

20 Years Munich Biotech Cluster - 20 Years Bio^M

History of the Munich Biotech Cluster

Munich was one of the BioRegio Competition winners in 1996. With the foundation of the cluster management organization Bio^M in 1997, the Munich Biotech Cluster was born 20 years ago. To mark this anniversary, we have selected certain milestones achieved by Munich as it developed into a global and successful biotechnology region. The main focus here is on the development of companies in Martinsried which today is the heart of the Munich Biotech Cluster.



Initial nucleus: The Max Planck Institute of Biochemistry was founded in 1973.

Pioneers: Mikrogen was set up as the first Munich-based biotechnology company in 1989. Other companies including MorphoSys (1992), Micromet (1993) and Medigene (1994) were established in the following years.

Public-Private-Partnership: The Gene Center was founded in Martinsried in 1984. It was set up as a very first „Biotech Cluster“ with several research groups from the field of applied molecular biology.

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Groundbreaking: Boehringer Mannheim established the Penzberg Biotechnology Center (1972) and the Genetics working group in Tutzing (1977).

High-end medicine: The University Hospital of the LMU in Großhadern was opened in 1974.

Genetic Engineering Act: Legal framework conditions for genetic engineering were developed for Germany in 1990. The amendment of 1993 provided considerable relaxation.



BioRegio Competition: The BioRegio Competition was launched by the former Ministry of Research and Technology to make biotechnology more economically viable and to catch up with progress made in the USA. The former Head of the Gene Center, Prof. Dr. Ernst-Ludwig Winnacker, and his team applied for the competition with a concept to advance innovation and the dream of a Munich Biotech Cluster. In 1996, Munich was one of the competition winners, receiving funding of 50 million DM (about 25 million Euro). That could be given to companies in the biotechnological sector to fund 50% of their project costs. By 2000, more than 20 companies in the Munich area were able to profit from it.



IZB: The Innovation and Start-Up Center for Biotechnology was launched in Martinsried in 1995.

Research and Production: Roche took over Boehringer Mannheim in 1997. The Penzberg site expanded greatly over the course of the following years.

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New building: The Gene Center on the Campus of Martinsried-Großhadern was opened in 1994.



Anniversary: The cluster management organization Bio^M was set up in 1997 to coordinate the implementation of the BioRegio concept. Horst Domdey was appointed as chief executive of Bio^M AG.



Pharma: MSD Sharp & Dohme (the German branch of Merck & Co.) was established in Haar near Munich in 1994.



Cluster expansion: Launch of the Innovation and Start-Up Center for Biotechnology in Weihenstephan north of Munich in 2002.

Up- and Downturn: The record amount of 500 million external financing was reached in 2000. But almost simultaneously, the research-intensive, high-risk biotechnology sector had to learn its lesson after the breakdown of the so-called *New Market* at Frankfurt Stock Exchange. Investment dropped sharply with significant effects over the next few years such as decreased numbers of Biotech funds and IPOs. However, increasing numbers and more active VC companies have been reported since 2014.

IPO: MorphoSys was the first Munich biotechnology company to go public in 1999, followed by GPC and Medigene one year later.



Localization: The Faculty of Chemistry and Pharmacy (LMU) was transferred to Martinsried-Großhadern in 1999.

TUM: Foundation of the TUM School of Life Sciences Weihenstephan in 2000.
(Wissenschaftszentrum Weihenstephan für Ernährung, Landnutzung und Umwelt)



Booming Biotech: In 2001, there were already more than 100 biotechnology enterprises located in Munich.

Network: Since 2001, Bio^M has constantly offered expert lectures, discussion forums and other events. Moreover, Bio^M has regularly invited international pharmaceutical and biotechnology companies to convince them of the location's research quality. In 2001, one of the first partnering events was held in collaboration with Genentech (now Roche), many others of Top-20 pharmaceutical companies followed until today.

Funding: Since 2001, Bio^M has developed new funding sources, has offered consulting in terms of business development and has helped companies to apply for public funding programmes.

New tasks: Bio^M separated investment activities (now Bio^M AG) from cluster development and networking (now Bio^M GmbH). The *Bavarian Biotechnology Cluster* was founded in 2006 by the Bavarian government and Bio^M GmbH was engaged in connecting all biotechnology regions in Bavaria.



