Bavarian Biotech News

December 2022

Dear Reader,

looking back, not only at the past year, but at more than 25 years, has kept me constantly busy over the past weeks. In June 1997 I happened to be one of the initiators and creators of Bio^{M}, I served the newly established company as “acting CEO” for the first months, and eventually joined Bio^{M} as “real CEO” in April 1998. During all these years, I had the great pleasure to not only direct the development of the cluster management organization Bio^{M}, but – perhaps even more importantly – accompany the evolution of the Biotech Region Munich into the Bio^{M} Cluster, an internationally renowned hot spot in the life sciences. These 25 years were filled with many adventures, most of them exciting, but once in a while also a little bit scary. I learned a lot and used the gained knowledge and experience for the continuous improvement of Bio^{M} and the cluster. All my efforts, however, would have been in vain if had not had all these creative, supportive, and simply fantastic colleagues, Bio^{M} team. And together with our cluster partners in Northern Bavaria we have managed to make the whole of Bavaria a special place for biotech.

But now the journey – which I like to compare with a kind of jungle cruise – has come to an end, not a sudden end but a very well-planned end. Already quite some time ago I had decided to start my retirement by January 1st, 2023. Finding the right successor, the new captain, was certainly no easy task, but with the appointment of Prof. Ralf Huss this task has fortunately been resolved in the best possible way. I am totally convinced that he will not only just continue the journey, but that he has the promise of opening up new areas in the field of life sciences which I had not touched upon at all or only slightly in the past. Therefore, I have no doubts that the future of Bio^{M}, the Bio^{M} cluster and the entire Bavarian biotech scene will be bright, innovative, and simply great.

I wish you a Merry Christmas and all the best for the New Year.

Horst Domdey

Prof. Domdey hands over management to Prof. Huss

At the traditional Bio^{M} end-of-year dinner, this time host Prof. Horst Domdey looked back not only on an eventful year for the biotechnology and pharmaceutical industry, but also on a quarter of a century as managing director of Bio^{M}. After 25 years, he will hand over the management to his successor, Prof. Ralf Huss, on January 1, 2023.

Read more and find some pictures from the event.

Prof. Ralf Huss (designated Managing Director, Bio^{M}, left) with Prof. Horst Domdey (Managing Director, Bio^{M}) at the traditional Bio^{M} dinner.
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Martinsried gets start-up incubator: Munich Accelerator Life Sciences & Medicine (MAxL)

Handover of the grant for the establishment of the Munich Accelerator Life Sciences & Medicine (MAxL) in Martinsried: Prof. Ralf Huss (designated Managing Director, Bio[M]), Dr. Petra Burgstaller (Head of inQlab, Bio[M]), State Secretary Roland Weigert (StMWi), Christina Enke-Stolle (Head of inQlab, Bio[M]), Prof. Horst Domdey (Managing Director, Bio[M]), (l.t.r.) © Bio[M] / Michael Woelke

The Bavarian Ministry of Economic Affairs is funding the formation of the Munich Accelerator Life Sciences & Medicine (MAxL) in Munich-Martinsried with 8.5 million euros.
The project for a new Bavarian incubator infrastructure for pre-seed projects and early-stage start-ups in the biotech and healthtech sector is managed by Bio[M] Biotech Cluster Development GmbH.

Bavaria has evolved into an **outstanding start-up ecosystem for biotechnology** within the last 25 years. By funding the Munich Accelerator Life Sciences & Medicine, the Bavarian state government is sustainably strengthening Martinsried's role as a leading biotechnology location in Germany and Europe. The early-stage incubator is managed by Bio[M] and is scheduled to open as early as 2023.

Bavaria's Secretary of State for Economic Affairs, Roland Weigert, handed over a grant of **8.5 million euros** to Bio[M], the network organization of the Bavarian biotechnology industry.

Weigert: „Biotechnology is a crucial building block for the medicine of the future and a sustainable industry based on the bioeconomy. In this context, start-ups play a key role as drivers of innovation. Thanks to consistent support from the state government, Bavaria has evolved into an outstanding ecosystem for start-ups in this key industry."

