

Life Sciences Report 2026 | 2027

Biotech | Pharma | Medtech | Digital Health

in Berlin Brandenburg

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The Leading Hub for Healthcare Industries and Life Sciences

The German capital region is one of Europe's leading locations for life sciences and the healthcare industry. Excellent research institutions, world-class hospitals, innovative startups, and international companies form a uniquely interconnected ecosystem here. Thousands of professionals from biotechnology, pharmaceuticals, medical technology, and digital health are driving innovation for regional and global markets.

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Publisher:

BERLIN PARTNER for Business and Technology | BERLIN

Berlin Partner für Wirtschaft und Technologie GmbH
Fasanenstr. 85
10623 Berlin
Germany
www.berlin-partner.de
+49 (0)30 46302-463

in cooperation with the Economic Development Agency Brandenburg (WFBB).

Text: Berlin Partner für Wirtschaft und Technologie GmbH, Knowbio GmbH
Design: kakoii GmbH
Print: MedienSchiff Bruno Print- und Medienproduktion Hamburg GmbH

© November 2026

Cover photos: © fhm via Getty Images / Image edited with AI
Back cover photos: © BAVARIA LUFTBILD VERLAGS GMBH; © Peter Himsel www.himsel.de; © Jens Ahner www.jensahner.com



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The German capital region continues to strengthen its position as one of Europe's leading life sciences hubs. A unique combination of world-class research institutions, renowned hospitals, innovative companies, and a vibrant start-up ecosystem creates an environment where scientific discoveries can be translated into real-world healthcare solutions.

The Deep Tech Berlin Agenda reflects this ambition. By prioritizing biotechnology and the application area health alongside fields such as artificial intelligence and advanced digital technologies, it provides a strategic framework for accelerating the journey from discovery to application and from startup to scale-up. At the same time, Germany's Hightech Agenda underscores the growing importance of life sciences as a driver of innovation, competitiveness, and technological sovereignty in Europe.

The Life Sciences Report 2026/2027 highlights how this transformation is already taking shape.

Key topics include
- advanced therapies
- precision medicine
- artificial intelligence
- neurotechnology
- medical technology
- prevention
- financing
- innovation infrastructure

Together, these developments highlight the region's ambition to drive scientific excellence, improve patient outcomes, and advance the next generation of healthcare solutions.

As the boundaries between biology, data science, artificial intelligence, and engineering continue to converge, Berlin offers a compelling model for innovation-driven growth. The city's strength lies not only in generating knowledge, but in turning knowledge into impact, creating value for patients, society, and the economy alike.



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Berlin has been Germany's leading start-up hub for years. On average, a new company is founded in the German capital region every 14 hours, across all industries. Life science founders benefit from this environment as well as from the region's universities, hospitals, research institutions and specialized technology-transfer organizations. They can draw on a broad range of financing options.

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30 | MedTech
The German capital region drives the future of connected and personalized medtech

Berlin Brandenburg stands out as one of Europe's leading medical technology regions. It is home to device developers ranging from established mid-sized manufacturers to specialized start-ups and global industrial players. Companies here have been building medical hardware for more than a century: Today, regional players pair hardware with digital features such as sensors, connectivity, and remote monitoring, moving toward personalized, patient-specific solutions.

35 | NeuroTech
Growing into a neurotech hub

Neurotech is reshaping the diagnosis and treatment of neurological and psychiatric disorders. In Berlin Brandenburg, the field is moving from research into practical application through brain-computer interfaces, digital therapies and non-invasive diagnostic tools. Neurotech is opening up new therapeutic and diagnostic pathways for conditions including Alzheimer's disease, Parkinson's disease, epilepsy, stroke and traumatic brain injuries as well as mental disorders.

40 | AI in Healthcare Industries
Reshaping healthcare with artificial intelligence

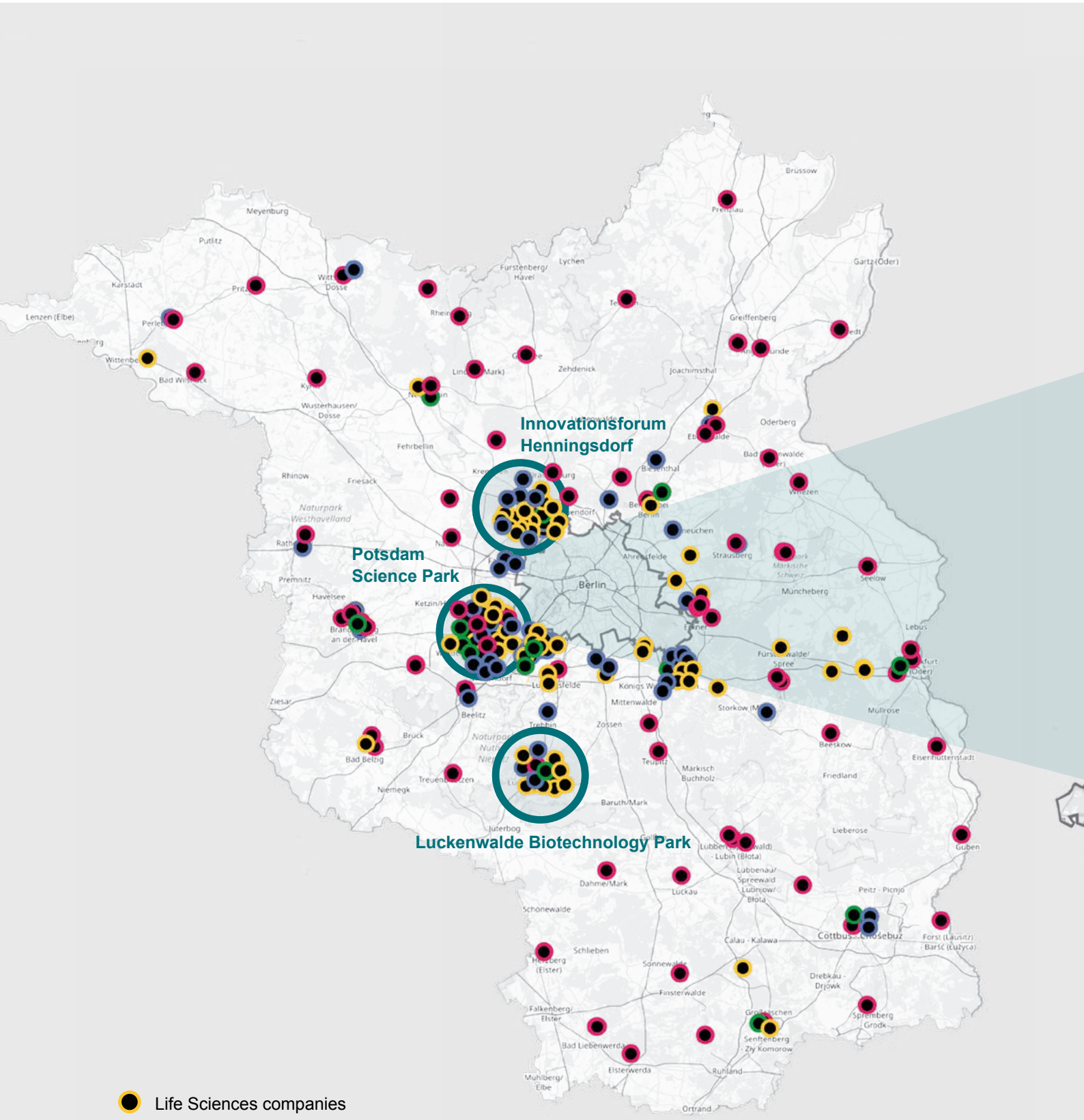
Artificial intelligence (AI) is transforming healthcare at a rapid pace. It is changing how health data are collected, interpreted and applied across areas ranging from basic research and drug development to diagnostics, clinical decision support, disease management, and administrative medical tasks. Few regions are as well positioned to drive this shift as Berlin Brandenburg.

45 | Advancing Prevention
Prevention: From personal health to pandemic preparedness

People in Germany and many other countries are living longer than ever. But longer lives do not necessarily mean more years in good health. Closing this gap requires a comprehensive approach to prevention – from increasing health literacy to early detection and robust public health structures.

By scanning the QR Code you will find an overview of more than 840 stakeholders of companies, startups and research institutions in the HealthCapital region Berlin Brandenburg.

Hotspots of Life Science and Healthcare Industries in Berlin Bra



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andenburg



Find our interactive map healthcare industries in Berlin Brandenburg here.



Berlin Economy Overview Map

- Companies in different sectors
- Universities and colleges
- Associations and political decision-makers
- Infrastructure data

Healthcare Industries Berlin Brandenburg – HealthCapital[1]

Companies	22,000
Employees	447,000
Euros in revenue	33 billion

Leading university hospital in Europe

Charité – Universitätsmedizin Berlin

Sectors[2]

Pharmaceutical	35	11,500
Biotech	300	7,200
Medtech & Digital Health	426	13,900
	761 Companies	32,600 Employees
Hospitals[1]	150	35,000

Technology parks focusing on life sciences	Large research facilities and institutions of higher learning focusing on life science	Health-related programs of study (on-site and online)
8	40	350

Sources: [1] Amt für Statistik Berlin-Brandenburg, [2] Knowbio GmbH



© Charité – Wiebke Peitz

Infrastructure for Life Science Innovation in the German capital region

What was once a small, generalized start-up support landscape has in recent years grown into a fully-fledged life science tech transfer ecosystem. Today, there are more than 100 accelerators and incubators active in Berlin Brandenburg across sectors, roughly a third of which have a health-related focus[1]. An increasing number of specialized programs target specific stages of development or technologies.

Laboratories and scientific institutes remain the foundation of this changing innovation infrastructure. Increasingly, these support structures combine research space with entrepreneurship support, clinical test beds, regulatory expertise, scale-up facilities and links to industry. Some offer access to wet labs and hospital environments, others provide scale-up capacity and GMP manufacturing facilites.

Incubators: connecting research and entrepreneurship

Incubators offer more to early-stage companies than lab benches. They can help provide a structured route from an academic finding to a validated technology or spin-off. Young founders in Berlin Brandenburg now have a range of options to choose from, such as programs run by research institutions, incubators based in hospitals, corporate wet lab facilities and support services on research campuses.

The **BIH Clinical Incubator (CLIC)** is located directly within a hospital setting. Run by BIH and BioLabs, CLIC was opened at the Rahel Hirsch Center in July 2025. It provides academic teams and early-stage biotech start-ups with access to labs, office space, mentorship and regulatory advice. CLIC's aim is to translate advanced and personalized therapies into clinical applications and to foster spin-offs focused on advanced therapy medicinal products (ATMPs).

At **Bayer Co.Lab Berlin**, early-stage companies working in advanced therapy medicinal products, oncology and related fields have access to fully equipped laboratories, shared equipment, office space and tailored mentoring. The **BerlinBioCube Start-up Lab** offers young biotech companies laboratory and office space on Campus Berlin-Buch. The start-up lab is close to the Max Delbrück Center, clinical institutions and established biotechnology companies

1 Source: Startup Map Berlin. The figure reflects accelerators and incubators active in the Berlin Brandenburg Metropolitan Region filtered by health-related industry experience; accessed October 13, 2026.



The BIH Clinical Incubator (CLIC) officially opened its doors at the Rahel Hirsch Center in July 2025. © Chris Hahn / BIH

and thus allows young ventures to operate within an existing life science environment.

Brandenburg offers comparable infrastructure, although with a broader focus. At Potsdam Science Park, the two Innovation Centers, **GO:IN and GO:IN 2**, offer flexible laboratory and office space for research-related start-ups and growing companies in life sciences, biotechnology, chemistry and other fields.



Research laboratories at Potsdam Science Park © sevens+maltry

Accelerators: Advancing defined projects

Accelerators support projects for a set period of time, with progress measured against defined milestones. In the life sciences, they help research teams and companies address specific challenges, including proof of concept, clinical need, regulatory strategy, product development and market access.

In digital and data-driven medicine, the **BIH Digital Health Accelerator (DHA)** offers a specialized program for developing regulated digital health solutions with researchers and clinicians from Charité, as well as users and other institutions. Projects range from AI- and machine-learning-based clinical decision-support systems to digital therapeutics, data platforms and software as a medical device. Many also use sensors, robotics and augmented or virtual reality. In May 2025, BIH reported that the program had supported more than 60 projects and generated 13 spin-offs, including one nonprofit organization and one company exit.

SPARK-BIH is a translational program with an accelerator function. It supports academic projects focused on therapies, preventive approaches, diagnostics and medical devices. The program provides mentoring, education and translational expertise alongside milestone-based project development, with the aim of addressing development risks before clinical application.

CDL-Berlin Health supports science- and technology-based ventures in fields including therapeutics, diagnostics and medical technologies. It is operated at the European School of Management and Technology Berlin. Founders work with experienced entrepreneurs and industry experts to set development objectives and address project-specific challenges.



State-of-the-art laboratories for start-ups at the BerlinBioCube life science incubator © Peter Himsel/Campus Berlin-Buch GmbH

A recent addition is **JUNI**, the Berlin Brandenburg start-up factory for science-based and technology-oriented ventures. Its six-month Science to Venture Program is open to deep-tech and life science spin-off teams and focuses on team development, market validation and the transition from scientific project to viable company.

Corporate innovation initiatives offer another route into industry. **Pfizer's Digital Health Hub**, MSD's **IDEA Studio Europe**, **RoX Health** and **Future4Care** in Berlin connect start-ups with healthcare organizations and corporate partners. While they are not conventional incubators or accelerators, they support the development of new healthcare technologies through industry collaboration.

For more information on financing instruments and investor access please see "Life science financing".

Tech parks and campuses: Room for growth

Technology parks provide laboratories, offices and production facilities for research-based companies. **Campus Berlin-Buch** combines one of Germany's largest biotechnology parks with biomedical research institutes and nearby hospitals. **Berlin Adlershof** is a major location for biotechnology, pharmaceuticals and analytical technologies. Both bring companies close to universities and non-university research organizations, while **Potsdam Science Park** is expanding its capacity with additional laboratory buildings for new companies.

The **FUBIC** innovation campus in Berlin-Dahlem is also adding space for research-based companies. Its Innovation Center is scheduled for completion by the end of 2026, with the first start-ups due to move in during 2027. The FUBIC Innovation Center is being developed near Freie Universität Berlin. The central innovation building will provide around 30,000 square meters for up to 80 technology-oriented start-ups and young companies.

Another recent addition to Berlin's life science real estate landscape is **CHARLOTTE**, a laboratory and office development currently under construction in Berlin-Charlottenburg. Designed for research-driven companies and technology ventures, the site provides modern laboratory infrastructure alongside flexible office space and benefits from its proximity to universities, research institutions and the wider innovation ecosystem in western Berlin.

The **Health Innovation Quarter Berlin-Mitte** follows a different model. Initiated by Charité – Universitätsmedizin Berlin and Bayer, the approximately five-kilometer innovation district extends from Campus Charité Mitte through the Bayer site at Nordhafen to Campus Virchow-Klinikum. It encompasses research, clinical application, industrial development and production, with institutions including Charité, Bayer, the German Rheumatology Research Center and the Max Delbrück Center. The future Berlin Center for Gene and Cell Therapies (BC GCT) will be one of its central translational projects.

