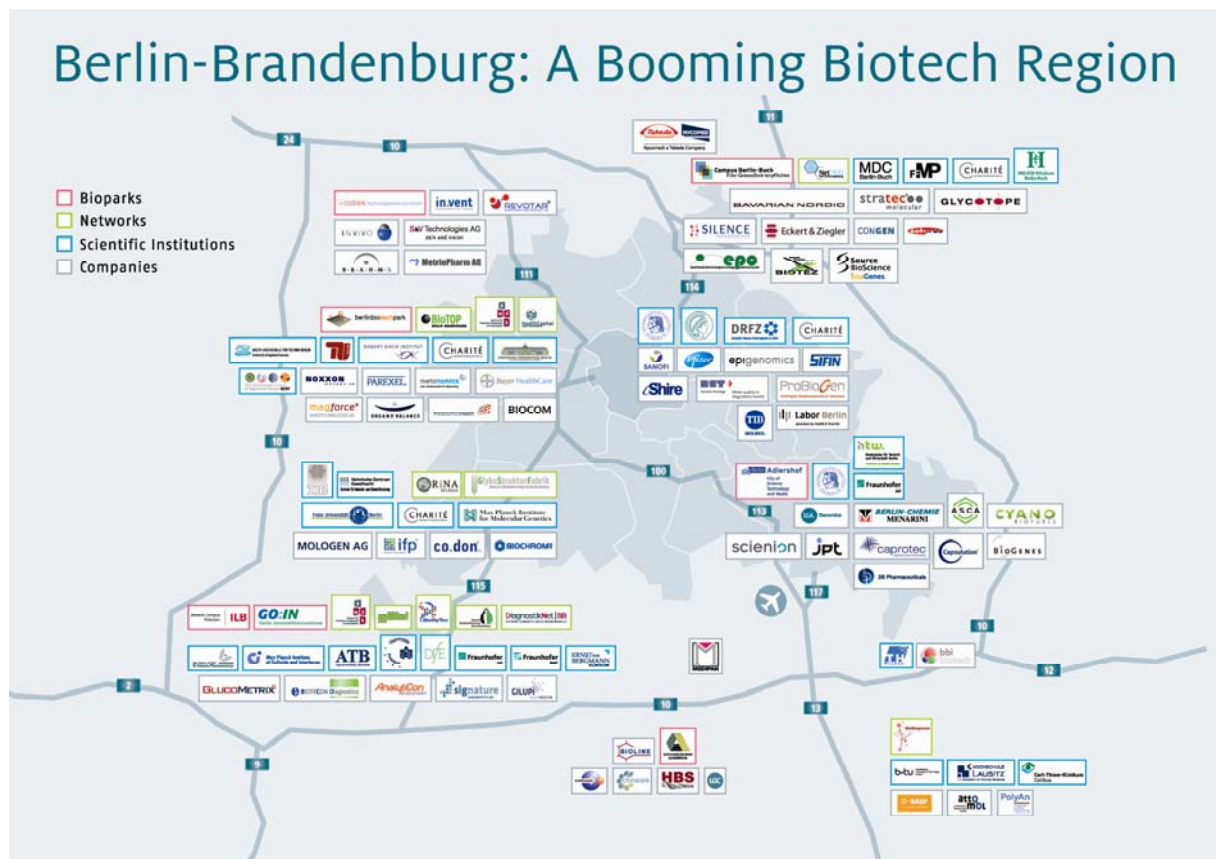


The Berlin-Brandenburg BioRegion

The Berlin-Brandenburg region is one of the leading, international locations for life sciences. The area concentrates on clinical research via a dense and compact healthcare network, and boasts a state-of-the-art IT infrastructure. It is no coincidence that the region is Germany's 'health capital' as it is home to both the German government, as well as the center for healthcare industries. Biotechnology, in particular, is a strong force driving innovation and growth there and beyond, interfacing with the pharmaceutical, diagnostics and medical technology sectors.

The region's distinction is anchored in its unique research and clinical landscape, as well as its ability to closely link and network the key players in the life sciences and healthcare cluster. The many technology parks and networks in the various branches of modern biotechnology create the excellent infrastructure and technological support that characterize the Berlin-Brandenburg biotech area.

A cluster management system was implemented in 2010, to coordinate and ensure businesses, research and educational institutes link in order to foster collaboration, innovation and growth.



