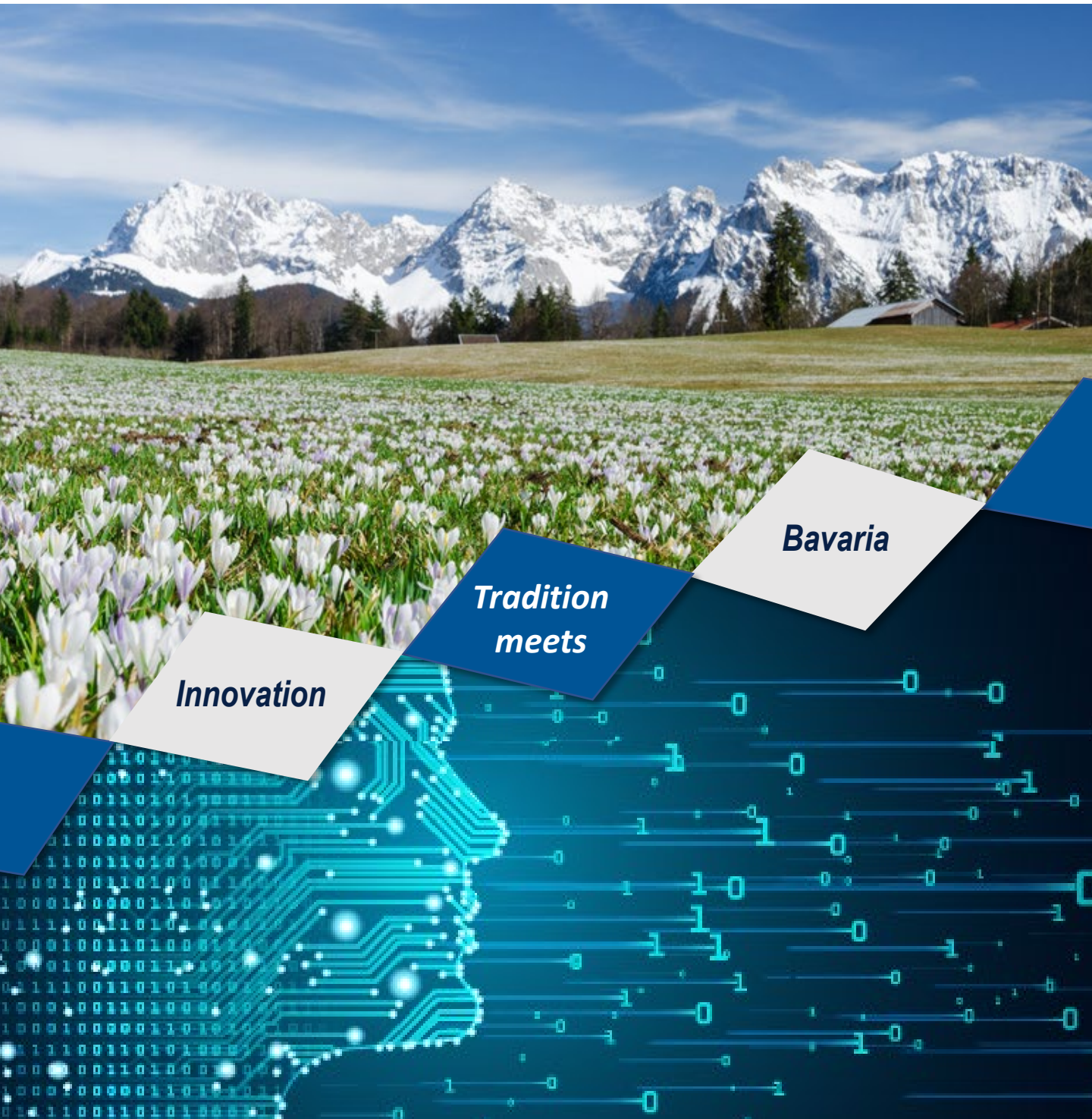


# Bavarian Biotech News

March 2023



**Innovation**

**Tradition  
meets**

**Bavaria**

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**Dear Reader,**



as of January 1st, 2023, I have succeeded Prof. Horst Domdey as the managing director of Bio<sup>M</sup>. The first 6 weeks in office have already been a privilege to work with a great team of experienced scientists and cluster managers. I am looking forward to carrying on the legacy of the past 25 years.

