

Basel Area Life Sciences Ecosystem

Landscape Overview Q3 2021

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Basel Area Life Sciences Ecosystem Landscape Overview Q3 2021

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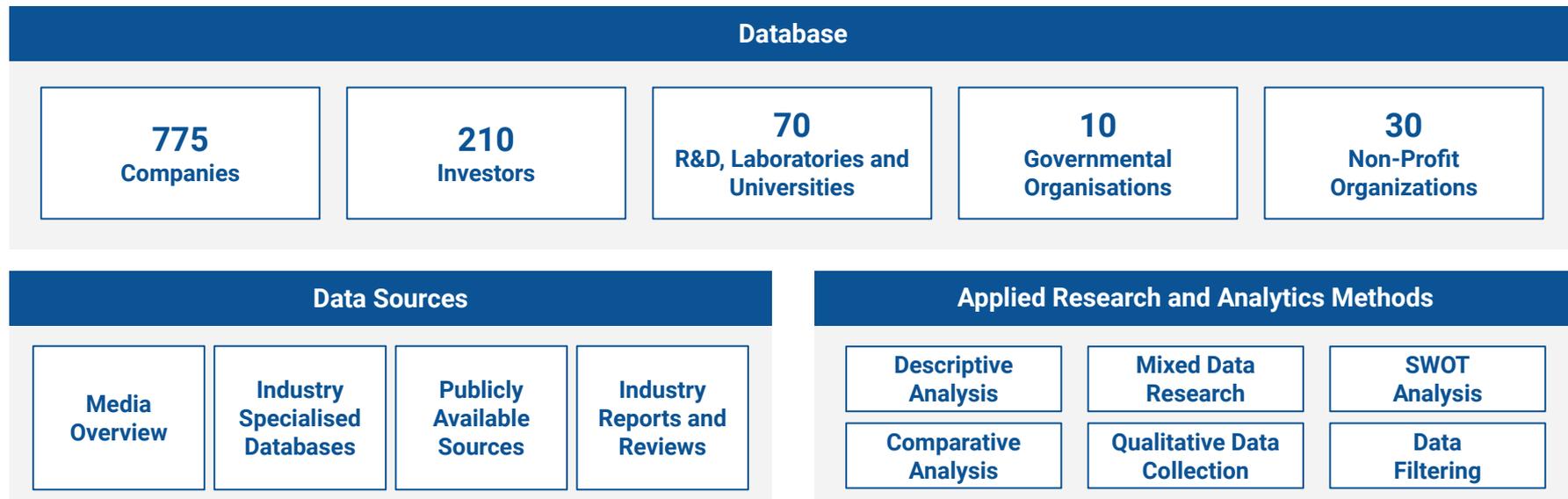
Developed by Deep Knowledge Analytics and Deep Pharma Intelligence, “**Basel Area Life Sciences Ecosystem Landscape Overview Q3 2021**” Report contains a comprehensive overview of the Life Sciences industry in the Basel Area. The report focuses to provide a comprehensive overview of the Life Sciences Industry Landscape in Switzerland and especially the Basel Area.

The study of the **Life Sciences Industry lends important insights into disease processes and allows the development of novel therapeutics and innovative medical devices**, thereby directly improving human health. The **coronavirus pandemic contributed to the growth in the Life Sciences**, and also highlighted the importance of the biotech and pharmaceutical industries as the whole world battles the COVID-19 disease and its impacts. This industry focus could have a lasting impact in shifting consumer and policymaker perspectives about these sectors in a positive direction.

In this analytical case study, we identified relevant companies, investors, R&D organizations and non-profit organizations that operate, interact with or are involved in any other way in the Life Sciences Industry. The key purpose of this report is to support all industry entities and stakeholders in strategic decision-making to gain maximum value.

We created a unified industry framework based on a vast industry database: 775 companies, 210 investors, and 110 organizations.

Approach of the Report



Life Science Ecosystem in Basel Overview Q3 2021 is a comprehensive analytical report which assembled information about key trends in the industry. The report was compiled to give a detailed systematic description of the leading companies, investors, R&D and Hubs, universities, and other non-profit organisations related to the life-science industry located in Basel, Switzerland. Basel is a life sciences ecosystem with one of the highest densities of biopharmaceutical enterprises globally and has an incredible pool of talents and specialists. The world's largest pharma companies, like Roche and Novartis located in Basel that secures business and scientific potential of the region. Basel is a hub of business-oriented applied science forums covering a wider range of topics with focus on translating science to practice like Basel Life forum. Combination of the innovative science and technology solutions brings together preeminent researchers to the region and creates prominent prospects of development.

