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Switzerland’s appeal as a destination for talent is bolstered by factors beyond the industry’s control, like over a century of political stability, a robust legal framework, and a reliable government

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Swiss Biotech's Michael Altorfer explains how Switzerland's biotech industry continues to grow, driven by startups and SMEs and supported by strong international collaborations across the entire value chain. He outlines how Swissmedic’s proactive approach to advanced therapies and participation in the Access Consortium enables faster and more efficient drug approval processes, making Switzerland an attractive market for biotech innovation; and why attracting and retaining global talent will be essential for the country's continued biotech success.

Can you start by sharing a few words of introduction on Switzerland’s biotech ecosystem?

One of the key strengths of the Swiss biotech sector is its consistency, endurance, robustness, and steady growth. I am always amazed by how the biotech sector continues to grow, even though it is already well established. This is quite remarkable, given the country’s small market size and population. While some industries in Switzerland develop at a slower pace, biotech stands out. Switzerland has been attracting a significant influx of skilled workers, primarily due to its economic success and open borders with the EU. The country typically sees a net influx of about 80,000 to 100,000 people annually, which is substantial given our population of 8.9 million. While this population growth requires significant infrastructure investments, this influx directly supports economic growth, creating new jobs and integrating skilled labor into the economy. The integration of immigrating talent is particularly straightforward, given the international nature of the life

science industry and the Swiss life sciences talent pool.

In 2023, the Swiss biotech sector set new records, with revenues reaching CHF 7.3 billion, up from CHF 6.8 billion in 2022. Swiss export activity also highlights the increasing importance of life sciences, contributing 38.5 percent to total Swiss exports in 2023. This sector has become dominant in the broader mix of industries in Switzerland.

From our perspective, growth is driven primarily by startups and SMEs that are involved in research, drug development, and new platform technologies. Their partners, including CDMOs and CROs, provide critical operational support. Another key segment includes specialized advisors and investors—the “money and advice”—who play an essential role in the industry.

Today, there are about 1,500 biotech companies in Switzerland. The Swiss Biotech Association hosts a Biotech Directory on our website, which serves as a crucial resource for anyone looking to understand who is active in this field. It functions as an invaluable business card for talent, pharma companies, investors, regulatory bodies, government officials, and investment promotion agencies worldwide, highlighting the vibrant and growing biotech community in Switzerland.

Globally, several countries have made significant strides in nurturing flourishing biotech ecosystems through forward-thinking government investments and policies. What unique value does Switzerland bring to the table?

Ever since we became members of the International Council of Biotechnology Associations (ICBA), which is our global body for international collaboration in biotech, my focus has been on fostering cooperation rather than competition. This perspective stems from our industry’s ambition to develop products and platform technologies for the global market. Only very few countries, such as the U.S., may have the luxury of focusing solely on their domestic markets due to their size, most countries, including Switzerland, aim to develop innovations that address global medical needs.

No matter where a biotech company is based, the goal is to bring innovative products to the global market through harmonized and regulated processes. It is essential that all countries adhere to these standards to ensure that new drugs are safe, effective, and meet global quality criteria. This collective approach ensures that what is offered to patients worldwide is of consistent quality, regardless of where it is produced.

Switzerland plays a vital role in this international landscape. While many countries aim to establish biotech hubs, Switzerland’s unique strength lies in its ability to contribute across the entire value

chain. For 13 consecutive years, we have ranked number one in the Global Innovation Index by the World Intellectual Property Organization, showcasing our commitment to innovation. We are often involved in various stages of drug development, from investing and clinical trials to manufacturing and distribution. This flexibility allows us to support global biotech initiatives in multiple capacities.

What sets Switzerland apart is that we are involved at every stage of the value chain, with a capacity that far exceeds our domestic needs. This surplus allows us to collaborate internationally and support other countries' biotech ecosystems. Our challenge is not about becoming the biggest or having more startups than other nations; instead, it is about maintaining our ability to contribute meaningfully at all levels of the value chain and fostering international alliances with our expertise and resources.