The **SEE:LAB** Competence Center for Biomaterials at the Teltow-Seehof research campus provides 2,000 square meters of laboratory and office space for founders and innovative companies in biomaterials, biochemistry, chemistry and related fields. At Marienpark Berlin, **HYBRICK** is developing laboratory, production and office space for life science and technology companies, alongside smaller equipped Launch Labs for start-ups. **Riverside Lab**, a new IQ spaces development at Berlin-Nordhafen, will house the BC GCT and its GMP facility, operated by ProBioGen. **MotionLab.Berlin** provides laboratories, machinery and makerspace facilities for prototyping and fabrication, particularly for hardware and hardtech ventures.



FUHUB © stay-fotografie.de



Opening of the Research Building: Si-M © Kevin Fuchs

Overview Incubators, accelerators and innovation programs (selection)	
Organization	**Focus Area**
Bayer Co.Lab Berlin	Laboratory space, equipment and expertise for early-stage companies in cell and gene therapies, oncology and related fields.
BerlinBio-Cube Start-up Lab	Laboratory and office space for biotechnology and medtech start-ups at Campus Berlin-Buch.
Berlin Center for Gene and Cell Therapies (BC GCT) (planned)	Planned incubation, research and GMP infrastructure for companies developing gene and cell therapies.
BIH Clinical Incubator (CLIC)	Wet-lab and office incubation for advanced and personalized therapies, particularly ATMPs.
BIH Digital Health Accelerator	Development of digital health projects from clinical need to validation, licensing, collaboration or company formation.
CDL-Berlin Health	Mentoring for science-based ventures in therapeutics, diagnostics, medtech and related healthcare fields.
Charité BIH ARC Innovation Center (CBAIC)	Open innovation center focused on needs-led medical innovation.
Flämingo Accelerator Health Cluster	Six-month program for healthcare, prevention and well-being start-ups, supported by Fraunhofer IZI-BB and the Fraunhofer Center for Digital Diagnostics.
GO:IN and GO:IN 2 innovation centers	Laboratory and office space at the Potsdam Science Park for research-related companies and start-ups in life sciences, biotechnology, chemistry, physics and related fields.
Green Health Accelerator	Pilot development for climate-tech solutions addressing resource efficiency in healthcare.
HYBRICK Launch Labs	Laboratory and office units for life science, biotech and deep-tech start-ups and scale-ups.
JUNI Science to Venture Program	Six-month venture-building program for life science and deep-tech research teams.

Overview Incubators, accelerators and innovation programs (selection)	
Organization	**Focus Area**
Match & Connect	Collaboration program connecting start-ups with clinicians, researchers and clinical facilities at Charité and BIH.
Nucleate Germany Activator	Educational and venture-development program for academic biotechnology teams.
SPARK-BIH	Translational funding and mentoring for academic projects in therapeutics, diagnostics and medical devices.
Startup Lausitz Accelerator	Cross-sector program with a focus on health and medtech.
Vision Health Pioneers Incubator	Incubator for early-stage healthcare founders, including digital health and other healthcare fields.



Networking between start-ups and investors at the “Rooftop Pitch Potsdam 2026” event hosted by Potsdam Science Park © sevens+maltry, Benjamin Maltry

Research infrastructure: The capabilities behind translation

Research infrastructure is not primarily designed to develop a venture or business model. It provides the laboratories, equipment, data, materials and specialist services needed to conduct research and move discoveries toward application. In the life sciences, this includes advanced laboratories, imaging and analytical technologies, human model systems, clinical research facilities, clean rooms and GMP manufacturing facilities.

Technology parks and Future Sites with a life science focus in the capital region

Technology parks offer lab, office and production space for start-ups, growing businesses and established companies. Many also bring companies into close contact with research institutions and other technology developers.

- Adlershof Technology Park
- berlinbiotechpark Charlottenburg
- BioTech Campus Hennigsdorf
- Biotechnology Park Luckenwalde
- Campus Berlin-Buch
- FUBIC (Business and Innovation Center next to Freie Universität Berlin)
- Health Innovation Quarter Berlin-Mitte
- Potsdam Science Park
- Wuhlheide Innovation Park



Potsdam Science Park Research © sevens+maltry

On the Charité Campus Virchow-Klinikum, the **Berlin Center for Advanced Therapies (BeCAT)** and **Der Simulierte Mensch (Si-M)** opened in April 2026. BeCAT provides laboratories and clean-room infrastructure for developing advanced therapies based on genes, cells and tissues. Si-M, jointly operated by Charité and Technische Universität Berlin, develops human cell and organ models to investigate disease mechanisms and support the preclinical testing of potential treatments.

Scheduled to open at Berlin-Nordhafen in 2028, the **Berlin Center for Gene and Cell Therapies (BC GCT)** will combine research and development facilities with an incubator and GMP manufacturing capacity for gene and cell therapies up to clinical Phase II. In 2028, Bayer Co.Lab is scheduled to move into the center, which is expected to accommodate around 15 to 20 start-ups.

Another addition is planned at Campus Benjamin Franklin. The **Berlin Centre for the Biology of Health (BC-BH)**, a joint initiative of Charité and Freie Universität Berlin, is expected to provide laboratory and collaborative space for around 150 researchers from 2028. Its focus will be on the biological mechanisms that preserve health and prevent disease.

Expanding Berlin Brandenburg's translational capabilities

Berlin Brandenburg is building new routes from scientific discovery to clinical application and company formation. JUNI and CLIC add support for technology transfer, while the planned FUBIC Innovation Center and Berlin Center for Gene and Cell Therapies will provide space and infrastructure for technology development and GMP manufacturing. Together with the region's well-established research institutions, initiatives such as these give life science teams access to a broad range of resources and support at different stages of translation.

Technology transfer offices and IP support

Technology transfer offices form the institutional bridge between research and application. They identify inventions, advise researchers before publication, assess protection and commercial potential, manage patenting and licensing, negotiate IP provisions in research agreements and support routes to industry collaboration or spin-off formation.

- **Charite BIH Innovation:** Central technology transfer service for Charite and BIH, covering IP and licensing, technology scouting, commercialization, and spin-off support
- **Max Delbrück Center – Innovation & Entrepreneurship:** The department combines IP protection with scouting, business development, industry partnerships and spin-off support
- **Freie Universität Berlin – Patent and Licensing Service:** Responsible for the legal protection and commercial exploitation of university research results
- **Technische Universität Berlin – Center for Intellectual Property:** Central contact point for university inventors; TU Berlin's transfer services also cover patents, licensing, cooperation agreements and start-up support
- **Potsdam Transfer – Patent and Licensing Service:** Brandenburg example offering invention assessment, coordination with patent attorneys, administrative support and commercial exploitation services for University of Potsdam researchers
- **VOBB (Verwertungsoffensive Brandenburg):** joint IP exploitation network of the eight Brandenburg universities (and two Leibniz institutes), supporting patenting and commercialization

The Berlin Model: A standardized framework for IP transfer in academic spin-outs

A recent initiative aims to make IP transfer to academic spin-offs simpler and more transparent. Developed by the start-up factory JUNI together with a working group of technology transfer offices from Berlin's universities and research institutes, the Berlin Model introduces a standardized framework for assessing intellectual property and negotiating transfer agreements. In September 2026, ten Berlin universities and scientific institutions signed an agreement to test the model over three years. The framework includes a structured IP assessment, predefined transfer options and standardized contract terms, with the aim of completing suitable IP transfer agreements within three months.



© Peter Himsel/Campus Berlin-Buch GmbH

Specialist networks

Specialist networks connect researchers, companies and clinical partners around shared technologies or fields of application. The following selection includes both networks dedicated to life sciences and health and cross-sector networks that provide relevant expertise in areas such as artificial intelligence, IT security, advanced materials and additive manufacturing.

Life science and health networks

- Bio-PAT: bioprocess analytics and process control
- DiagnostikNet | BB: in vitro diagnostics
- DUCAH: digital health, healthy aging and care
- MGA Medical goes Additive: additive manufacturing in healthcare and medical technology
- Life Sciences Tech Network (LSTN) Berlin: entrepreneurship and networking at the intersection of life sciences and technology

Enabling tech networks

- it's.BB: IT security and cybersecurity
- KI Park: artificial intelligence
- XRBB: virtual, augmented and mixed reality industries
- SIBB: digital economy and IT industry
- INAM: advanced materials and deep-tech
- AMBER: additive manufacturing



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Financing life science innovation in Berlin Brandenburg

Berlin has been Germany's leading start-up hub for years. On average, a new company is founded in the German capital region every 14 hours, across all industries. Life science founders benefit from this environment as well as from the region's universities, hospitals, research institutions and specialized technology-transfer organizations. They can draw on a broad range of financing options.

For biotech, medtech and digital health companies, financing is usually a staged process. Grants and government funding programs support research and proof of concept, public investors help close the pre-seed gap, and private venture capital becomes increasingly important as companies approach clinical development, market entry and international expansion. The 2026 launch of bio:cap – International Life Science and AI Investival further strengthened the region's profile as a meeting point for life science companies, investors and research institutions. The event combined an investor forum, innovation platform and networking festival.

Grants for early-stage projects

Public funding is particularly important before a company generates revenue or has clinical data. The **Berlin Startup Stipendium (BSS)** supports teams during the pre-foundation phase with a stipend, coaching and access to incubator infrastructure. The program is delivered through a network of incubators across Berlin, offering sector-specific expertise and facilities tailored to different technology fields.

Available nationwide, the **EXIST Startup Grant** and **EXIST Research Transfer funding programmes** of the Federal Ministry for Economic Affairs and Energy (BMWE) are an important source of support for start-up teams at Berlin's universities and research institutions. The grants help early-stage teams develop business models, prototypes and technologies with high technical and financial risk. **Berlin's Science & Startups network**, the joint start-up service of Freie Universität Berlin, Humboldt-Universität zu Berlin and Technische Universität Berlin, in partnership with Charité, helps researchers identify suitable programs and prepare applications.

For life science projects, **GO-Bio Next**, a funding programme of the Federal Ministry of Research, Technology and Space (BMFTR) is especially relevant. It supports research teams working on biotechnology, diagnostics, therapeutics, medical technology, synthetic biology and digital life sciences. It is designed for innovations with long development timelines and high technical and commercial risk, and can cover both proof-of-concept work and the preparation of a spin-off.

In Berlin and Brandenburg, the **ProFIT** funding programs offered by **IBB (Berlin's development bank)** and **ILB (business promotion bank of the federal state of Brandenburg)** provide additional support for research and development projects as well as early-stage technology

companies, making them an important source of funding for innovation-driven start-ups.

Other important sources include **BIH SPARK**, a mentoring and funding program that supports the translation of early-stage biomedical research into clinical applications. In addition to funding, the project offers mentoring and training to support medical innovations. The **BIH Clinical Incubator** (CLIC) offers infrastructure, expertise and contacts for translational projects. Programs at Charité, the Max Delbrück Center and other research institutions complement these instruments. **HealthCapital** provides information on funding opportunities, partners, locations and internationalization.

Incubators and first investment

The region's incubators and accelerators provide an important bridge between academic research, company formation and first financing. Initiatives such as JUNI, BIH CLIC, Nucleate, HPI Ventures and the Business Angels Club Berlin Brandenburg connect founders with mentors, investors and potential industry partners. Specialized programs such as **Vision Health Pioneers**, **BIH SPARK**, **CDL-Berlin Health** and **GeneNovate** focus on healthcare, medical innovation and gene and cell therapy.

These organizations help founders validate their ideas, prepare for investment and identify suitable sources of capital. Early-stage companies can also approach to IBB Ventures and the **High-Tech Gründerfonds**, while the **EIC Accelerator** and **SPRIND** offer funding opportunities for high-risk innovations with significant market potential. For a detailed overview of the region's incubators, accelerators, laboratories and other support infrastructure, **see the infrastructure article**.



"Berlin offers a unique research environment, pharmaceutical partners with production sites, and – with Charité and Vivantes – is home to the largest hospital complex in Germany. This provides an excellent breeding ground for spin-offs and provides opportunities for scale-ups as well as investors! The start-up ecosystem benefits from the new standard for IP transfer by universities – initiated, amongst others, by IBB Ventures – as well as new networking opportunities such as bio:cap."

Ute Mercker, Investment Director, IBB Ventures

© Alena Schmick



Oliver Höppner, CEO Ascléa GmbH

"With our latest round of fundraising, Ascléa is now in a position to realise its vision of making its AI-based solutions available to hospitals internationally and enabling them to use large language models and agent-based AI safely in day-to-day clinical practice. The regional ecosystem played a key role in this regard, both in terms of the development of our products and our associated partners, and in terms of access to the funding market."

© DHZC - Kuelker

VC investors and growth capital

As life science companies move toward clinical development, regulatory approval and market expansion, they require larger financing rounds and more specialized investors. Berlin's broader start-up ecosystem provides a strong basis for this. In 2025, Berlin recorded 218 start-up financing rounds – more than any other German state and almost a third of all deals nationwide. Together, these financing rounds attracted approximately €2.7 billion in venture capital. While these figures cover all sectors, they underline Berlin's visibility among national and international investors.

Public investors play an important role in supporting early-stage companies and facilitating access to further financing.

IBB Ventures, an IBB Group company, is one of the most active players in early-stage financing in Berlin and invests from pre-seed through Series A. In addition to its two VC funds for technology and creative companies with a combined volume of €100 million and an Impact VC Fund launched in 2022 with €30 million, a €11 million Pre-Seed Fund for Berlin deep-tech startups has been in its investment phase since 2025. It completed 39 deals in 2025, including 13 first financings and 26 follow-on rounds. Its B# ("be sharp") Pre-Seed Funds provides convertible loans from €100,000 to €500,000 for Berlin-based deep-tech start-ups, helping companies reaching larger first private seed financing rounds.

Brandenburg Kapital, the venture-capital arm of **ILB**, supports start-ups and growth companies based in Brandenburg with equity and equity-like investments. **HPI Ventures** also provides capital and investor access for technology start-ups in Potsdam.

Public investors are complemented by private life science funds, business angel networks, corporate investors and international VCs (see table for selected investors and their investment focus). In addition to capital, these investors and networks contribute sector expertise, clinical and regulatory know-how, commercial networks and access to international financing syndicates.

Selected venture capital investors and business angel networks active in the German life sciences and healthcare sector

Investor	Investment focus
Apollo Health Ventures	Early-stage biotechnology focused on aging, age-related diseases and healthy lifespan
Cherry Ventures	Generalist technology start-ups, including selected healthcare and health-tech companies
Forbion	Biotech and biopharmaceutical drug development; bioeconomy and planetary-health technologies
LifeCare Partners	Life sciences and healthcare, including medtech, diagnostics, biopharma and related bioeconomy sectors
MIG Capital	Life sciences and deep technology
Peppermint Venture-Partners	Healthcare and life sciences, including medtech, diagnostics, digital health and life-science tools and services
Remiges Ventures	Early-stage biotech, drug discovery and therapeutics
Springboard Health Angels	Pre-seed and seed health-tech and life-sciences start-ups

Recent transactions illustrate the range of available capital. AMBOSS raised €240 million in March 2025, while Voize secured US$50 million and 4TEEN4 €55 million in the same year. Recare followed with a €17.5 million funding round in January 2026. In biotechnology, Captain T Cell raised financing and grants totaling €20 million, while Cellbricks secured approximately €10 million in March 2026. Kupando's additional €10 million Series A round brought its total Series A financing to €23 million.