However, times have changed since the turn of the century. Coming from an era of biochemical and genomic research and an eruption of technologies including next generation sequencing and single cell proteomics, it is now the time to connect the dots. George Church, one of the founding fathers of genomics and synthetic biology and Professor at Harvard Medical School and the Massachusetts Institute of Technology (MIT) once told me that he considers one of his most significant contribution to life science was to make sequencing „affordable“ also to medical and clinical practice.

It is also one of our ambitions at Bio<sup>M</sup> to identify novel solutions and disruptive technologies and facilitate their paths to the healthcare and life science market and finally to the patient. Other still emerging technologies like computational sciences, digital solutions, and artificial intelligence along with a smart database will help us to achieve this goal and identify opportunities early and help them to mature and grow. Our new life science incubator MAxL (Munich Accelerator for Life Science and Medicine) in Martinsried is another pivotal addition to our partnership activities and cluster portfolio.

Together with our cluster partners, we at Bio<sup>M</sup> will carry on the journey that started more than 25 years ago and we will continue to work on the future of modern biotechnology and applied life sciences here in the Munich area, Bavaria and even beyond.

Best wishes,

Ralf Huss



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## BioPark Regensburg reports positive developments

In the current annual report, [BioPark Regensburg](#) shows a continued slightly increasing number of life science companies and a strong increase in the number of employees in East Bavaria in the post-Corona era. The new business figures for 2022 presented by BioPark Regensburg GmbH count 66 companies and 5,340 employees for the cluster in Eastern Bavaria.

The companies in the cluster from the fields of biotechnology, pharmaceuticals and medical engineering, diagnostics, analytics and the healthcare industry were able to continue to significantly expand their business in Eastern Bavaria in the post-Corona period and have increased their staff substantially.

This is shown by the [current survey in the BioRegion Regensburg](#), which is conducted annually by BioPark Regensburg GmbH, a company of the City of Regensburg. The total number of companies in the cluster increased slightly compared to the previous year to 66 companies (+3). The total number of employees increased strongly from 4,504 to 5,340 (+16%). [Read more...](#)



© BioPark Regensburg

## Bioresorbable membrane for wound healing

Fraunhofer researchers in Würzburg have developed a bioresorbable membrane that supports wound healing and is completely biodegradable in the body to form a natural substance.

The treatment of large and internal wounds is a challenge and can be extremely tedious. Researchers at the [Fraunhofer Institute for Silicate Research ISC](#) in Würzburg and the [Fraunhofer Institute for Toxicology and Experimental Medicine ITEM](#), which also has a location in Regensburg, have now developed a bioresorbable membrane to support wound healing. This membrane completely dissolves in the body after six to eight weeks as the wound heals.



© istock/choja

In addition, the membrane causes no direct damage to tissue or DNA. The basis for the innovative membrane is a fiber fleece developed at the Fraunhofer ISC, which is already medically approved for the regeneration of chronic wounds such as diabetic feet. The researchers were able to reduce the fiber diameter of 50 micrometers by more than 50 times, so that the fibers now have a diameter of less than one micrometer. Another advantage of using the membrane is that active ingredients can be integrated into the fiber fleece, which are then released when the material dissolves.