As the global market grows and more countries strengthen their healthcare systems, the demand for innovative medicines will rise. Switzerland's role in this evolving landscape is not just to be an attractive partner for international collaborations but to use our advanced capabilities to support other nations in improving their healthcare systems. While our healthcare system is among the world's best, we still have a lot of room for improvement, particularly in areas like digital data management and optimizing hospital networks. Engaging internationally allows us to contribute while continuously learning and refining our own systems.

Focusing on the regulatory landscape for drug development and market access, how satisfied are early-stage biotech companies in Switzerland with the local support and guidance?

I can truly say that I am pleased with the support of Switzerland's authorization body, Swissmedic, for several reasons. They have taken significant steps to keep pace with the evolving landscape of advanced therapies. Recognizing that regulatory bodies have historically been slow to adapt to innovations like cell and gene therapies, Swissmedic has established a dedicated division for Advanced Therapy Medicinal Products (ATMPs). They realized that they needed to catch up with the rapid advancements in these areas and have proactively worked to build the capacity and expertise required for these new approaches.

Swissmedic has also opened an Innovation Office aimed at being closer to research and innovation. They actively engage with innovation hubs, providing mentorship and gaining a firsthand understanding of emerging developments from both academia and industry. This close interaction allows Swiss startups and SMEs to collaborate with regulators early in the process, shaping their

products in ways that align with regulatory expectations. By the time these products reach the point of needing approval, the groundwork has been laid, making the approval process smoother.

From a Swiss perspective, perhaps the most notable development is Swissmedic's role in establishing the Access Consortium, an alliance with the UK, Canada, Australia, and Singapore. This partnership expands access to a combined market of about 150 million people. Five years ago, Swissmedic mainly catered to companies looking to access the Swiss market, which is relatively small. Now, through this consortium, companies can target a much larger market, making the Swissmedic pathway far more attractive.

Swissmedic's involvement in this alliance was driven by three main goals. First, it aimed to harmonize processes with other regulatory bodies, recognizing that a unified approach benefits everyone by creating a more efficient, robust, and ideally faster regulatory environment. There is no reason to maintain different approval processes worldwide when the best, most efficient methods could be adopted universally.

Second, the consortium allows for a shared workload in reviewing application dossiers. Instead of each regulatory body independently reviewing the same data, the work can be split among them, leading to a more efficient review process. If one regulator feels that further scrutiny is needed in a particular area, they can focus on that, while the others concentrate on different aspects, ensuring a thorough and coordinated evaluation. This collaborative approach enhances both speed and quality.

The third and perhaps most important point is that this collaboration significantly benefits Swiss-based companies. By working with other high-standard regulatory bodies, approvals through Swissmedic now mean access to a much larger market than Switzerland alone. This is a huge step forward, not only for Swiss companies but for any organization seeking entry into these connected markets. While similar collaborative efforts exist in the EU, Swissmedic's approach within the Access Consortium offers a streamlined, unified, and efficient alternative that is becoming increasingly attractive to biotech and pharma companies globally.

Switzerland is well-equipped for early-stage clinical trials but faces limitations due to its smaller population size. How does the local biotech ecosystem navigate this challenge, and are there strategic policies in place for attracting global clinical trials?

Clinical development, particularly for late-stage trials, is inherently global, and this holds true regardless of where the innovation originates, whether it's from Switzerland, Belgium, or Saudi Arabia. By phase three, clinical trials must be conducted on a global scale to capture the diverse range of ethnicities and patient demographics needed to validate a drug's efficacy and safety. The more we move towards personalized medicine, the more critical patient selection becomes. In a small country like Switzerland, there may be challenges in recruiting enough patients for certain indications, while for others, patient availability is not an issue. The key is to view clinical development as a global process and to focus on what each country can contribute, rather than what is done solely within its borders

With a population just shy of nine million, Switzerland has never been positioned as the primary hub for large-scale clinical trials. However, the country offers significant strengths, including world-class clinical trial expertise, skilled professionals, and experienced CROs that frequently manage trials both locally and internationally. What is crucial is understanding the process, knowing when and how Switzerland can contribute patients and expertise, and leveraging this to support the broader development strategy.

