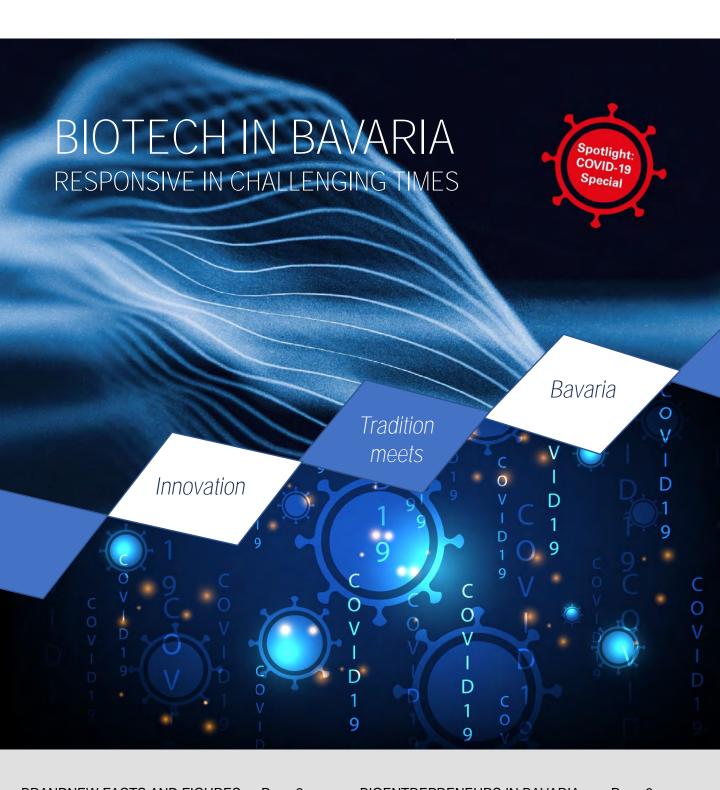
Bavarian Biotech News

August 2020





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Biotech in Bavaria - Brandnew Facts and Figures



Dear reader,

continuity is important in these turbulent times. So again this year, Bio^M has summarized the latest developments in the Bavarian biotechnology scene in the current edition of the *Bavarian Biotech Report* entitled "*Responsive in Challenging Times*". These show a clear growth in employment and a strong start-up dynamic.

A COVID-19 special is dedicated to the fight of Bavarian biotech companies and research institutions against the corona pandemic, and shows the effects of the pandemic on the industry. Overall, Bavarian biotechnology is demonstrating global competitiveness and responsiveness.

Find more details, statements and articles within the Bayarian Biotech Report 2019/20.

In a nutshell we present here the key messages and further interesting biotech news.

Your Bio^M team



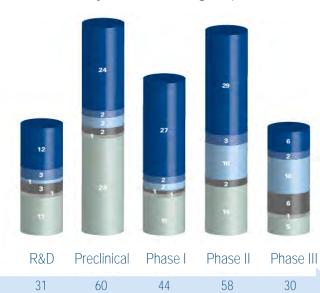
Short Facts: Focus on Biotech Numbers in Bavaria



400 Biopharma Companies

35,000 Employees

223 Projects in Drug Pipeline





- Oncology
- Infectious Diseases
 - Autoimmune Diseases
- CNS Diseases
- Cardiovascular Diseases
- Other

Recent Headlines



MorphoSys: FDA-Approval for Cancer Drug Monjuvi ®

On August 1, MorphoSys received US approval for Monjuvi (Tafasitamab-cxix) for the treatment of diffuse large cell B-cell lymphoma (DLBCL).

DLBCL is the world's most common form of non-Hodgkin's lymphoma in adults and is characterized by rapidly growing malignant B cells in the lymph nodes, spleen, liver, bone marrow or other organs. The cancer drug may be used in combination with lenalidomide for the treatment of adult patients with relapsed or refractory diffuse large cell B-cell lymphoma (DLBCL).

Monjuvi is a humanized, Fc-modified, cytolytic, monoclonal antibody that recognizes the surface protein CD19 on B lymphocytes. MorphoSys and Incyte will jointly commercialize Monjuvi in the USA. Incyte has exclusive marketing rights outside the USA. Read more...

morphosus

EUR 10.7 million for Tubulis from Munich

Tubulis has closed a EUR 10.7 million Series A financing round to accelerate the development of a new class of highly stable and efficient antibodydrug conjugates (ADCs) and to support the further growth of the company.