Executive Summary

Life Sciences companies in Basel Area were distributed into 10 main categories (excl. others): **Medical Technology** refers to the companies which are dealing with medical devices, their production and distribution. **Biotechnology** category includes companies that use live organisms or their products, such as bacteria or enzymes, to manufacture drugs. **Management & Consulting** companies provide management and consulting services to companies dealing in the pharmaceutical industry. **Pharmaceuticals** category follow Management & Consulting companies and include companies that are dealing with drug production and distribution. Category that is named as **Clinics, Diagnostics and Laboratories** include Medical Clinics, Laboratories and Diagnostic Centers. **Healthcare IT-Systems** category contains companies that provide software solutions such as IT solutions, telemedicine companies, specialised platforms, communication solutions, etc. **Outsource Research** includes companies that are doing contract research and data analytics for other enterprises. **Life Insurance** and **P4 Medicine** categories contain companies that are dealing with insurance for the first mentioned category and precise diagnostics. **FinTech Services** category includes companies that provide saving products, financing for businesses, service provision companies for older consumers' and housing' provision, insurance services and products to fund lifestyle and social care.

Basel Area Life Sciences Ecosystem

FinTech Services

Biotechnology

Life Insurance

Outsource Research

Clinics, Diagnostics and
Laboratories

Healthcare IT-Systems

Pharmaceuticals

Medical Technology

P4 Medicine

Management & Consulting

Basel Area Life Sciences Ecosystem Q3 2021

Medical Technology

Clinical Diagnostics and Laboratories

Companies - 775
Investors - 210
Organizations - 110

Biotechnology

Other Organizations

Companies

FinTech Services

Investors

P4 Medicine

Non-profits

Life Insurance

R&D, Labs & Universities

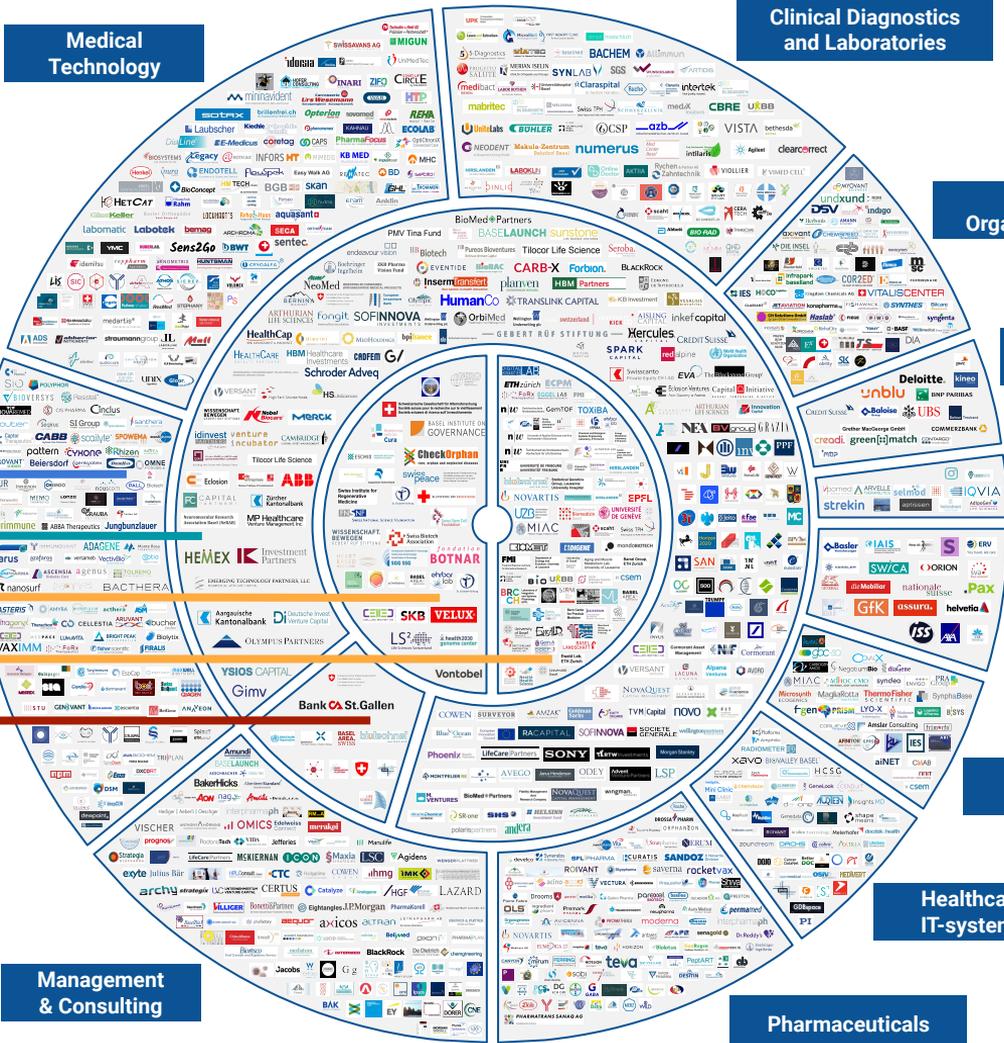
Government Organizations

Management & Consulting

Outsource Research

Healthcare IT-systems

Pharmaceuticals



Global Life Sciences Market Size

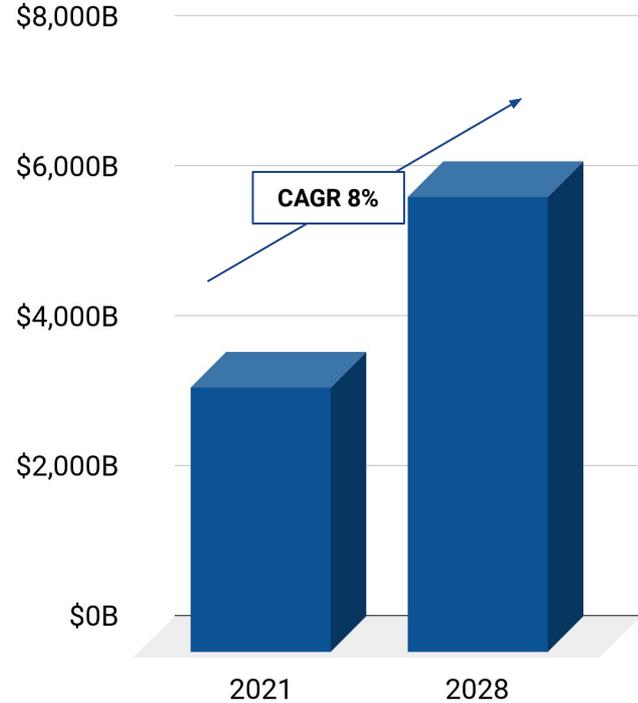
Global Life Sciences Market is based on gathering six of its domains, which are Pharmaceuticals, Biotechnology, Medical Technology, Healthcare IT-Systems, Clinics, Diagnostics and Labs, and P4 Medicine.

The total market size is accounted for more than \$3.5 trillions and is projected to growth at a **CAGR of 8%** from 2021 till **2028 to reach \$6 trillions**.