More than 3,000 visitors came to the first edition of bio:cap in Berlin in June 2026. © Messe Berlin GmbH

Connecting capital, innovation and infrastructure

Held at CityCube Berlin from June 9 to 11, 2026, the bio:cap – Life Science and AI Investival brought together start-ups, researchers, investors, established companies and policymakers. The program combined an investor forum, innovation platform and networking event, with IBB, IBB Ventures and ILB among its partners. The next edition will take place on June 29 and 30, 2027.

The event reflects a central requirement of life science financing: scientific excellence, clinical relevance, intellectual property, industrial partnerships and capital must be considered together. The German Spin-off Framework follows the same principle. Supported by leading research institutions and venture-capital investors, it seeks to make negotiations on intellectual property, licensing and equity participation more transparent and predictable. This can shorten the path from academic research to company formation. Another example of investment in Berlin's life sciences ecosystem is Riverside Labs, a new research and production facility in Berlin-Mitte. With an investment volume of around €200 million, the development will house the Berlin Center for Gene and Cell Therapies, including a start-up incubator and GMP manufacturing infrastructure, and the Bayer Co.Lab. In addition, new laboratory developments such as FUBIC and CHARLOTTE demonstrate the region's continued investment in life science infrastructure, expanding the supply of modern laboratory space for growing companies and addressing a challenge that international investors have often associated with Berlin.

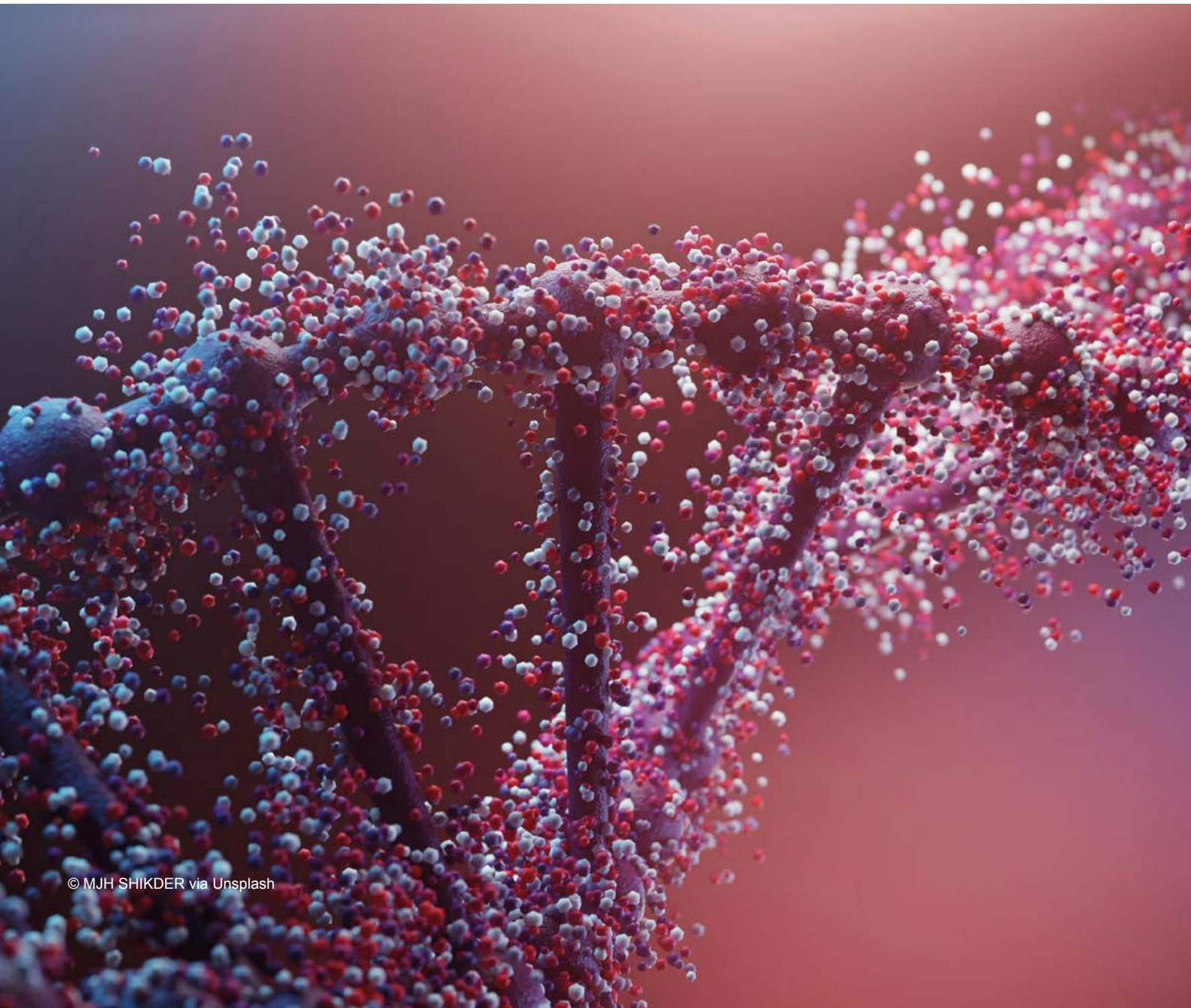
Building momentum in advanced and personalized medicine

With the groundbreaking of the Berlin Center for Gene and Cell Therapies and the opening of the Berlin Center for Advanced Therapies at Charité, Berlin-Brandenburg is stepping up efforts to position itself as a leading location for advanced and personalized therapies. The field is an umbrella for a range of next-generation medical approaches, including rapidly growing gene and cell therapies as well as regenerative therapies aimed at restoring damaged tissues and organs.

The region benefits from close ties between hospitals, research institutes, biotech companies, and translational centers, and thus is creating an ecosystem designed to move advanced therapies more efficiently from the lab into clinical practice. This emphasis on translation is increasingly important as personalized therapies require highly specialized manufacturing, regulatory expertise, and close collaboration between academia, clinics and industry.

Excellent infrastructure for translational medicine

Berlin Brandenburg combines internationally recognized biomedical research with extensive clinical expertise. Charité – Universitätsmedizin Berlin is home to one of Europe's largest stem cell transplantation centers and has established CAR-T cell therapies in clinical care. The



© MJH SHIKDER via Unsplash

Berlin Institute of Health at Charité (BIH) plays a central role in translating biomedical discoveries into personalized diagnostics and therapies and helped develop Germany's National Strategy for Gene and Cell-Based Therapies.

Regenerative medicine is another important pillar of the region's advanced therapy landscape. At the BIH Center for Regenerative Therapies (BCRT), interdisciplinary teams of clinical scientists, engineers and biologists are developing cell- and biomaterial-based therapies and diagnostic tools that harness the body's own healing processes. The Julius Wolff Institute, also part of Charité's regenerative-therapy cluster, adds expertise in musculoskeletal regeneration using mechano-therapeutic and immune-therapeutic approaches. The Berlin Center for Advanced Therapies (BeCAT), officially opened in 2026, strengthens Berlin's academic infrastructure for bringing Advanced Therapy Medicinal Products (ATMPs) into clinical application. With CLIC at BIH, an academic incubator structure supports teams to mature from pre-seed to seed stage.

The Max Delbrück Center for Molecular Medicine (MDC) contributes important expertise in genome editing, single-cell technologies, and cell-based medicine. In 2025, the Helmholtz Association committed €30.8 million to the Center for AI-Accelerated Molecular Innovations in Medicine at the MDC, supporting the integration of artificial intelligence into biomedical research and precision medicine.

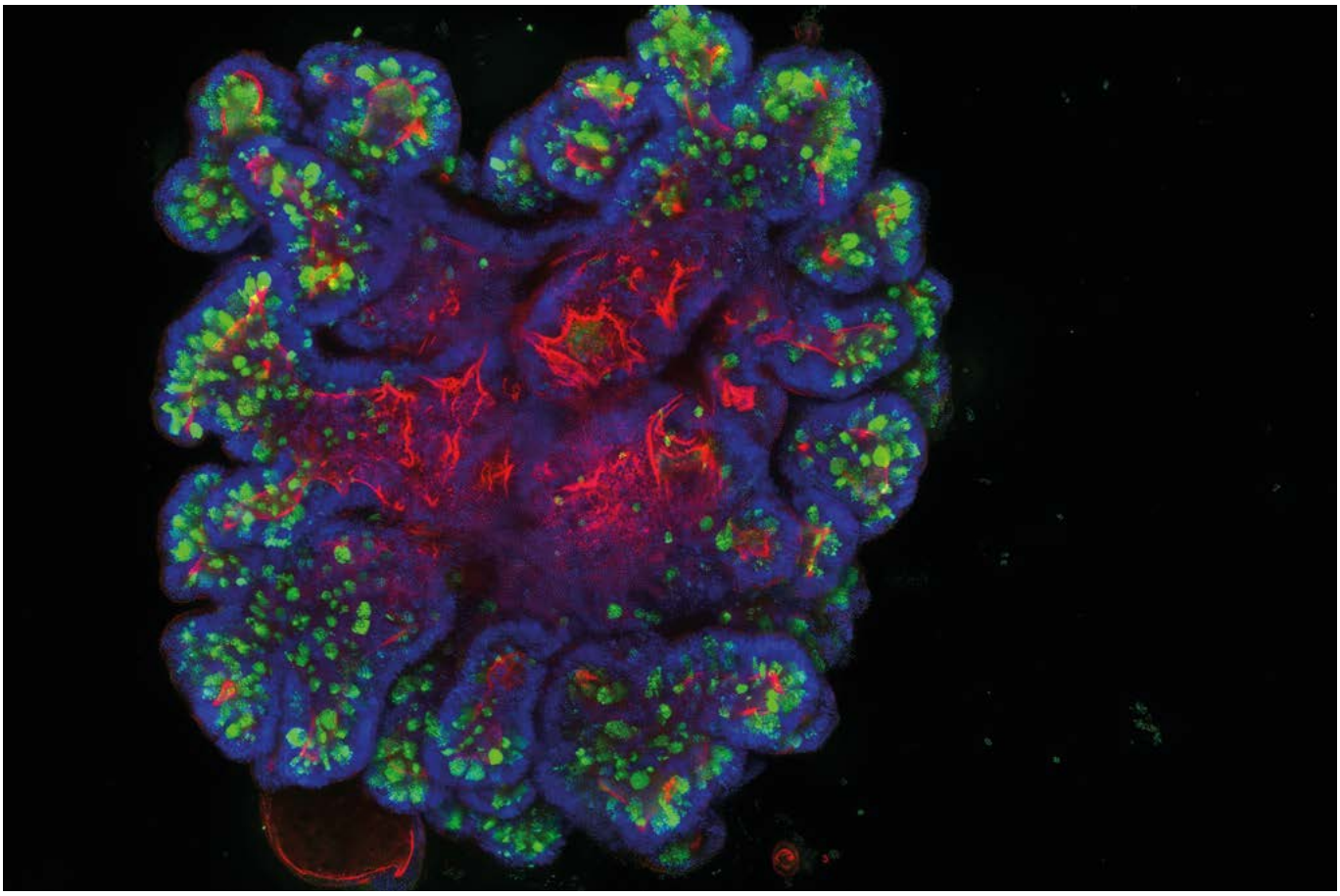
A major milestone in gene and cell therapy

One of the region's most ambitious projects is the Berlin Center for Gene and Cell Therapies (BC GCT), a joint initiative by Bayer, Charité and BIH located adjacent to Bayer's Berlin campus. Backed by public investments exceeding €100 million, the center will combine laboratory infrastructure for start-up incubation and scale up, GMP-compliant manufacturing capacity, and space for 15 to 20 biotech start-ups under one roof. It will be housed in Riverside Labs, a new, highly specialized research and production facility for the life sciences sector currently under development in the heart of the Health Innovation Quarter Berlin-Mitte. Ground was broken in early June 2026, and operations are expected to begin in 2028.

The growing network is already attracting biotech companies working on new therapeutic approaches.



Opening of the research buildings: BeCAT und Si-M © Kevin Fuchs



Human intestinal organoid © Afonso Vieira and Roman Sprick, AG Bartfeld, TU Berlin

MyoPax is developing regenerative cell and gene therapies to treat muscle defects and diseases, while EpiBlok Therapeutics is advancing a gene therapy approach for epilepsy. BlueRock Therapeutics, a Bayer subsidiary, has established its first European cell therapy innovation site in Berlin and is advancing clinical programs in Parkinson's disease.

Expanding networks and market access

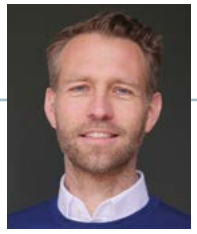
Berlin is also involved in several national and European initiatives aimed at improving collaboration in the field. The EU-funded JOIN4ATMP consortium, coordinated by Charité, aims to improve market access and reimbursement pathways for ATMPs across Europe. At the national level, the National Network Office for Gene and Cell-Based Therapies, based at the BIH, supports collaboration, training, and entrepreneurship programs designed to strengthen Germany's growing gene and cell therapy community.



"Combined with advanced diagnostics, truly personalized therapies are becoming a reality. Berlin has built a unique ecosystem to address unmet medical needs through advanced therapies by integrating precise phenotyping, innovative bioengineering, and deep mechanistic understanding. BeCAT's new GMP manufacturing facility further de-risks advanced therapies, while BIH's CLIC incubator supports academic projects from pre-seed to seed stage. Through BC GCT, we aim to advance company creation and commercialization even further, translating strong basic science and breakthrough technologies into scalable patient treatments. Here, teams receive the support needed to grow from early-stage ventures to broader clinical impact."

Prof. Georg N. Duda, Director Julius Wolff Institute (JWI), Speaker BIH Center for Regenerative Therapies (BCRT), Berlin Institute of Health at Charité - Universitätsmedizin Berlin (BIH)

© BIH/Thomas Rafalzyk



Dr. Felix Lorenz, CEO Captain T Cell

"With our recent financing round completed and our next-generation TCR-T cell therapy lead program on the verge of entering the clinic, Captain T Cell is moving into an exciting new phase. Our ambition is to develop transformative new therapies for patients with advanced solid tumors who urgently need novel treatment options."

© Captain T Cell GmbH

Organization	Focus Area
Charité / BIH	Translational research, clinical application, and development of the National Strategy for GCT
CLIC (BIH Clinical Incubator)	Accelerating clinical translation and start-up creation for personalized therapies
Julius Wolff Institute (JWI)	Biomechanics, orthopedics, and engineering regenerative therapies
Max Delbrück Center (MDC)	Molecular medicine, single-cell analyses, and genome editing
Blueprint Biomed	Advancing regenerative therapies and biomedical engineering
BlueRock Therapeutics	Engineered cell therapies for neurology, cardiology, and immunology
Captain T Cell	Next-generation TCR-T cell therapies targeting solid tumors
CARTemis	Development of innovative CAR-T cell therapies
Cellbricks	Bioprinting and development of complex 3D tissue models
EpiBlok Therapeutics	Gene therapies designed to suppress epileptic seizures
MyoPax	Advanced muscle stem cell technologies for treating muscle diseases
NeutroGen Therapeutics	Developing a shelf-stable neutrophil transfusion therapy
Pacira Germany	Gene therapies for musculoskeletal disorders using high-capacity adenoviral vectors

Highlight

The **Berlin Center for Gene and Cell Therapies (BC GCT)** is set to become a key building block in Berlin's ecosystem for advanced and personalized therapies. Following the groundbreaking in early June, construction is now underway at Bayer's Berlin Nordhafen campus, located within the newly designated Zukunftsort Health Innovation Quarter Berlin-Mitte. The project is designed to bring research, development, and manufacturing closer together to accelerate the path from gene and cell therapy research into clinical use.