The financing round was co-led by BioMedPartners and High-Tech Gründerfonds (HTGF) with support from Seventure Partners, coparion, Bayern Kapital, and OCCIDENT alongside significant contributions by high net worth individuals and the founders. Tubulis was spun out in 2019 from the Leibniz Research Institute (FMP) in Berlin and the Ludwig-Maximilians-Universität München (LMU).

The young company has already been awarded several start-up prizes. These also include the <u>m⁴ Award</u> 2017, coordinated by Bio^M. <u>Read more...</u>



USD 103.5 million for Immunic Therapeutics

Immunic, Inc., developing oral immunology therapies against chronic inflammatory and autoimmune diseases, announced the closing of a USD 103.5 million public offering.

The company intends to use the net proceeds of the offering to fund the ongoing clinical development of its three lead product candidates, IMU-838, IMU-935 and IMU-856. Read more...



Free Coronavirus Testing in Neuried near Munich for over 900 People

In July, a successful corona test campaign took place in Neuried near Munich, where 910 citizens of the community of Neuried were tested free of charge for acute or already survived SARS-CoV-2 infection.

In none of the tested persons could an acute infection be detected, in less than 2 percent antibodies against the SARS-CoV-2 virus were detected. This value is slightly below the German average.

In cooperation with the Neuried-based company <u>Mikrogen</u>, the <u>MVZ Martinsried</u> and the biotech cluster



Prof. H. Domdey (Bio^M), C. Kuchenbecker (Mikrogen), T. Mair and J. Ziegler (MVZ Martinsried) presenting the bar-coded test sets to the 1st Mayor H. Zipfel. © Community of Neuried.

organization Bio^M, the Neuried community organized the screening. The test was intended to provide information on the immune status and the potential number of unreported infections. In addition, the researchers also tested how such tests can be carried out efficiently in an emergency.

Spotlight COVID-19



COVID-19 Testing

The Martinsried biotech company GNA Biosolutions, a spin-off of the Ludwig Maximilians-Universität München (LMU), has got a considerable funding from the Free State of Bavaria to bring the ultra-fast COVID-19 test to series-production maturity and hence to large-scale production. Within 15 minutes, this test delivers a reliable positive result of acute infection with the SARS-CoV-2 virus. It also offers the advantage of being a battery-powered, portable device.



Dr. Lars Ullerich, CBO of GNA Biosolutions, explains Hubert Aiwanger (left), Bavarian State Minister of Economic Affairs, the rapid test for SARS-CoV-2 © StMWi/Elke Neureuter

Bavaria is also at the forefront in the detection of antibodies produced in response to a SARS-CoV-2 infection: In addition to its RT-PCR test, a highly specific antibody detection test was launched by Mikrogen in Neuried near Munich in early April.

Roche in Penzberg also launched a SARS-CoV-2 antibody test in early May. In addition, it announced an investment of EUR 250 million in a new hub in Penzberg over the next four years, where research and development activities for diagnostic tests will be combined and pooled. Read more...

Drugs - Vaccines - Digital Health

Leukocare is developing a novel adenoviral vaccine against COVID-19 within a European consortium by contributing the liquid vaccine formulation. Munich-based Baseclick, a spin-off of the Ludwig-Maximilians-Universität München (LMU), has successfully enhanced the so-called click chemistry for developing an mRNA vaccine against SARS-CoV-2. Also Bavarian Nordic, based in Martinsried near Munich is working in the field of COVID-19 vaccine research.

Various biotechnology companies are working on highly innovative approaches that directly target the novel coronavirus. So, Ethris is developing mRNA-based drugs, Cfm Oskar Tropitzsch and Iris Biotech from Marktredwitz in northern Bavaria are working on a new antiviral agent and Immunic Therapeutics announced the start of a new clinical development program with its advanced drug candidate IMU-838.

Ebenbuild, a spin-off of the Technical University of Munich (TUM), has developed a digital twin of the lung. Improved mechanical ventilation of critically ill COVID-19 patients is facilitated by AI in the analysis of lung imaging.

Read more...

Academic Approaches

To better understand the spread of the virus, the Munich Tropical Institute at the LMU University Hospital Munich, is coordinating the "Prospective COVID-19 Cohort Munich" (KoCo19) by investigating the infection status of around 3,000 representatively selected households.