Global Life Sciences Market Size by Sectors

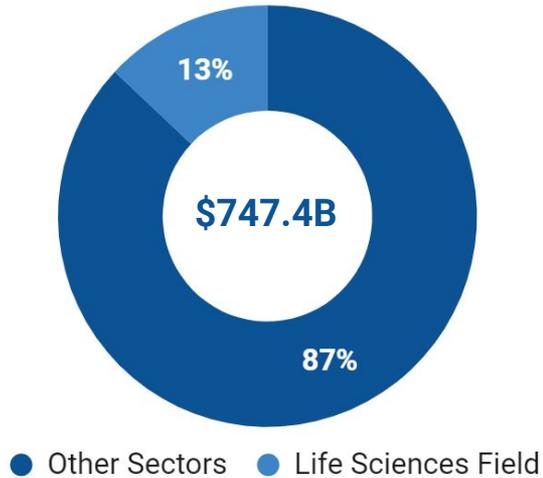


Global Life Sciences Market Size

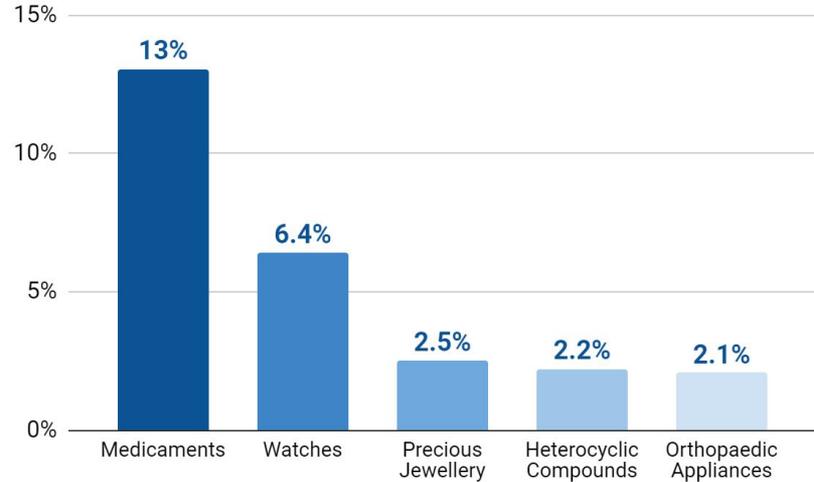


The Life Sciences Industry Landscape in Switzerland

Life Sciences Field in Total Swiss GDP, %



Main Swiss Categories of Export, % of Total Export

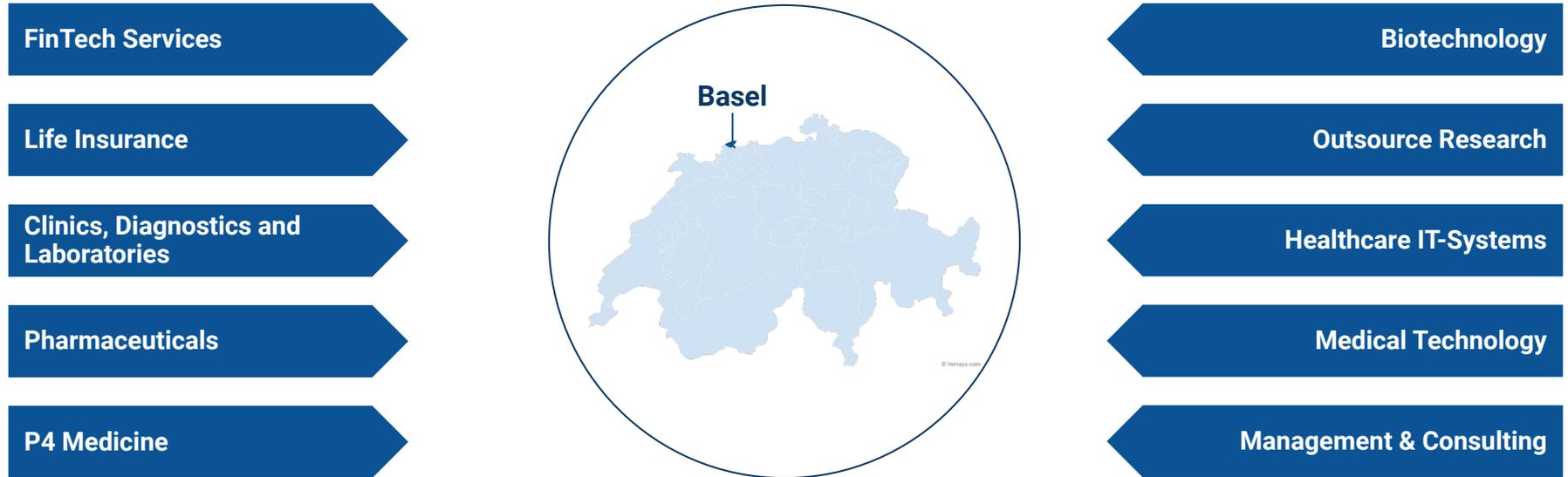


Numerous companies from all life sciences sectors have their headquarters in **Basel**: chemical and pharmaceutical companies as well as companies that are active in medical technology, agricultural technology, bio- or nanotechnology.

The Life Sciences cluster covers the entire value chain from research and development to production and marketing. The Life Sciences field accounts for **13% of Swiss GDP** which is **\$747.4B** total.