Backed by Bayer, Charité and BIH, the center will provide modern laboratory space, GMP-compliant production facilities, and space for biotech start-ups developing new therapeutic approaches. Its aim is to further strengthen Berlin's role in gene and cell therapy innovation in Europe and shorten the distance between early research and patient treatment.



The Berlin Center for Gene and Cell Therapies is scheduled to open in 2028. © HENN



© Charité (Arne Sattler)

Future projects

BeCAT

The **Berlin Center for Advanced Therapies (BeCAT)** coordinates the development and application of advanced therapy medicinal products (ATMPs) at Charité's Virchow-Klinikum campus. Existing structural and spatial facilities there support the establishment of ATMPs of rigorous scientific and technological standards, spanning basic research, initial application testing, and clinical deployment for patients. This framework expands through a new research building – funded with €37.9 million by the federal government and the State of Berlin. It houses a modular GMP cleanroom unit designed to produce all ATMP categories at Charité, including those incorporating biomaterials or 3D bioprinting. The center opened on April 22, 2026.



"The possibilities of novel therapies seem limitless, and bringing these promising approaches into the clinic is BeCAT's mission. Researchers from institutions such as Charité, the Berlin Institute of Health in the Charité (BIH), the Max Delbrück Center (MDC), or Si-M work with us to develop and manufacture drugs for early-stage clinical trials. We also help integrate these efforts under Berlin's leadership into national networks such as the National Center for Tumor Diseases (NCT). "

Prof. Annette Künkele-Langer, Director of BeCAT

© Charité (Isabelle Knispel)

GeneNovate entrepreneurship program

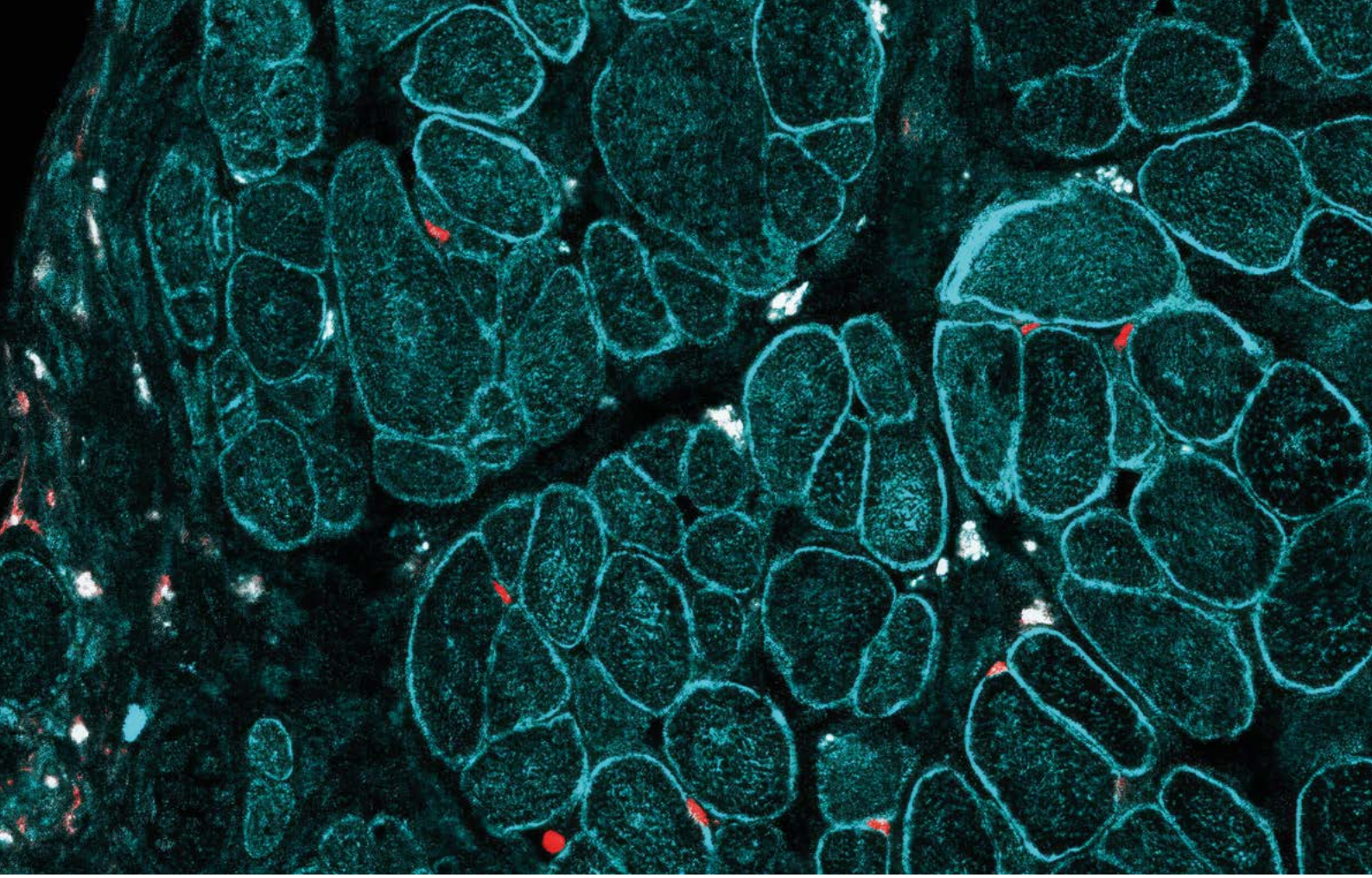
GCT
Nationale Strategie
Gen- und zellbasierte Therapien
GeneNovate®

GeneNovate® is Germany's first nationwide entrepreneurship program focused on gene and cell therapies, biotechnology, and medicine. It targets master's students, PhD candidates, postdoctoral researchers, physicians, and experienced scientists who seek to translate scientific discoveries into therapeutic applications or commercial products. The program is delivered through regional hubs across Germany, including Berlin. Participants benefit from workshops on pitch development, intellectual property, regulatory pathways, financing, and investor negotiations, as well as mentoring from industry experts and venture capital investors. An annual GeneNovate® Investors' Day in Berlin further connects start-ups and academic projects with international investors and industry leaders. GeneNovate® is part of Germany's National Strategy for Gene- and Cell-Based Therapies and is coordinated by the National Network Office GCT at BIH/Charité in Berlin.

JOIN4ATMP

JOIN 4 ATMP

JOIN4ATMP seeks to speed up and de-risk ATMP development across Europe while improving patient access. Funded with €3 million through Horizon Europe since January 2024, the project brings together 14 partners from nine countries to examine obstacles in preclinical research, clinical development, regulation, and reimbursement. The consortium analyzes existing practices used by ATMP developers and regulatory authorities and uses these findings to develop recommendations and guidelines. The project focuses on faster approval procedures, stronger GMP manufacturing capacity, and more reliable access to advanced therapies for patients with rare cancers or non-oncological diseases.



This image shows regenerated muscle tissue from a genetically modified mouse. Three weeks earlier, the researchers had injected muscle stem cells in which a disease-causing mutation relevant to humans had been corrected using the gene-editing tool CRISPR/Cas9. © Andreas Marg, Max Delbrück Center

Precision medicine on its way to the clinic

Berlin Brandenburg is moving into precision medicine. With the opening of **Der Simulierte Mensch (Si-M)** and the **Einstein Center for Early Disease Interception** in Berlin-Wedding in spring 2026, the region has gained two new hubs linking human-based disease models, single-cell multi-omics, spatial biology, and AI-driven diagnostics. Their shared aim is to detect disease at its earliest molecular stages, enabling intervention before symptoms even emerge.

Precision medicine starts from a simple but significant idea: patients with the same diagnosis may need different treatments because their disease biology differs.

For most of the 20th century, drug development meant identifying a disease mechanism shared across a patient population, designing a compound to target it, and testing whether it works on average. That model still matters: broad-spectrum drugs remain essential for infectious diseases and multifactorial conditions where no single molecular target drives the disease process.

A strong ecosystem for pharmaceutical innovation

Drug development has deep roots in the Berlin Brandenburg region. Global players such as **Bayer, Berlin-Chemie (Menarini), Pfizer, Sanofi** and **Takeda**, along with 30 pharmaceutical companies, are based in Berlin Brandenburg, with around 13,000 employees in total. This industrial base is supported by a dense research landscape, which is at the same time increasingly engaged in precision medicine approaches: **Charité – Universitätsmedizin Berlin, Berlin Institute of Health (BIH), Max Delbrück Center (MDC), and Berlin Institute for Medical Systems Biology (BIMSB)**.

Precision medicine, by contrast, builds on molecular profiling, data integration, and biomarker-driven patient stratification. This shifts the unit of analysis from disease category to individual molecular phenotype. Tumor profiling for actionable mutations is now routine in many oncology settings. Proteomic and metabolomic signatures are being explored as early-risk biomarkers in cardiovascular medicine. Multi-omics approaches are helping resolve rare and undiagnosed diseases where classical diagnostics fall short.

Spatial omics as a core technology

Spatial omics has become one of the key technologies for precision medicine because it adds tissue context to molecular data. By linking omics data to cellular architecture, it supports biomarker discovery, stratification, and target validation in disease settings where spatial organization matters as much as the molecular signature itself, for example, in cancer and inflammatory diseases. Clinical use is still limited, but the field has moved beyond proof of principle and into translational development.

In Berlin, several groups are helping drive the field forward. Oliver Klein and the BIH Imaging Mass Spectrometry Unit at Charité are advancing imaging mass spectrometry, enabling the mapping of proteins, metabolites, and other molecular features directly in tissue sections. Building on this work, Oliver Klein, together with René Hägerling's group and its strong expertise in 3D histology, is establishing the Spatial Diagnostics Platform at the Berlin Institute of Health (BIH) at Charité, bringing together genomics, proteomics, and spatial tissue analysis in an automated, AI-supported workflow to make complex molecular information more accessible for clinical decision-making.

On the single-cell and spatial biology side, Nikolaus Rajewsky's lab at MDC-BIMSB has pioneered high-resolution spatial transcriptomics technologies, including the Open-ST platform for spatially resolved gene-expression analysis. Complementing these efforts, the MDC-Bruker Center of Excellence for Single Cell Omics focuses on developing and applying mass-spectrometry-based single-cell and multi-omics workflows.

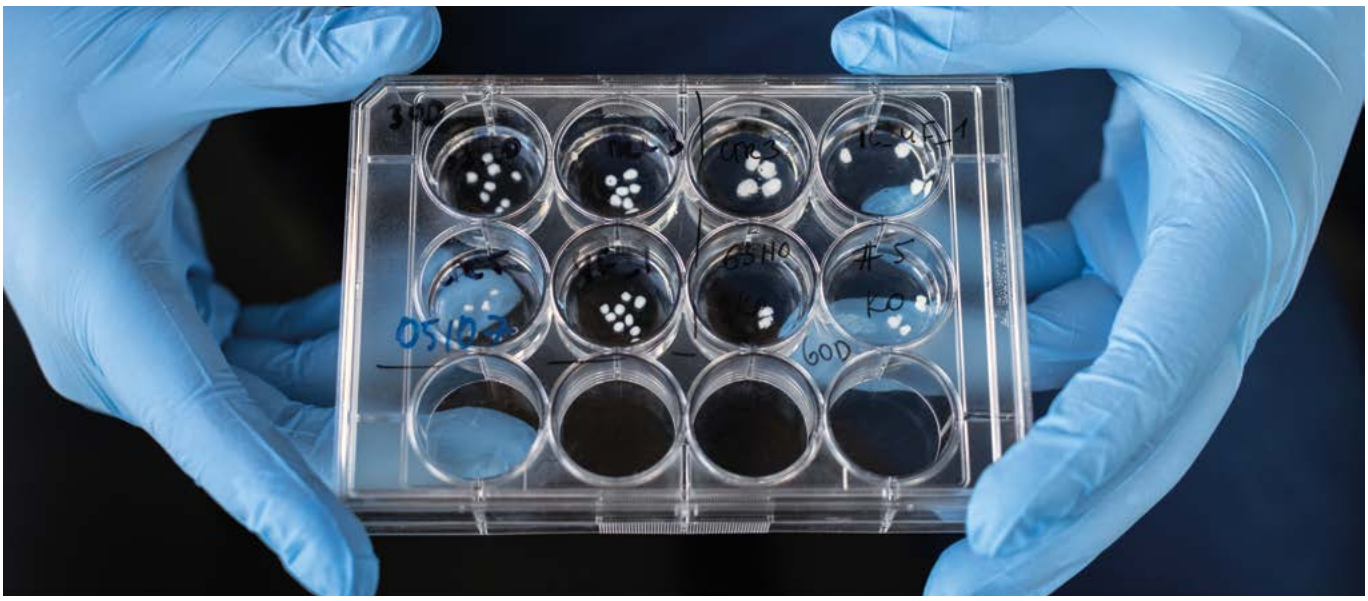
From research to clinical application

Moving precision medicine from the lab to the patient requires more than data. It requires computational tools to interpret that data, and disease models that reflect human biology closely enough to be predictive.

On the computational side, BIH/Charité, the Berlin Institute for Medical Systems Biology **(BIMSB)**, and the MDC have built strong capacity in computational and systems biology, integrating high-throughput molecular data with mathematical modeling and bioinformatics to generate quantitative,



Before proteome analysis, the highly sensitive mass spectrometers must be calibrated. © Felix Petermann, Max Delbrück Center



Brain organoids © Einstein Stiftung Berlin | Pablo Castagnola

testable models of disease. The **MDC-BIMSB** is now also home to the **Einstein Center for Early Disease Interception (EC-EDI)**, which brings together researchers from twelve Berlin institutions to apply single-cell multi-omics technologies, AI modeling, and patient-specific organoids to the study of disease in its earliest stages. Initial focus areas include respiratory and neurological diseases, Alzheimer's disease, and multiple sclerosis.

The region has also built a coordinated infrastructure for human-based, animal-free research. **Charité 3R** funds internal research projects focused on replacing, reducing,



© Heidi Scherm

Three questions to...

Dr. Oliver Klein

Lead of the BIH Imaging Mass Spectrometry Unit | KleinLab, BIH Center for Regenerative Therapies (BCRT), BIH

What is the Spatial Diagnostics Platform, and why was it created?

The Spatial Diagnostics Platform (SDP) at the Berlin Institute of Health (BIH) at Charité is designed to make complex information from patient tissue samples more useful for clinical decisions – faster, more comprehensively, and more precisely. At its core is the spatial analysis of genes, proteins, and cells, with the goal of developing automated, AI-supported, and scalable diagnostics. Together with industry partners, including Roche Diagnostics, Zeiss Industrial Quality & Research (IQR), Bruker Daltonics, and Hamilton Germany, we are combining research, clinical practice, and technology development. LIMAA Technologies complements this effort with technologies for tissue-preserving analysis and for later transfer into clinical use.

Why is it important for diagnostics to consider molecular information in the spatial context of tissue?

Because we need to know not only which molecules are present, but also where they are located in the tissue and how they interact. Spatial multi-omics combines genomics, proteomics, and spatial tissue information, enabling a much more comprehensive picture of disease. Working with our industry partners, these different technologies can be integrated into a single, automated workflow. In the longer term, we aim to translate molecular information more quickly into actionable treatment decisions.

