



KEY FIGURES



Source: Swiss Biotech Report, 2018

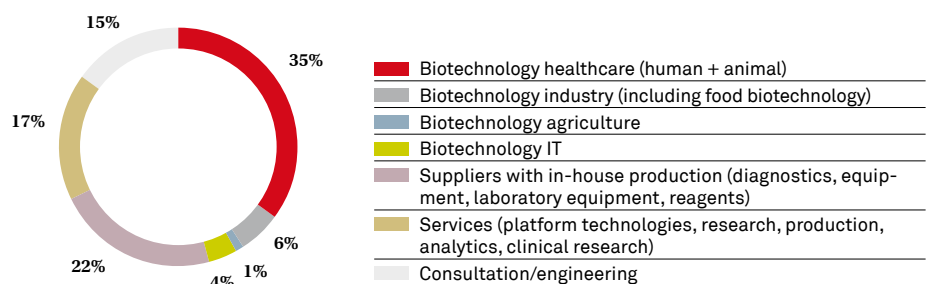
BIOTECH CLUSTER IN SWITZERLAND

AT A GLANCE

Switzerland is one of the best and most innovative locations for biotechnology in Europe. Local companies hold leading positions throughout many sectors and thus attract capital and researchers from all over the world. The basis for this success is a close-knit network between research and development, driven by renowned universities, highly specialized SMEs and strong multinational corporations. In addition to being an attractive place to live for international specialists, Switzerland also offers a modern infrastructure, a beneficial funding environment and access to a highly-qualified workforce.

Specializations of Swiss Biotech Companies

557/651 companies in the Swiss Biotech Directory. Distributors and biotechnology-focused consultants excluded



Source: Swiss Biotech Directory, 2017
Survey of 146 specialist biotech companies (OECD definition)

A Selection of Biotech Companies

A selection of biotech companies active in Switzerland

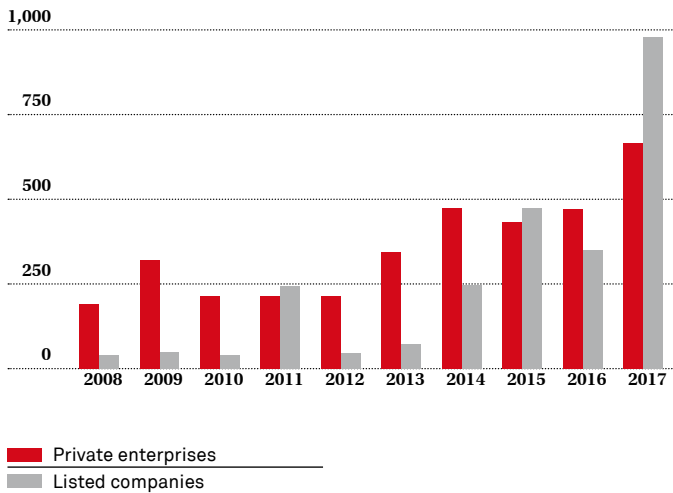
AC Immune	Geistlich Pharma
Bachem	Humabs BioMed
Basilea Pharmaceutica	Idorsia
Biogen	Lonza
Celgene	Molecular Partners
Cerbios Pharma	Polyphor
Debiopharm	Santhera
Evolve	Tillotts Pharma

RESEARCH AND DEVELOPMENT (R+D)

- **Outstanding biotech-related theoretical and applied public research** takes place at these globally leading universities with top international reputations (ETH Zurich and EPF Lausanne, as well as 4 research institutes and 7 cantonal universities).

Capital investment in Swiss Biotech Companies

in million CHF, 2008-2017



Source: swissbiotech.org; EY, 2018

- The ETH's Department for System Biology in Basel, which comprises 15 professors and 300 employees, will be moved to a new building by 2020 and is expected to grow to 500 employees. In 2017, there were 1094 people studying Life Sciences at Bachelor, Master or PhD levels at the EPFL. In the same year, there were 2,625 individuals studying life sciences and chemistry at universities of applied science.
- Switzerland is the global leader at attracting highly qualified specialists from abroad. This makes it relatively **easy to recruit talent**.
- Switzerland boasts close cooperation between universities and the private sector. This leads to **high productivity in research** in the biotech sector. Switzerland is one of the world's leading countries in terms of the number of products in the research pipeline.

