

HEALTHCARE & LIFE SCIENCES REVIEW

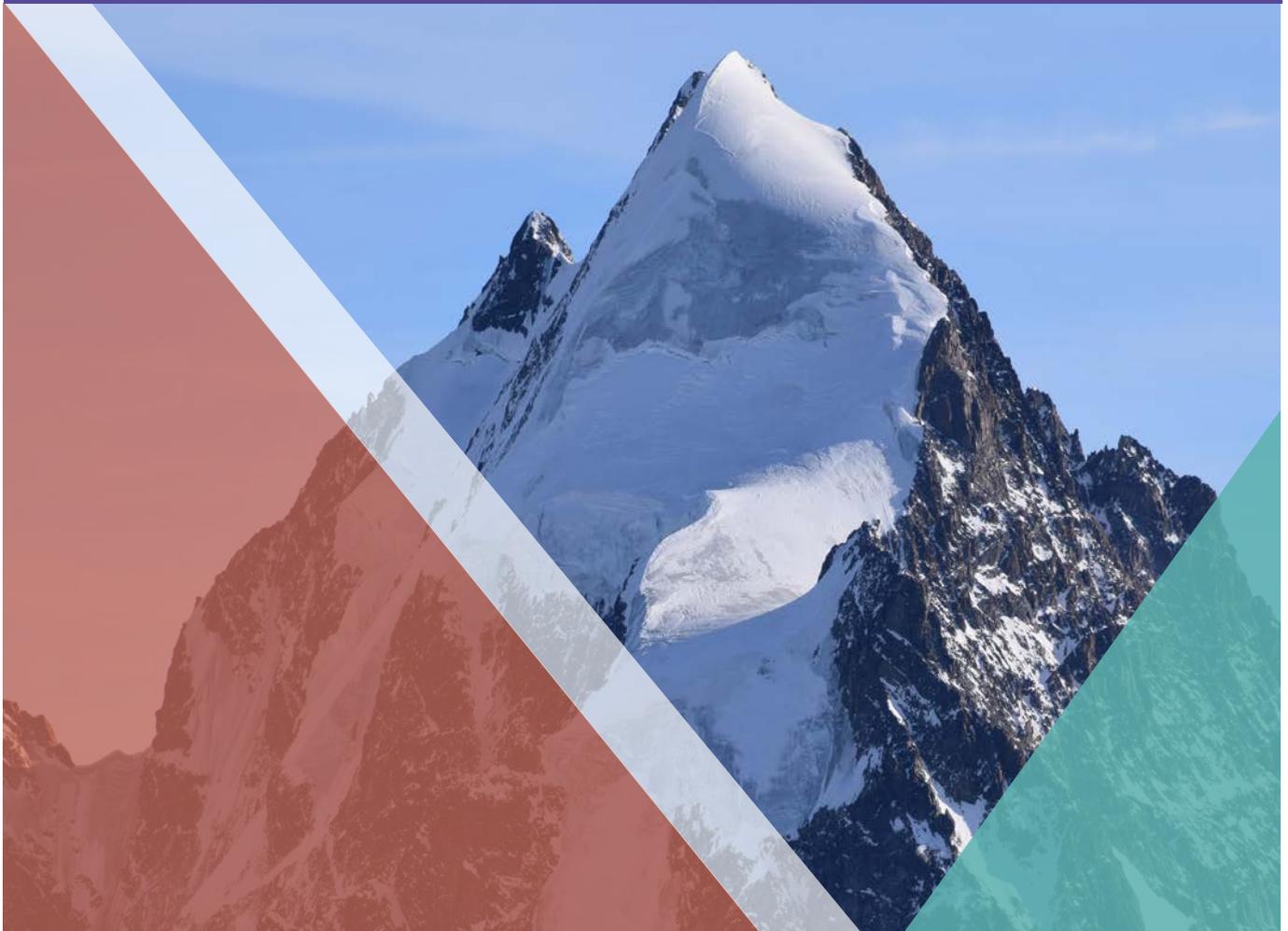
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SWITZERLAND

JUNE 2017



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JOIN THE CONVERSATION



Switzerland

Additional full-feature interviews from our Switzerland 2017 Report can be accessed on PharmaBoardroom, the premier website for C-Level executives, consultants and state actors in the pharmaceuticals and life sciences sector, alongside hundreds of exclusive interviews featuring the main movers and shakers of the industry, free country reports and sector insights supplemented by the latest news from global markets.

AMPLIFIED CONTENT



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IN BRIEF



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Raymond Cron of the **#Switzerland #Innovation Foundation @swissinnova** discusses the new Switzerland Innovation Park

[Read the interview](#)

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Jurgi Camblong of **@SophiaGenetics #Switzerland** on turning data driven medicine into a reality

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Bridget-Anne Kirwan of SOCAR Research talks **#clinicaltrials** in **#Switzerland**

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Michele Genovesi of SFI talks **#nutraceuticals** and **#naturalsolutions** in **#Switzerland**

[Read the interview](#)



Preface

As part of our series on Switzerland, this report delves into the specificities of Swiss pharmaceuticals, biotech, and healthcare, based on in-depth interviews conducted with leaders and pioneers across the value chain, from government representatives, global affiliate heads, and founders of innovative local SMEs.

In spite of high operating costs and a sometimes-byzantine regulatory environment, major MNCs are flocking to establish regional headquarters in a country frequently ranked the most innovative in the world. Complementary thriving ecosystems of biotech startups, contract research and manufacturing organizations, as well as a whole host of niche service providers have also sprung up across Switzerland, many of which are featured inside. Key themes featured in this report include the resonance of the ‘Made

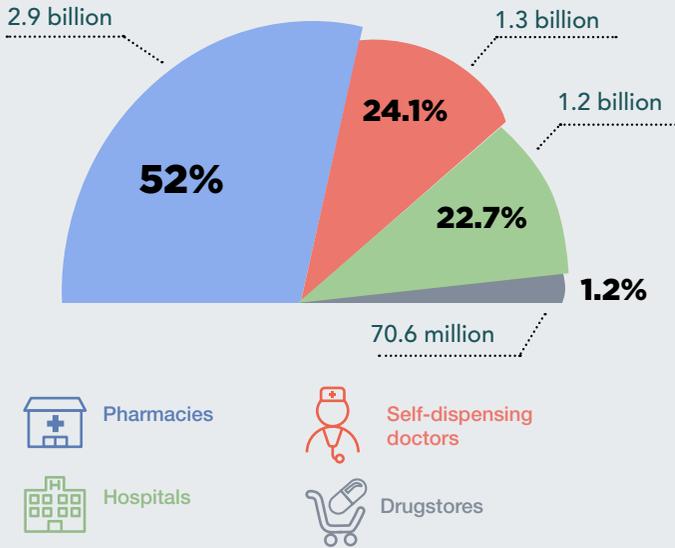
in Switzerland’ brand abroad, Swiss companies’ cutting-edge digital prowess, the Swiss biotechs turning to the US for investment, mid-caps and minnows at the vanguard of creativity, and the variety of regional clusters outside of the traditional healthcare heartland of Basel, home to Novartis and Roche. In particular, the report examines the canton of Ticino, an oft-overlooked Italian-speaking region in the south of Switzerland which is rapidly turning a tradition of research and academic excellence into commercial innovation locally.

For those wishing to scratch beneath the surface and discover why Switzerland has achieved such success in healthcare and the life sciences and how the Swiss are poised to achieve even more in the coming years, this report is essential reading. ✨



PHARMACEUTICAL MARKET IN SWITZERLAND BY VALUE

MARKET VALUE 2015: USD 5.5 BILLION
(AT EX-FACTORY PRICES, 100%)



Source: Interpharma with database IMS Health Switzerland, 2016.

TOP 5 COMPANIES

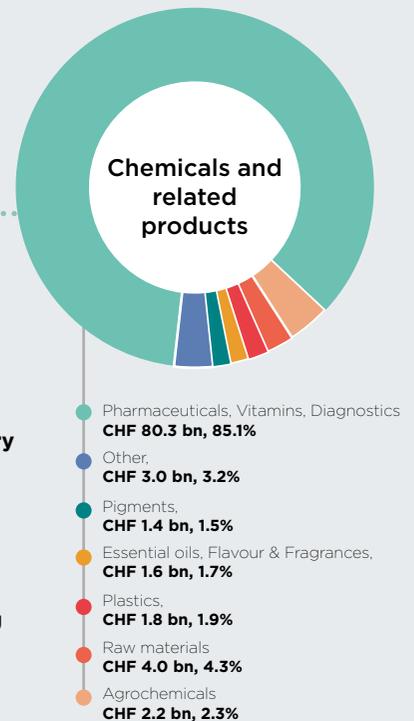
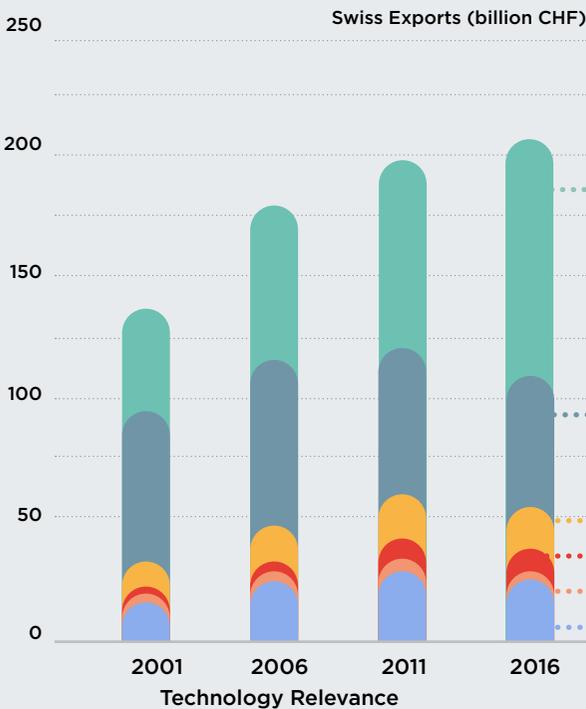
ACCORDING TO THE NUMBER OF EMPLOYEES IN SWITZERLAND IN 2013