## European partnership for cardiovascular research awards five million euros for projects involving Munich TU and LMU researchers

Two teams with participating scientists from the [Technical University](#) and the [Ludwig-Maximilians-Universität](#) in Munich receive funding in the millions from a European partnership for cardiovascular research. The [British Heart Foundation \(BHF\)](#), the [German Center for Cardiovascular Research \(DZHK\)](#) and the [Dutch Heart Foundation \(DHF\)](#) are providing the international research teams with 5.3 million euros over the next four years. A total of 4 funded project teams want to find new ways to better identify and treat cardiovascular diseases.

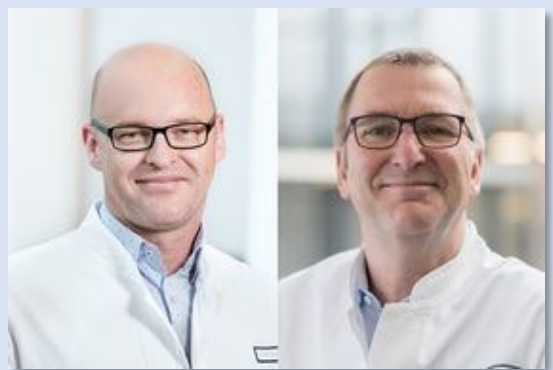


© British Heart Foundation / Deutsche Zentrum für Herz-Kreislauf-Forschung / Dutch Heart Foundation

For the fourth time, the European organizations are working together and joining forces: teams with scientists from the three countries are researching heart failure, atherosclerosis and heart failure in pulmonary hypertension in four projects and are analyzing thousands of proteins to predict the probability of a heart attack or stroke. **Prof. Lars Maegdefessel** from the Technical University of Munich, together with **Dr. Jason Tarkin** from the University of Cambridge, UK and **Prof. Marit Westerterp** from the University Hospital Groningen, Netherlands, get the grant for the project "PLAK-TALK - Understanding cell-cell communication to prevent heart attack and stroke-causing arterial blockages". Also funded is the MegaCardiocyte project – mapping a blood-bone marrow-heart axis to identify new targets for drugs to treat heart failure. **Dr. Tobias Petzold** from the Ludwig-Maximilians-Universität in Munich and **Prof. Steffen Massberg** from the Munich University Hospital together with **Dr. Mairi Brittan** from the University of Edinburgh, UK, and **Dr. Judith Cosemans** from CARIM University Maastricht, Netherlands, to investigate the connection between the function of small blood vessels and a specific type of heart failure.

## University Hospital Erlangen: world's first patient with myositis successfully treated with CAR-T cell therapy

The world's first patient with a severe form of muscle inflammation (myositis) has been successfully treated with CAR-T cells at the [University Hospital Erlangen](#). The inflammation in the muscles, lungs and joints completely resolved after six months.



Prof. Schett (left) and Prof. Mackensen, University Hospital Erlangen  
© Wegener/Michael Rabenstein/Uniklinikum Erlangen

Antisynthetase syndrome belongs to the group of autoimmune muscle inflammations (myositis). The usually serious disease is based on a malfunction of the immune system and affects muscles, joints, skin and lungs. The name antisynthetase syndrome derives from the observation that in this disease the enzymes necessary for the synthesis of amino acid building blocks (tRNA, so-called synthetases) are mistakenly attacked by the immune system. As a result, various cells are significantly disrupted in their function. A 41-year-old man has now been successfully treated for this disease at the University Hospital in Erlangen using CAR-T cell therapy. After the infusion of the previously removed and genetically modified T cells from the patient, the patient's state of health improved immensely: the inflammation in the muscles, lungs and joints regressed completely. Strength, performance and endurance came back. All immunosuppressive drugs - especially cortisone - could be completely discontinued without the disease flaring up again. Six months after CAR-T cell administration, the patient had fully recovered from his autoimmune disease.

## National Tumor Center located in Bavaria for the first time: Millions in funding for cutting-edge research

The four university hospitals in Würzburg, Erlangen, Regensburg and Augsburg are receiving millions in federal funding as the new location of the "National Center for Tumor Diseases" (NCT). As "NCT WERA", the clinic group bundles patient-oriented cutting-edge research.