- Major private investments are made in research and development in Switzerland. Swiss companies spent 15.6 billion Swiss francs on this sector in 2016, investing 40% or over 6 billion Swiss francs of this amount in pharmaceuticals, chemicals and biotechnology.
- The presence of over 700 life science companies, including financially sound and globally leading pharmaceutical companies such as Novartis and Roche, offers a wide range of opportunities in IP marketing, whether it be in licensing, patent transactions, or even strategic partnerships.
- Switzerland has a large range of modern research laboratories and production facilities for pharmaceutical, biological and medical technology products.
- Access to international systems for the protection of intellectual property (European Patent Office EPO, World Intellectual Property Organization WIPO) enables the use of a central registration procedure without the need for local representatives in each individual country.
- Thanks to its simple and efficient registration procedure for protecting intellectual property, Switzerland is one of the countries with the highest number of biotechnology patents per capita.

Top 5 EPO Member States

Number of patent applications at the European Patent Office 2017

	CH	DE	FR	NL	UK
Biotechnology	425	673	519	311	272
Medical equipment	573	1'340	601	821	364
Medication	350	600	441	186	229
Measurement	698	1'436	548	414	325

Source: EPO, 2018

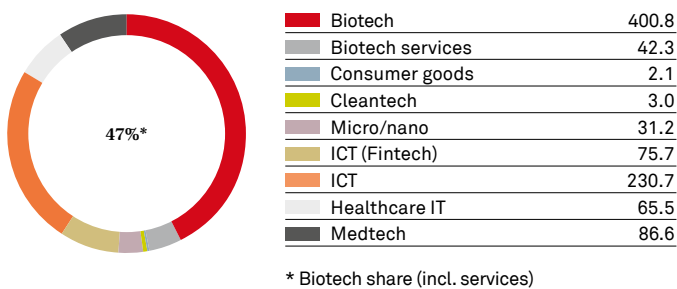
- Switzerland Innovation is intended to contribute to securing the leading role of Switzerland as an innovation nation and thus maintaining its competitiveness. The Innovation Park was launched at the start of 2016. It includes the two hubs near the two Federal Institutes of Technology in Zurich and Lausanne, as well as the three network locations in Aargau, Basel and Biel.
- The **Schlieren-Zurich Bio-Technopark** is an internationally important science park for the life sciences sector that employs over 1,000 people. Among other things, the Bio-Technopark received attention thanks to the successful sales of start-ups to large corporations and international companies such as Roche, Novartis, J&J, GSK, Pfizer, Thermo Fisher Scientific, Cell Medica, Sunstar and Heptares.

COSTS AND FINANCING

- **Venture capital** and private equity funds are readily available. With a 47% share of the entire volume of venture capital, the biotech industry was the most successful sector in sourcing borrowed capital in 2017. A total of around CHF 443 million in venture capital was invested in domestic biotech startups, an

Capital Invested in Swiss Start-ups, per Industry

CHF million, 2017



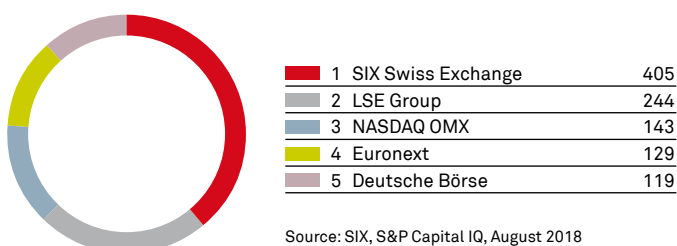
Source: startupticker.ch, 2018

increase of 10% compared to the previous year.

- Capital investments in private and listed Swiss biotech companies reached a record level of 1.64 billion Swiss francs in 2017.
- The Swiss Innovation Agency (**Innosuisse**) specifically promotes cooperation between science and the market with innovation projects, networking, training and coaching. Innosuisse has an annual funding budget of around 200 million Swiss francs. The lion's share of this goes to the promotion of innovation projects.
- The Swiss National Science Foundation (SNF) promotes research projects in every scientific discipline with a budget of 9.3 billion Swiss francs (2016).
- There is easy **access to public subsidies**, even outside Switzerland. As part of the European Union's 7th Framework Programme, grants amounting to CHF 172.4 million (2.2% of all grants) have been promised for the period 2014-2020. The high success rate of the Swiss project proposals in comparison with other countries is worthy of remark.