Source: Interpharma, 2014

SWISS EXPORTS BY INDUSTRY

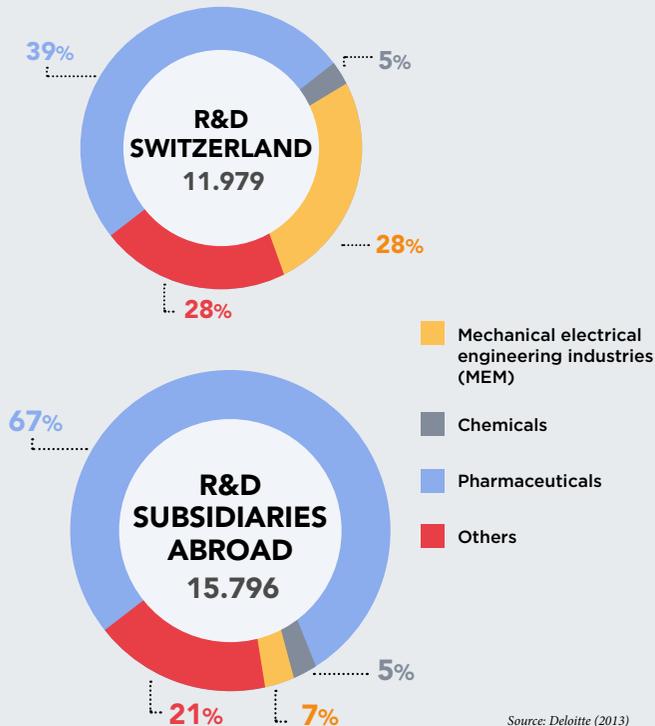
Source: Swiss Biotech Association, 'Swiss Biotech Report 2017'





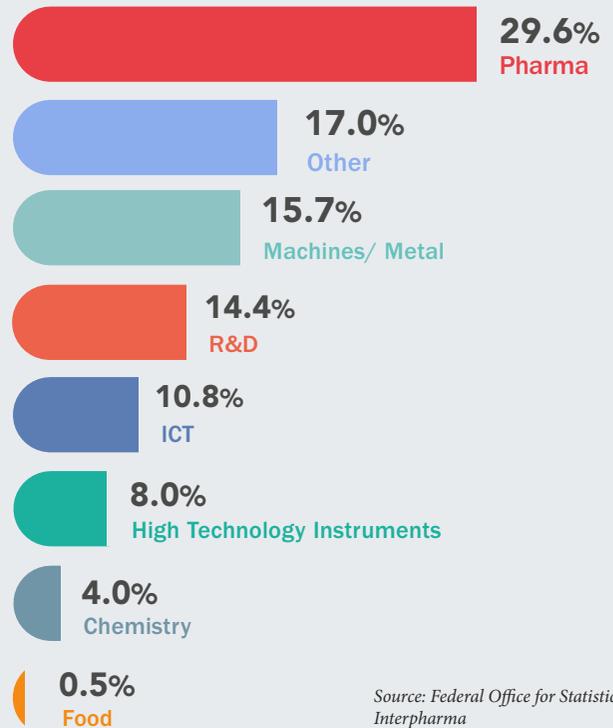
R&D EXPENDITURE IN SWITZERLAND AND ABROAD

PRIVATE SECTOR ONLY: 2008; IN MILLIONS OF CHF AND %



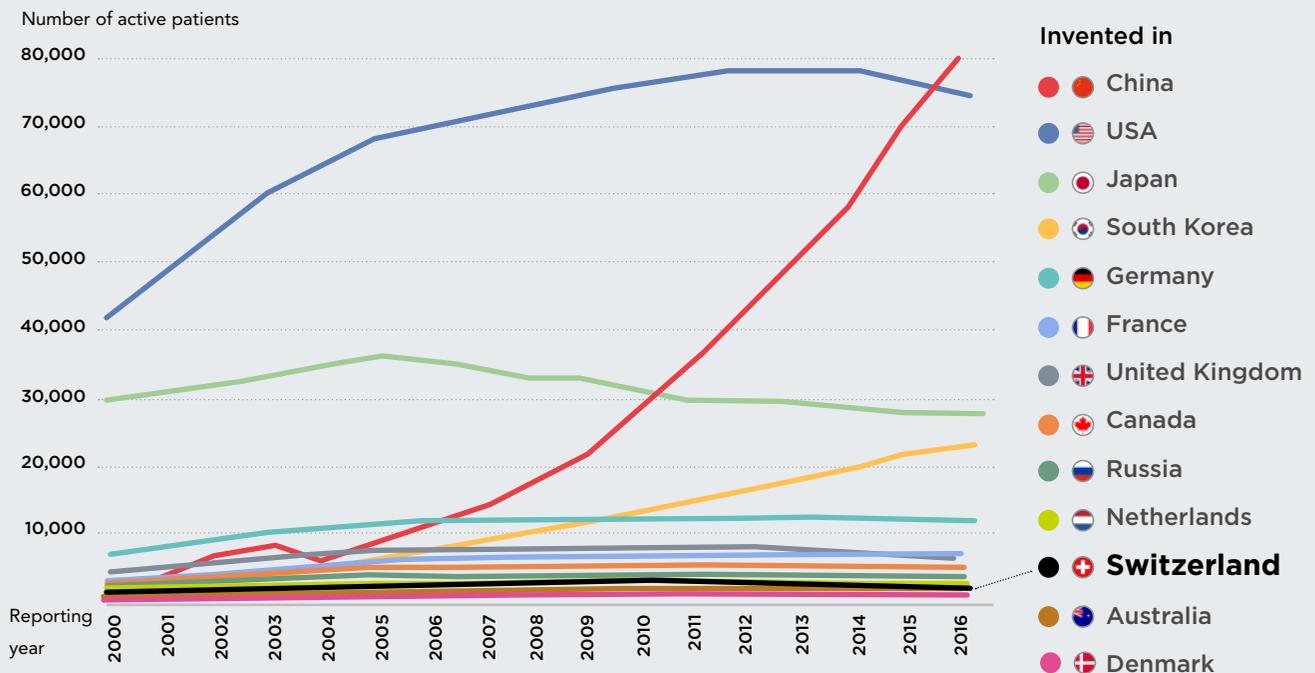
INVESTMENT IN R&D BY INDUSTRY

TOTAL EXPENDITURE ON R&D (2012): CHF 12,819 MILLION (USD 13,090 MILLION)



NUMBER OF ACTIVE PATENTS PER YEAR AND COUNTRY

Source: Swiss Biotech Association, 'Swiss Biotech Report 2017'