For the first time, Bavaria will have its own location for the National Center for Tumor Diseases (NCT) of the [German Cancer Research Center \(DKZF\)](#). The association of the four university hospital locations Würzburg, Erlangen, Regensburg and Augsburg, WERA for short, is coordinated by the University Medical Center Würzburg. In the future, the [NCT WERA](#) can be funded with up to 14.5 million euros per year by the BMBF.

### Better care for cancer patients

The NCT is a cooperation between the German Cancer Research Center and outstanding competence locations in university cancer medicine. The aim is to further expand cancer research in a patient-centric manner and thus improve the treatment of cancer patients in Germany in the future. NCT WERA will focus, among other things, on the further expansion of innovative immunotherapies ("CAR-T cells") and the development of new molecular therapeutics.



The network of the four university hospitals Würzburg, Erlangen, Regensburg and Augsburg (WERA) is officially one of the new locations of the "National Centers for Tumor Diseases" (NCT). © UKW / Kim Sammet

## EU funding in the millions: six life sciences research projects in Bavaria receive ERC grants

Scientists from Bavarian universities in Munich, Erlangen-Nuremberg and Würzburg will receive one of the internationally highly regarded ERC Consolidator Grants for their research from the [European Research Council \(ERC\)](#) for 2022. Six projects are located in the field of life sciences and deal with, among other things, AI-supported medical image analysis, nano-transport systems for RNA drugs and molecules that prevent cancer cells from growing.



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A total of 16 million euros went to research projects in Bavaria. The project funding, each endowed with up to two million euros, will be given to eight researchers from the Technical University of Munich (TUM/3) and the Klinikum Rechts der Isar of the Technical University of Munich (MRI/1), the Ludwig-Maximilians-Universität in Munich (LMU/2), the Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU/1) and the Julius-Maximilians-Universität of Würzburg (JMU/1). 6 ERC Consolidator Grants are for projects in life sciences research.

## Ernst-Ludwig Winnacker Award goes to Prof. Antje Boetius

Prof. Antje Boetius, Director of the Alfred Wegener Institute (AWI) in Bremerhaven, is the winner of the Ernst-Ludwig Winnacker Award. The prize recognizes scientists who contribute to the dialogue between science and society.

The [Ernst-Ludwig Winnacker Prize](#) of the Bayer Foundation for enhancing the impact of science for the benefit of society was established in 2021 in honor of the 80th birthday of Prof. Ernst-Ludwig Winnacker.



Prof. Ernst-Ludwig Winnacker with Prof. Antje Boetius © Bayer AG

## Louis-Jeantet Prize for Medicine for Prof. Brenda Schulman

The 2023 Louis-Jeantet Prize for Medicine will be awarded jointly to Brenda Schulman, Director at the [Max Planck Institute \(MPI\) of Biochemistry](#) in Martinsried and Ivan Đikić, Director of the Faculty of Biochemistry II at [Goethe University](#) in Frankfurt am Main for their outstanding scientific contributions to our understanding of the function of the protein ubiquitin and its mechanisms in cells.

Ubiquitin is a rather small protein, yet it plays a key role in cellular health. Ubiquitin is attached to other proteins in a process known as "ubiquitylation", which ensures that various processes in our cells occur in the right order.



Prof. Brenda Schulman;  
© Aussenhofer, MPI for Biochemistry

## Mohammad Lotfollahi wins Early Excellence in Science Award

The [Bayer Foundation](#) awards the Early Excellence in Science Award. This year's winner in the category "Data Science in the Life Sciences" is [Helmholtz Munich](#) researcher Mohammad Lotfollahi from the Institute of Computational Biology.

Dr. Mohammad Lotfollahi wins the Award 2022 for the innovative development of machine learning algorithms in the context of computational biology. His work advances the understanding of large-scale single-cell omics data in health and disease.