What makes Berlin a suitable location for the SDP?

Berlin brings together excellent research, clinical care, technology development, start-ups, and industry in a comparatively small area. With BIH and Charité, along with our technology and industry partners, we have gathered the key actors in one place. As a result, rather than developing new technologies in isolation, we can directly link them to clinical questions and later industrial implementation.

and refining animal use. The **Einstein Center 3R**, a multi-institutional initiative founded in 2021, receives funding from the Einstein Foundation to develop 3D human tissue models as alternatives to animal experiments, covering six organ systems.

Si-M is a visible example of this direction. Opened on April 22, 2026, Der Simulierte Mensch is the first research facility in Germany specifically designed for the simulation of human organ function without animal testing. Around 150 researchers from TU Berlin and Charité work together, combining organ-on-chip systems, 3D cell cultures, bioprinting, and advanced imaging to model human physiology from the molecular to the tissue level.

Enabling technologies

Precision medicine depends on enabling technologies that measure disease earlier and with greater precision. Among them are highly sensitive sensor platforms, liquid biopsy for minimally invasive molecular profiling, as well as AI and machine learning tools that help interpret complex omics datasets in clinical context.

At MDC, the **Center for AI-Accelerated Molecular Innovations in Medicine (AI2M)** is set to strengthen Berlin's precision-medicine ecosystem. Backed by substantial funding from the Helmholtz Association, it will operate from two hubs: the Spatial and Single-cell Biomedicine and AI hub at MDC-BIMSB in Mitte and the Human Cell Model and Bioengineering hub in Berlin-Buch. The center is designed to develop AI models for large molecular and clinical datasets and to support precision treatment and prevention. Construction is scheduled to begin in 2026.

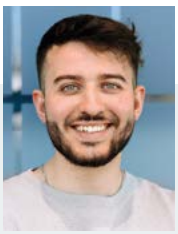
The region also has a strong base in innovative sensors, including ultrasensitive immunoassays, electrochemical biosensors, lab-on-chip and microfluidic systems, and mass spectrometry-based platforms.



Prof. Peter Robinson, Alexander von Humboldt-Professur für Künstliche Intelligenz, Berlin Institute of Health (BIH)

"With the help of AI, it will be possible to apply precision medicine to most diseases in the coming decades."

© privat



"When building a category-defining company that is reimagining how cancer patients globally get personalized treatment recommendations, you cannot follow the crowd. This is what Berlin stands for and always has: a place with people who challenge the status quo, free-thinkers who do not settle for what's easy but pursue what needs to be done to build the future."

Omar El Nahhas, CEO & Co-founder StratifAI

Gender-based medicine

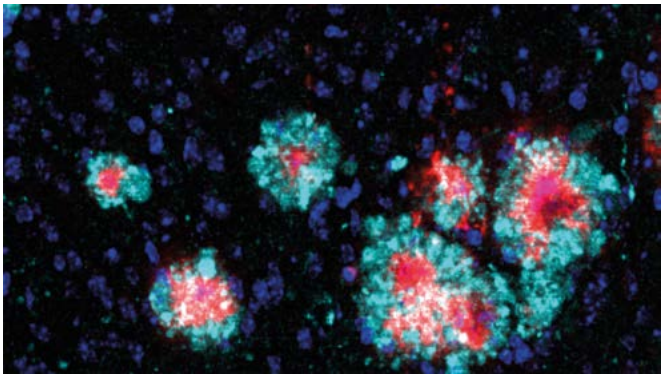
Gender-based medicine examines how sex and gender influence the disease mechanisms, its symptoms, diagnosis, treatment and management, including how patients cope with illness. Berlin has taken on a pioneering role in this field. It was shaped by cardiologist Prof. Dr. Vera Regitz-Zagrosek who held the first German Professorship on Gender in Medicine, established at Charité in 2003. She also founded Charité's interdisciplinary Center for Gender in Medicine, today operating as an independent institution within Charité.

Berlin is growing into a leading hub for addressing the gender health gap through research, technology development, education and clinical practice. Further aspects of diversity, including age, sociocultural background and ethnicity are increasingly incorporated into the concept of gender-sensitive health. A research group led by Professor Gertraud (Turu) Stadler at Charité developed a **Diversity Minimal Item Set** to support the regular and standardized collection of data on gender and other diversity dimensions.

Charité and the Berlin Institute of Health (BIH) are partners in the GenDiMedNet project, which aims to systematically collect, harmonize, and analyze research data while consistently integrating both biological sex and sociocultural gender perspectives. GenDiMedNet serves as a network and accompanying research center that provides scientific coordination in the areas of data management, communication, and translational research for eight technology projects focused on sex- and gender-specific aspects of diagnosis and treatment. Researchers from Charité and Berlin-based companies are involved in four of these eight technology projects.

Organization	Focus Area
Charité 3R	Charité network that aims at fostering research, education and public understanding for alternative methods to animal experiments according to the 3R principle (Replace, Reduce, Refine).
Charité Comprehensive Cancer Center (CCCC)	Interdisciplinary cancer care, clinical trials, and translational oncology research.
Einstein Center 3R	Berlin-wide alliance founded in 2021 that has a 3R-driven research focus on 3D tissue models.
Einstein Center for Early Disease Interception (ECEDI)	Early disease detection and intervention using single-cell, spatial, AI, and preclinical models.
Leibniz-Forschungsinstitut für Molekulare Pharmakologie (FMP)	Basic research in molecular pharmacology to identify and characterize bio-active molecules.
Max Planck Institute for Molecular Genetics	DNA and gene function research, with emphasis on molecular genetics and development.
MDC-Bruker Center of Excellence for Single Cell Omics	Single-cell omics platform development for translational and clinical research.
MDC-BIMSB (Berlin Institute for Medical Systems Biology)	Research institute integrating multiple levels of gene regulation into predictive models, combining high-throughput technologies, computational methods, and molecular biology.

Organization	Focus Area
Alacris Theranostics	Precision oncology and personalized cancer therapies through multi-omics intelligence, AI-powered bioinformatics, and digital twin technology.
Attomol	Medical diagnostics with a focus on laboratory diagnostic tools and assay development.
BASF Metabolome Solutions	Service provider of mass spectrometry-based biological analytics for customers within and outside of BASF.
biotechrabbit	Supplier of ultra-pure enzymes and high-quality antibody services for diagnostics and reagents for molecular biology and proteomics.
Bruker	Developer of scientific instruments and analytical and diagnostic solutions, among others for molecular research and cell biology.
GlaxoSmith-Kline (GSK)	In Berlin-Buch, GSK leverages biology, chemistry and AI/ML capabilities to develop and evaluate novel therapeutics and diagnostics and to support clinical research activities.
INVITEK Molecular	Nucleic acid purification and molecular diagnostics solutions, especially for DNA/RNA workflows.
MEDIPAN	*In-vitro* diagnostics, especially immunological tests for autoimmune and infectious diseases.
Orbion	Discovery and engineering of proteins into quantum sensors and biological processors, turning the molecules of life into hardware for intelligent machines.
SCIENION	Design and manufacturing of biochips and biochip-based biomedical procedures.
StratifAI	precision oncology company developing biomarkers to advance cancer diagnostics.
TissUse	Multi-organ-on-chip technology for drug testing, safety assessment, and reducing animal testing.



Brain section of an Alzheimer's mouse: The Arl8b protein (turquoise) shows an accumulation around the amyloid b aggregates (red). Cell nuclei are stained blue. The section was analyzed with immunofluorescence.
© AG Wanker, Max Delbrück Center

Highlight

The **Einstein Center for Early Disease Interception (EC-EDI)** was inaugurated in March 2026 at the MDC's Berlin Institute for Medical Systems Biology in Mitte. The center brings together researchers from twelve Berlin institutions, including Charité, MDC, BIH, Berlin's three major universities, and several Max Planck Institutes. Its goal is to detect and intercept disease before symptoms appear. Key technologies include single-cell multi-omics, spatial biology, patient-specific organoids, 3D bioprinting, and AI-based modeling of disease mechanisms and trajectories. The Einstein Foundation Berlin funds the center with €6 million. Additional support for recruiting young international researchers comes from the state of Berlin.



The Chair of the Einstein Foundation Berlin, Prof. Martin Rennert (center), together with the spokespersons of the Einstein Center for Early Disease Interception: (from left to right) Prof. Nikolaus Rajewsky, Prof. Jens Kurreck, Dr. Janine Altmüller and Prof. Leif Erik Sander. © Andrea Vollmer, EC-EDI

Future Project

Si-M – Der Simulierte Mensch

Si-M – Der Simulierte Mensch is a joint research center of **Charité** and **Technische Universität Berlin**. It aims to simulate human physiology and pathophysiology using human-based *in-vitro* and *in-silico* models, including organoids, organ-on-a-chip systems, and 3D bioprinting. These approaches help reduce reliance on animal experimentation. The facility is funded equally by the State of Berlin and the Federal Ministry of Education and Research.



The official ribbon cutting for Si-M. (From left: Professor Dr. Joachim Spranger, Dr. Ina Czyborra, Dorothee Bär, Astrid Lurati, Professor Dr. Sina Bartfeld, Professor Dr. Fatma Deniz, Professor Dr. Heyo K. Kroemer, Professor Dr. Andreas Thiel) © Kevin Fuchs



© Jasmin Podufall



3D-Printed Leg Prosthesis © Ottobock

The German capital region drives the future of connected and personalized medtech

Berlin Brandenburg stands out as one of Europe's leading medical technology regions. It is home to device developers ranging from established mid-sized manufacturers to specialized start-ups and global industrial players. Companies here have been building medical hardware for more than a century: Ottobock's Berlin roots go back over 100 years, and BIOTRONIK developed Germany's first pacemaker here in 1963. Today, regional players pair hardware with digital features such as sensors, connectivity, and remote monitoring, moving toward personalized, patient-specific solutions.

Designing for the individual patient

Personalization is becoming a defining feature of regional medtech. One example is a heart valve built from a patient's own pericardial tissue, which is shaped and tailored using patient-specific 3D-printed stencils derived from MRI or CT data before being delivered by catheter. This personalized heart valve was developed by **GrOwnValve**, a Charité and German Heart Center of the Charité (DHZC) spin-off. DHZC implanted the first such valve in a human in June 2025; a larger safety trial is now recruiting. Because the valve is composed of living tissue, it has the ability to grow with the patient. This makes it especially suitable for children, for whom conventional replacement valves may require repeated operations.

3D printing is one of the key technologies that drives this shift towards personalized solutions. Rather than relying on standard sizes, additive manufacturing creates implants and prosthetics that match a patient's anatomy. In Berlin, **trinckle 3D** is applying the principle to dental care. Together with scientists at Charité and TU Berlin, the company has developed an automated digital workflow for the production of patient-specific tooth implants that replicate an individual's root geometry.

Devices designed for children

Personalized, patient-specific solutions are especially important in pediatrics. After all, children's anatomy is

smaller, and they are still growing. Several device makers in Berlin and Brandenburg focus on designing implants and support systems specifically for the smallest patients. **Berlin Heart's** ventricular assist devices remain the only ones of their kind for infants and small children with severe heart failure. They can bridge the wait for a donor organ. Another example is Potsdam-based **Miethke**, a global specialist in hydrocephalus treatment. The company develops shunt systems tailored to the needs of infants and children, helping manage a condition that often required lifelong care. Miethke works closely with Charité's neurosurgery department.

Other companies focus specifically on childhood conditions. **Cranioform** trains clinicians at Charité in helmet therapy for infant skull deformities. **CCtec**, Berlin's Deutsches Korsettzentrum, fits 2,000 to 2,500 scoliosis braces a year, mostly for children and teenagers, using body scans instead of plaster casts. **Merete**, well known for their hip implants, develops PediatrOS implants that correct leg-axis misalignment as children grow. Software is entering the field too: **motus med**, a Charité and BIH venture, uses smartphone video and AI to speed up diagnosis of infantile spasms.



"AI and robotic assistance open new diagnostic and therapeutic pathways in cardiovascular medicine. The combination of advanced imaging modalities, AI based risk analysis and decision support tools with robotic precision will enable us to tailor interventions to individual phenotypes and improve the quality of minimally invasive treatments. The close collaboration between a world leading institution in cardiovascular medicine, the Deutsches Herzzentrum der Charité, the German Heart Center Foundation and leading industry partners creates an environment to develop and clinically validate new technologies and to successfully translate research in the fields of AI and robotics into everyday clinical practice."

Prof. Volkmar Falk, Chief Medical Director, DHZC, Director, Department of Cardiothoracic and Vascular Surgery, Chairman of the DHZC Divisional managers

© DHZC / Paff

Robotics moves toward routine care

In Berlin and Brandenburg, robotic assistance is rapidly moving from pilot projects into routine care. In 2025, the Universitätsklinikum Ruppin-Brandenburg became the first clinic in eastern Germany to introduce robotic knee and hip surgery. Charité's Navigation and Robotics Laboratory has long run its own experimental operating room to test image-guided and robotic surgery before it reaches clinical practice. In 2025, the German Heart Center of the Charité (DHZC) built one of Europe's largest robotic cardiac surgery programs within months, treating more than 260 patients by year's end. The system, which was backed by the German Heart Center Foundation, supports surgeons with articulated instruments and three-dimensional visualization.

Berlin robotics research also gained a shared home in July 2025, when the Berliner Hochschule für Technik (BHT) opened its **House of Robotics** (Haus der Robotik). The research center houses BHT's program for Humanoid Robotics, which has been running since 2018, alongside labs for soft robotics and human-robot collaboration, including work on industrial exoskeletons.



The dental implant developed by researchers at TU Berlin, Charité, and trinckle 3D eliminates the need for a screw thread, enabling a less invasive implantation procedure. © trinckle 3D GmbH

Digital tools and a growing start-up base

Digital innovation is reshaping cardiovascular care. **BIOTRONIK** has long combined implantable devices with remote monitoring and connected patient management. In May 2026, BIOTRONIK, together with Charité and the German Heart Center Foundation, announced a research partnership in digital and translational cardiology. It builds on inCareNet HF, the telemonitoring platform BIOTRONIK runs with Teltow-based **GETEMED** and the Berlin-base software firm **SEMDATEX**.

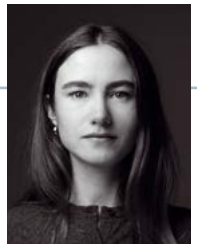
In Potsdam, the **Hasso Plattner Institute's Digital Health Cluster** and the nonprofit **data4life** jointly run SensorHub. The initiative turns wearable and sensor data into research-

Key players (selection)	
Organization	**Focus Area**
B. Braun	Infusion therapy, anesthesia, surgical care, infection prevention, and vascular systems for minimally invasive and surgical cardiovascular treatments.
Berlin Heart	Ventricular assist devices (VADs) providing mechanical circulatory support for infants, children, and adults with severe heart failure.
bess medizintechnik	Surgical implants and disposables for ENT, head and neck surgery, pulmonology and gastroenterology, including airway stents.
biotrics bioimplants	Regenerative implants for bone and soft tissue repair.
BIOTRONIK	Cardiac rhythm management, electrophysiology, neuromodulation, patient monitoring and remote monitoring systems.
Carl Zeiss Meditec	Ophthalmic diagnostics, surgical lasers and intraocular lenses.
Eckert & Ziegler	Radiopharmaceuticals, radionuclides and radiation therapy solutions for oncology and nuclear medicine.
FIAGON	Electromagnetic surgical navigation systems for ENT, neurosurgery and spine procedures.
Hologic	Mammography, breast biopsy, cervical health screening, molecular diagnostics and women's health solutions.