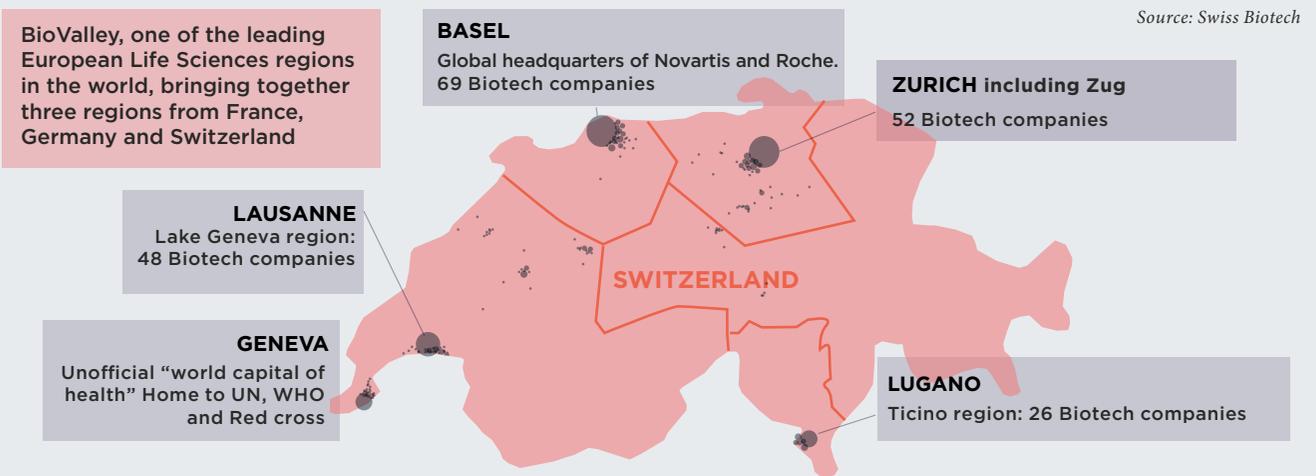




NUMBER OF BIOTECH COMPANIES IN SWITZERLAND

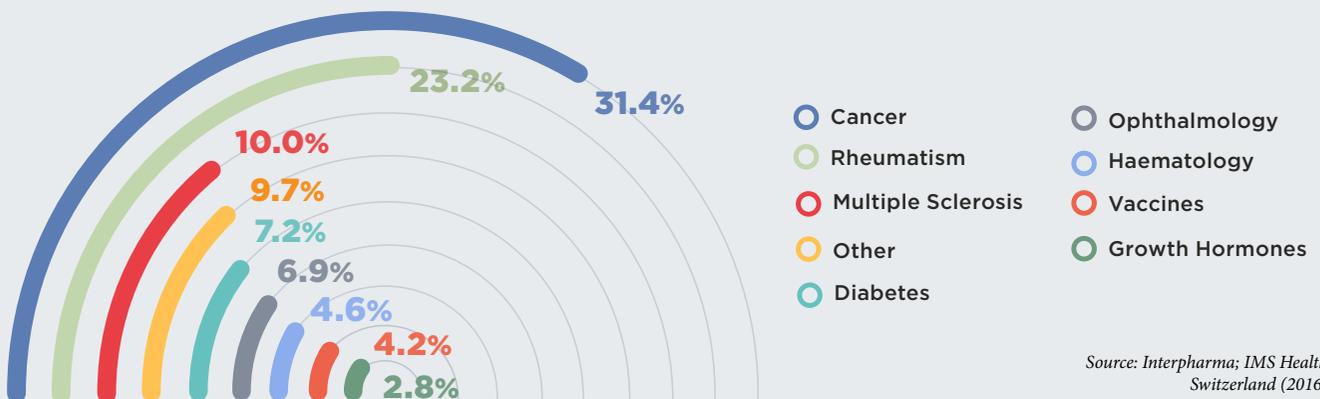


SWISS PHARMA AND BIOTECH HOTSPOTS



INDICATIONS FOR SWISS BIOTECH PRODUCTS

MARKET VALUE: CHF 929.1 MILLION (USD 948.4 MILLION)



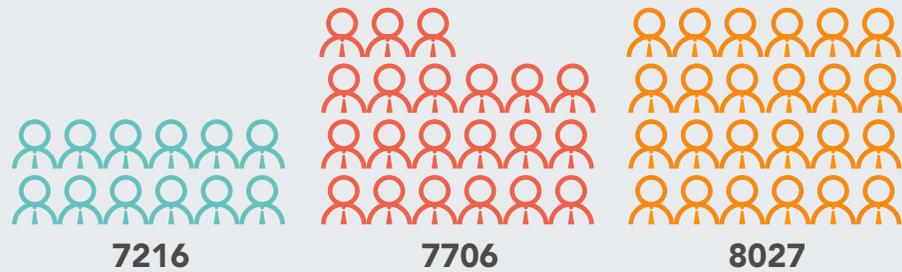
NUMBER OF EMPLOYEES IN BIOTECH INDUSTRY

Source: Swiss Biotech Association, 'Swiss Biotech Report 2017' Annual Reports, website information and EY

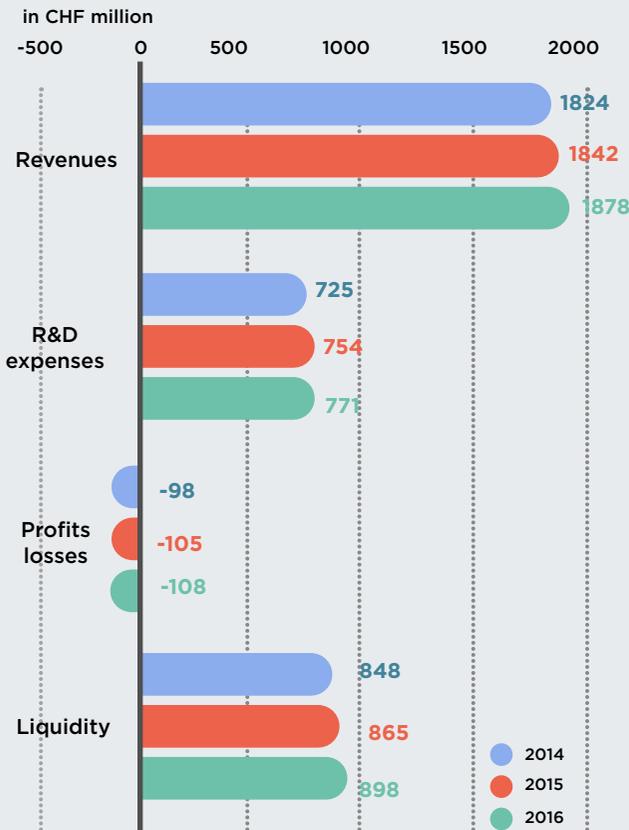
IN PRIVATELY HELD COMPANIES



IN PUBLICLY TRADED COMPANIES

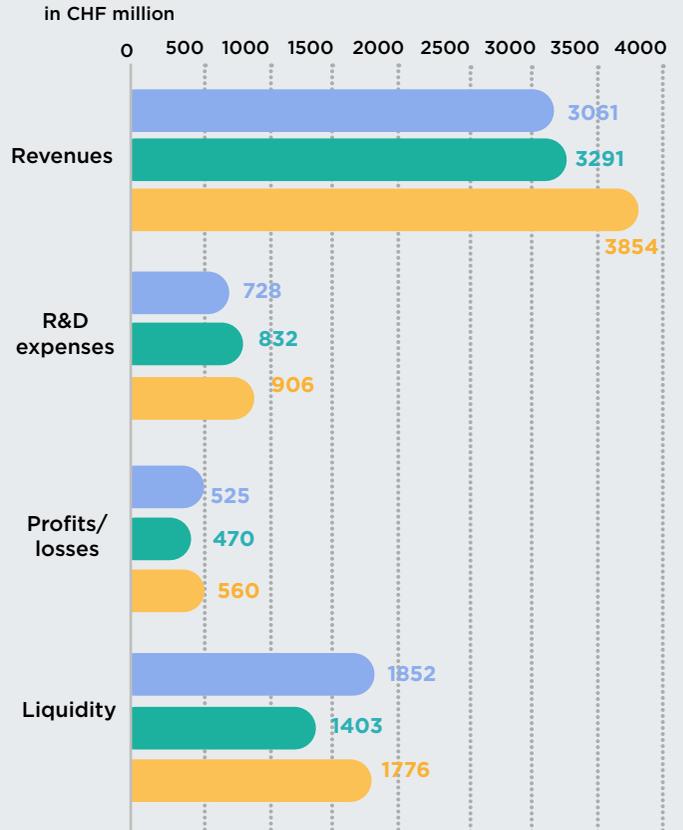


PRIVATELY HELD SWISS BIOTECH COMPANIES



Source: Swiss Biotech Association, 'Swiss Biotech Report 2017', EY

PUBLICLY TRADED SWISS BIOTECH COMPANIES



Source: Swiss Biotech Association, 'Swiss Biotech Report 2017', Annual Reports, website information and EY



RUNNING LIKE CLOCKWORK

Thomas Bohn, executive director of the Greater Geneva Bern area, Western Switzerland's investment promotion agency, elaborates on the unique assets the region has to offer, and highlights the strong pro-business mindset of the Swiss people.

HCLS: The GGBa represents the cantons of Bern, Fribourg, Vaud, Neuchâtel, Geneva and Valais. Why does this grouping of cantons fit together?

THOMAS BOHN (TB): Western Switzerland is one of the best places in the world to do business and is particularly attractive to foreign firms thanks to its international and multilingual environment. All GGBa cantons share a common vision and mission: to develop and maintain a competitive economy based on high value-added products and services. Over the decades, each canton has developed its own dynamic clusters, or networks of expertise, which are catalysts in the fields of life sciences, IT, micro- and nanotechnology and cleantech, to name just a few. Thanks to this extraordinarily rich and diverse business community, our region offers the perfect solution and match for any specific requirement, technological need or strategic partner an investor may need. Most companies that invest in Western Switzerland do so as they seek competences, and the region is able to suit all needs. We have leading universities, world-class research institutions, a highly-qualified workforce and unrivalled skills in the precision industry derived from a tradition of watchmaking.

HCLS: What would you highlight as some of the key accomplishments and milestones for you and your team?

TB: Every time we succeed in positioning Switzerland as a leading business location worldwide, we consider it a success. This could be at different levels: each year, we handle some 200 to 250 new projects; we organize cantonal visits for 120 to 140 potential investors who want to come and see first-hand what Western Switzerland

looks like; and we help around 50 companies establish a presence in our region. However, a great deal of what we do cannot be expressed by mere numbers. We often act as facilitators and door openers, fostering business links and collaborations between local and international actors. We are also very active in promoting our technology platforms abroad, such as the bioFactory Competence Center (BCC), a unique facility specialized in theoretical and practical training to the biopharmaceutical industry, and swissfillon, the worldwide innovation leader in fill-and-finish lines, to name just two.