Facts

Focus Areas:

- Biomedicine and Diagnostics
- Therapeutics and Regenerative Medicine
- Industrial Biotechnology

Economic Facts:

- 200+ biotech companies with approximately 4,000 employees
- 30+ pharmaceutical companies with approximately 10,000 employees
- 270+ medtech companies with approximately 10,000 employees
- 100,000m² of highly modern lab space for biotech companies in Buch, Charlottenburg, Adlershof, Hennigsdorf, Luckenwalde and Potsdam
- Lab Berlin - Charité Vivantes GmbH: Europe's largest hospital lab
- Berlin was again ranked the top start-up region in Germany by Foreign Direct Investment (fDi) Magazine (March 2012 issue), with over 33,000 new companies launched there in 2011

Companies new to the Region and Location Expansions:

- Pfizer 2007
- Swisslab 2010 (Subsidiary of Roche) (Expansion of existing location)
- Carl Zeiss Meditec 2011
- Takeda 2012
- Sanofi 2012 (Expansion of existing location)
- B.Braun Melsungen 2009 and 2012 (Expansion of existing location)

Renowned Institutes of Higher Learning and Research Institutes Focusing on Life Sciences, including:

- 170 degree programs at 25 universities and universities of applied sciences
- 4 Max Planck Institutes
- 2 Fraunhofer Institutes
- 2 Leibniz Institutes
- 2 Helmholtz Centers
- 5 Universities
- 4 Universities of the Applied Sciences
- Charité University Hospital (one of Europe's largest university hospitals)

7 BioTech-Parks:

- Campus Berlin-Buch
- Berlin-Adlershof
- Biotech Park Luckenwalde
- co:bios Technology Park Hennigsdorf
- berlinbiotechpark
- Biotech Campus Potsdam
- GO:IN Golm Innovation Center

R&D Sectors within existing, well-established networks:

- Glycobiology
- Multi Parameter Immune Diagnostics
- Molecular Diagnostics and Bioanalysis
- Nutrigenomic Research
- Plant Genome Research
- Regenerative Medicine
- RNA Technologies
- Drug Development

BioTOP: The network node of biotechnology

The central contact and coordination office for all issues concerning biotechnology in the German Capital Region is **BioTOP** – a joint initiative of the federal states of Berlin and Brandenburg in the TSB Innovationsagentur Berlin GmbH and part of the regional healthcare industries cluster HealthCapital. It is the objective of BioTOP to coordinate all regional activities in biotechnology by networking with all key players and to initiate specific projects in order to extend the region's leading position in biotechnology and life sciences worldwide.

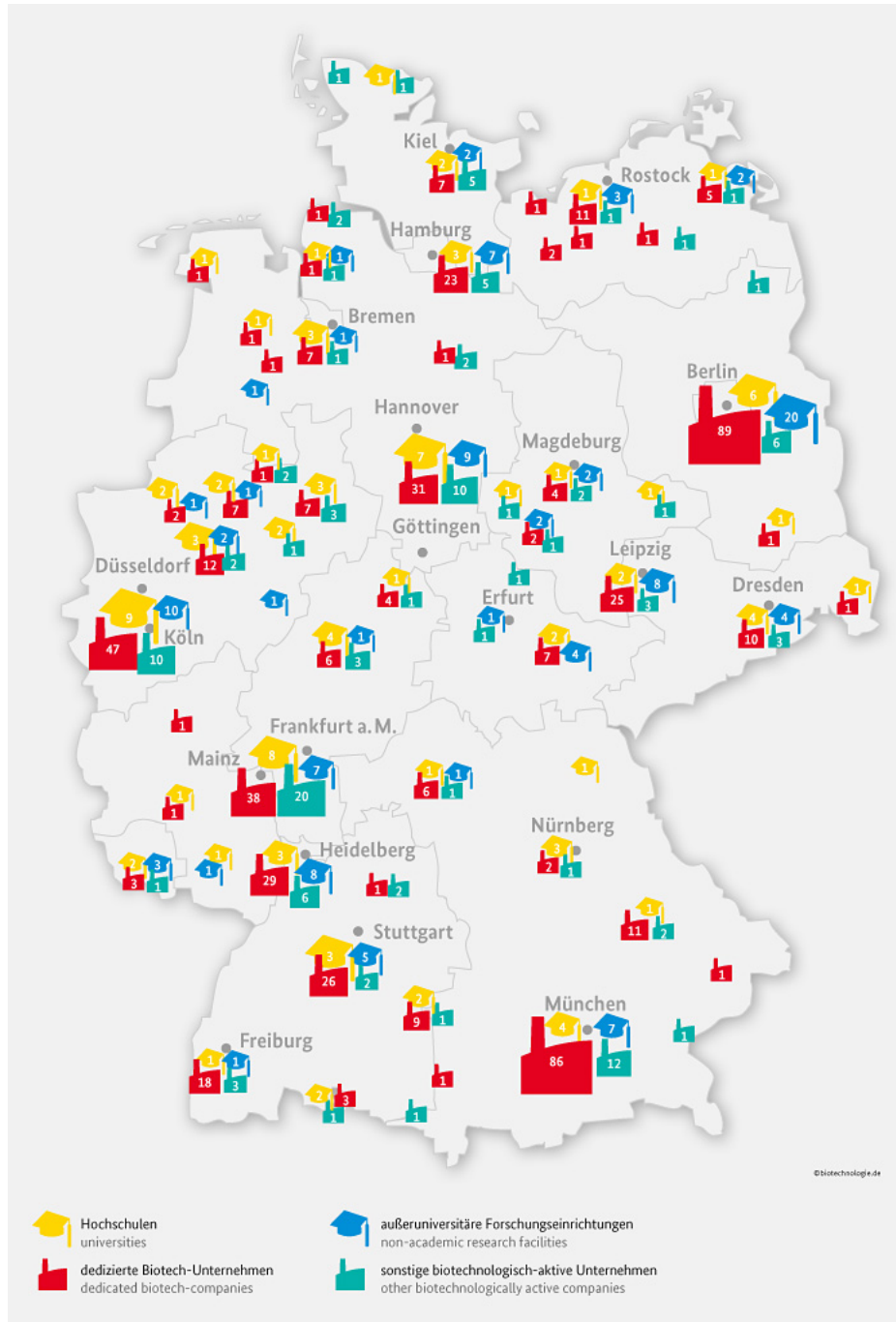
Our Services:

- Technology transfer between science and industry
- Initiation and support of networks
- Support for technology-oriented start-ups
- Funding support for innovative project concepts
- Providing and presenting biotechnology information
- Building and coordinating of scientific and interdisciplinary networks
- Establishing contacts between experts from all disciplines
- Organization of events and seminars
- Public Relations work for the biotechnology region



[Read the BioTOP-Report 2012](#)

Landscape of the research institutes and companies of German biotechnology in 2011 (Clusters appear cumulated)



(Source: www.biotechnologie.de)

Your Partner for Next Generation *in vitro*-Diagnostics

Berlin-Brandenburg with its many high-performing companies and research facilities provides broad expertise in the development of innovative diagnostics.

- About 20 research institutes focus on the identification of new biomarkers and new platform technologies for diagnostic tools.
- More than 80 small and medium sized enterprises (SME) as manufacturers or suppliers cover a broad spectrum of highly innovative diagnostics. The Berlin-Brandenburg region develops solutions for the next generation *in vitro*-diagnostics and bioanalysis like sensor-molecules and autonomous biosensors, genome-, proteome- and glycan-based multiplex analytics (microarray- and bead technologies) and metabolomics platforms for new biomarker strategies.
- Berlin-Brandenburg offers excellent conditions for implementing clinical validation studies. Being Germany's most diversified hospital landscape with the Charité – Universitätsmedizin Berlin, it has access to patient cohorts of urban and rural populations of about 180 ethnicities, covering all medical indications. Customers from research and industry have access to advanced biobanking infrastructures.

The **Center for Molecular Diagnostics and Bioanalysis (ZMDB)** is the regional platform for technology transfer that connects basic research, technology development, clinical research and industrial application to promote the development and production of innovative diagnostics in Berlin-Brandenburg.

New approaches on the interface between biotechnology and IT

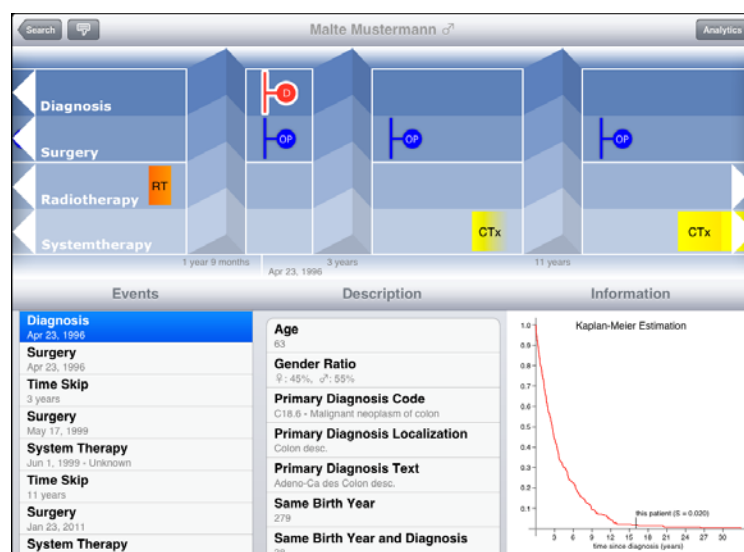
Berlin-Brandenburg is not only one of Europe's most attractive life science and health care location, but also a leading centre of the IT industry. That combination offers optimal conditions for the development of innovative health IT solutions for the regional and global market. Health IT comprises a broad range of applications, including telemedicine and solutions for process optimisation in hospitals as well as technologies for handling large data volumes along the entire value chain from research to patient therapy and care. For example:

IT Future of Medicine (ITFoM) – Berlin heads a European flagship project

Modern biotechnology and today's increasingly personalised medicine require a huge amount of fundamental data. That will present the IT sector with unprecedented challenges regarding hardware, software, memory and communication systems. To meet these new tasks in the clinical, technological and ICT-based environment, 60 mainly European institutions and companies have joined forces in the initiative "IT Future of Medicine" (ITFoM) which is being coordinated by the Max Planck Institute for Molecular Genetics in Berlin. ITFoM will develop computer models by which personalised "virtual patients" will be derived from the molecular, physiological, anatomic and environmental data of every individual patient. The aim is to develop individually optimised prevention and therapy concepts and minimise the potential side-effects of therapies.