Key players (selection)	
Organization	**Focus Area**
Jenoptik	Berlin facility develops optical components and systems specifically for dentistry (intraoral scanners) and robot-assisted surgery.
Karl Storz	Endoscopy systems, surgical imaging and instrumentation.
Merete Medical	Orthopedic implants for hip revision, primary hip care and pediatric orthopedics.
MELAG	Sterilization, disinfection and instrument reprocessing equipment.
Novanta Medical	Insufflators, pumps, integrated operating room systems, and single-use tubing solutions for minimally invasive surgery.
OHST Medizintechnik	Design and manufacture of hip and knee implants, with contract manufacturing services for medical device companies.
Olympus Surgical Technologies	Medical endoscopes, endotherapy devices and surgical energy systems.
Osypka Medical	Cardiac electrophysiology and temporary stimulation devices.
Ottobock	Prosthetics, orthotics, exoskeletons and digital mobility solutions.
XION	Endoscopy systems and instruments for ENT, arthroscopy and laparoscopy.
Zimmer Biomet	Orthopedic implants for joint replacement, trauma and sports medicine.

ready datasets that are now used in data4life's own D4L Collect tool.

This research environment supports a steady flow of new digital health companies in Berlin. Start-ups are founded every year across areas such as clinical software, diagnostics, digital therapeutics and remote monitoring. Incubators and accelerators including the BIH Digital Health Accelerator and Vision Health Pioneers Incubator help founders move from clinical need to validated product. Berlin Brandenburg's medtech profile is therefore no longer defined by hardware alone. Its distinctive strength lies in the interaction between device engineering, clinical practice, software, data and manufacturing. From a child's heart valve or cranial orthosis to a connected implant or robot-assisted surgery, regional companies and institutions are building technologies around individual patients and specific clinical situations.



Dr. Selina Greuel, Co-Founder & CCO Insellar

"At Insellar, we are building the first interface to the basal brain, making previously hard-to-reach brain regions accessible to treatment. Berlin gives us a unique combination of world-class science and clinical expertise, a thriving deep-tech ecosystem, and early-stage investors willing to back bold ideas. Support from IBB Ventures' B# Pre-Seed Fund has been instrumental in helping us turn our vision into reality."

© Charité - Universitätsmedizin Berlin

Research institutes	
BAM	Materials testing, safety analysis and regulatory support for medical devices.
Charité – Universitäts-medizin Berlin & BIH	Translational medicine, clinical research and precision health.
Fraunhofer Institutes	Heinrich-Hertz-Institut (HHI), Institute for Reliability and Microintegration (IZM), Institute for Production Systems and Design Technology (IPK) and Institute for Open Communication Systems (FOKUS)
Hasso-Plattner-Institute	Digital health, health data science and patient-centered technologies.
Helmholtz Hereon (Teltow)	Metallic biomaterials research for medical implants, including titanium and magnesium alloys for regenerative and degradable implant applications.
PTB	Metrology, calibration and measurement standards for medical devices.
TU Berlin	Mechanically oriented medical device development, with focus on rehabilitation aids, medical product reprocessing systems and minimally invasive instruments.



Collaboration in Digital Cardiology: Prof. Heyo K. Kroemer, Chairman of the Executive Board of Charité; Dr. Volker Lang, Senior Vice President of Research & Development at BIOTRONIK; and Andreas Portmann, Managing Director of the German Heart Center Foundation (from left to right). © Andrea Vollmer



© Deutsches Herzzentrum der Charité (DHZC)

Highlight

Digital innovation is changing healthcare by bringing data, artificial intelligence and connected technologies into clinical practice. These developments are creating new opportunities to improve diagnosis, treatment and patient care.

In May 2026, **BIOTRONIK**, **Charité – Universitätsmedizin Berlin** and the **German Heart Center Foundation** announced a research and innovation partnership focused on digital and translational cardiology. The partnership combines the clinical expertise of the **Deutsches Herzzentrum der Charité (DHZC)** with BIOTRONIK's expertise in active cardiac devices, AI and connected health technologies, covering projects from early-stage ideas through joint development and contract research. Initial projects will explore AI-based tools and advanced simulation environments for device-based therapies, alongside training and education opportunities.

A similar interdisciplinary approach can be found at the **Hasso Plattner Institute's Digital Health Cluster** in Potsdam. The cluster brings together medicine and information technology, and it spans public health, health economics, computational genomics and data science. Its research covers a wide range of areas, including AI and machine learning in medicine, clinical data analysis, digital biomarkers, connected and context-aware health technologies, public health and the economics and regulation of digital health. Through research and teaching, the cluster contributes to the development of digital health technologies and the training of researchers in the field.



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Future Project

QuantumCardiology-AI

The research project **QuantumCardiology-AI** combines quantum sensor technology and artificial intelligence to advance cardiac diagnostics. It was launched in November 2025 at Humboldt-Universität zu Berlin and MSB Medical School Berlin with the aim to diagnose cardiovascular disease earlier and more precisely. Using thousands of magnetocardiography datasets, the project trains deep learning models to recognize magnetic field patterns that remain undetectable with standard diagnostic tools. The goal is to develop non-invasive, near real-time diagnostic methods. The team is open to collaboration from clinics, industry and research to bring these methods into clinical practice.



Prof. Niels Wessel, Lead of the QuantumCardiology-AI project at Humboldt-Universität zu Berlin and MSB Medical School Berlin

"After three decades of basic research in magnetocardiography, I am convinced that the door to clinical translation is now open. QuantumCardiology-AI is our way through that door: quantum sensing of the heart's magnetic signals, combined with artificial intelligence, for earlier and more precise diagnosis - without contact, radiation or contrast agents. In East Asia, recent national programs are already pursuing this path with determination. The science is ready. Whether Germany and Europe now seize this opportunity, created here in Berlin, is a question of will."

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Growing into a neurotech hub

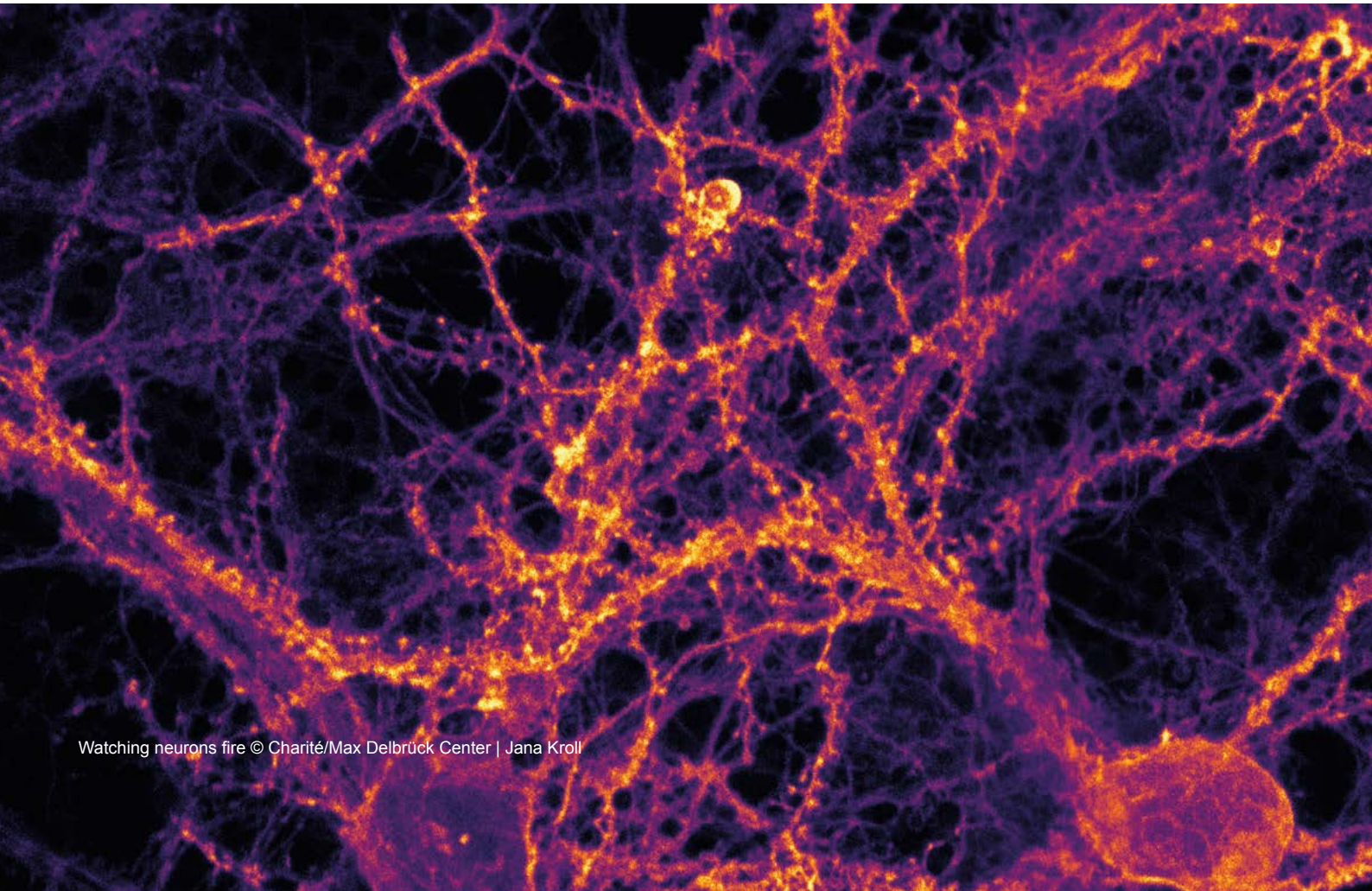
Neurotech is reshaping the diagnosis and treatment of neurological and psychiatric disorders. In Berlin Brandenburg, the field is moving from research into practical application through brain-computer interfaces, digital therapies and non-invasive diagnostic tools. Neurotech is opening up new therapeutic and diagnostic pathways for conditions including Alzheimer's disease, Parkinson's disease, epilepsy, stroke and traumatic brain injuries as well as mental disorders.

The German capital region combines excellent neuroscience, several clinically leading university hospitals, a growing transfer infrastructure and a start-up scene that attracts substantial investment. Together, these give Berlin Brandenburg the pieces needed to carry neurotech from early research through clinical testing to commercialization and market adoption.

Interdisciplinary collaboration in neurotechnology

Progress in neurotechnology depends on collaboration across disciplines. Clinical medicine contributes to the understanding of neurological conditions and therapeutic needs. Engineering, computer science, photonics and microelectronics provide the technologies required to measure, interpret and modulate activity across the brain and peripheral nervous system. Together, these fields enable the development of new approaches that can move from laboratory research into clinical practice.

The successful development and large-scale adoption of neurotechnologies require close collaboration across a broad range of high-tech industries. This is where the German capital region stand out. Berlin Brandenburg brings together world-leading research institutions, global industry players, innovative start-ups, and well-connected cross-sector networks. The region's expertise in life sciences & healthcare, photonics, microelectronics, quantum technologies, digital and AI solutions creates an ideal environment for developing, testing, and commercializing next generation neurotechnologies.



Watching neurons fire © Charité/Max Delbrück Center | Jana Kroll



OPM-MEG Charite © ReneKrempin

A strong research base

The region's neuroscience base is anchored by Humboldt-Universität zu Berlin, Charité – Universitätsmedizin Berlin, the Bernstein Center for Computational Neuroscience, the Einstein Center for Neurosciences and the German Center for Neurodegenerative Diseases (DZNE) site in Berlin. Together, these institutions address a wide range of scientific questions, from computational models of brain function to the mechanisms of dementia and other neurological diseases.

NeuroCure, the long-standing interdisciplinary network at Charité, has recently entered a fourth funding phase under the Excellence Strategy, with support continuing through 2032. The Cluster of Excellence aims to better understand disease mechanisms, strengthen local research networks and support new research groups and technological platforms.

The connection between research, clinical practice and innovation is also reflected in the work of Prof. Surjo R. Soekadar, Einstein Professor of Clinical Neurotechnology and Head of the Research Division for Translation and Neurotechnology at Charité – Universitätsmedizin Berlin. His work in clinical neurotechnology focuses on moving neurotechnological approaches into patient care, including brain-computer interfaces, neuromodulation and digital health solutions. As Chief Innovation Officer of the Charité, Prof. Soekadar, alongside Managing Director Avner Shahal, is



Dr. Frank Zanow, Founder and CEO of eemagine and ANT Neuro

"As a developer of neurotech solutions and Medical Device Manufacturer, we benefit from Berlin's unique ecosystem, one where neuroscience innovations can truly take root. Here, we are close to many of our academic and clinical partners, and the city itself is attractive particularly to international talent."

© ANT Neuro



© Charité | Mariia Streltsova

"Our research focuses on integrating next generation quantum sensing with novel neuromodulation technologies, including temporal interference magnetic stimulation, to create bidirectional brain-computer interfaces. We believe this convergence will enable a new generation of precision therapies for neurological and psychiatric disorders."

Prof. Surjo Soekadar, Head of research division Translation and Neurotechnology, Head of research group Clinical Neurotechnology, Charité – Universitätsmedizin Berlin

responsible for establishing the new BIH ARC Innovation Center (CBAIC) and its NeuroTech Open Innovation Hub. The hub is intended to connect researchers, clinicians, start-ups and investors around concrete neurotechnology projects, with the goal of accelerating their translation into clinical practice and real-world healthcare applications.

Sensors, therapy and transfer

The OPM-MEG Center demonstrates how quantum metrology is entering clinical neuroscience. Charité and the Physikalisch-Technische Bundesanstalt (PTB) opened the center for biomagnetic brain research in 2025. In clinical neuroscience, a new type of high-sensitivity quantum sensors, the so called optically pumped magnetometers (OPMs), enable the measurement of the brain's tiny magnetic fields with high temporal and spatial resolution. Because the sensors operate at room temperature and can be used during natural movement, the technology opens up new possibilities for studying Parkinson's disease, epilepsy and psychosis.

The Charité BIH ARC Innovation Center, opened at Charité in 2026, extends this same translational mindset into Berlin Brandenburg's start-up scene. It serves as an accelerator for research on its way into clinical practice.

Investor interest is gaining momentum: Insellar secured €400,000 in pre-seed backing from IBB Ventures' B# fund. The company is developing a brain-computer interface for severe depression and will use the funds to build a functional prototype. Nuuron raised a €3.5 million seed round led by High-Tech Gründerfonds (HTGF) for its "memory pacemaker", a non-invasive, photonic neurostimulation for dementia patients.

Several well-established medtech companies are already active in this space. BIOTRONIK's portfolio includes the Prospera Spinal Cord Stimulation system for chronic pain. Ottobock has developed the exopulse suit, designed to reduce spastic symptoms and pain in conditions such as cerebral palsy and multiple sclerosis.

Meeting points for the neurotech community

A packed event calendar helps keep the ecosystem visible and connected. ANT Neuromeeting brings researchers, clinicians and industry together in Berlin every year, while the Berlin Neuroscience Meeting returned in 2026 for its ninth edition. The 14th MindBrainBody Symposium is scheduled for March 2027 both in Berlin and online, giving the region another interdisciplinary platform for exchange on brain research and related technologies.

