

Press release

At the IZB, start-ups are working on drugs against the Sars-CoV-2 virus, as part of a consortium on a vaccine and developing new corona tests

State Minister Kerstin Schreyer visited the Corona researchers in the Innovation and Start-up Center for Biotechnology (IZB) near Munich

Martinsried / Munich, August 17, 2020 – The corona pandemic is keeping us all in suspense. Almost 700,000 infected people have now died worldwide. Researchers around the world are working on rapid tests, drugs and vaccines to get the COVID-19 disease under control. Seven biotech start-ups are investigating the new SARS-CoV-2 pathogen in Planegg-Martinsried near Munich, in the Biotechnology Innovation and Start-up Center (IZB). Immunic Therapeutics, Eisbach Bio and Origenis are researching drugs to treat the new corona virus. GNA Biosolutions and Exosome Diagnostics each launched a new corona test. Ella Biotech also increased the production of components that are included in corona tests. LEUKOCARE AG is working with an Italian consortium on a vaccine against the SARS-CoV-2 virus. As a constituency member, the Bavarian State Minister Kerstin Schreyer, MdL, visited these seven biotech start-ups on August 17, 2020, who presented their research results on COVID-19 and spoke to Dr. Peter Hanns Zobel, Managing Director of the IZB, on the innovative strength of entrepreneurs at the IZB.

"I am delighted with the creativity with which the young company founders approach the problem that threatens the whole world. Certainly there will soon be very positive reports relating to corona research from the IZB," said Minister Kerstin Schreyer. "Especially in times of corona, everyone has now understood the importance of biotechnology. Our start-up center helps courageous biotech entrepreneurs break new ground in drug development and thereby effectively combat diseases," said Dr. Peter Hanns Zobel, managing director of the IZB.

The IZB is celebrating its 25th anniversary in 2020. Especially this year it has become clear how far-sighted the Bavarian State Government was to promote the biotechnology sector in Munich and to advance the development of the Martinsried Campus location. Not only is the IZB about finding medications for existing ailments for which there is no cure yet, but it is also essential to develop innovative, medical solutions for diseases that we will face in the future. "Precisely the networking between teaching, basic research and entrepreneurship at the Martinsried campus is what offers the opportunity to best face this challenge," is how Dr. Zobel explains the successful concept of the Innovation Center.

The IZB started in 1995 with 1,000 m² of laboratory and office space and five biotech start-ups. Today the IZB with its locations in Planegg-Martinsried and Freising-Weihenstephan has developed into one of the leading biotechnology centers in Europe. There are currently over 50 biotech companies with more than 600 employees over an area of 26,000 m². The IZB is working on developing drugs against the most serious diseases, such as cancer, Alzheimer's or various autoimmune diseases, and with great success. "Since 2015 alone, we can look back on many successful deals with pharmaceutical companies, collaborations or company sales with a total volume of 3.8 billion Euros," says Dr. Zobel about the success of the start-ups.

In times of the Corona crisis, start-ups from the IZB are among those working on future-oriented solutions. The following entrepreneurs presented their corona research at the IZB on August 17, 2020:

1. **Dr. Federico Buersgens, Managing Director of GNA Biosolutions, presented the newly developed Corona rapid test.**

Due to the unprecedented demand and shortage of diagnostic tools for Covid19, GNA Biosolutions shifted its focus to the development of SarsCov2 molecular assays early in 2020. Since then, the company has focused on accelerated development of a rapid molecular batch-testing system called GNA Neo, which can be used to test 8 samples at a time outside of traditional laboratory settings, while patients wait for the results. In parallel, GNA is preparing for a field study of GNA NEO at Munich airport in September of this year.

2. **Exosome Diagnostics: Dr. Mikkel Noerholm, Vice President of Product Development, presented the Corona test from Exosome Diagnostics. The company specializes in developing liquid biopsy tests.**

When the world was gripped by the Covid-19 pandemic, the team at Exosome Diagnostics, a Bio-Techne Brand, quickly realized that their clinical laboratories in both Waltham, USA (CLIA certified) and IZB, Martinsried, Germany (ISO 15189 accredited) are ideally suited for testing patient samples for the presence of the virus. Since the SARS-CoV-2 virus is quite similar to an exosome, many of the processes already established in Exosome Diagnostics' clinical labs can be used for extracting virus particles from patient samples as well as detecting virus RNA.