2005: Novartis took over Hexal and relocates the *International Generica Division Headquarters* to Holzkirchen near Munich. The Strüngmann Brothers (former Hexal owners) started investing in German Biotechnology.

Biocenter: The Faculty of Biology (LMU) opened the Biocenter at the Campus Martinsried-Großhadern in 2004.

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Medical engineering: General Electric Healthcare (GEHC) opened its European R&D Center in Garching in 2004.



Ready for the market: In 2004, Martinsried-based Medigene was the first German biotechnology company to launch a drug.



Elite Universities: The two Munich Universities (LMU and TUM) succeeded in the German Universities Excellence Initiative (2006).





Major Deal: Amgen purchased Munich-based Micromet (Inc.) for 1.2 billion dollars in 2012. Munich developed into Amgen's largest research center outside the USA.

Personalized medicine: The future strategy "m⁴ – Personalized Medicine and Targeted Therapies" was among the winners of the BMBF Leading-Edge Cluster Competition in 2010. The Leading-Edge Cluster managed by Bio^M has funded 60 collaborative projects between 2010 and 2015. Personalized medicine is increasingly considered indispensable for the development of safer and more effective drugs. Moreover, mutual trust increases between the industrial and academic sectors leading to successful collaborations. Bio^M developed a comprehensive concept for supporting start-ups, which continues til today.

The applicants (from left to right): Dr. Moroney, MorphoSys AG; Prof. Dr. Domdey, Bio^M GmbH; Prof. Dr. Muntau, LMU; Prof. Dr. Wess, HMGU; Dr. Käab, Bio^M GmbH, Prof. Dr. Peschel, TUM



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Innovation: Removab (Trion Pharma/ Fresenius Biotech) is the world's first multi-specific antibody, which was developed in Munich and brought to market in 2009.

Branching: Between December 2010 and March 2012, three US companies specializing in personalized medicine opened up new branches in Munich: Exosome Diagnostics, Lab-PMM and Myriad.

Partnership: Bio^M and the Life Science Cluster of Osaka/Japan signed a collaboration agreement in 2011.



Hotel: Opening of the IZB Residence at the Campus Martinsried-Großhadern (2014). After several extensions, the total area of the Innovation and Start-Up Center for Biotechnology (IZB) in Martinsried and Weihenstephan amounts to more than 26,000 m².

EIT Health: The European headquarters of EIT Health was opened in Munich in 2014. Bio^M is a partner in the largest European healthcare initiative comprising 140 partners from 16 countries.

BMC: The Biomedical Center dedicated to applied cell research was opened at the Campus Martinsried-Großhadern in 2015.



BioSys-M: Opening of the Research Center for Molecular Biosystems at the Campus Martinsried-Großhadern (2016).

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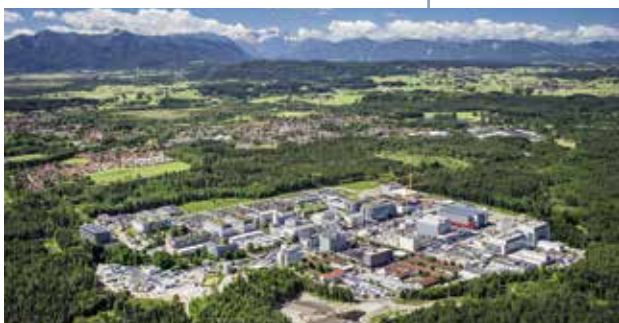
2015

2016

2017

Award: Bio^M was awarded the *European Gold Label for Cluster Excellence* in 2013.

Investment: In 2015, Roche invested about 600 million Euro in biopharmaceutical production facilities, an education center, diagnostics production facilities as well as infrastructure in Penzberg. 5,800 people work at this location today.



Bio^M

Medicine of the future: Bio^M constantly initiates new projects. Digitalization of the medical sector is promoted in cooperation with the Center for *Digitalisation in Bavaria* (Zentrum Digitalisierung Bayern). The network *ImmPact Bavaria* pools Bavarian immunotherapy expertise. The project *InnoMuNiCH* aims to increase Bavarian-Japanese research collaboration and deepen existing partnerships between the Munich Biotech Cluster and Japan.