Key players (selection)

Organization	Focus Area
ANT Neuro	High-density EEG, neuronavigation, and neuromodulation systems for research and clinical use.
BIOTRONIK	Neuromodulation solutions for chronic pain, including spinal cord stimulation and remote patient monitoring.
eemagine Medical Imaging Solutions GmbH	B2B neurotech development and manufacturing of EEG, TMS, and neuronavigation systems.
InnoSphere	Home-based, non-invasive brain stimulation devices for ADHD and cognitive disorders.
Insellar	Minimally invasive brain-computer interface for targeted stimulation in major depressive disorder.
NIRx	Near-infrared brain imaging systems and software for research and neurofeedback.
Nocturne	AI-based retinal imaging to diagnose and monitor neurological diseases.
Nuuron	Non-invasive photonic "Memory Pacemaker" digital therapy for Alzheimer's disease.
Ottobock	Prosthetics, neuro-orthotics, and exoskeletons with digital solutions for neurorehabilitation.

Research institutes	
Organization	**Focus Area**
Berlin Institute of Health at Charité (BIH)	Translational research hub advancing precision medicine, including neurotechnology for brain diseases.
Bernstein Center for Computational Neuroscience Berlin	Computational and cognitive neuroscience across scales, from synapses to brain systems.
Charité – Universitätsmedizin Berlin	Clinical neuroscience, brain–computer interfaces, and non-invasive neuromodulation for neurological and psychiatric disorders.
Einstein Center for Neurosciences Berlin	Interdisciplinary umbrella fostering neuroscience collaboration, training, and visibility in Berlin.
Fraunhofer Institute for Reliability and Microintegration (IZM)	Microelectronics and system integration for neurotech devices, sensors, and implants.

Research institutes	
Organization	**Focus Area**
German Center for Neurodegenerative Diseases (DZNE)	National research on causes, prevention, and treatment of neurodegenerative diseases.
Humboldt-Universität zu Berlin	Academic neuroscience and computational neuroscience.
Intelligent Biomedical Sensing (IBS) Lab	Wearable multimodal neurotech (fNIRS, EEG) with maschine learning (ML) for everyday brain–body monitoring.
Leibniz-Forschungsinstitut für Molekulare Pharmakologie (FMP)	Molecular pharmacology targeting neurodegeneration and brain-related disease mechanisms.
Max Delbrück Center (MDC)	Molecular and systems neuroscience research on brain function, circuits, and neurodegeneration.
NeuroCure Cluster of Excellence	Excellence cluster for mechanisms and therapies of neurological and psychiatric disorders.



© privat

“Nuuron is well on its way to developing what may become one of the first true Digital Drugs for Alzheimer’s disease: an at-home neuromodulation therapy based on our proprietary technology. While no molecule is involved, our approach aims to deliver therapeutic effects through precisely engineered neurostimulation. From the very beginning, the outstanding neurotech research environment around Charité has been the ideal place to develop our start-up.“

Fabian Queisner, Founder and CEO of Nuuron



exopulse suit David Haase © OTTOBOCK

Highlight

Jointly run by Charité – Universitätsmedizin Berlin and the Physikalisch-Technische Bundesanstalt (PTB), the **OPM-MEG center** brings together complementary expertise from both institutions. PTB oversees the biomagnetic measurements using its quantum sensors, while Charité applies the technology to neurological and psychiatric research. At its core is a magnetoencephalography (MEG) system built from around 100 optically pumped magnetometers (OPMs), supported by a joint national research grant and housed in a dedicated magnetically shielded chamber procured by PTB. Located on Campus Charité Mitte, close to patients, the center also serves as a testbed for qualifying PTB's quantum sensor systems for industrial use and regulatory approval.



Opening OPM-MEG-Zentrum © Charite | Rene Krempin

Future Project

NeuroTech Open Innovation Hub

Charité BIH ARC Innovation Center (CBAIC) has launched the **NeuroTech Open Innovation Hub**, a clinically grounded platform for the responsible development, validation, and scaling of neurotechnology across medical and consumer applications. The hub was created in response to a persistent European scaling gap. While Europe produces strong research output, funding remains fragmented and commercialization pathways are weak. A largely unregulated consumer segment adds to the challenge. The hub's structured innovation platform for science, clinical practice, industry, and policy seeks to address these issues. The NeuroTech Hub targets start-ups, clinicians, investors, regulators, and patient communities; its services span stakeholder access through community and corporate councils, ecosystem matchmaking, public-private matching funds via the Einstein Foundation Berlin, and product evaluation including a Charité Seal of Quality and EU Seal of Trust readiness. With the hub, Charité aims to establish Berlin as a leading hub for responsible neurotechnology.



From Servers to Cells – The Future of AI-Driven Biotechnology © AI-generated

Reshaping healthcare with artificial intelligence

Artificial intelligence (AI) is transforming healthcare at a rapid pace. It is changing how health data are collected, interpreted and applied across areas ranging from basic research and drug development to diagnostics, clinical decision support, disease management, and administrative medical tasks. Few regions are as well positioned to drive this shift as Berlin Brandenburg. The capital region brings together research institutions, hospitals, technology developers and companies working across these different stages of medical AI, supported by a growing infrastructure for testing, validation and clinical translation.

A strong foundation for AI in medicine

Medical AI in the region draws on the close proximity of research, clinical expertise and technology development. This research infrastructure continues to expand. **Charité – Universitätsmedizin Berlin** established the **Institute for Artificial Intelligence in Medicine (IKIM)** in 2025. IKIM aims to bring together AI activities across prevention, diagnosis, treatment and follow-up, with a focus on transferring reliable AI into clinical practice (see “Future projects”).

At the **Max Delbrück Center**, the **Center for AI-Accelerated Molecular Innovations in Medicine (AI²M)** is adding substantial research capacity. The center, backed by €30.8 million from the **Helmholtz Association**, will develop AI-driven approaches for precision treatment and prevention. Its researchers will use AI to analyze large-scale molecular and clinical datasets, including data from population studies. Two hubs in Berlin-Mitte and Berlin-Buch are planned, with construction set to begin in 2026.

The **Hasso Plattner Institute** is also expanding its expertise in digital health. In November 2025, Georg Kaissis took up a professorship in Digital Health: Human-Centered Transformative AI. His research focuses on multimodal AI systems that integrate medical imaging, clinical findings, genomics and population health data. One of the key aims is to develop trustworthy systems in which AI supports clinical decision-making instead of replacing it.

Berlin's broader research infrastructure includes the **Berlin Institute for the Foundations of Learning and Data (BIFOLD)**, based at **Technische Universität Berlin**, with **Charité** as its institutional partner. BIFOLD conducts research in machine learning and big data management, including clinical decision support and healthcare data science. The **Charité Lab for Artificial Intelligence in Medicine (CLAIM)** focuses on AI for medical decision-making, and the **Robert Koch Institute's Center for Artificial Intelligence in Public Health Research (ZKI-PH)** extends the application to public health.

From biological insight to drug development

Beyond academic research, several companies based in the capital region are applying AI in the early stages of therapeutic development. The technology helps design therapeutic candidates and inform decisions about which targets or molecules should advance through the development pipeline.

Epsilico uses generative AI and geometric deep learning to develop therapeutic proteins against difficult targets such as G protein-coupled receptors, ion channels and transporters. **Pheiron** takes a different approach. Its applied AI models are designed to quantify biological risk and identify drug programs with a higher probability of translating successfully into humans.

Supporting diagnosis and care

Closer to clinical practice, regional companies are developing AI for medical imaging, pathology, monitoring and decision support. Charité spin-off **Aignostics** develops AI tools for digital pathology, analyzing tissue images and associated biomedical data for drug discovery, clinical research and precision medicine. Other Berlin companies address specific diagnostic needs. **mediaire** develops AI-based tools to support radiologists in the assessment of MRI scans, while the MX Healthcare platform **Vara AI** applies AI to mammography.

Noah Labs uses AI for the remote monitoring of people suffering from cardiovascular disease. Its Ark platform analyzes data from connected medical devices. The company is clinically investigating voice analysis as a potential early biomarker for heart failure.

Another group of applications addresses the organizational and documentation workload surrounding patient care. **Aiomics** combines existing case documents, voice notes and patient information to support documentation and workflow coordination in hospitals, thereby reducing the burden on healthcare staff. **Voize** enables nurses to create documentation through speech, directly on a smartphone and without continuous internet access. In 2025, the company raised $50 million for its AI voice assistant for medical staff. **Radiant Science** develops voice agents for healthcare providers that answer calls, schedule appointments and transfer information into clinic calendars and electronic health records.

Enabling safe, practical use

Across these different applications, the path from a functioning AI model to practical use in healthcare involves more than technological performance. Access to suitable and reliable data, interoperability, validation, regulatory requirements and integration into clinical workflows all influence whether an application moves from development into practice.

At the **Berlin Institute of Health at Charité (BIH)**, Prof. Sylvia Thun and her research group on Digital Medicine and Interoperability are addressing a fundamental part of this challenge: making sure that health data from different sources are structured, exchanged and reused through common standards and terminologies. Working with hospitals, research institutions, industry and policymakers, the



BIFOLD is one of Berlin's central research centers for artificial intelligence and data science. In 2026, it co-organized the Berlin Summer School of Artificial Intelligence and Society, which brought together 50 students for talks and hands-on sessions on responsible AI, robotics and physical AI. © BIFOLD | Michael Setzpfandt



Prof. Alexander Meyer, Director of the Institute for Artificial Intelligence in Medicine (IKIM); Chief Medical Information Officer of the German Heart Center, Charité

"As the overarching goal of the Institute for Artificial Intelligence in Medicine, I see the IKIM generating real added value at Charité in both research and application, enabling us to implement AI in medicine efficiently. In particular, we are focusing on the application of foundation models and agentic AI systems. Over the next four years, such systems may be able to interact with clinical systems in a semi-autonomous or even autonomous manner and, in some cases, make decisions independently. Naturally, we also want to involve industry in this process."

© DHZC | Sarah Paff

group develops and tests interoperability and documentation solutions based on international standards. This work provides part of the data infrastructure on which medical AI development and implementation depend.

Alongside these data foundations, the region is also developing structures to test and validate AI applications and support their translation into everyday care. **TEF-Health** provides infrastructure for testing AI and robotics in real

Highlight

The **ai.berlin hub** is a physical community space for Berlin's AI ecosystem. It brings together companies, research institutions, startups and other organizations to exchange ideas, build connections and work together. The hub is part of a growing technology and innovation cluster at the **CIC Berlin** campus, alongside the neighboring **Deep Tech Hub Berlin**. From this location, the ai.berlin team works with partners across the city's AI ecosystem and organizes meetings, events and delegations, creating a central point of contact for Berlin's diverse and geographically dispersed AI community. The hub also serves as a venue for events, workshops, consultation sessions and networking formats.

Turning AI's promise into medical impact

Turning the possibilities of Artificial Intelligence into real improvements will depend on more than better algorithms. A handful of key factors will decide whether AI innovations become reliable tools in research, diagnostics and everyday care.

High-quality health data
Strong data protection and security
Powerful digital infrastructure
Interoperable systems and interfaces
Regulatory clarity and validation support



"Berlin has a number of internationally recognised big data and machine learning research groups that already have many years of experience and with which we cooperate successfully. In addition, many other interdisciplinary research institutions and think tanks are based in Berlin, which can stimulate and complement each other. BIFOLD and its institutional partner Charité together with the strong AI ecosystem of the region are increasingly translating cutting-edge research into medical applications that can improve healthcare and patient outcomes."

Prof. Klaus-Robert Müller, Director of the Berlin Institute for the Foundations of Learning and Data (BIFOLD)

© BIFOLD

and simulated clinical environments and supports developers as they address technical, regulatory and market-access requirements in Europe. Healthcare environments are equally important. The **BIH Charité ARC Innovation Center (BCAIC)** brings together clinical expertise, research and technology development to co-create and test innovations in healthcare settings. The **Berliner Simulations- und Trainingszentrum (BeST)** at Charité adds simulation-based training and a translation, innovation and creativity network (BeST-TrIK) that links industry with clinical contexts and expertise.

Together, these structures address key requirements for translating medical AI into practice, from interoperable data and testing to regulatory preparation and integration into clinical settings.

Highlight

The Testing and **Experimentation Facility for Health AI and Robotics (TEF-Health)** provides a single-entry point to extensive tests on health AI and robotics solutions within real or realistic environments. It brings together 52 partners, including top hospitals such as Charité, research institutes, and certification experts. This pan-European initiative supports the safe, effective and trustworthy introduction of AI and robotics in healthcare. Its scope of services ranges from software for diagnostics and patient care to intelligent robotic systems for surgery and nursing, as well as access to data. By enabling technologies to be tested under realistic conditions, the infrastructure is designed to accelerate certification processes, support regulatory compliance and facilitate market access across Europe.



Prof. Dr. Petra Ritter, coordinator of TEF-Health and Head of the "Brain Simulation Section" at the Berlin Institute of Health (BIH) at Charité – Universitätsmedizin Berlin

"With TEF-Health, we want to help ensure that the digital transformation in the healthcare sector is secure and transparent."

© Charité – Universitätsmedizin Berlin

Future Project

Institute for Artificial Intelligence in Medicine (IKIM)

The Institute for Artificial Intelligence in Medicine (IKIM) at Charité – Universitätsmedizin Berlin was founded to integrate AI solutions into healthcare, generate evidence on their clinical benefit, and embed them in everyday clinical practice. Led by founding director Professor Alexander Meyer, the institute's work covers fundamental AI research, development of clinical applications and structured testing in patient care. In close cooperation with the Berlin Institute for the Foundations of Learning and Data (BIFOLD), IKIM develops new AI methods and translates them into applications for medicine and clinical practice. A dedicated service unit supports researchers and clinicians on AI projects. The institute also develops curricula for medical education and continuing education programs to anchor AI competencies in healthcare professionals. The institute is based at Campus Virchow-Klinikum.



A doctor analyzes AI-assisted medical data © AI-generated

AI across the healthcare value chain

Examples are selective and represent different stages of research, development, validation and implementation. Some players are active across more than one stage. Not all applications are already in routine clinical use.

Stage	How AI contributes	Selected examples
Basic research and data science	Analysis of biomedical, molecular and clinical data; drug discovery and modeling	• Berlin Institute for the Foundations of Learning and Data (BIFOLD) at Technische Universität Berlin • BIH ailslab • data4life • German Research Center for Artificial Intelligence (DFKI) Labor Berlin • Zuse Institute Berlin (ZIB)
Drug discovery and development	Target identification, virtual screening, molecular design, biomarker discovery and patient stratification	• Center for AI-Accelerated Molecular Innovations in Medicine (MDC) • Epsilico • Lucid Genomics • Pheiron • Phinomics • Provolut
Diagnostics	Imaging analytics and interpretation of lab data	• Aignostics • Charité Lab for Artificial Intelligence in Medicine (CLAIM), Charité – Universitätsmedizin Berlin • dentalXrai • Fraunhofer Center for Digital Diagnostics • Institute of Medical Informatics (IMI), Charité – Universitätsmedizin Berlin • LIMAA Technologies • Magnosco
Clinical applications and medical technology	Clinical decision support, risk prediction, monitoring and intelligent medical devices	• Amboss • Institute for Artificial Intelligence in Medicine (IKIM), Charité – Universitätsmedizin Berlin • Mediaire • Nia Health • Noah Labs • Sphaira • Vara
Care and public health	Documentation, workflow automation, assistive systems; population health surveillance and prevention	• Ascléa • Centre for Artificial Intelligence in Public Health Research (ZKI-PH) • Doctolib • Medical University Lausitz – Carl Thiem • nextOR • NurseIT Institute • Oracle Health • Recare • Samedi • voize
Validation, testing and implementation	Clinical validation, experimentation and evidence generation	• Berliner Simulations- und Trainingszentrum (BeST) • Charité BIH ARC Innovation Center (CBAIC) • maia – Center for Applied AI in Medicine • MediCoRE • TEF-Health

Prevention: From personal health to pandemic preparedness

People in Germany and many other countries are living longer than ever. But longer lives do not necessarily mean more years in good health. Closing this gap requires a comprehensive approach to prevention – from increasing health literacy to early detection and robust public health structures. Companies and research institutions in Berlin Brandenburg are working on a range of preventive strategies, including digital support tools, vaccines, and concepts for preparing for the next pandemic.