The study "COVID Kids Bavaria" at Dr. von Hauner Children's Hospital of the LMU University Hospital Munich addresses the pandemic situation in children in about 150 selected childcare facilities.

Another concept for treating COVID-19 is using antibodies from convalescent plasma. University Hospital Erlangen was one of the first institutions in Germany to receive official approval to produce therapeutic plasma for treating seriously ill COVID-19 patients.

Read more...

COVID-19 Company Survey



What challenges do the Bavarian biotech companies have to deal with as a result of the coronavirus pandemic? Bio^M addressed this question in a survey of the biotech companies in Bavaria. The anonymized company survey represents a snapshot of the Bavarian Biotechnology Cluster in May 2020. 94 questionnaires were evaluated (corresponds to 27% of those surveyed).

Key Messages



55% of respondents are concerned about the coronavirus pandemic for their company



20% % of the respondents are looking for cooperation partners to develop COVID-19 relevant products / services.

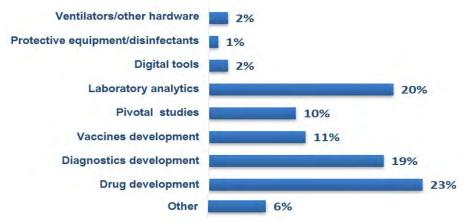


50% of the respondents indicated a drop in sales, 13% stated an increase in sales



64% of the respondents offer products or services that can be used to combat COVID-19

Products / Services of the responding companies that can be used to combat COVID-19 (multiple choice was possible)



Find the entire survey results here: BioM-COVID19-Company Survey

Bio^M COVID-19 platform use the network stay informed find partners Currently more than 90 offers & requests online

Use the network during the crisis for current information and the search for cooperation partners on our COVID-19 platform.

The Bio^M team continues to address individual questions directly concerning how to cope with the special challenges posed by the pandemic.

www.bio-m.org/en/covid19

BioEntrepreneurs in Bavaria



In 2019, the momentum for start-ups in Bavaria was very strong. Overall, the number of new companies in the biotech/pharma arena reached an all-time high of 14. The BioM network is renowned in this regard, connecting scientists, founders, experienced entrepreneurs, investors, lawyers, real estate and many other qualifications for getting a new venture started.

The new companies are listed in the following table:

New Companies

COMPANY	CATEGORY	LOCATION	WEBSITE
Cherry Biolabs GmbH	Therapeutics	Würzburg	www.cherrybiolabs.com
Ebenbuild GmbH	Bioinformatics/Digital	Munich	www.ebenbuild.com
Eisbach Bio GmbH	Therapeutics	Martinsried	www.eisbach.bio
Evanium Healthcare GmbH	Pharma/Food	Munich	www.evanium.de
Fluics GmbH	Devices & Reagents	Munich	www.fluics.com
Genesurge GmbH	Diagnostics	Munich	www.genesurge.com
Incyton	Devices & Reagents	Martinsried	www.incyton.com
Independent Data Lab UG	Bioinformatics/Digital	Munich	www.independentdatalab.com
OmicEra Diagnostics GmbH	DNA/Protein Analytics	Martinsried	www.omicera.com
Promove Biotech GmbH	Regenerative Medicine	Nürnberg	9
res mechanica GmbH	Bioinformatics/Digital	Munich	www.resmechanica.com
Sirana Pharma GmbH	Therapeutics	Martinsried	www.sirana-pharma.com
Tubulis GmbH	Therapeutics	Munich	www.tubulis.com
Velvio GmbH	Therapeutics	Regensburg	www.velvio.com



Bio^M inOlab we guide you from idea to success virtual incubator for the future of medicine





Startup Coaching get hands-on support







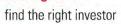
Mentor Circle inspired by experience

















m4 Award create the future of medicine



BioEntrepreneur Bootcamp validate your business idea



BioEntrepreneurship Summit connecting the ecosystem

Bavaria International



German-Japanese Cooperation for Global Innovation

The InnoMuNiCH Project

Since 2017, Bio^M coordinates the InnoMuNiCH project. The acronym stands for "Innovations through Munich-Nippon Cooperations in Healthcare" and reflects the project's aim to increase global innovations in the biopharmaceutical industry and to pool German and Japanese expertise in research and development for the benefit of global healthcare.