When it comes to the firms we help set up in Switzerland, size doesn't really matter. Each and every established company – be it a renowned multinational or a small SME – brings value, jobs, and expertise to our region. I am thinking for instance of WAMA Diagnóstica, a Brazilian medical diagnostic company that opened a research center in Western Switzerland last year. Even though the investment is not huge in terms of size, the Swiss subsidiary has initiated a promising collaboration with BioArk, a Valais-based technology site dedicated to life sciences. Together, they are conducting research on several human diseases, including the infamous Zika virus. Creating new synergies and putting in place this kind of win-win partnerships is very rewarding for us, and benefits our region greatly.



**THOMAS
BOHN**

executive director,
Greater Geneva
Bern Area (GGBa)



HCLS: How important is the life sciences sector within the industries you target?

TB: The life sciences sector – including biotechnology, medical technology and pharmaceuticals – is of utmost significance for Switzerland and for our region. As a high margin sector, it is a good fit for a country that is not so cheap to operate in such as Switzerland. Moreover, our tradition in watchmaking sets us up to any segment related to precision works – a description I prefer over naming individual sectors as I believe that many of them become more and more difficult to clearly compartmentalize. The latest developments in medical technology for example show a strong overlap with the ICT sector. 3D printing in the medical field and bioinformatics are also good examples of this multi-sectoral crossing.

Frankly speaking, the sectors that fit our region are any that are innovative – this is a must for us. Two years ago, we had a Romanian investor coming to the region creating more than 120 jobs, developing highly innovative aircraft scanners for the security and defense industry. This kind of development draws from many sectors – IT, micromechanics and more – with the common denominator being innovation. Hearing that that investment came from Eastern Europe into Western Europe might sound paradoxical at first glance given



WE HAVE LEADING UNIVERSITIES, WORLD-CLASS RESEARCH INSTITUTIONS, A HIGHLY-QUALIFIED WORKFORCE AND UNRIVALLED SKILLS IN THE PRECISION INDUSTRY DERIVED FROM A TRADITION OF WATCHMAKING.

THOMAS BOHN GREATER GENEVA BERN AREA

that operating in Switzerland is more expensive than in Romania. However, by manufacturing in Switzerland and having the ‘made in Switzerland’ tag on their products, innovative companies can penetrate the markets much more effectively and sell their products at a higher price. I can say without a doubt that, although the operating costs are higher in Switzerland than in other countries, companies get adequate value for their level of expenses.

HCLS: Most people are likely to be more familiar with Geneva or Lausanne. How do you convince a company to set up an office in Biel or Neuchâtel for instance and ensure regional harmonization instead of concentration?

TB: When we meet a potential investor who is not familiar with Switzerland, we explain that, thanks to the small size of our country and its excellent infrastructure, everything is within reach. Wherever in Switzerland you are, you can reach an international airport in less than one hour. Wherever in Switzerland you are, you have access to world-famous research centers, academic institutes, and top-class research labs active in a wide range of different, complementary fields. Basically, wherever in Switzerland you are, you are in the best place you could be.

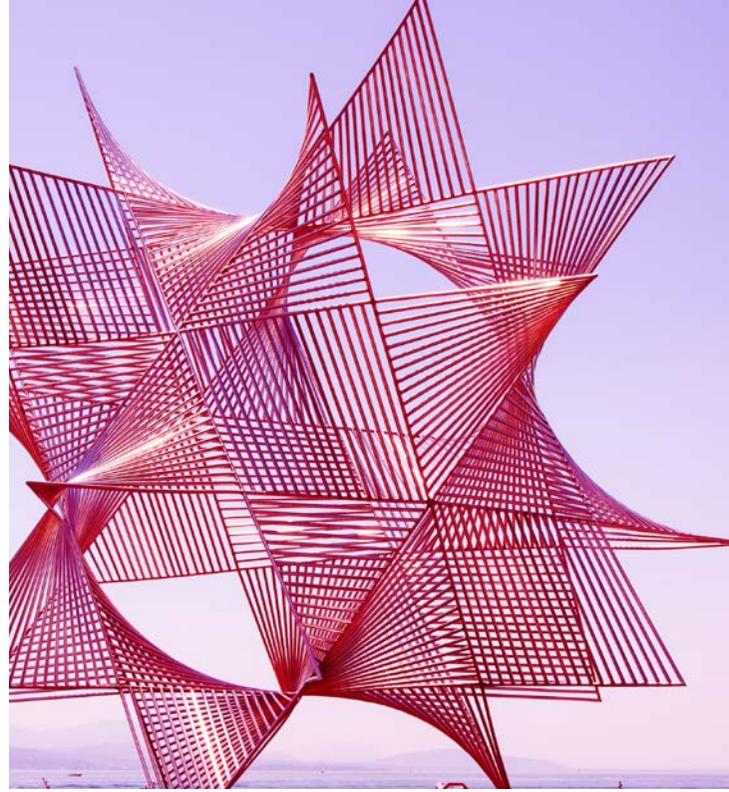
The Swiss ‘Health Valley’ stretches all the way from Geneva to Zurich. Every canton along the way has unique assets and competences that make it attractive to the specific needs of individual companies. Since you mentioned Neuchâtel, it is worth mentioning that Celgene chose the canton of Neuchâtel for its international headquarters in 2005, and has been growing there ever since. The company is currently building a new campus on a total surface area of 37,000 square meters. 100 jobs are expected to be created when it becomes operational in 2019. ❁



GENEVA: SWITZERLAND'S BUDDING HEALTH VALLEY

In the Southwest of Switzerland, overlooking the lake that shares its name, lies Geneva, a city with ambitious designs on becoming the country's foremost healthcare and life sciences hub. Pascal Strupler, Director General of the Federal Office of Public Health (FOPH), notes that Geneva can "already claim renown as the informal capital of health because of the sheer multitude of health-related supranational institutions located there." Indeed the city plays host to not only the European headquarters of the United Nations and Red Cross, but also the secretariat of the World Health Organization (WHO) and an array of development funds and lending agencies. "We benefit from this high concentration of actors engaged in public health and endeavor to deepen and extending these relationships each year during the meeting of the World Health Assembly," he affirms.

Alongside this proliferation of health-related international organizations implanted in Geneva, the region also boasts an exciting life sciences R&D scene. Michael



Hengartner of University of Zurich (UZH) points out that "the axes along the Geneva-Lausanne area foster an extremely vibrant biotech and scientific research community that is growing year on year." Many others agree. "We're talking about an extensive network of innovation, discovery, development and manufacturing and a wealth of easily accessible scientific talent," concurs Nicolas Hug, head of the Industrial Biotech Center of Excellence and Bulle site general manager at UCB.

Moreover the structural foundations of the Geneva area appear well suited to the direction in which life sciences is developing as a discipline. "The Lake Geneva region benefits from having two intersecting innovative clusters, one in MedTech and another in biotech,"

GREATER GENEVA BERN AREA HEALTH VALLEY: THE PLACE TO BE

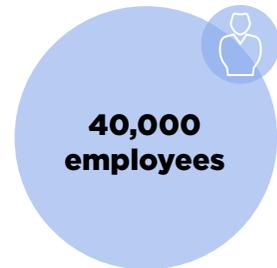
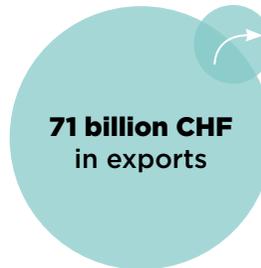
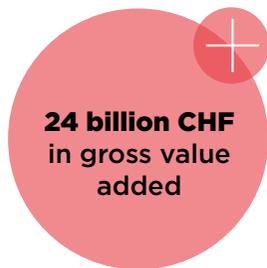


- 450 biotech companies
- 300 medtech companies
- >500 biomedical labs
- 8 incubators
- 16,000 highly skilled life sciences employees
- 50% of all Swiss life sciences start-ups
- strong network of highly specialized life sciences service providers
- presence of the Ludwig Institute for Cancer Research
- unique infrastructures for translational and clinical developments
- massive public investments and fruitful public-private partnerships

Source: GGBa



PHARMA AND BIOTECH IN THE GREATER GENEVA AREA



Source : GGBa; Interpharma (2014)

reflects Benoit Dubuis, chairman, of Campus Biotech. “This is important because it mirrors emerging trends... looking at the course of life sciences development, the field is firmly headed down a trajectory in which the distinction between MedTech and biotech is fading away and the most exciting innovation is occurring at the crossroads between related fields including medicine, biology, biotech, chemistry, micro and nano technology and Geneva’s pulling point is it has all of these components concentrated in the same place,” he asserts.

Indeed Geneva enjoys a degree of strength in many of these domains. “Historically, the region has had a very advanced watch making industry that involved working on technologies which were highly complex and the culture which developed around this industry has had a strong influence on the development of medical technologies in the region,” conjectures Dubuis.

Specifically in biotechnology, Geneva has already been a source of several headline making success stories. Serono, which was acquired by Merck, came to Geneva in the 1970s and, by the time of its sale in 2006, it had become the third largest biotech company in the world. Biogen was also notably founded in Geneva with the ‘gen’ in the brand name, ‘Biogen,’ initially standing for Geneva rather than anything to do with genetics or genome. As such, there is now a strong heritage and tradition of biotech in the region, and a vast array of experience and talent associated with it.