MAxL is designed to provide targeted **support for pre-seed projects and start-ups** shortly after they are founded in the life science and healthtech sectors. "In the first few months, the projects and start-ups face particular challenges. There is a huge need for flexible laboratory infrastructure tailored to the early phase in combination with customized and professional support and networking offers. The planned early-stage incubator in Martinsried offers both together. With MAxL, we are creating the perfect framework for successful spin-offs."

MAxL is planned as a highly visible new flagship project of the Bavarian life science and healthtech ecosystem in several phases. The vision is to create a unique, inspiring, co-creative and entrepreneurial breeding ground for outstanding life science and healthtech start-ups in Bavaria. Excellent minds will thus shape the future of medicine and the bioeconomy - based on cutting-edge biomedical research and groundbreaking new technologies. In the process, the new structure forms internationally a highly attractive gravity center for investors as well as for industrial companies. Read more…

Recent Headlines

Roche Diagnostics: Dr. Claudia Fleischer succeeds Claus Haberda as Managing Director

Dr. Claudia Fleischer will become the new Managing Director and Spokesperson of the Management Board of Roche Diagnostics GmbH in Mannheim and Penzberg on January 1, 2023.

Her predecessor Claus Haberda will retire at the turn of the year after 30 years with Roche. Fleischer will also become a member of the management board of Roche Deutschland Holding GmbH.

She started her career at Roche in 2004. Most recently, Fleischer was managing director of Roche's pharmaceutical sales company in Romania.

Dr. Claudia Fleischer succeeds Claus Haberda as Managing Director of Roche Diagnostics GmbH
© Roche

Three researchers from Bavaria receive Gottfried Wilhelm Leibniz Prize

Three of a total of ten Gottfried Wilhelm Leibniz Prizes for 2023 will go to Bavaria: Prof. Claudia Höbartner, a biochemist at Julius Maximilian University (JMU), Prof. Georg Schett, a rheumatologist at Friedrich Alexander University Erlangen-Nuremberg (FAU), and Prof. Fabian Theis, a bio- and medical informatics scientist at the Technical University of Munich (TUM) and Helmholtz Munich, will each receive 2.5 million euros among the award from the German Research Foundation (DFG).

Prof. Claudia Höbartner is awarded for her outstanding research on the catalytic functions of DNA and RNA. The two biomolecules can not only store, transport and regulate genetic information. They are also capable of mediating the course of biochemical reactions in the same way as enzymes. Such RNA enzymes, also known as ribozymes, can be developed in the laboratory through artificial evolution.

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How do inflammations and autoimmune diseases correlate? **Prof. Georg Schett** is researching this so successfully that he was awarded for his work with the most important research prize in Germany. This year, he succeeded in conducting the world's first therapy of an autoimmune disease, the disease systemic lupus erythematosus (SLE), using the body's own gene-modified immune cells.

© Simone Kessler / Uniklinikum Erlangen

Prof. Fabian Theis is honored for his pioneering work in the analysis, modeling and interpretation of genomic data. He uses AI to investigate how cells make decisions, for example to understand how diseases develop. His objective is to describe the diverse range of cell types in the human body, for example to represent the effects of medicinal active ingredients on specific cell types.

© Astrid Eckert / TUM

Bavaria leads Germany with 16 ERC Starting Grants

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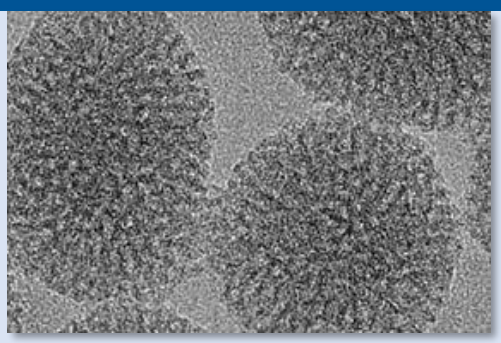
Bavaria's young researchers are top in Germany: 16 of the 81 ERC Starting Grants 2022 for Germany go to young researchers in Erlangen, Munich and Regensburg. Science Minister Blume: "Great careers in science begin in Bavaria!" 9 ERC Starting Grants go to researchers working on topics in the life sciences.