Today, a 65-year-old person in Germany can expect to live for another 18 to 21 years. However, only a little more than eight of these years are likely to be spent in good health. As more people live into old age, the need for long-term care and treatment for chronic conditions is increasing. This demographic development is one of several factors contributing to rising healthcare expenditure. Spending by Germany's statutory health insurance system increased from €202 billion in 2015 to a record €336.4 billion in 2025 – an increase of 66.6 percent within a decade[1].

Investing in prevention can help extend the number of years people spend in good health. Improving health literacy is one focus of prevention initiatives in Berlin Brandenburg. A representative survey conducted in 2024 found that three-quarters of adults in Germany had low health literacy[2]. **Charité – Universitätsmedizin Berlin** addresses this challenge through its Health Education research focus, with projects focusing on areas such as mental health and drug prevention. Established in 2024, **PatientenUniversität Brandenburg** offers information and support services tailored to the needs of people in rural regions. The **Healthy Communities** project is developing multilingual services and training health guides to help people from different social groups navigate local health resources.

Targeted local initiatives can also help close gaps between medical and social care. **DiVerso**, developed as a pilot project by the Treptow-Köpenick public health office, is a free digital portal that helps professionals working within Berlin's

1 Verband der Ersatzkassen e. V. (vdek)

2 Technical University of Munich



© canadastock - shutterstock.com



A program developed at Charité demonstrates how targeted nicotine prevention can be integrated into everyday school life.
© Deutsche Herzstiftung | Bettina Ausserhofer

support system identify suitable services for people facing complex health and social challenges.

Early detection and tailored prevention

Prevention is most effective when it takes individual risks and circumstances into account. Detecting disease before symptoms appear offers opportunities to intervene early and potentially delay or prevent its progression.

Launched in July 2026, the **Einstein Center for Early Disease Interception (EC-EDI)** aims to detect and treat diseases at their earliest stages, potentially even when only a few diseased cells are present. Building on a two-year preparatory phase, the center has secured €6 million in funding over six years. Researchers from **Charité – Universitätsmedizin Berlin**, the **Max Delbrück Center**, **Freie Universität Berlin**, **Humboldt-Universität zu Berlin** and other partners are developing methods that combine single-cell analysis, spatial biology, advanced disease models and artificial intelligence.

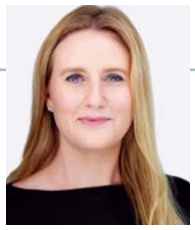
Prevention also needs to reflect the needs of different population groups. For example, migrants, children, and people facing social disadvantage may encounter different health risks and barriers to care. Tailoring programs to their needs, including language and access, is an important part of effective prevention.

Women's health is another area where prevention is becoming more tailored to individual needs and life stages. The **PETRA** project, involving the **Berlin Institute of Health at Charité (BIH)** and **Femna Health**, is developing an AI-supported app to provide personalized information and support during perimenopause. **Vara AI**, operated

by **MX Healthcare GmbH**, develops AI software to support radiologists in breast cancer screening. Beyond individual applications, the **GAIA network**, initiated by the **Berlin Institute for the Foundations of Learning and Data**, connects research and innovation activities in women's health. Berlin's **WomenX Collective hub**, launched in partnership with the United Nations Population Fund, Charité and BIH, brings together organizations working in this field.

Longevity: Preventive medicine or lifestyle trend?

While prevention focuses on reducing disease risks and detecting health problems early, longevity takes a broader approach: extending the years people spend in good health, often referred to as *healthspan*. The field combines preventive medicine with research into aging and lifestyle factors such as nutrition, exercise and sleep. While the benefits of regular physical activity, a balanced diet and established preventive measures are well documented, the effectiveness of many newer longevity treatments and interventions need further research.



Madeleine Roach,
Country President, Sanofi Deutschland

"Prevention and early detection are essential to building resilient healthcare systems. By combining scientific innovation with strong partnerships across healthcare, research and public institutions, we can protect people from preventable diseases, detect illness earlier, and prevent secondary diseases - building not only a more resilient healthcare system, but a more resilient economy and society for generations to come."

© Sanofi



Berlin-based ProBioGen is developing Minapharm's Bundibugyo ebolavirus vaccine candidate using its proprietary MVA-CR19 platform. © PrioBioGen

Global and public health

Vaccination remains one of the most effective ways to prevent infectious diseases. In Berlin, both **Charité – Universitätsmedizin Berlin** and the **Max Delbrück Center** conduct vaccine-related research, while the **Berlin Centre for Travel and Tropical Medicine** is one of the largest clinical trial centers for vaccine studies.

ProBioGen is also contributing to vaccine development. Together with Minapharm, the Berlin-based biopharmaceutical company is working on a vaccine candidate against Bundibugyo ebolavirus, with up to US$16.5 million in funding from the Coalition for Epidemic Preparedness Innovations (CEPI). The project aims to advance the candidate into preclinical development and a planned Phase 1 clinical trial in Africa.

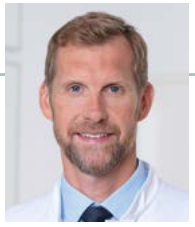
Managing highly infectious diseases also requires specialized clinical facilities and infection control procedures. In May 2026, **Charité** treated a U.S. citizen infected with Bundibugyo ebolavirus in its specialized isolation unit. The case illustrated the hospital's capacity to manage highly infectious diseases, combining specialist clinical care with strict infection control and close coordination with public health authorities.



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"At the Center for Artificial Intelligence in Public Health Research, we want to understand where infectious diseases are spreading, who is at risk and how outbreaks might develop. AI helps us connect information from different sources, from infection reports to climate data, and identify patterns that would otherwise be difficult to detect. With this, we can give public health authorities a better basis for deciding when and where to act."

Dr. Katharina Ladewig, Managing Director of the ZKI-PH



Prof. Leif Erik Sander, Director of the Department of Infectious Diseases and Critical Care Medicine at Charité and head of a research group at the Berlin Institute of Health at Charité (BIH) and spokesperson of the Einstein Center for Early Disease Interception

"Prevention and innovation are the only ways to keep our health system financially sustainable in the long term."

© die Hoffotografen



© David Ausserhofer, MDC

Early detection and surveillance are also important components of outbreak preparedness. Several institutions in Berlin Brandenburg contribute to this work. At the **Robert Koch Institute's Center for Artificial Intelligence in Public Health Research (ZKI-PH)** in Wildau, researchers develop AI-based methods to analyze health and environmental data, model disease spread and support public health decisions. The **WHO Hub for Pandemic and Epidemic Intelligence** in Berlin works with countries and research partners worldwide to improve disease surveillance, data analysis and early warning systems. In October 2026, the WHO Hub renewed its cooperation agreements with Charité and the Robert Koch Institute through 2031.

Highlight

The **Centre for Artificial Intelligence in Public Health Research (ZKI-PH)** of the Robert Koch Institute develops AI-based methods for epidemiology, disease surveillance and public health research. The research facility is located at Centre for Future Technologies in Wildau, Brandenburg, and employs more than 50 researchers in five units working on developing models, adapting existing AI methods for public health applications, and preparing data and results for public authorities and policymakers. One example is CLIMADEMIC, a research project investigating how climate change influences the spread of infectious diseases and pandemic dynamics. By combining climate models and data with insights from infection biology and epidemiology, the project uses artificial intelligence to better understand climate-related health risks and predict how disease patterns may evolve under future climate scenarios. The ZKI-PH also offers an interdisciplinary three year doctoral program in the field of AI-supported applications in public health.





ZKI-PH organizes the International Symposium “Artificial Intelligence in Public Health Research”. Its third edition took place in Berlin in September 2026. © Steffen Kugler

Key Players	
Selected organisations and companies working on prevention, early detection and health promotion in Berlin Brandenburg	
Research and public-health institutions	
Centre for Artificial Intelligence in Public Health Research (ZKI-PH), Robert Koch Institute	Develops AI models and simulations for epidemiology, disease surveillance and public health research.
Einstein Center for Early Disease Interception (EC-EDI)	Investigates molecular changes that precede disease symptoms, using single-cell analysis, disease models and AI to develop new approaches to early detection and treatment.
WHO Hub for Pandemic and Epidemic Intelligence	Connects countries and research partners to improve disease surveillance, outbreak detection and analysis of emerging health threats.
Early detection and precision medicine	
CheckImmune	Provides immune biomarker testing and data analysis for drug development and clinical studies.
Epimune	Uses epigenetic markers to measure immune cell populations in blood samples for research and immune monitoring.
Mental health and digital prevention	
Dear Employee	Provides software for assessing psychosocial risks at work and identifying measures to improve working conditions.
detoxi Health	Offers app-based programs to reduce digital stress, excessive screen time and problematic smartphone use.
Krisenchat	Provides free, confidential crisis support via chat for children, adolescents and young adults under 25.
SuchtGPT	Develops an AI chatbot to answer questions about substance use and addiction and direct users to support services.

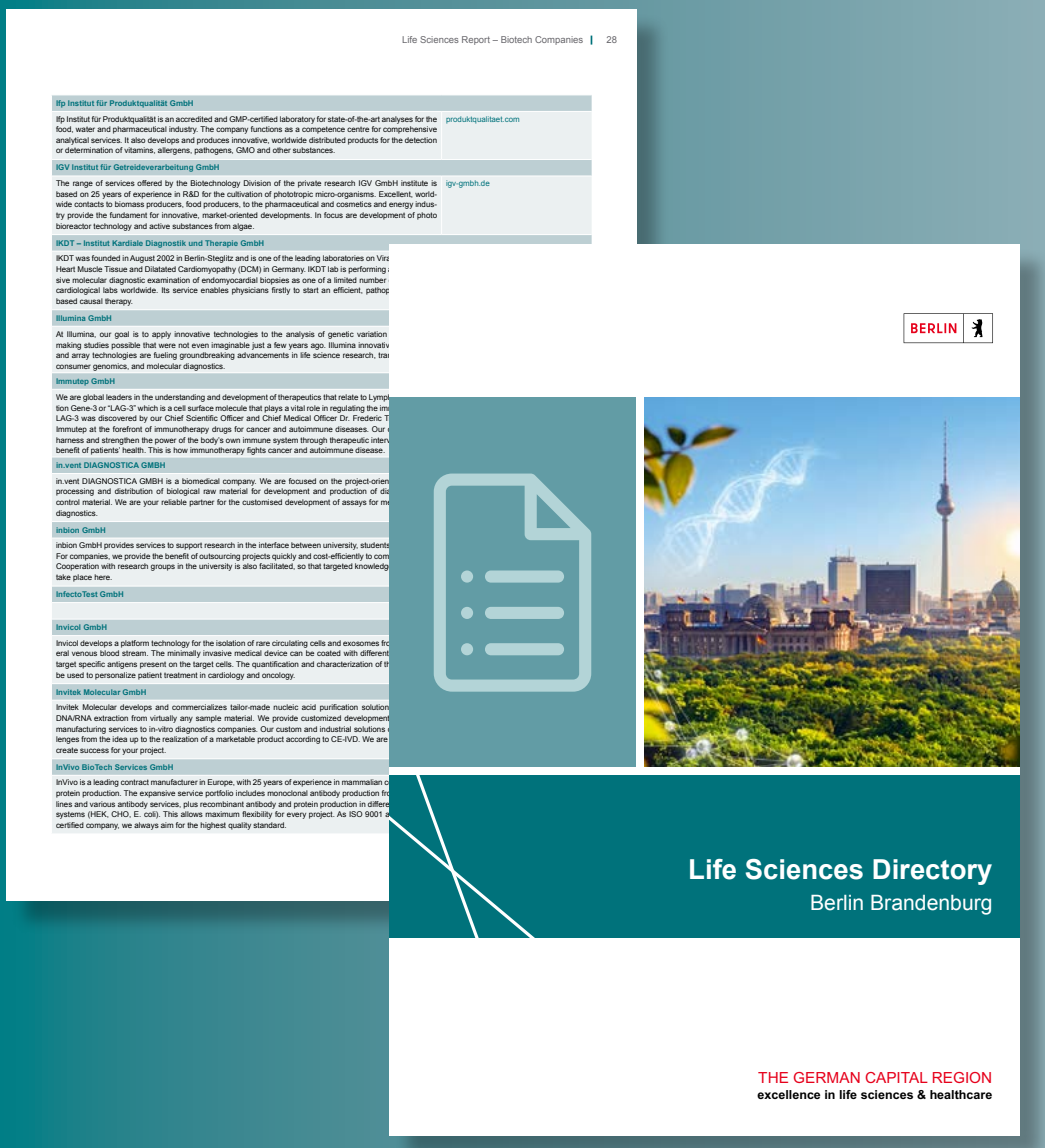
Key Players	
Women's health	
Beyoni	Offers at-home hormone and nutrient testing with individualized health recommendations for women in midlife.
Evela Health	Provides digital guidance and support for women during perimenopause and menopause, covering symptoms, lifestyle and hormonal changes.
Femna Health	Offers at-home hormone and other laboratory tests, health information and individual consultations on menstrual and menopausal health.
femote	Develops digital tools for gynecological practices and patients, combining symptom assessment, at-home testing and treatment guidance.
Hermaid	Offers a digital menopause companion with symptom tracking, health information and access to professional advice.
MX Healthcare GmbH (Vara AI)	Develops AI software to assist radiologists in mammography screening and the detection of suspicious breast lesions.

Future Project

DiVerso

DiVerso is a digital platform developed as a pilot project by the public health office in Berlin's Treptow-Köpenick district. It aims to improve access to health and social services, particularly for people with complex needs who struggle to navigate the existing system. The free online portal helps professionals working in healthcare, social services and public administration identify suitable support services based on a person's individual circumstances. It also provides multilingual checklists to help people understand which steps to take and where to seek assistance. By bringing together information on available services in one place, DiVerso aims to make referrals easier, reduce barriers to accessing support and improve coordination between the different organizations involved in health and social care.

Life Sciences Directory Berlin Brandenburg



Here you will find an overview of more than 840 companies, start-ups and research institutions in the HealthCapital region Berlin Brandenburg

https://www.healthcapital.de/en/press-media/life-sciences-directory/page/

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BERLIN PARTNER for Business and Technology | BERLIN

Berlin Partner für Wirtschaft und Technologie GmbH
Fasanenstr. 85
10623 Berlin
Germany
www.berlin-partner.de
+49 (0)30 46302-463

Follow us on LinkedIn
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