“Geneva has matured into a key city for the treatment of multiple sclerosis, having been the birthplace of two of the early pioneers in MS treatment in Biogen and Serono. While these companies have both moved on for a variety different reasons, the expertise lingers on and many of the people that allowed the development of these great success stories are still very much

here,” attests Jesús Martin-García, chairman and CEO, GeNeuro. “With its thriving innovative clusters in Biotech and Medtech, combined with the historical legacy to support their development, and a forward-looking environment that proactively promotes cross-functional, cross-disciplinary collaboration, I believe that this is a region that is extremely well positioned for the future,” predicts Dubuis.

Nevertheless, while inter-Canton rivalry and competition has long been a hall mark of the Swiss pharmaceuticals landscape; encouraging individual regions to go further in attracting investment, advancing innovation, and driving growth, it is also important to remember that these regions do not exist in bubbles, and are actually located quite close to each other, collaborating both often and fruitfully. Dr. André T. Dahinden, general manager Switzerland and head of Immuno-Oncology Business Unit Europe at Amgen points out that “Switzerland is a small country, with a proportionally dense number of high quality institutes in Zurich, Basel and Geneva all quite close to each other, ensuring an easy sharing of knowhow and expertise between these institutes.” The UZH’s Hengartner agrees; highlighting the fact that “the distance between Lausanne and Zurich is the same as the distance between UC Berkley and Stanford. Ultimately it is all very local.” ❄️



BENOIT DUBUIS
chairman, Campus Biotech



JESÚS MARTIN-GARCÍA
chairman and CEO, GeNeuro



INDUSTRY 4.0

Defying its high living costs to become one of the leading life sciences innovation and manufacturing hubs in the world, Switzerland has driven its competitiveness to dizzying heights. With their constant search for the next level in cost-effectiveness and productivity, companies offering process automation and digitalization services – the much-touted ‘Industry 4.0’ technologies – are keen to share their expertise on this front.

The mission is not as straightforward as simply shoehorning in new technology into the industry, however. As Roland Laudenbacher, GM of Honeywell Building Solutions, Switzerland, explains, “For both manufacturing facilities and R&D laboratories, pharma manufacturers want top quality – proven, reliable systems that will keep the building conditions they need 24 hours a day, seven days a week. For manufacturing facilities especially, that is the ultimate concern, because if those conditions are violated – the air in manufacturing spaces becomes a few degrees too hot or cold for example – it can break the GMP manufacturing environment and they have to shut down production at immense cost.” For their pharma clients, he affirms, “reliability is the key concern above everything else. Clients need to know with certainty that you can deliver what you agree to and without any issues.”

With over 30 years of experience in delivering integrated solutions and special software modules, this has compelled Honeywell to go a step further by dedicating to pharma projects as well as developing their own in-house validation capabilities. Through their specially-developed pharmacy module in our building management system, “all the underlying systems are easily managed through the use of a number of management and alarm workstations and web interfaces. [Also] of critical importance to the pharmaceutical industry, we are not only able to install systems according to GMP requirements in line with FDA, EMA and Swissmedic standards, but are also able to validate these systems ourselves”, thus eliminating the need for clients to bring in



an independent validator afterwards, Laudenbacher elaborates.

Another automation and processes leader, Emerson, agrees that companies need to understand the precise needs of the life sciences industry before rushing in to proffer solutions. President Europe Roel Van Doren describes his role as a very “active” one, overseeing 13,000 employees and a USD 2 billion business. He describes, “I had to refocus the organization because, between 2009 and my appointment, we had witnessed a period of heavy investment in oil and gas. We have really tried to understand all our customers’ [life sciences] investments not just in Switzerland but across multiple hubs, including clusters like Ireland, Denmark and Belgium” – countries that have witnessed the largest life sciences investment in recent years.

To their delight, Emerson had existing company strengths that complemented the particular demands of their life sciences clients. As Van Doren outlines, “our speed to the market is particularly crucial. The majority of multinational companies started manufacturing in their original locations before moving their productions to Asia. Emerson has adopted regional manufacturing, adding approximately 60,000 square metres of manufacturing capacity in Europe. We therefore have much shorter lead times and can deliver in a matter of



ROGER HUNZIKER

country sales
director, Rockwell
Automation



ROEL VAN DOREN

president Europe,
Emerson



days thus dramatically increasing our market participation.”

He adds that their “solutions focus” has also been key, explaining, “our portfolio and our breadth of products and services for process automation makes Emerson unique.

We have the measurement devices, pressure & temperature level analytics, and final control diagnostics. If you look at each of these three areas you will see strong competition but none of these competitors are visibly strong in all three areas.” As an example, he cites the model predictive control function embedded in their DeltaV offering, which has already been used in the oil and gas refining industry for a number of years. “Basically, it helps our customers transform from batch manufacturing to constant manufacturing. With batch manufacturing, obviously there is a considerable amount of time wasted in the production of the drug. With model predictive control customers can transfer to a continuous plan to utilise their time effectively.” In their current

production lines by 4-5 percent per year for the last five years.” This experience is what they want to leverage on. Hunziker candidly shares, “investing in the technology to capture data is pointless if you are not able to find the right data that can be used to make better management decisions. We are happy to share our expertise – gained from practicing what we preach.”

The life science sector already represents USD 1 billion of Rockwell Automation’s USD 6.3 billion global revenue, and they work with 95 percent of the Fortune 500 companies. Nevertheless, while “all of the Big Pharma players on that list make extensive use of IT systems and Industry 4.0 capabilities at the global level ... there is certainly space for them to do more at the operational level inside plants,” evaluates Martin Petrick, life sciences strategic account manager.

The value that Rockwell can bring is very simple; in Hunziker’s words, “Rockwell Automation is fully focused on automation. It is the only business we do.” Breaking this down, he explains, this means Rockwell can offer “a unified control system with multidisciplinary capabilities. We can control all types of systems: safety systems, continuous process, batch process, discrete systems, motion or drive systems all with common controllers and infrastructure. Information flows seamlessly across and through these systems. None of our competitors offers such multi-discipline capabilities.” Very helpfully as well, “all our systems use industry

“ALL BIG PHARMA PLAYERS ON [THE FORTUNE 500] LIST MAKE EXTENSIVE USE OF IT SYSTEMS AND INDUSTRY 4.0 CAPABILITIES AT THE GLOBAL LEVEL... THERE IS CERTAINLY SPACE FOR THEM TO DO MORE AT THE OPERATIONAL LEVEL INSIDE PLANTS

MARTIN PETRICK ROCKWELL AUTOMATION

pilot demonstrations in Basel, they demonstrated that the product had the capability to reduce the production time of a particular drug from six months to half a day!

For Rockwell Automation, this is all familiar territory, having built an Industry 4.0 platform within their own organization called ‘The Connected Enterprise’ in 2008 – a comprehensive overhaul involving over 30 ERP systems and 15 different plants. Roger Hunziker, Country Sales Director, tallies, “by carrying out this transformation program, we increased our rate of on-time deliveries from 85 to 96 percent, reduced our stock level from 120 days to 82 days of inventory, cut our rate of defects per million in half, and increased utilization of our

standard connectors and protocols, and thus are compatible with almost any other system ... We can come in on top and provide the solution ... to assist creating a connected enterprise unlocking business value across their supply chains.” As if that package was not attractive enough, Petrick adds, another area of strength is “scalability”. Responding to the industry trend of modularization, “Rockwell can automate both very large systems and very small systems with the same technology.” In particular, Rockwell has invested significantly in downward connections to “use the intelligence of the many small devices and modules in a facility” with a ‘plug and play’ model, Petrick boasts. ❁



FROM PAYER TO PLAYER

The CEO of Switzerland's leading insurance company sketches out the local health insurance landscape, analyses the drivers behind escalating costs, and speaks out about how his firm is proactively seeking to improve the system.



Daniel Schmutz
HELSANA

HCLS: With 1.9 million policy takers and CHF 6 billion (USD 5.96 billion) in inland premiums, Helsana is one of the largest healthcare insurers in Switzerland. Could you start by introducing the healthcare insurance landscape here and where Helsana fits within that?

DANIEL SCHMUTZ (DS): The insurance landscape changed 21 years ago when we introduced the health insurance legislation, which by European standards is quite recent. It was only then that health insurance became mandatory in Switzerland. As Switzerland is a relatively entrepreneurial country within Europe where decentralization is quite important, it was decided that the Cantons should play a large role in this system and that there should also be individual responsibility. In contrast to other countries, it is not the state that provides the coverage, but a mandatory insurance scheme. That is the first pillar of our business.

The “basic insurance” package is defined by law and is quite comprehensive; allowing for example access to all kinds of pharmaceutical products, specialty treatments, and hospitals. However, there are quite a few other options in these benefit packages. For example, you can choose deductibles as well as managed care models which give discounts to people who commit to behaving



in a certain way, i.e. going to the same gatekeeper and purchasing the drugs through alternative channels. Freedom of movement, freedom of choice, and access are very important here and anyone, in any year, can go to a different insurance company. We cannot turn down anyone due to pre-existing conditions and there is community rated pricing. The Swiss system therefore is costly but of an excellent quality and without waiting periods.

The second part of our business is supplemental insurance. The regulator allows for top-up insurance on top of the basic, mandatory insurance. These products cover areas such as dental treatment, eye-care, and fitness. The supplemental hospital insurance products give you free choice of doctor in the case of hospitalization and better amenities such as a private room. That is an insurance business in the more traditional sense in that we can underwrite, risk-select – at least at the beginning – and work more like a “normal” insurance company.

