

## Switzerland, a leading country in biotech innovation, but with lack of local venture capital

Switzerland is home to more than 280 biotech companies. The majority of these companies are performing research & development (R&D) with the aim to develop novel therapies in many different diseases. The number of such R&D biotech companies continuously grew over the last years reaching more than 220 companies at the end of 2016. Overall, more than 15,000 people are employed by all Swiss Biotech companies (source, Swiss Biotech Report 2017). The majority of these positions are highly educated jobs with a high value creation, an ideal profile for Switzerland also for future growth.

### Swiss biotech companies have a strong pipeline of novel therapeutics

The combined Swiss biotech companies present a strong pipeline of novel therapies. In 2017, 50 clinical trials by Swiss biotech companies were ongoing in phase 1 and 2, and an additional 11 phase 3 clinical trials, the last step before filing and registration of a new drug. The number of these clinical trials compares well to the number of clinical trials run by the two big Swiss pharma companies Novartis or Roche. Remarkably, the majority of the clinical trials by Swiss biotech companies encompass completely novel drugs and therapies whereas many clinical trials run by the big pharma organizations either are reformulation or indication expansions of existing drugs. Thus, the Swiss biotech companies focus on novel drugs to achieve better treatments which represents a much more innovative pipeline. The top five indications of Swiss biotech companies are neurobiology, infectious diseases, oncology, inflammation and ophthalmology.

### Switzerland as a leading country for biotech patents

In biotechnology, patents are the key assets and a primary focus on due diligences for financing rounds but also collaborations and acquisitions. Over the last years, the number of patent applications by Swiss applicants in the field of biotechnology continuously grew. Compared to other fields, the number of biotechnology patent applications are by far leading followed by patent applications covering medtech and organic chemistry. This shows that biotechnology is the key driver for innovation in Switzerland. On an international level, biotech patents by Swiss applicants are the most important globally. This is measured by the relevance of the patents which means number of citations as well as market coverage. In this matrix, Switzerland is the leading country globally (source IPI, Swiss Biotech Report 2017).

### Many Swiss biotechs are financed through venture capital, mainly from US and UK

Biotechnology is a very capital intensive industry. Extremely long development cycles of new drugs over 10 to 15 years to reach the market combined with very expensive infrastructure as well as research and development force most of the biotech companies to finance their business through capital increases. Swiss biotech companies were successful in raising capital during the last years. In 2016, more than CHF 800m were invested in Swiss biotech companies (Fig. 1). However, the time to close financing rounds is long. Any new financing round can easily consume 12 to 18 months of the management. Furthermore, most of the Swiss biotech companies are looking for lead venture capitalists in the US or UK due to the specific expertise of these investors in biotechnology, but also due to the large size of several biotech venture funds in these two countries. Thus, of the CHF 472m invested into private Swiss biotech companies in 2016, the majority of the capital came from US or UK venture capital funds.

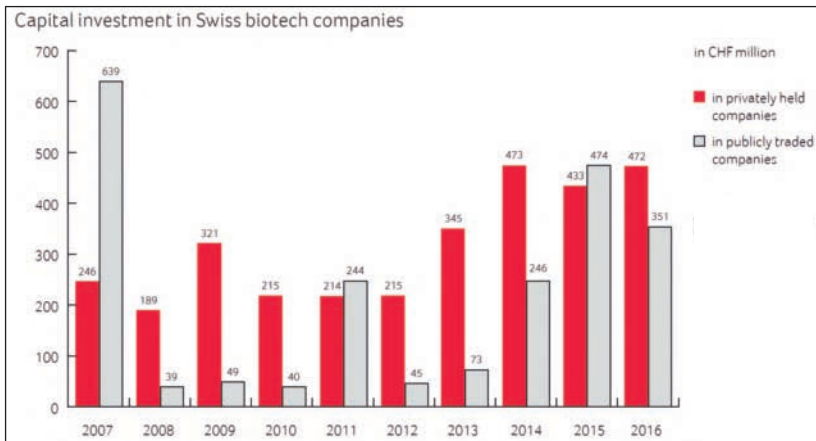


Figure 1: Capital investments in Swiss biotech companies over the last 10 years  
 Source: E&Y, Swiss Biotech Report 2017

### Switzerland has not enough local venture capital

Switzerland has a very active biotechnology ecosystem. This includes excellent academic institutions in life sciences which generate many innovative Start-ups, top pharma companies with an abundant talent pool of which many Swiss biotech companies can profit from through recruitment of experienced personnel. In addition, world leading contract manufacturing organizations in Switzerland that can manufacture complex biotechnology products for which close proximity to the Swiss biotech companies ensure an efficient communication and material transfer. Furthermore, over the last years, several successful exits of Swiss biotech companies occurred generating a pool of experienced biotech entrepreneurs. What is missing in this ecosystem is venture capital to finance biotech companies. Despite the abundance of capital in Switzerland, institutional venture capital is hardly available. Within Europe, Switzerland is in a poor position regarding local venture capital (Fig. 2). Compared to the European average, Switzerland has 3 times less venture capital measured in percentage of the gross domestic product of the respective country. Compared to the UK, the difference is even 8 times less.

### Pureos Bioventures, a new venture capital fund for next generation biologics

A team of experienced venture capitalists and biotech entrepreneurs recently launched the fundraising for a new venture capital fund, Pureos Bioventures, which will invest in 15 to 20 private, innovative drug development companies located in Switzerland and abroad. The fund will focus on companies developing the next generation of biological drugs for indications with high medical need. Pureos Bioventures will invest at early stages, classically in preclinical research and development and support the companies to reach clinical proof-of-concept with their new therapies. With this new initiative Pureos Bioventures will be in a position to support several Swiss biotech companies helping to prosper the local biotech ecosystem.

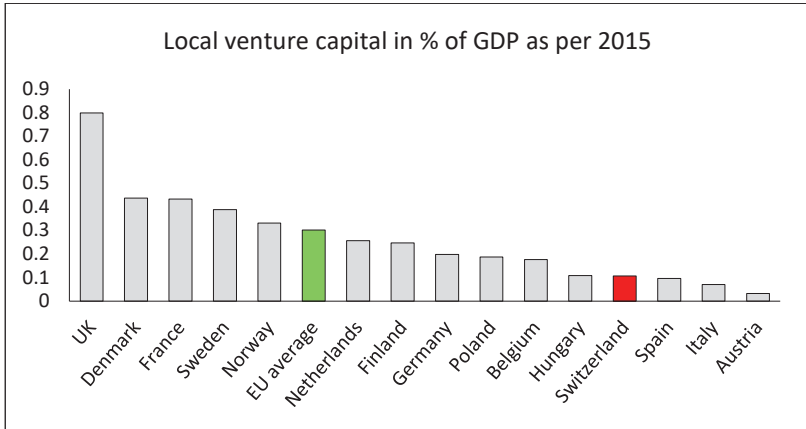


Figure 2: Local venture capital in percentage of the country's gross domestic product (GDP) in 2015  
 Source: SECO (kmu.admin.ch)

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