Thus export of **Medicaments** is the main part of total Swiss export and accounts for **13%** of it.

The Life Sciences Industry Landscape in the Basel Area at a Glance



The Basel Area Life Sciences Ecosystem comprises **10** main categories of Companies: **FinTech Services, Life Insurance, Clinics, Diagnostics and Laboratories, Pharmaceuticals, P4 Medicine, Biotechnology, Outsource Research, Healthcare IT-Systems, Medical Technology, Management & Consulting.**

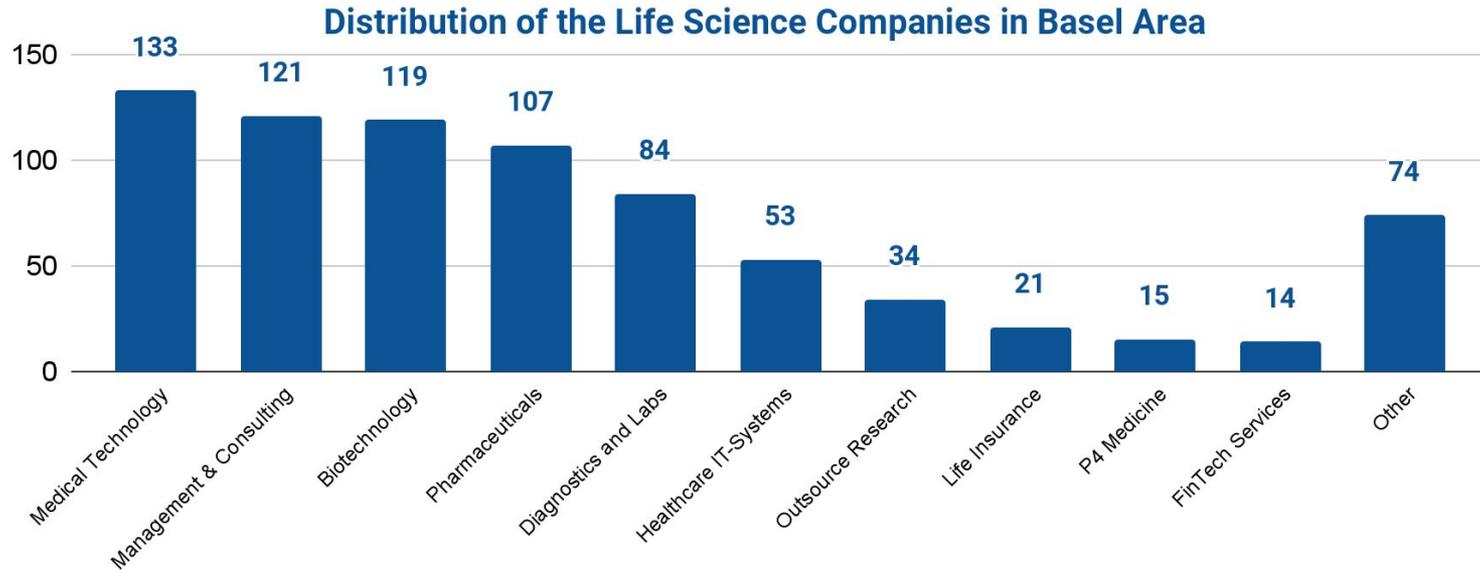
The Life Sciences industry underlines the economic strength of the region. Basel is a powerful scientific and business hub that hosts such international companies as **Roche** and **Novartis**.