Our third pillar is worker’s compensation and accident insurance, which we do for corporations. Combining those three lines of business, we are the largest player in Switzerland and in basic insurance alone, we are number two.

HCLS: The Swiss healthcare system is of an excellent quality but quite costly, with costs continuing to rise. From a payer’s perspective, what do you see as the main drivers of this?

DS: The system here, although it has many elements of individual responsibility compared to other European



nations, is by no means a market system. There are many regulations and protectionist legislation, which lead to the fact that we pay a high price for healthcare. In healthcare, you are always going to have an interaction between regulatory mechanisms and private sector activity; if you leave healthcare to market forces alone, you end up with a mess. However, we do see incentive structures that are simply outdated. As an example: as soon as you qualify as a doctor here, you know that you have access to the entire patient population of Switzerland and do not have to worry about contracts. That is not helpful when you want to negotiate prices.

There is quite a stable cost-per-treatment trend, but the issue is volume. People want more, there are more providers, therefore you result in more volume. Obviously, that has to do with our consumer patterns. An MRI is completely standard treatment now for patients that would have been given an X-ray 10 years ago! Another example is physiotherapy, which has become standard practice after operations. People have already paid for the service in their premiums so will obviously choose to do it. As we still have some elements that protect the provider side, and a population that is used to not having to wait to get access, you get volume increases.

The other side is prices; Switzerland has high prices for everything! I can see the case for highly innovative drugs being highly priced, but there is no reason why generics should be significantly more expensive here than anywhere else. If you reduced generics to a European price,

we would get about CHF 3-4 hundred million (USD 2.9-3.9 hundred million) back from healthcare costs. What has changed in the last two years is the public's awareness that we do in fact have a cost problem. However, we have had three votes on moving from multiple payers to one single, centralized government, per Canton or nationwide in the last 15 years, which were all voted down. We also had votes on increasing managed care, which was also voted down because it was feared that it would reduce free access to specialists. We had a vote on including homeopathics in the basic insurance package, which was voted in favor by a large margin.

When push comes to shove, the Swiss people still favor additional benefits versus costs. In Switzerland healthcare costs are rising, but in terms of percentage of GDP, these costs have actually grown more slowly than in other countries, albeit from a relatively high starting point – we are seventh in OECD. The big difference between Switzerland and the other countries around us in that ranking (Canada, France, Switzerland, Denmark, the Netherlands) is that here, the cost is very visible to the consumer. In France, you might pay 50% of your salary in taxes, part of which covers healthcare. There are deficits. In Switzerland, that is not possible; if we make deficits we go out of business. The system is deficit-free but its true costs are factored so you see the increase every year, and as a family you pay it from your pocket.



WHEN PUSH COMES TO SHOVE, THE SWISS PEOPLE STILL FAVOR ADDITIONAL BENEFITS VERSUS COSTS

HCLS: What is the effect of hospitals being controlled by individual Cantons?

DS: Well, some Cantons are trying to separate the assets and create independent holding companies for the hospitals. Other Cantons are still holding onto that infrastructure and also investing public money in it. As an example, the Canton of St. Gallen covers an area where in England you would have one NHS hospital, but in fact hosts six hospitals with close to a billion CHF (USD 0.9 billion) being poured into them. For a country of our size, to have 300 hospitals is too many. When I went to Denmark three years ago, they had 40 and had plans to reduce that to 25.



HCLS: Helsana started its own in-house scientific health service research center in 2011, which has been producing reports ever since. What was the logic behind setting up this center?

DS: We are committed to moving from being a payer to being a player. I firmly believe that it is important that we use information to the benefit of our customers. We have been trying different ways to make information in our field more transparent and digestible; the reports are one way of doing so, as they are geared towards the provider system itself. Previously, Swiss doctors knew how diabetics were being treated in Switzerland but did not have any view on how it is done globally. One of our reports therefore looked at how diabetes is being treated in Switzerland and found that diabetic patients are far better off in a managed care setting, which is also much more cost effective.



WE ARE COMMITTED TO MOVING FROM BEING A PAYER TO BEING A PLAYER

DANIEL SCHMUTZ HELSANA

Another initiative in that field is what we call Gesundheitskompetenz, which is a way of trying to make information available for patients for individual health-care decisions. We still say that the customer should decide themselves which treatment to take. Freedom of choice is a very important feature in Switzerland in general and in healthcare specifically.

HCLS: How can this type of data be useful at national and Canton levels in Switzerland and in other markets?

DS: We are trying to get the message out and have had interesting discussions with Cantonal delegations. Switzerland is a small country and everyone tends to know everyone. Decision making is therefore collaborative. Helsana has a large market share but on our own we cannot and do not want to force the providers to do anything. The system emphasizes freedom of choice, so we share our findings to influence outcomes nationally as well as internationally. Through the International Federation of Health Plans (IFHP) the barriers to cross-border information exchange are low. It does not

matter if health insurers in Australia hear what we have done successfully and copy it as we do not infringe on each other's territories.

HCLS: Can you give any specific examples of how your findings have provoked a reaction in terms of reforming or changing the system?

DS: There are two kinds of impacts: on the systemic level and the more tangible, operational level. In terms of cost growth, one area where we don't have growing costs for old-age care. There were some proposals on the table which would have put that cost as additional on top of basic insurance but, also due to our data and findings; the decision was made to implement a more predictable model. We prevented something bad from happening for our premium payers and we therefore help people make their own better informed decisions.

Another project I would like to highlight is a more recent one. The way the system is organized with free access to specialists, many people with multiple illnesses go to multiple specialists. What often happens to them is that they end up with a cocktail of medicines that they actually should not be taking together. Together with an innovative start up from ETH, we created a software which shows the doctor if there is a danger of a risky cocktail. This is now being rolled out and is an example of us using our data to try and influence outcomes; not on a systemic level but on a real for-patient level. That is what I meant by becoming a player and becoming relevant for the client.

HCLS: With 40 or so other health insurance companies in the Swiss market, how does Helsana differentiate itself?

DS: As the basic insurance is the same, you can try to differentiate on price, but that only works in the long run if you aggressively risk-select. We have a different strategy focused on customer-centricity. We try to emphasize customer engagement and differentiate ourselves in supplemental insurance and on a product level where we have products that others do not. You can also differentiate yourself on service, friendliness, and additional services. Price is a dominant factor and every year you have anything from 6-10% of the population that switch insurance company, which is very high. It is a very competitive market out there! 🌟



LOCATION LOCATION LOCATION

Shigeo Taniuchi, Santen's head of EMEA, explains why the company established their new regional headquarters in Geneva, Switzerland.

HCLS: Given Santen's historic presence in Germany, and the fact that its two European R&D centres are located in France and Finland, why did you choose Switzerland as a strategic hub to implement regional strategy?

SHIGEO TANIUCHI (ST): The key constellation Switzerland has to offer is the ability to access and manage the diversity and complexity of the different markets. For instance, we need to manage commercial specialists in Italy, Germany and France while being in charge of the manufacturing in Finland, and all operations and cultural aspects differ considerably. From a managerial point of view, it was essential to have a geographically and culturally central location. Of course, given our historic presence in Finland, Germany and France, we assessed a multitude of different locations to become our regional HQ... however, Switzerland remained outstanding not only from pure location aspects but also from the perspective of finding and acquiring the right talent. That does not mean we only hire Swiss people; but, the Swiss professionals have the benefit that they are already mastering the art of managing the cultural diversity, which is of utmost significant to us.

HCLS: Basel is the traditional healthcare & life sciences city in Switzerland, with the headquarters of Roche and Novartis. Additionally, Zug offers very attractive fiscal incentives. With this in mind, why did you choose to base your operations in Geneva?

ST: We indeed also assessed Basel, as it does have many local champions, a good location and good talent. But, the attractiveness of Geneva is simply that it extrapolates these benefits and expertise beyond the



healthcare and life science industry, thus creating a healthy balance of talent. We realized we needed talent in different functions, supply chain management for instance, and Geneva offered expertise in a variety of fields. Moreover, it has excellent public infrastructure and a stellar level of cultural and social life which eases the process of attracting talent from the outside.

HCLS: However, it seems that Geneva is losing attractiveness to the Canton of Vaud for example, due to uncertainties regarding corporate tax, immigration and more. Do you regret having chosen Geneva?

ST: The issue of the immigration quota is a Swiss rather than a Geneva issue which we would face in every canton of Switzerland. It is true that some companies have moved their headquarters to another canton for the sake of taxes, however, in our case taxes are not –although important–the top priority for the company. You have to understand that, before the acquisition of the MSD portfolio, we did not have to worry about taxes at all as we were not generating profit. Recognizing the positioning of our headquarters as a long-term strategic decision, it is more important that the location offers long-term and healthy growth, rather than where we pay the least taxes. Besides, comparing the tax rate here with the tax rate in Japan, we see that we are still in a favourable position. ❄️



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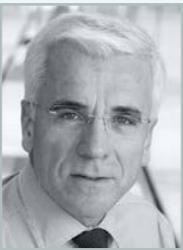
A Kaleidoscope of Excellence

Located deep in the heart of Europe, home to some of the world's most important international health institutions as well as two of its largest pharmaceutical companies in Novartis and Roche, and with a number one ranking globally in terms of ease of doing business and innovation; Switzerland can truly lay claim to be a healthcare and life sciences powerhouse. Despite some of the highest operating costs of any country in the world, an increasing number of pharma companies are choosing to base their European and EMEA headquarters in Switzerland, allowing the landlocked nation of merely eight million to firmly establish itself as "Europe's brain."