A mobile application for personalised cancer therapy from Berlin-Brandenburg

In the context of a joint research initiative, Charité – Universitätsmedizin Berlin, together with the SAP Innovation Center and the Hasso Plattner Institute in Potsdam developed a new data management technology for the research and therapy of cancer within only seven months. The HANA Oncolyzer is based on the in-memory technology co-developed at the Hasso Plattner Institute which permits accessing all relevant patient and clinical data in realtime and supplementing them at any time. Using the mobile end user device, this can be done directly from the patient bed. Cancer therapies can therefore now be adjusted more specifically and more quickly to each patient and cancer type, so that the chances of healing improve considerably. In addition, this technology also makes the work of researchers far less onerous. For example in gene sequencing where terabyte volumes of raw data per patient are generated, the HANA Oncolyzer helps analyse them as to their relevance and select them accordingly. The HANA Oncolyzer was presented to a broad expert audience at CeBIT in spring 2012. Productive operation is scheduled to begin this year.



Figures: „Analytical view of HANA Oncolyzer“ (Source: SAP AG)

Funding perspective

According to a study by Fleischhauer, Hoyer & Partner, a panel of 36 leading VC investors, investment in Germany fell from € 505 million in 2010 to € 445 million in 2011 (panellists only). That represents a 14% drop, but is nevertheless a 24% increase compared to 2009. Most of the capital was invested in biotechnology (€ 70 million) and medical technology (€ 66 million). The regional distribution of all investment shows Berlin-Brandenburg in third place behind Bavaria and North Rhine-Westphalia.

Public support remains an extremely important factor for developing new products, since it is still the case that only few companies have access to VC funding.

IBB Beteiligungsgesellschaft (IBB Bet) stands out as the region's highest investor. The newly founded Charité Biomedical Fund, which is managed by Peppermint Venture Partners, made its first investment in 2011 by funding Humedics.

Ute Mercker, Vice President / Head of Life Science IBB Beteiligungsgesellschaft mbH:

“IBB Beteiligungsgesellschaft and its funds have been investing in innovative biotech and medicine start-ups in Berlin for 15 years now. The German capital stands out due to its large range of universities, academies and research facilities. This creates tremendous potential for innovative start-ups, and our investment strategy aims to develop them into thriving companies. We invested in Noxxon Pharma AG, Jerini AG and Scienion AG shortly after their spin-off from the university. In the meantime, they have established their products successfully on the market. In 2011 we successfully invested in four other start-up companies. Octreopharm Science GmbH and Humedics GmbH will use the invested capital to implement clinical trials. Due to our regional focus, we can support our companies flexibly and swiftly with our extensive experience during the start-up phase.”

Berlin-Brandenburg in the European Context

Active cooperation in the networks of Europe's BioRegions has played a central role in the internationalisation efforts in our region. BioTOP Berlin-Brandenburg is a founding member of the networks Council of European Bioregions (CEBR) and ScanBalt – a biotech network of the Baltic Sea states that celebrated its 10th anniversary in Heringsdorf on the island of Usedom in 2011.

Through the Center for Molecular Diagnostics and Bioanalytics (ZMDB), the region is also a founding member of the still young European Diagnostic Clusters Alliance (EDCA), a network of leading European diagnostics clusters which currently represents more than 400 companies from the member regions. As the only German region in this network to date, Berlin-Brandenburg is regarded as one of the most high-performing regions in the alliance as regards both the number of companies and research facilities engaged in diagnostics development and the structures already established here (the ZMDB as a coordination platform and driver with a very clear focus). A main goal of this new European alliance is to provide targeted support to companies in the field of *in-vitro*-diagnostics by means of

customised support offers, activities and formats. The first attempt to combine European partnering especially for diagnostics companies with a regional conference was successfully made with the Euromediag International Convention (EIC) in summer 2011. With 127 participants from seven European countries, and 237 B-2-B meetings, the event made a promising start. The sequel will take place in June 2012 at the 4th Berlin-Brandenburg Technology Forum on *In-vitro*-Diagnostics and Bioanalysis, which is being co-organised by the region's Enterprise Europe Network, setting a positive signal for Berlin-Brandenburg and Europe.

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