3. **Immunic Therapeutics: Dr. Manfred Gröppel, COO, explained that the company is working successfully on a medication against COVID-19. Immunic Therapeutics is carrying out a clinical development program for its drug candidate IMU-838, which is currently being tested in a phase 2 trial.**

Immunic's lead asset, IMU-838, is an orally available, selective immune modulator that inhibits the intracellular metabolism of activated immune cells by blocking the enzyme DHODH. Backed by positive preclinical results demonstrating activity against SARS-CoV-2, an attractive pharmacokinetic, safety and tolerability profile and with about 650 individuals tested, to date, Immunic has initiated a clinical development program for IMU-838 in COVID-19. The ongoing phase 2 trial, called CALVID-1, is a prospective, multicenter, randomized, placebo-controlled, double-blind clinical trial in patients with moderate COVID-19, designed to evaluate efficacy, safety and tolerability of IMU-838. The study received regulatory allowance from the German BfArM, the US FDA and from regulatory authorities in other European countries involved in the study.

4. **Ella Biotech GmbH: Dr. Tim Gehrke, Senior Scientist R&D, explained that they had to drastically increase production of building blocks for corona tests to meet the rapidly growing demand.**

Ella Biotech GmbH is a certified manufacturer of DNA building blocks for the analysis of pathogens. With the start of the corona pandemic in January 2020, it increased its production capacities in the field of diagnostics. Successful, rapid and unequivocal testing for the Sars-CoV-2 pathogen is possible using the polymerase chain reaction (PCR) based on synthetically produced short DNA building blocks known as oligonucleotides. The products of Ella Biotech GmbH are then delivered to certified diagnostic laboratories, where they are verified for the new corona virus using qPCR.

5. **Eisbach Bio GmbH: Dr. Adrian Schomburg, Managing Director, started the development of a novel specific agent against SARS-CoV-2 virus.**

Eisbach identified small molecules targeting novel, disease-relevant functions in SARS-CoV-2. Using our innovative platform, we are developing inhibitors against two relevant and essential SARS-CoV-2 proteins, for which we have pioneering, worldwide expertise. Since these proteins are essential for the replication of the viral SARS-CoV-2 genome and to suppress the host's immune system, they represent highly promising drug targets.

6. LEUKOCARE AG: Dr. Konstantin Petropoulos, Vice President of Business Development, Marketing & Sales, described the collaborative work with a European consortium to develop a vaccine against COVID-19.

In April 2020, LEUKOCARE AG formed a pan-European consortium with ReiThera Srl from Italy and Univercells SA from Belgium to develop an adenoviral, vector-based Covid-19 vaccine. ReiThera is contributing the vaccine candidates, Univercells will be responsible for production, while LEUKOCARE is developing a liquid formulation (mixture of the active ingredient and stabilizing excipients) for the vaccine. The vaccine is expected to start clinical development in August 2020 and could be available as a vaccine as early as Q1/Q2 2021.

7. Origenis GmbH: Dr. Michael Thormann, Managing Director, presented the current situation in the development of a medication against COVID-19.

When Origenis and Sirion decided in 2018 to pool their respective expertise in order to identify novel antiviral therapeutics, hardly anyone could imagine the immense importance of this in 2020. With its AI-driven platform, Origenis generated an arsenal of promising substances, while Sirion provided the functional test platform, ViraSense, to measure their antiviral effects. The VIRAstorm™ project, which was partially financed by the KMU-NetC, was a success. The selective inhibition of a special target led to potent drug candidates, also active on clinically relevant strains of DNA and even RNA viruses including SARS-CoV-2. The potency of the new drug candidates is on a par with Remdesivir, but unlike this, they can even cross the blood-brain barrier to deprive the virus of this area of refuge. Origenis is paving the way for unique therapy options.

About the Innovation and Start-Up Center Biotechnology (IZB):

The company IZB mbH, founded in 1995, is the operating company of the Innovation and Start-Up Centers for Biotechnology in Planegg-Martinsried and Freising-Weihenstephan, and has developed into one of the top ten renowned biotechnology centers in the world. More than 50 biotech companies with more than 600 employees are currently located on an area covering 26,000 m². This is where work focuses on developing drugs against the most severe diseases such as cancer, Alzheimer's disease and various autoimmune diseases – and there are already many successes. At the IZB Freising-Weihenstephan – 15 minutes from the airport – scientists are working on developments in the field of life sciences. An essential criterion for the success of the IZBs is the proximity to top research on the Martinsried/Grosshadern Campus. The new infrastructure measures, such as the Faculty Club G2B (Gateway to Biotech), the IZB Residence CAMPUS AT HOME, the Chemistry College Elhardt, the two kindergartens BioKids and BioKids2, as well as the two restaurants SEVEN AND MORE and Café Freshmaker, have become decisive location factors. Successful companies that have emerged from the IZB include, for example, Medigene AG, Morphosys AG, Micromet GmbH (now Amgen AG), Octopharma GmbH and Corimmun (today Janssen-Cilag). More information at www.izb-online.de

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