Though not without its own specific challenges – as a non-member of the European Union, its rather quirky regulatory setup can certainly confound some un-savvy operators, while the country's aforementioned pricy-ness, remains distinctly unappealing to others – Switzerland continues to lead the world in innovation and offers decidedly more than first meets the eye. "Our unique market is doubtless small, but holds its weight admirably alongside European giants that are only a train ride across the border," resolutely affirms Pascal Strupler, director general of the Federal Office of Public Health for the Swiss Confederation. ➤



PASCAL STRUPLER,
director general,
Federal Office of
Public Health



GILLES PLUNTZ
chairman of the group
operating committee
& SVP Europe and
Canada, Ferring

One striking feature of the country's pharmaceuticals complexion has been the growing proclivity to treat the small mountain nation as a stellar destination for drug manufacturing. Alongside the familiar ongoing investments of homegrown giants, Novartis and Roche, in maintaining a full manufacturing presence, the thundering pace at which major international pharma companies have demonstrated a willingness to invest in new or upgraded fabrication facilities has been deeply impressive. Biogen, for example, last year announced that they would be erecting a brand new biotech plant in Luterbach, in the canton of Solothurn to the tune of some EUR one billion (USD 1.1 billion), while Celgene have been spending big on extending a major hub near Lake Neuchâtel. "The big pharma

multinationals are consistently demonstrating a clear preference for Switzerland when it comes down to manufacturing state-of-the-art, latest generation, high-complexity originator products. This is because their key selection criteria are productivity, quality assuredness and the strong brand reputation associated with Swiss-ness, all of which prove more than sufficient to stave off any tendency towards de-industrialization," proclaims Thomas Cueni, former secretary general of Interpharma and current director general of the Geneva-based International Federation of Pharmaceutical Manufacturers & Associations (IFPMA), representing the interests of the research-based biopharmaceutical industry at a global level.

What's more, one gets the sense of a snowball and magnifier effect underway. "There can be absolutely no doubt that Switzerland remains one of the very best places in Europe to be doing business, concedes Gilles Pluntz, chairman of the group operating committee & SVP Europe and Canada at Ferring, "because of the presence of an abundance of pharma industry, services and research players and the fact that all three

are so exceptionally well linked and integrated into the local ecosystem. Indeed, whether one considers the burgeoning prowess of its budding pharma service sector, the gutsy creativeness of its mid-cap drug developers, or the synergistic life-sciences orientation of little known cantons like Ticino, this is clearly a market in the ascendancy.

WORLD-CLASS SERVICE PROVIDERS

Playing host to the regional headquarters of some 29 multinational pharmaceutical firms and with a manufacturing base exporting pharma related products worth more than 70 billion Swiss Francs (USD 70.93 billion) per annum, Swiss-based pharma developers have much to shout about. However, Switzerland's life sciences industry extends much deeper than that. Indeed, Switzerland's burgeoning cornucopia of world-class pharmaceutical innovators has necessitated a

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corresponding growth of service providers with similar levels of excellence. Stefan Berg, general manager of Danish pharmaceutical engineering company NNE, owned by global diabetes market leader Novo Nordisk, highlights the importance of building a strong reputation for reliability in the pharmaceutical engineering niche. NNE has been present in Switzerland for over 20 years and Berg explains that “We have long term relationships with our customers and it’s all about trust. In our line of business, you can do it right for many years, if you do it wrong once there’s a risk of losing the whole partnership.”

Roland Laudenbacher, GM of the Swiss affiliate of Honeywell Building Solutions, concurs on the crucial significance of a reputation for reliability when building both manufacturing facilities and R&D labs for pharmaceutical companies, as “pharma manufacturers

want top quality, proven, reliable systems that will keep the building conditions they need 24 hours a day, seven days a week. For manufacturing facilities especially, that is the ultimate concern, because if those conditions are violated – the air in manufacturing spaces becomes a few degrees too hot or cold for example – it can break the GMP manufacturing environment and they have to shut down production at immense cost. Reliability is the key concern above everything else.”

Not only are pharmaceutical engineers stepping up their game to supply Swiss innovators with the cutting-edge laboratories and plants that they need; highly specialized, top-end of the market contract manufacturing organizations (CMOs) are also emerging to support the multitude of pharmaceuticals companies present in the country. Juerg Burger, managing director of CordenPharma, one such organization, points

The Partner of Choice for Microbiological Control



JOHANN EGGER,
—
general manager
Switzerland
& Austria,
bioMérieux

With pharmaceuticals developers increasingly “subjected to evermore stringent oversight and regulation,” the industry worldwide is “witnessing a surge demand for improvements to the safety of the drug

manufacturing process,” according to Johann Egger, general manager of Switzerland and Austria for bioMérieux. “Companies are increasingly confronted with new legislation governing data monitoring and the requirements of these new regulations are translating into more frequent auditing, and the capacity to demonstrate that testing has been conducted in the proper manner,” he explains.

In light of these manifold challenges, bioMérieux has been positioning itself as “the reliable partner of choice for a wide range of pharmaceutical and biotechnology companies, by assisting them in the highly-regulated domain of pharmaceutical compliance,” reveals Egger. The launch, in 2016, of EviSight™ Compact – a smart incubator that is providing real time culture media reading – is very much indicative of the new style of solutions being offered. “We identify considerable demand emerging for innovative systems that can ensure integrity and EviSight™ stands out as one of the most effective testing method for microbial detection in pharmaceutical pro-

ducts. Therefore, it serves not only as an important new addition to our portfolio of solutions, but also as an excellent illustration of bioMérieux’s profound commitment towards protecting consumers’ health,” he confides.

Furthermore, Egger believes the Swiss market to act as an excellent arena for testing out and pioneering these sorts of innovations. “A particular focus of the local affiliate has been to apply ourselves to the provision of novel solutions for industrial microbiological control of manufactured products, because this is the kind of market that well appreciates these types of developments,” he notes. We are already in the launch phase for EviSight™ and are confident of completion before the end of the year. “In Switzerland, we recognize it as a fantastic platform to bring new developments to the market,” he confirms.



Photo courtesy of: bioMérieux

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Q&A with CordenPharma managing director Juerg Burger



**JUERG
BURGER**

—
managing
director,
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CordenPharma Switzerland has achieved recognition for its capabilities in small molecule development and as a premium supplier of peptides, phospholipids and carbohydrates.

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into a formulation or fill & finish, so, as the customers' needs unfold, we respond by transferring the API to our other affiliates which handle drug product development and manufacturing.

What do you identify as the emerging trends in demand?

Innovation today tends to come from bio-organics, whereas classical small molecules are more or less historical and competition in that segment is increasingly tight. We also witness pharma firms placing greater emphasis on the development of niche indications and segments such as orphan drugs. The tendency is towards personalized medicine and this means demand is rising year on year for "small quantity" contracts: nowadays an important revenue driver for our business.

out that the niche specializations in which many Swiss innovators excel mean that Switzerland has become a key strategic location for his organization; "We are really a dedicated facility for the manufacturing of niche products – for example synthetic phospholipids which later go into liposome formulations, or products needed for novel technologies."

Burger also notes that "more niche indications and segments such as orphan drugs and trends such as personalized medicine ... really drive our business, the latter raising the demand in small quantity needs each year." Rudolf Hanks, CEO of fellow CMO Siegfried, highlights the CMO industry's role as a way for highly innovative companies to offset risk, stating that "the CMO industry ... provides [pharma] companies with an alternative that lets them avoid having to invest in manufacturing assets which might not be used," thereby "providing back-insurance; by taking on multiple clients, we are able to diversify the asset-risk of non-utilization."

"While once the name of the game used to be all about Big Pharma attempting to do everything in-house, most pharma companies are now tending to concentrate on specific stages of drug development and willing to outsource the other functions... Since

the development of a new chemical entity or a future generic carries the risk of failure of clinical trials or failure in the launch, production outsourcing to a CMO brings a definite value to the pharma companies," analyzes Gabriel Haering CEO of Cerbios, an elite contract manufacturer of both chemical and biological APIs. According to him, the co-development model characterized by risksharing and profit-sharing is becoming more and more popular. "For a small to medium size CMO like us it is possible to consider this model under certain given circumstances such as in the area of future generics or supporting the originator in the "life-cycle-management" phase of his original compound, but we always have to be wary of instances of riskshifting," he warns. Doing the development free of charge on the basis that the CMO earns royalties on any eventual sales is the dream of some pharma companies, but will probably only makes economic sense to a CMO if they are a new market entrant and desperate to secure some initial business."

Instead of going down that particular pathway, Cerbios has concentrated its energies on providing a visibly differentiated service and having special technologies at its disposal that align well with the premium demands of the kind of top-flight clients to be



encountered on the Swiss market. “We have forged a well-earned reputation for being able to safely and efficiently handle High Potency Active Ingredients (HPAIs),” explains Haering.

“If you consider the new chemical entities being produced nowadays, we are talking about more and more highly potent substances requiring advanced levels of containment so as to protect the operator from their toxicity in addition to the CGMP procedures in order to avoid any cross-contamination. Our sophisticated containment equipment, which was borrowed from the nuclear science industry, can act as a technological constraint and barrier to entry for potential competitors.”