With projects ranging from energy research to the fight against cancer, a total of 16 young scientists at **Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU)**, **Ludwig-Maximilians-Universität München** (2), **Technical University of Munich** including **Klinikum Rechts der Isar** (12) and the **University of Regensburg** have acquired the prestigious **ERC Starting Grants** 2022 from the European Research Council (ERC).

A total of 408 researchers have received Starting Grants from the European Research Council (ERC) this year. The grants total EUR 636 million and are part of the Horizon Europe program. They are awarded to help excellent younger scientists who have two to seven years of postdoctoral experience to start their own projects, form teams and pursue promising ideas.

Read more…

UNIGE and LMU team develops a new transport nanoparticle to act at the heart of cells



The porous nature of the silica nanoparticles allows entrance of NSA molecules, where they are taken up by immune cells and NSA is released to stop the inflammatory processes. © UNIGE - Carole Bourquin

How can a drug be delivered exactly where it is needed, while limiting the risk of side effects? A team from the University of Geneva (UNIGE) and the Ludwig-Maximilians-Universität München (LMU) has succeeded in developing a fully biodegradable nanoparticle capable of delivering a new anti-inflammatory drug directly into macrophages - the cells where uncontrolled inflammatory reactions are triggered - ensuring its effectiveness. In addition, the scientists used an in-vitro screening methodology, thus limiting the need for animal testing.

The use of nanoparticles to encapsulate a drug to protect it and the body until it reaches its point of action is being increasingly studied. However, this requires identifying the right nanoparticle for each drug according to a series of precise parameters.

Necrosulfonamide (NSA) is a new molecule that inhibits the release of several important pro-inflammatory mediators, therefore constituting a promising advance to reduce certain types of inflammation. However, being extremely hydrophobic in nature, it travels poorly in the bloodstream and could target many cell types, triggering potentially toxic effects. Read more…

New X-ray technology can improve COVID-19 diagnosis: Patient study demonstrates benefits of dark-field X-ray technology

A research team at the Technical University of Munich (TUM) has, for the first time, produced dark-field X-ray images of patients infected with the corona virus. In contrast to conventional X-ray images, dark-field images visualize the microstructure of the lung tissue, thereby providing additional information. This approach has the potential to provide an alternative to computed tomography (CT), which requires a significantly higher radiation dose.

Daniela Pfeiffer, Professor of Radiology and Medical Director of the study at Klinikum rechts der Isar
© Andreas Heddergott / TUM

The lungs of **COVID-19** patients are normally visualized using computed tomography (CT). CT technology uses multiple X-ray images from different angles to compute a three-dimensional image. This provides more **accurate results** than two-dimensional imaging using conventional X-ray technology. The downside, however, is a higher radiation dose due to the large number of X-ray images required.
Dark-field chest X-ray is a **new X-ray technology** developed by **Prof. Franz Pfeiffer**. It is paving the road for new possibilities in radiological diagnostics: "During our X-ray examination, we take conventional X-ray images and dark-field images simultaneously. This gives us additional information about the affected lung tissue quickly and easily," says Franz Pfeiffer, Professor of Biomedical Physics and Director of the **Munich Institute of Biomedical Engineering at TUM**. Read more…

Erlangen University Hospital gets interdisciplinary Post-COVID Center

An interdisciplinary Post-COVID Center will be established at the University Hospital Erlangen. According to the university hospital, the center with a coordinating and bundling function will be located in the head clinics and is expected to start its work at the beginning of December 2022. So far, the Erlangen University Hospital had already set up a special post-COVID hotline.

© Uniklinikum Erlangen

The new center in Erlangen has its own homepage: www.post-covid-zentrum.uk-erlangen.de where those affected can find information about the center's work, registration procedures and current studies on post-COVID.

The care of post-COVID patients is also guaranteed at all other Bavarian university hospitals. A post-COVID outpatient clinic already exists, among others, at the University Hospital of Munich, which is supported by the Free State of Bavaria with up to 578,000 euros as part of the "Post-COVID LMU" project.