The Life Sciences Industry Landscape in the Basel Area at a Glance



The **Life Sciences Industry** in the **Basel Area** is represented by **775** companies with a total funding amount of over **\$1.45B**; **210** investors that made **over 100** funding rounds in total; **70** R&D centres, laboratories and universities; **10** government organisations and **30** non-profit organisations. To better understand the industry, all companies are divided into **7** distinct industry subsectors, including **Medical Technology**, **Bioinformatics**, **Biotechnology**, **Nanotechnology**, **Pharma**, **Agrochemistry** and **Universities & Research Facilities**.

The Life Sciences Industry Landscape in the Basel Area

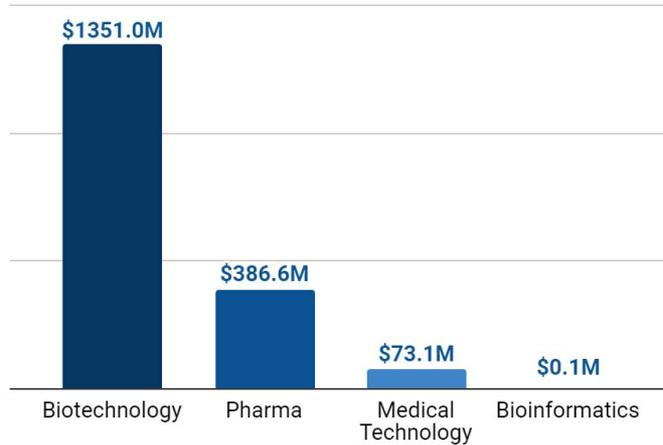


Life Sciences Ecosystem contains 775 companies in Basel and divided by 10 categories. Medical Technology is the main category which includes 19% of all companies, followed by Management & Consulting and Biotechnology companies with 16% and 14% respectively. FinTech Services category is the smallest one, that refers to less than 3% of all companies mentioned in the report.

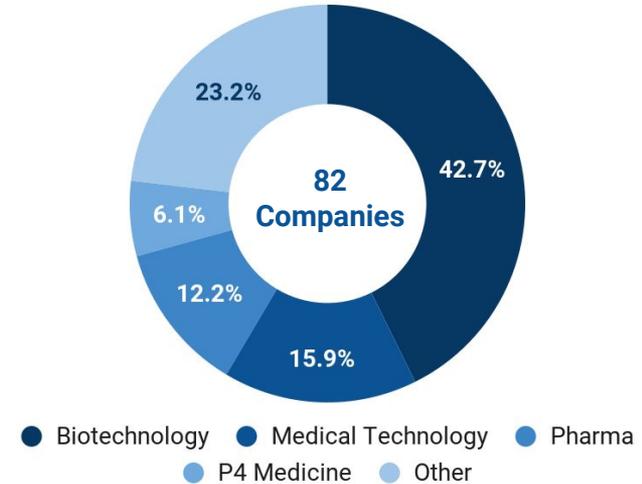
Agrochemistry, Ecology, Education, Wellness and Logistics & Marketing companies are included into the "Other".