Dr. Mohammad Lotfollahi; © Marcus Meertz, meertzfilm GmbH

## academics Young Scientist Award for Dr. Lara Urban

Helmholtz Munich scientist Lara Urban has been selected by academics as the Young Scientist of the Year 2022.

Dr. Lara Urban's research group, located at Helmholtz AI and the Helmholtz Pioneer Campus at [Helmholtz Munich](#), focuses on applying molecular biology research and integrating statistical and computational methods to improve our understanding of Planetary Health. Since her research days in England and New Zealand, Urban has been using genomics and artificial intelligence to understand the interactions between the environment, biodiversity, and human health.



Dr. Lara Urban  
© Helmholtz Munich | Almut Barden



## Leading Life Science Clusters of Kawasaki and Munich renew their cooperation agreement

Bio<sup>M</sup> renewed its Memorandum of Understanding with the City of Kawasaki on 28 February 2023.

The aim is to deepen the cooperation and to further develop both life science clusters.

Kawasaki City, with its open-innovation site King Skyfront, and the cluster management organization Bio<sup>M</sup>, which coordinates the Munich and Bavarian Biotechnology Clusters, decided to continue their active cooperation scheme, which includes matching support for cooperation projects, an exchange of information about each region's new technologies, industry developments and academic potential, and an exchange of best practices in technology transfer and biotech SME support.



Tamagawa Sky Bridge, © Shutterstock

On the first anniversary of the opening of a bridge connecting Kawasaki City with Tokyo Airport, Prof. Ralf Huss (CEO, Bio<sup>M</sup>) sent a video message to Kawasaki City: "Congratulations again to the City of Kawasaki for building the Tamagawa Sky Bridge, which directly connects Kawasaki City and Haneda Airport (Tokyo International Airport), Japan's largest airport. The Bridge that opened last March not only connects the city with the world, but also connects the bio-cluster in Kawasaki with Bavaria in Germany, and other global hot spots in life sciences and health."

## Biotech Bootcamp 2023

Move your start-up idea forward with Europe's leading life science incubators, and join the **Biotech Bootcamp 2023**, a partnership of SmiLe (Lund, Sweden) and Bio<sup>M</sup> (Martinsried near Munich, Germany). Apply for a hybrid business training program designed to equip aspiring biotech entrepreneurs with the knowledge, skills, and industry connections required to transform a breakthrough biotech idea into a successful scalable business.

The program runs over eight weeks, from Tuesday to Thursday each, with on-site weeks in Lund and Munich. It offers substantial industry input and involvement of investors, mentors, and industry. The Bootcamp provides valuable support in group and one-on-one settings, with a mix of live and recorded lectures, expert Q&As, panel discussions, personalized mentorship, and pitch trainings. Each start-up gets access to a personal mentor and pitch coach that provides support throughout the program.



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For more information click here

<https://www.smileincubator.life/biotech-bootcamp/>

## Adivo: limited market authorization status EMA for lead oncology program

[adivo GmbH](#), a Martinsried-based company focussed on discovering species-specific therapeutic antibodies for pets has been granted the limited market authorization status by the Committee for Veterinary Medicinal Products (CVMP) of the European Medicines Agency (EMA) for its most advanced proprietary pipeline program. adivo's CAESAR-derived cancer immunotherapy could benefit from a significantly shortened development path to a first market entry.



Dr. Kathrin Ladetzki-Baehs and Dr. Markus Waldhuber, both founder and CEO of adivo GmbH © Adivo GmbH

The adivo technology platforms allows de-novo identification of species-specific antibody panels to select drug candidates with optimal functionality, developability and low risk of

immunogenicity. adivo has established CAESAR, the first **fully canine phage display platform** in the veterinary medicines market for selecting therapeutic candidates against a broad range of diseases.

The cancer antibody addresses a well-established immune-oncology pathway in dogs and may now benefit from an accelerated approval pathway toward a first market approval in a specific oncology subsegment..