In addition to the services offered at the university hospitals, post-COVID outpatient clinics have been set up at other hospitals and institutes, providing care for children and adolescents as well as adults.

Start-ups at the Munich Demo Day of the BioTech Bootcamp

© BioM

As part of this year's BioTech Bootcamp of BioM Biotech Cluster GmbH and the life science business incubator "SmiLe Incubator" from Lund, Sweden, the international, eight-week training program for prospective founders and young companies climaxed in the Munich "Demo Week". Ten teams, aiming to develop and commercialize their biotech business idea, showed on the Martinsried / Großhadern campus what they had learned in eight weeks and presented their start-up on the final "Demo Day".

Two teams, **OPSYON Therapeutics** and **Strominnate Therapeutics**, won a visit to the customer cooperation center of the sponsor Merck in France. The winner of the audience award was the **RNhale** team, that can look forward to a partnering ticket for the BIO-Europe Conference 2023 in Munich.
The BioTech Bootcamp is an eight-week hybrid training program that provides up to 12 European start-up teams with the opportunity to validate and develop their business ideas in the field of the therapeutics development with the help of life science experts.
Two teams that were particularly compelling with their presentations were OPSYON Therapeutics and Strominnate Therapeutics.
OPSYON from Munich is working to improve the efficacy and tolerability of cancer therapies and is developing innovative multifunctional antibodies with reduced side effects that use the full spectrum of the immune system to target and permanently eliminate cancer cells. Read more…

Founders looking for capital at the BioM-BioAngels Pitch Day

© BioM

At BioM's 12th BioAngels Pitch Day on December 6, promising start-ups again met potential investors. Eight selected start-up teams had the opportunity to present their business idea in front of venture capital investors and business angels from the Life Science sector. Once again, the great potential of the Bavarian start-up scene with innovative ideas in the fields of drug development, next generation diagnostics, digital health and industrial biotech was demonstrated.

At the exclusive matchmaking event, promising pre-seed teams and start-ups again had the opportunity to convince prospective funders with an investment focus on life sciences and healthtech of their technology and business model - in just 12 minutes, with scientific data and a sound business strategy.

The project ideas were diverse. With the aim of successfully acquiring funding, new solutions in diagnostics were presented alongside the development of innovative drugs for the treatment of tumors, infectious and autoimmune diseases as well as depression.
BioM prepared the founders for their virtual pitch in a separate training session. The aim was to present the business model convincingly and in a compact form. Thus, the teams were well equipped for the in-depth questions of the invited investors after the pitches.

The subsequent networking lunch provided an additional opportunity for further personal exchange. Read more…

Another 50 million euros for CatalYm's anti-tumor antibody visugromab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Martinsried, Germany-based CatalYm has successfully closed a Series C financing of 50 million euros. This will be used to advance the Phase 2 clinical development of visugromab in patients with solid tumors.

CatalYm, a biotech start-up from Martinsried/Munich - originally based in Würzburg, Germany - has announced the closing of a EUR 50 million Series C financing round. The oversubscribed round was co-led by new investors, Brandon Capital and Jeito Capital with participation from existing investors Forbion, Novartis Venture Fund, Vesalius Biocapital III, Bayern Kapital, BioGeneration Ventures and Coparion.

At the end of 2020, CatalYm had already been able to raise 50 million euros in a Series B financing as well.

The current financing is supposed to support the continued, promising clinical development of its lead candidate, visugromab, a humanized monoclonal antibody engineered to neutralize the tumor-produced Growth Differentiation Factor-15 (GDF-15). GDF-15 belongs to the TGF-beta family and is associated with poor prognosis and reduced overall survival in several tumour types. GDF-15 acts as a key regulator of immune cell activation and as an inhibitor of immune cell infiltration into the tumor tissue. High concentrations of GDF-15 in the serum and tumor-microenvironment help the tumor to evade the immune system and are associated with resistance to current therapies. Read more…

25 million Euro Series B financing for Temedica


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Temedica has closed an additional 25 Euro million Series B financing to expand its Real-World Evidence ecosystem, bringing its total Series B financing to 42 million euros.