The Life Sciences Industry Landscape in the Basel Area

Major Life Sciences Categories by Funding Amount, \$M



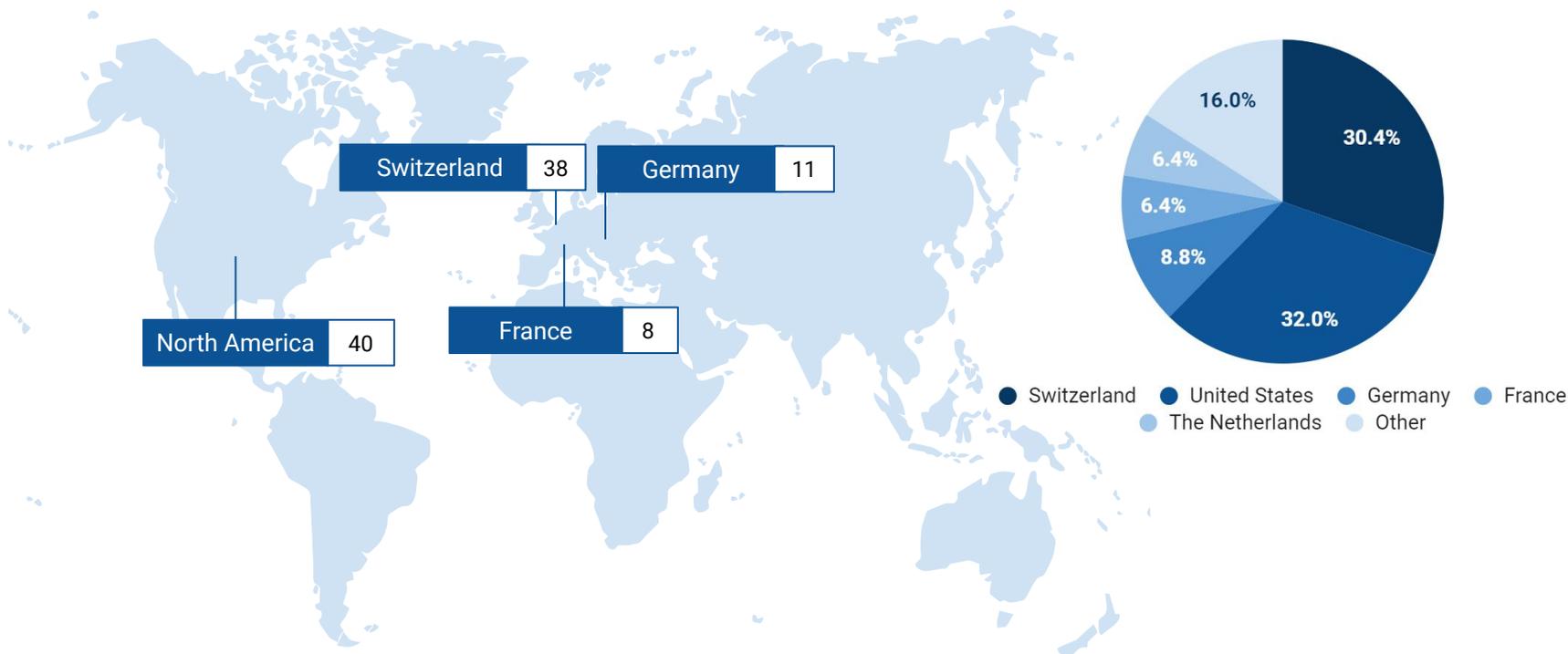
Main Sectors of Life Sciences Industry in Basel, %



Biotechnology is the most popular category in the **Basel Area** Life Sciences Industry to invest in with a total amount of investments of **\$1.35B**. It is followed by **Pharma** and **Medical Technology** categories with the total amount of investments equal to **\$386.6M** and **\$73.1M** respectively.

Among the **82** Life Sciences companies located in **Basel** the majority work in the **Biotechnology** sector and account for **42.7% (35)** of all companies. They are followed by **Medical Technology** and **Pharma** companies, which constitute **15.9% (13)** and **12.2% (10)** of all companies respectively.

The Life Sciences Industry Landscape in the Basel Area



USA is a leader in terms of the number of investors who are funding Life Sciences industry in Basel (32%). The amount of internal investors from Switzerland is almost the same (30.4%). Other investors are distributed mostly in the European region.

The Life Sciences Industry Landscape in the Basel Area

Since 2021, total investments in life sciences companies exceeded \$352M. Some of the major deals included:

- **VectivBio** – \$110M (Venture Series led by Cowen Healthcare Investments and Novo Holdings). The company initiated a public offering in April 2021 and raised \$127.5M.
- **Bright Peak Therapeutics** – \$107M to advance its pipeline of cytokine medicines toward the clinic and build out its underlying technology (Series B Round)
- **Urovant Sciences** – \$100M for debt financing from Hercules Capital
- **Monte Rosa Therapeutics** – \$95M to continue testing its 'molecular glues' (Series C Round). The company raised another \$222M during the IPO in June 2021.
- **Alentis Therapeutics** – \$67M to fund the proof-of-concept clinical trials of its lead candidate in advanced liver and kidney fibrosis (Series B Round led by Morningside Venture Investments)

Top 5 Investment Deals in Life Sciences in the Basel Area



Life Sciences and Innovations

In the future, most of the large-scale life sciences organizations plan to move away from traditional technology-based solutions to cloud-based scalable solutions.