Ultimately, it is about having access to the right resources and designing smart clinical trials that are efficient and targeted. Each indication, company, and product require a tailored approach to trial design that maximizes speed, minimizes costs, and reaches the appropriate patient populations. By focusing on strategic contributions to the global clinical trial landscape, Switzerland plays a vital role in advancing drug development, even if it does not conduct all trials within its own borders.

The current investment climate for biotech is challenging, with a noticeable reduction in investor interest compared to the boom seen a few years ago. How is the Swiss biotech sector managing this shift and what is the current sentiment among investors in Switzerland?

Despite the challenges in the global investment climate, the Swiss biotech industry managed to raise over CHF 2 billion in 2023, up from CHF 1.3 billion in 2022, marking more than a 50 percent increase in capital investments. Approximately CHF 1.4 billion was raised by public companies, and the remaining CHF 0.6 billion came from private companies. During the so-called "bonanza years" of COVID, Switzerland saw an influx of over CHF 3 billion annually, with one year reaching CHF 3.3 billion, which was more than double the typical amount.

Currently, raising CHF 1.3 to 2 billion is still impressive, especially since the majority of this funding comes from the global investor community rather than just local Swiss investors.

One unique aspect of the Swiss biotech sector is that over 96 percent of the companies are privately financed. This structure has been advantageous over the past few years when the public biotech market faced significant challenges. While public companies in Switzerland have had a mixed experience, with some large investors reorganizing and downsizing, private companies have remained steady and even seen record investment numbers.

Overall, the sentiment is that private biotech companies in Switzerland are thriving. They have not only been investing heavily in R&D but have also managed to bolster their liquidity reserves, creating a counterintuitive success story amid a tough investment climate. However, there is a clear shift towards fewer and larger fundraising rounds and a preference for professionally managed companies. Investors now expect companies to establish a professional board, bring in experienced management like part-time CFOs with prior biotech experience, and present a strong advisory board. The traditional model of scientists managing their spin-offs is no longer sufficient to secure financing; investors demand a level of professionalism and proven business acumen before committing their support.

How do you evaluate Switzerland’s talent pool in supporting the biotech sector?

The influx of international talent is crucial for Switzerland’s biotech sector because we cannot educate sufficient life science specialists domestically to meet the industry’s needs, as we need to sustain the industry’s growth and the retirement of experienced professionals. Thousands of skilled individuals are required to sustain the growth of our small startups and SMEs every year. Despite not having the largest number of startups or workforce compared to other countries, Switzerland continues to be a global leader across the biotech value chain. This makes us a highly attractive partner for international alliances and collaborations.

Switzerland’s appeal as a destination for talent is bolstered by factors beyond the industry’s control, like over a century of political stability, a robust legal framework, and a reliable government. For talented professionals, knowing they can provide their families with a high-quality education, efficient public transport, and a safe living environment are significant factors that make Switzerland an attractive place to live and work.

Looking at our talent pool, it’s notable that in R&D, 70 percent of professionals are non-Swiss, and 78 percent of founders of successful “unicorn” companies are also from abroad. This highlights how international talent finds Switzerland to be a stable environment where they can innovate and take risks without the added concerns of instability or safety. In this supportive setting, the most talented individuals feel empowered to pursue bold, innovative projects.

The diversity in our talent pool enhances Switzerland’s international engagements, making us strong players in global biotech. For example, 88 percent of the biotech patents active in Switzerland are not of Swiss only origin but are filed involving co-inventors and/or co-applicants from outside of Switzerland, a trend seen equally across academic institutions and private industry. This international connectedness is critical; our biotech hub would not thrive without it.