InnoMuNiCH is part of a funding program for German top clusters, "Internationalization of Leading-Edge Clusters, Forward-Looking Projects and Other, Comparable Networks". The project was awarded to Bio^M by Germany's Federal Ministry of Education and Research (BMBF) in 2017. Amongst other activities, two German-Japanese R&D projects were identified during the conception phase with the help of the Bavarian cluster management. The Munich-based companies Immunic AG and Bicoll GmbH are leading the respective consortia, which will receive co-funding from the BMBF for their projects over three years with a \in 1.4 mio. (Bicoll) and \in 1.3 mio. (Immunic) budget.

Interview with Bicoll and Immunic, two Partners of the InnoMuNiCH Project

The interview was conducted by Bio^M with Dr. Maria Lamottke, Chairwoman of the Board of Directors at Bicoll, and Dr. Hella Kohlhof, Chief Scientific Officer of Immunic. The project initiated by Bicoll **is titled "Precision medicine: individualized** discovery of compounds through lab-on-a-chip technology using plant libraries (Bicoll Plant Profiles[™]) and patient **samples for the treatment of inflammation processes: PTID", the project initiated by** Immunic **is titled "The regulation and** metabolism of inflammatory T helper cells in autoimmune diseases and the identification of pharmacologically influenced inflammation-**associated biomarkers".**



Dr. Maria Lamottke



Dr. Hella Kohlhof



© Immunic Therapeutics

Bio^M: InnoMuNiCH provides a platform for German-Japanese cooperation, with the aim to initiate and accelerate bi-national research and development projects. Why was Japan and the InnoMuNiCH program so interesting for your company?

Bicoll: Japan is one of the leading countries in the global field of pharmaceutical research. The identification of potential collaborators, and finally concrete project partners becomes more and more challenging. The InnoMuNiCH umbrella offered us the unique opportunity not only to bundle our business development resources, but also to benefit from Bio^M, which is regarded as a valued cluster in Japan.

Immunic: At Immunic, we also could build up on our long-term, established relationships with Japanese companies and collaboration partners. As an example, we licensed our third development program, IMU-856, from Tokyo-based Daiichi Sankyo. This reflects the value that we place on both the high scientific standards and the level of integrity held by our Japanese partners.

Bio^M: What challenges did your company face in finding the optimal research and development partners? And how can such a project initiated by your cluster management make a difference?

Immunic: In addition to the important financial funding, the InnoMuNiCH platform facilitates cultural exchange and provides invaluable networking opportunities with business partners and international experts in the areas of drug development, small molecules, immunology, autoimmune diseases and IT, which is not so easily available otherwise in such a compromised form.

Bicoll: Finding the optimal research and development partner has never been easy, neither in Japan nor elsewhere. Beforehand, Bicoll had very limited connection to the Japanese market in general and to Japanese people in particular. The first challenge was the market scouting. But also getting an entry and starting business is still very resource demanding and needs significant time investment. With Bio^M and the InnoMuNiCH network, Bicoll has an accessible partner on the local campus in Martinsried, with whom the needs and demands for an ideal matching of collaboration partners could be discussed. That Bio^M employed a Japanese speaking project manager in the conception phase was the clue to success for the partner search in Japan, and helped with building trust later in the project on both sides.

Read the entire Interview

Your Gateway to the Bavarian Biotech Community



Events



Biotech & Pharma Virtual Partnering Conference

28. -30. September 2020, Kansai-region, Japan

BioJapan 2020

14. - 16. October 2020, Yokohama



Analytica 2020

World's Leading Trade Fair for laboratory technology, analysis, biotechnology and analytica conference will take place on

October 19 to 22, 2020 | Messe München



BIO-Europe 2020

26 - 29 October, Delivered Digitally

BIO-Europe, the Partnering Conference of the biotechnology industry

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

Due to the COVID-19 pandemic, short-term changes can occur.

Contact

Bio^M Biotech Cluster Development GmbH Am Klopferspitz 19a 82152 Martinsried, Munich, Germany



www.bio-m.org





info@bio-m.org

Follow us on:







Cluster Information



Dr. Georg Kääb Kaeaeb@bio-m.org

International Affairs



Dr. Stephanie Wehnelt Wehnelt@bio-m.org

Founders & Investors



Dr. Petra Burgstaller, Burgstaller@bio-m.org



Christina Enke-Stolle Enke-Stolle@bio-m.org,