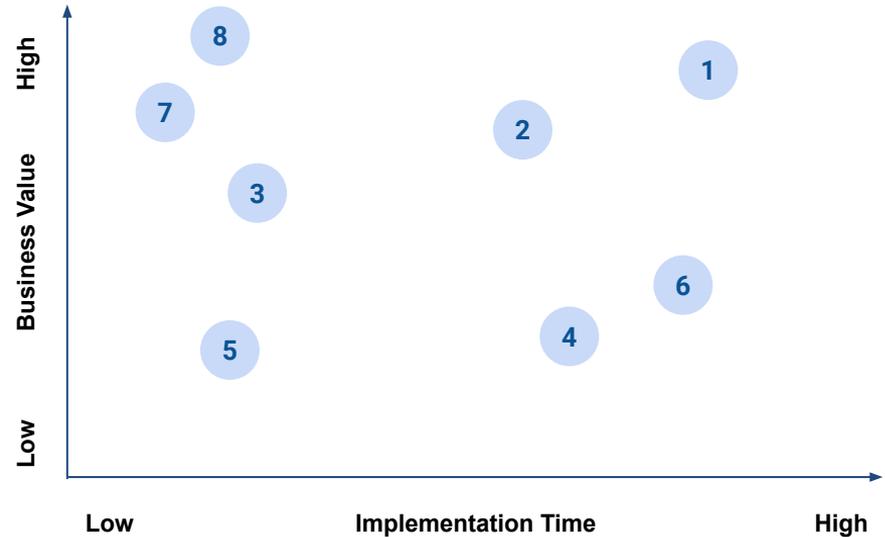
Most of the top life sciences companies are **scaling enterprise-grade IT infrastructure** and cloud applications cutting across the business value chain, business units, therapeutic classes, and geographic areas.

To align business strategies and data-driven business decisions, **life sciences companies are focusing on exploring primary and secondary research data through new-age cloud-based technology enablers.**

With the rebooting of the technology ecosystem, life sciences companies are focusing on trust in IT applications, capturing data quality statistics, generating data quality reports, enabling automated alerts, and highlighting adverse impact notifications.

The pressure on the healthcare sector to improve and evolve is massive. Technology will be the key to unlock immense value — or the barrier that holds it back.

Implementation of Emerging Technologies in Life Sciences Industry



1. Artificial Intelligence
2. Artificial Neural Networks
3. Cognitive Computing
4. Natural Language Processing
5. Conversational Business Intelligence
6. Robotic Process Automation
7. Machine Learning
8. Cloud/Big Data

Life Sciences and Innovations

Emerging Technologies Implemented By Largest Life-Science Companies



Since the beginning of the pandemic, **Abbott Group** has been actively implementing **data-management systems and algorithms** to increase sample collection and reception processes. Data managerial and recognition technologies transform a variety of unstructured documents or files into searchable structured information. Keywords, values, graphs and data tables are pulled from all files to enable easy search later.



Bayer is using the combination of **data and AI-driven solutions** to better characterize and stratify disease and the appropriate patient populations. The Group seeks collaborations in the Cardiovascular and Oncology therapeutic areas with external partners (e.g., the BROAD institute) to achieve this. Bayer expects that care will become increasingly personalized as the particular and unique issues of individuals will be more oftenly recognized.



AI is helping **Novartis** improve patients' lives and optimize the healthcare ecosystem. Novartis is committed to deploying AI systems in a transparent and responsible way. Moreover, The Novartis Foundation has been selected by Microsoft as a partner for the AI for Health initiative, a new five-year program that aims to use AI to empower researchers and organizations to address some of the world's toughest challenges in health.



Combined strengths of the pharmaceutical and the diagnostics business under one roof empowers **Roche** to drive forward personalised healthcare. A deeper understanding of molecular science and new methods for diagnostics, together with know-how in **data science and digitalisation**, as well as the partnerships and the global reach the company has, will help Roche to revolutionize healthcare again, yet through data.

Key Trends to Watch in Life Sciences

Main Trends in Life Sciences

Personalized medicine

As the life sciences industry's research body becomes increasingly expansive, many experts discover that some conditions are inherited through genetic coding. This implies that healthcare can be more customized based on DNA information or other genome features.

Collaboration

The life sciences industry is continuously developing thanks to its collaborative nature. In 2022, it is expected that biotech companies will join forces with science-related organizations to push the boundaries for development.

Advanced Drug Research

Another rising trend is the improvement of drug research. Smart technology allows the possibility of improving the assessment and treatment of patients using medication. Doctors will be able to combine the data needed to prescribe the right medication for the patient.

Digital Assessment

Many doctors and healthcare professionals are now accredited to continue their practice virtually. Some general practitioners can prescribe medications online through a database website such as LiveHealth Online or Teladoc.

Genetic Treatment

Gene technology enables researchers to identify genome sequences that predict disorders in humans. Experiments in the area of gene editing could potentially prevent diseases that can be inherited from the mother to the child.

Data Management

Modern cloud management systems enable data management professionals to easily collect and interpret information for improved life sciences practices. This can help drive down the cost of medications while providing evidence-based information for key stakeholders.