Switzerland’s ability to attract global talent and protect intellectual assets within an international framework are cornerstones of our success. This ecosystem not only supports our domestic growth but also strengthens our role in building global alliances and serving as a coordinating hub for the biotech sector. Much like our renowned diplomatic efforts, we have developed a unique role in life sciences, acting as a neutral space for collaboration and innovation, which is something I am incredibly proud of and eager to continue nurturing.

What do you believe are the critical factors that regulators and governments must consider to sustain and accelerate the evolving innovation model of the biotech sector?

Over the past two decades, we’ve seen a significant shift in how multinational pharma companies approach innovation. Historically, they relied heavily on their internal research capabilities, but now their strategies are more focused on mergers, acquisitions, and licensing. This shift allows them to rapidly access external innovations, fill gaps in their internal pipelines, and strategically manage competition. Today, about three out of four new projects in the biotech sector are initiated by startups and SMEs, a trend seen globally, including in Switzerland and the US.

The critical point is that governments and regulators worldwide need to recognize this shift and ensure that their frameworks are conducive to fostering external innovation hubs. Supporting this ecosystem is vital because these smaller, agile companies are now the primary source of innovation for the industry.

Another crucial factor is strong intellectual property protection. This is something I often stress when speaking with countries that transition from copying existing drugs to becoming true

innovators, thethe importance of IP protection increases naturally. Without a robust framework to protect innovations, attract international investors, and offer market exclusivity, the biotech sector in those regions will struggle to thrive. IP protection is essential not just for safeguarding innovations but also for encouraging the high-risk investments needed to bring new medicines to market.

There’s often a misconception that limited access to new medicines in developing countries is linked to patent protection, but that is very rarely the case. The real challenges often lie in other areas, such as technology transfer, infrastructure and distribution, regulatory hurdles, and affordability. In Switzerland, for instance, we see that global companies are deeply invested in research and manufacturing, taking significant risks to innovate.

Ultimately, regulators and governments must strike a balance—promoting innovation through supportive policies while ensuring fair access to new therapies. This includes maintaining a robust IP system, streamlining regulatory processes, and fostering an environment where biotech companies can continue to innovate, take risks, and grow.

Do you have concerns about complacency or stagnation within the Swiss biotech sector? Are there specific areas where Switzerland must remain vigilant to ensure it continues to drive growth?

As it stands today, I see a significant growth in the industry, the emergence of new companies, a strong influx of capital, and continuously high levels of patent applications. There is also an expansion of interest into new areas such as health tech, AI-driven solutions, and companion diagnostics. These advancements in the sector are crucial and have been spurred by developments in personalized medicine and new modalities like ATMPs. Such new trends and technologies offer new opportunities as well as challenges.When we consider cutting-edge innovations like gene therapies, many of these products are still in the early stages. Although they have received approval and represent scientific breakthroughs, their high cost makes them inaccessible to most patients. For instance, treatments costing millions per patient cannot be sustained by small yet prosperous markets.

Switzerland has a strong reputation in manufacturing and considerable expertise in this area which can ultimately help lower costs. For example, the cost of genome sequencing has dramatically decreased from millions to just a few dollars. Such progress is possible, and it is important to accelerate it further to make these advancements more accessible. If products cannot be

integrated into the global healthcare toolbox, they are not truly viable. The innovation in healthcare must therefore focus on both the scientific breakthroughs as well as at technological improvements that help enhancing accessibility and affordability.

While I am excited about the country’s prospect to continue to be a leading global biotech innovation hub and to be a strong partner in international alliances and collaborations, I also believe that Switzerland should invest more in building new and lasting life sciences businesses. It is true that in our industry many products cannot be developed or commercialized without a strong, multi-national industry partner. Innovating and selling a license or an asset to larger corporate partners is therefore a common option how to contribute as a biotech company. But personally, I believe that biotech entrepreneurs and biotech investors should always look at all strategic alternative options. And whenever possible, the build-up of a long-term self-sustained business should at least be evaluated as it might allow to build both an attractive value proposition as well as powerful and innovative new biotech and pharma company. This could further complement and strengthen the Swiss biotech hub in the long-term.

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