Temedica from Munich wants to make a significant contribution to the development of individual, patient-oriented care. To this end, the health insights company combines its real-world insights platform Permea and patient companion apps.

Billions of data points for more and better health

From more than 40 billion data points on over 50,000 diagnoses, Temedica derives health-relevant insights into disease progression, the effectiveness of therapies, patient journeys, and medication adherence. In the process, data from a wide variety of sources are combined. The insights gained from the connected data are intended to provide tangible added value to all stakeholders in the healthcare system.

Among other things, the information and insights collected by Temedica are fed back directly to patients via Temedica's patient companion apps. In this way, patients will gain an individualized understanding of their disease as well as the connections with their lifestyle and be able to actively influence their condition.

Read more…

European Innovation Council funds Dermagnostix with 2.5 million euros

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The joint spin-off of Hahn-Schickard, Helmholtz Munich and TU Munich, Dermagnostix GmbH, was one of 30 companies to qualify for a direct grant from the European Innovation Council (EIC) and will receive 2.5 million euros to bring its product portfolio to market under the new "In Vitro Diagnostic Regulation" applicable in Europe. The start-up aims to push the diagnostic boundaries within dermatology.

CatalYm, a biotech start-up from Martinsried/Munich - originally based in Würzburg, Germany - has announced the closing of a EUR 50 million Series C financing round.

The mission of the medtech company Dermagnostix to push the diagnostic boundaries within dermatology promises relief to patients with the most common skin diseases psoriasis and atopic dermatitis: the **unambiguous analysis** result means that therapeutic measures can be initiated in a targeted manner.

The start-up, which was founded in 2021, has developed a molecular analysis method that provides fast and unambiguous results as to whether an inflammatory skin disease is **psoriasis** or eczema such as **neurodermatitis**.

From around **1000 applications** from Europe, Dermagnostix convinced the jury and can thus look forward to the largest public grant to date. Read more…

SPRIND funding for m⁴ Award winner Plectonic and its nanoswitch for targeted tumor therapy

Dr. Benjamin Kick, Dr. Klaus Wagenbauer and Dr. Jonas Funke (left to right) of Plectonic Biotech have received a SPRIND grant for their nano-tool to fight tumors. © Plectonic

Plectonic Biotech from Munich receives funding from the German Federal Agency for Leap Innovations SPRIND. The start-up, a spin-off of the Technical University of Munich, has developed a nanoswitch that connects immune cells with tumor cells. This is expected to enable immunotherapies against cancer to be more targeted and with fewer side effects. In 2019, the team won the m⁴ Award pre-seed competition for its development.

Antibody-based cancer **immunotherapies** have great potential for the treatment of tumor diseases. However, overstimulation of the immune system can lead to side effects due to which one has to stop the therapy. This overstimulation has two causes: First, the target antigens are often present on both tumor tissue and healthy tissue. Second, the antibodies are active throughout the body and not just locally on the tumor.

The Plectonic Biotech team around the founders Dr. Klaus Wagenbauer, Dr. Jonas Funke, Dr. Benjamin Kick and Prof. Hendrik Dietz has therefore developed an "on/off switch" for antibodies to improve the specificity and effectiveness of immunotherapies for cancer and thus also reduce side effects.

This involves an ultra-miniaturized **nanoswitch** produced from DNA. The nanoswitch specifically recognizes tumor cells and binds to them. A switch is flipped, which activates other antibodies on the opposite side that were previously hidden. These are recognized by the body's own immune cells, which are thus recruited to fight the cancer cells.

Events

[BIO-Europe Spring]
March 20 - 22, 2023 | Basel, Switzerland
March 28 - 30, 2023 | Digital

[Biovaria]
April 24 - 25, 2023 I Munich, Germany

[BIO Korea 2023]
May 10 - 12, 2023 I Seoul, South Korea

[BIO International Convention]
June 5 - 8, 2023 I Boston, USA

[BIO-Europe Munich]
November 6 - 8, 2023 I Munich, Germany

Please find current event information on our website www.bio-m.org/en/events.

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