Longevity Investment Big Data Analytics Dashboard



Longevity Investment Big Data Analytics Dashboard

Market Intelligence

Longevity Investment Market Intelligence

- Major Trends
- Network Diagrams
- Interactive MindMaps

Interactive Mindmaps



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Dashboard Parameters

DATA POINTS	PERSONALITIES	COMPANIES
4810866	16107	19603
INVESTORS	SECTORS	SUBSECTORS
9007	14	140

Dynamic Industry Charts



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Longevity Investment Ecosystem Investors

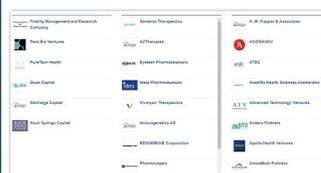
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Company Competitors Investor Competitors

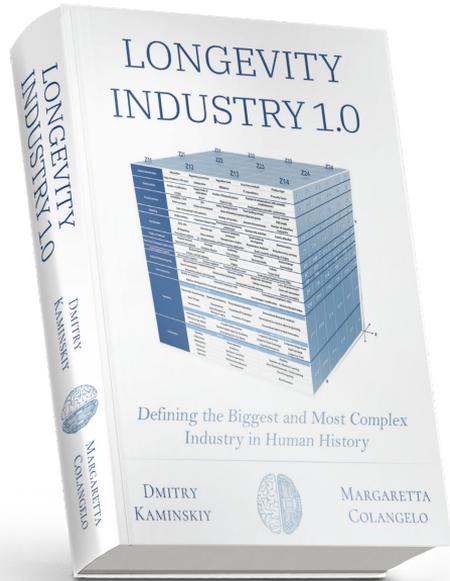
Interactive Network Diagrams



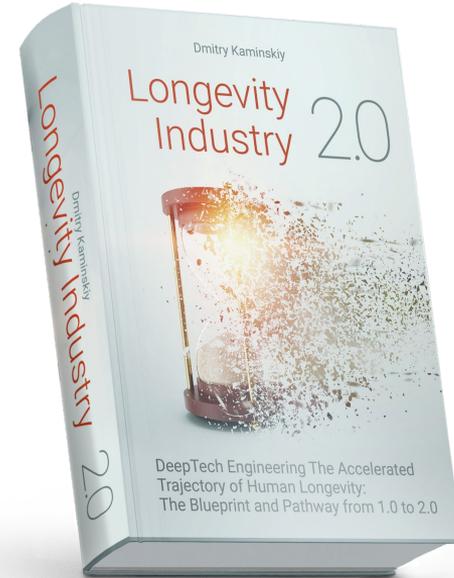
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Longevity Investment Ecosystem Companies

- Company Investor Search
- Company Competitors Search
- Entrepreneur Search



Longevity Industry 1.0
Defining the Biggest and
Most Complex Industry in
Human History



Longevity Industry 2.0
DeepTech Engineering The Accelerated
Trajectory of Human Longevity
The Blueprint and Pathway from 1.0 to 2.0

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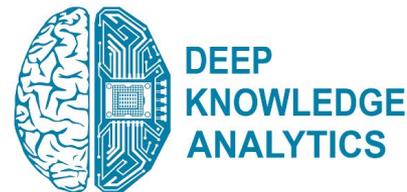
About Deep Knowledge Analytics

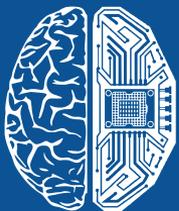
[Deep Knowledge Analytics](#) is a DeepTech focused agency producing advanced analytics on DeepTech and frontier-technology industries using sophisticated multi-dimensional frameworks and algorithmic methods that combine hundreds of specially-designed and specifically-weighted metrics and parameters to deliver sophisticated market intelligence, pragmatic forecasting and tangible industry benchmarking.

It is an analytical subsidiary of [Deep Knowledge Group](#), an international consortium of commercial and non-profit organizations focused on the synergetic convergence of DeepTech and Frontier Technologies (AI, Longevity, MedTech, FinTech, GovTech), applying progressive data-driven Invest-Tech solutions with a long-term strategic focus on AI in Healthcare, Longevity and Precision Health, and aiming to achieve positive impact through the support of progressive technologies for the benefit of humanity via scientific research, investment, entrepreneurship, analytics and philanthropy.

About Deep Pharma Intelligence

[Deep Pharma Intelligence \(DPI\)](#) is a leading strategic and investment intelligence agency focused on the emerging markets in the Pharmaceutical, BioTech, and Healthcare Tech industries. DPI is producing regular analytical reports on major areas of high-potential in the pharmaceutical and healthcare industries, maintaining ratings of companies and governments based on their innovation potential and business activity in the BioTech space, and providing strategic consulting and investment intelligence services to top-tier clients.

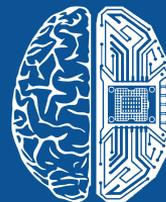




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