Early 2022, the Veterinary Medicinal Products Regulation introduced a specific authorization route for medicines intended for veterinary limited markets in the European Union. The regulatory pathway aims to stimulate the development of veterinary medicines for serious or life-threatening animal diseases and unmet veterinary medical needs. [Read more...](#)

## VisionHealth raises EUR three million to fund large COPD and asthma market readiness study

Munich-based [VisionHealth](#) has successfully closed a EUR three million Pre-Series A financing round. The e-health start-up is a specialist in digital support for inhalation therapy for the treatment of chronic respiratory diseases such as COPD and asthma and plans to use the money for a study on its digital health app Kata®.



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Incorrect use of inhaled medications is a common problem for patients with **chronic respiratory diseases**. For example, too little drug deposition in the lungs can ultimately trigger worsening in chronic lung diseases, such as **bronchial asthma** and **chronic obstructive pulmonary disease (COPD)**. Start-up [VisionHealth](#) has therefore developed the **Kata®** health app, a certified medical device, to improve inhalation treatment for respiratory diseases. The app controls therapeutic inhalation using artificial intelligence and gives patients concrete feedback on each inhalation.

Now the Munich-based company has raised three million euros through DB Speciality Invest GmbH & Co. KG, Neu-Ulm, Germany. VisionHealth, founded 2017, intends to use the fresh capital to fund a second, larger study to provide decision makers and physicians with even stronger scientific evidence to evaluate and potentially recommend Kata®. [Read more...](#)



## m<sup>4</sup> Award will be awarded for the 7th time in 2023

The seventh call for entries for the successful Bavarian [“m<sup>4</sup> Award – Pre-Seed Competition for the Medicine of the Future”](#) is currently underway. Bavarian academic research teams conducting research on an application-oriented project that addresses the challenges of medicine in the future can apply for the m<sup>4</sup> Award. In addition, the potential for a later spin-off must be present.

Research-related but application-oriented projects that serve to develop and test innovative products and technologies in the field of medical biotechnology are supported .

Possible topics of the projects are in particular:

- innovative active ingredients and therapies
- innovative platform technologies in the field of prediction, prognosis, or diagnostics in biotechnology
- innovative platform technologies in drug discovery and development
- Innovative approaches in the field of digital health in biotechnology

The winning teams each receive up to 500,000 euros over a period of 2 years for the validation of their approaches. In addition, the funded projects receive comprehensive project support on the way to founding a company.

Since the award was launched, a total of 30 research projects with spin-off potential have been awarded in six calls resulting in 14 spin-offs so far.

accelerating medical innovation



## m<sup>4</sup> Award 2023

create the future of medicine

m<sup>4</sup> Award



[www.m4-award.org](http://www.m4-award.org)



The Pre-seed competition m<sup>4</sup> Award is awarded by the Bavarian State Ministry of Economic Affairs, Regional Development and Energy.

Bavarian Ministry of Economic Affairs,  
Regional Development and Energy



# THE BAVARIAN BIOTECH CLUSTER

BAVARIA – TOP LOCATION FOR BIOMEDICAL INNOVATION

## CLUSTER ACTIVITIES

- Bavarian biotech report:  
the annual survey of the biotechnology sector
- Close collaboration of all Bavarian biotech locations
- Representation at international trade fairs
- Interlinking business and science
- Innovation transfer



## [BIO-Europe Spring](#)

March 20 - 22, 2023 | Basel, Switzerland

March 28 - 30, 2023 | Digital

## [BioVaria](#)

April 24 - 25, 2023 | Munich, Germany

## [BIO Korea](#)

May 10-12, 2023 | Seoul, South Korea

## [BIO International Convention](#)

June 5 - 8, 2023 | Boston, USA

## [BIO-Europe Munich](#)

November 6 - 8, 2023 | Munich, Germany

Please find current event information on our website [www.bio-m.org/en/events](http://www.bio-m.org/en/events).

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