The World's Most Important Stock Exchanges for Life Sciences

Trading volume in EUR billion



Source: SIX, S&P Capital IQ, August 2018

- Switzerland, as one of the premier banking centers and the **most important life sciences stock exchange in Europe**, offers a wide range of opportunities for **raising capital**. The Swiss Exchange (SIX) invests 49% of traded capital in life science projects.
 - First-class **technology and innovation park** infrastructure – alongside research institutions such as Campus Biotech Geneva, EPFL Innovation Park Lausanne, the BioArk in Visp and in Monthey, Bio-Technopark Zurich, Technologiepark Basel, and Biopôle Lausanne – promote startups and spin-offs.
 - **BaseLaunch** (a healthcare acceleration program) aims to speed up development of healthcare start-ups and strengthen Basel as a life-science hub. Supporters of BaseLaunch include the healthcare partners Novartis Venture Fund, Johnson & Johnson Innovation, Pfizer, Roche and Roivant Sciences.
 - Startups and newly established foreign companies are eligible for partial, or in some cases complete exemption from corporate and capital taxes at cantonal level for a period of up to ten years.
 - Companies have access to international markets through internationally embedded clinical research organizations.
 - Chemical and pharmaceutical products are subject to a reduced VAT rate of 2.5%.
- ## FRAMEWORK CONDITIONS AND MARKET ENTRY
- Free trade agreements with the EU/EFTA and 40 other countries including China and Japan provide **access to the most important export markets**. Around EUR 200 million are saved annually for pharmaceutical and chemical exports to Germany, France, Austria and the United Kingdom alone. Switzerland also has the third most concentrated network of bilateral investment protection agreements after Germany and China.
 - Due to the international recognition of its high standards for quality, Switzerland is well-suited to being a **strategic test market** ("early adopter market") for the launch of new biotech medicines.
 - In contrast to the procedure in other countries, a single authority governs applications for approval in the fields of biotechnology and genetic engineering (Federal Coordination Center for Biotechnology), which means **minimal bureaucracy and straightforward procedures**.

TESTIMONIAL



“We conducted a comprehensive search across Europe to find the right location for our international headquarters. We were looking for an environment with a strong ecosystem in the life sciences, but also for a government that understood our needs. After careful examination, we opted for Basel. Roivant is currently in the process of founding six companies, which is why we have very different requirements. We were able to quickly recruit talent locally, and because it is such an attractive location, we were also able to attract US expats and individuals from across Europe.”

MARK ALTMEYER
President & CCO Axovant Sciences GmbH (part of the Roivant Group)
www.axovant.com

CURRENT DEVELOPMENTS

- The aims of the master plan for strengthening biomedical research and technology are twofold: The Swiss Federation wants to provide the best possible basic conditions for biomedical research and technology and at the same time guarantee the public access to the achievements and products of biomedicine. For that purpose a total of 23 measures will be implemented in various areas by 2020.
- The Swiss parliament has asked the national government to develop proposals for setting up a Future Fund (www.zukunftsfonds.ch). This would involve pension funds investing venture capital in promising sectors of the economy, including biotech.
- Switzerland is currently in the process of modernizing its corporate tax system. The goal is to provide an attractive tax environment for companies and to ensure that taxation arrangements are in line with internationally established tax practices. The Swiss Federal Department of Finance (FDF) has already prepared a new proposal with tax proposal 17 (SV17). The reform is expected to come into effect no earlier than 2020. Until then, the current attractive tax regime will remain valid at national level.
- The American biotech firm Biogen is building one of the world's most modern biotech production plants in the Solothurn area. The Group will invest around 1 billion Swiss francs over the coming years and create up to 400 new jobs.

CONTACTS AND FURTHER INFORMATION

Authorities and regulators

State Secretariat for Education,
Research and Innovation
www.sbf.admin.ch

Federal Commission for Biological
Safety
www.efbs.admin.ch

Swiss National Science Foundation
www.snf.ch

Innosuisse - Swiss Innovation Agency
www.innosuisse.ch

Swiss Federal Institute of
Intellectual Property
www.ige.ch

Swiss Agency for Therapeutic
Products
www.swissmedic.ch

Innovation and startup support

www.agire.ch
www.baselarea.swiss
www.baselaunch.ch
www.biotechnet.ch
www.bio-technopark.ch
www.biovalley.ch
www.campusbiotech.ch
www.inkubator-basel.ch
www.investiere.ch
www.lifescience-zurich.ch
www.lsnb.ch
www.medicxventures.com
www.swissparks.ch
www.switzerland-innovation.com
www.theark.ch
www.tzw-witterswil.ch

Financing

www.bbbiotech.ch
www.biomedvc.com
www.devigier.ch
www.hbmhealthcare.com
www.investiere.ch
www.newventuretec.com
www.nvfund.com
www.roche.com/venturefund.htm
www.seca.ch
www.versantventures.com

Associations and networks

www.bioalps.org
www.gensuisse.ch
www.scienceindustries.ch
www.swissbiobanking.ch
www.swissbiotech.org
www.swisstestinglabs.ch
www.switt.ch

Publications

Swiss Biotech Report 2018
www.swissbiotech.org

Site Selection for Life Science
Companies in Europe 2018
www.kpmg.com

Collection of Swiss health laws
www.bag.admin.ch

Research and innovation in
Switzerland 2016
www.sbf.admin.ch

S-GE resources

Handbook for Investors
www.s-ge.com/handbookforinvestors

Information on the Swiss free trade
agreements
www.s-ge.com/fta

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