mRNA). mRNA-based active substances work by supplying a specific matrix in the patient, whose body then uses this to produce the actual active substance by itself. Current fields of research and development are centred around preventive vaccines, such as those targeting SARS-CoV-2 viruses.

The newly funded “NanoR” project by 4base lab AG has set out to develop new approaches for the testing and quality control of mRNA-based vaccines, with the aim of reducing the error rates for synthesised mRNA and improving their quality. The quality of the mRNA is crucial for its stability and is therefore also responsible for how it behaves and initiates a response in patients. The new method can decisively improve quality control in the pharmaceutical industry, as it allows scientists – for the first time – to compare the half-life of RNA vaccines in the human body with quantifiable data from quality control in vaccine production. In the future, this could open up more opportunities with regard to effectiveness and safety in the development of new vaccines.

The coordinator for the international “smart analytics” ZIM network in Germany is Bio-Regio STERN Management GmbH. Project manager Dr. Verena Grimm: “The realisation of this innovative project is an important and especially forward-looking step for both 4base lab AG and vaccine manufacturers.”

The “smart analytics” project is funded by the BMWi and currently includes 25 partners from Europe. Other companies are welcome to join as project partners. This will give them access to targeted support so they can submit their own promising applications for research and development under ZIM as necessary.

**Interested companies can apply now to Dr. Verena Grimm:**  
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#### **About 4base lab AG:**

4base lab AG is a biotech company based in Technologiepark Reutlingen that has been involved in developing and manufacturing mRNA vaccines against carcinogens and infectious agents since 2005. The company is accredited or certified to various regulatory standards such as GMP standards, DIN EN ISO 9001:2015, DIN EN ISO 14001:2015 and DIN EN ISO/IEC 17025:2018.

It offers extensive expertise in analytical requirements for testing the quality and identity of these molecules and validating them across the entire development and production process for this innovative class of medicinal products.

#### **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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