[SWITZERLAND IS] ONE OF THE [WORLD’S] MOST INNOVATIVE PHARMACEUTICAL HOTSPOTS AND THIS IS EXACTLY WHY IT IS SO FUNDAMENTALLY IMPORTANT TO BE HERE.

STEFAN BERG NNE

Micromacinazione, another provider of high-end outsourced services, namely jet milling micronization, has been pursuing a fairly similar business logic. “More micronization is being conducted globally than ever before, and though 90 percent of micronization tends to be performed in-house by the pharmaceuticals companies themselves, entities like ours still need to be present to cover the peaks and to take care of difficult-to-handle, high potents... Nowadays every large pharma firm requires a backup in case their production line experiences difficulties. When you’re talking about important blockbusters, the norm is for every big pharma firm to have a couple of micronization partners as part of having a sound risk mitigation strategy,” points out CEO, Markus Arigoni.

“Right now, the market is definitely trending towards the use of highly potent and hazardous substances and this has, in turn, translated into a mushrooming in demand for containment capabilities... In the past, we used to micronize a lot of products with a low occupational exposure level (OEL), but the pendulum has been swinging the other way, in recent times, to the point where having containment capabilities covering down to 20 ng/m3 is becoming imperative,” he recounts. Micromacinazione has duly been “upgrading



MALEŠA ULRICO SIDJANSKI

head Swiss business operations, Institut Biochimique (IBSA)



STEFAN BERG

general manager, NNE



RUDOLF HANKO

CEO, Siegfried

its production facilities to include a new banding system and a product segregation regime that comprises both flexible containment and fully closed glove boxes.”

Despite the expenses accrued for both pharmaceutical engineering companies and contract manufacturers by being based out of Switzerland and the relatively small size of the local market, it nonetheless remains a crucial location for organizations in both segments. Siegfried’s Hanco exclaims that Switzerland “is the biggest research and administrative hub for the pharma industry in Europe,” making it “essential for us to be here,” while NNE’s Berg characterizes Switzerland as “one of the [world’s] most innovative pharmaceutical hotspots and this is exactly why it is so fundamentally important to be here.”

THE ESSENCE OF SWISSNESS

Crucial to the business model of the country’s drug developers and pharma service providers is the concept of “Swissness,” a rather self-explanatory term for the attribute of being Swiss, and in its functionality some might say the term itself is quite Swiss. Swissness remains a staunchly serious matter for the local business community, given the perceived value associated with a product or service being described as Swiss. As Thomas Bohn, executive director of Greater Geneva Bern area (GGBa), Western Switzerland’s investment promotion agency succinctly summarizes, “by manufacturing in Switzerland and having the ‘made in Switzerland’ tag on their products and services, innovative companies can penetrate the markets much more effectively and sell their offering at a higher price,” and

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Glenmark: Beyond Generics



**KURT
STOECKLI**
—
managing
director,
Glenmark

Switzerland might seem an unforgiving market for generics players at first glance. Despite steady growth in the Swiss generics market, patients tend to prefer well-established brands, prices for generics are twice that of

elsewhere in Europe, and the country can be prohibitively expensive for manufacturers.

However, for companies with a tradition of generics looking to transition into R&D and creating their own medicines, Switzerland is actually a perfect location as Kurt Stoeckli, managing director of India-headquartered Glenmark Pharmaceuticals' Swiss affiliate explains. "Switzerland was an obvious choice for Glenmark to house biologics R&D because the country offers high-quality infrastructure, prospering interaction between private and public stakeholders and increased ease of attracting the best talent to the organization," he asserts.

Glenmark's Swiss R&D center is one of three globally, and is, as Stoeckli puts it, a key part of the company's "significant transition from a generics company to a specialty company to an innovation company—we are literally walking up the value chain!" This transition does not however mean completely diverging from the tradition of generics that has seen the company grow from humble beginnings in founder Glenn Saldanha's garage in 1977 to the billion-dollar company it is today. Stoeckli characterizes Glenmark's new strategy as "a mixed generics-new molecular entity business model [which] offers us more options regarding the management of risks and capital expenditures while potentially generating higher margins." Diversification therefore stands to take Glenmark to the next level as a company, with Swiss operations at its heart.

thus while "the operating costs are higher in Switzerland than in other countries, companies reap adequate value for their level of expenses."

Indeed, even in the pharmaceutical industry where an EMA or FDA seal of approval is ultimately more important than any country designation of origin, being "Swiss" certainly still carries substantial worth. At IBSA, head of Swiss business operations Maleša Ulrico Sidjanski claims that "purely in terms of competitiveness and commercial success, the "made in Switzerland" brand is fundamentally important



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BEAT BERGER
CEO, DCS Pharma



UWE SCHMELZER
director of sales &
marketing, DCS Pharma



**CHRISTIAN
BELTRAMETTI**
CEO, Linnea

our therapies in Switzerland makes it very easy to communicate the quality aspect.” Basel-based API distributor DCS Pharma, meanwhile, has leveraged the sense of quality and trust that people around the world associate with the Swiss in a rather unique manner. While they source their APIs from cost-effective manufacturers in China and India, CEO Beat Berger says that, “from our clients’ standpoint, we take on the risk of the supply side and guarantee delivery... [and] they are buying them from a Swiss company.” In this regard, Berger says “we definitely benefit from being based in Switzerland because the country is so thoroughly associated with reliability, and premium quality goods and services,” which fits well with the company’s own reputation, as “it is well known in the market that we always fulfill our agreements, and if we sell a product we know exactly what we are selling and that it meets the specifications it is supposed to.”

That’s not to suggest that the reputation and brand equity of Swissness doesn’t come with its own liabilities however. In terms of additional obligation, Berger points

to the company’s communications strategy.” “We are positioned in the ‘supergenerics’ segment, so our success is very much based on our products being known to be superior in terms of pharmaceutical form, delivery pathway, ease of use, and side effect profile, when compared to the original product and its other generic-ized versions,” and thus “given Switzerland’s well-earned reputation for high quality pharmaceutical manufacturing, producing



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BEAT BERGER DCS PHARMA

out that the impeccable reputation of the Swiss can “create some pressure for us in the rare cases where things don’t work out perfectly as everyone knows the Swiss are always on time to the very second, just like our trains which never run late!” And “of course premium services come at a price, even more so when you’re based in Switzerland and having to pay many costs in Swiss francs.”

The base reality is of course that in most cases the Swiss are worth the price. DCS’s director of sales Uwe Schmelzer explains that “there is a huge supply of talented experienced pharma professionals across Switzerland,” and moreover “from a management culture perspective, we have also been able to develop a corporate culture that is very entrepreneurial, where every employee has the responsibility and independence to take decisions themselves,” something that he points out can be difficult even in other European countries that are “somewhat more hierarchical or bureaucratic, which can slow things down.” He concludes by reflecting that, “without the right talent pool, it would be frankly impossible run this type of high-performance, high-efficiency organization.”

Indeed, in terms of high-performance and high-efficiency organizations, natural extract and phytopharmaceuticals API manufacturer Linnea provides a robust example of the power of Swissness. CEO Christian Beltrametti explains that, “with high labor costs, this means operating with a high level of productivity as well as capacity utilization. Linnea does well in both respects, producing a turnover of CHF 45 (USD 45.1) million with just over 90 people. We also run most of our production lines around the clock – 24 hours a day, seven days a week. This allows Linnea to produce an annual turnover per capita of about CHF 500,000 (USD 501,313), positioning the company in the industry’s top percentile.” Such performance figures are remarkable and critical for the company’s survival, as “while top-quality products can be priced higher than lower quality competitors, we must also strive to keep this differential to a minimum,” and as Beltrametti admits “we face tough competition, especially for semi-synthetic APIs, where some qualified Indian manufacturers are also active

and meet FDA and EMA quality standards.” With competitors having “extremely low labor costs so they can devote large teams and significant resources to guaranteeing the quality of their products; in some cases, they are in a position to utilize over five times more “man hours” than we can at Linnea, or in Switzerland and Europe in general,” and thus Linnea’s competitive survival is only due to “the extremely high level of productivity combined with the long-term expertise of Linnea personnel.”

Others, such as Metrohm, the renowned designer and manufacturer of high-performance chemical analytical devices, have calculated that, on balance, the rewards to be derived from Swiss quality more than compensate for the higher operating costs that have to be shouldered. “For our customers it really wouldn’t be any cheaper or provide any other advantage if Metrohm were to manufacture elsewhere. Additional cost for quality issues and longer innovation cycles more than counterbalance the benefits from lower salary cost for manufacturing in other countries. The proximity of engineering and operations at all of our product centers results in maximum speed and innovation

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PUSOLE**
—
general manager,
ALK



**CLAUDE
FISCHLEWITZ**
—
managing director,
Stallergenes Greer

leadership,” contemplates the company’s CEO, Jodok Reinhardt. “Sure we could pay lower salaries in other countries for manufacturing, but that’s not the sort of company we are. We are innovators and are intent on making high-quality products quickly.”

Similarly, Bridget-Anne Kirwan, CEO of functional services provider (FSP) SOCAR Research, recognizes that “costs are higher in Switzerland than in the US and other EU countries and the strong Swiss Franc certainly

hasn’t helped,” but emphasizes that “one needs to look further than just at deliverables per se – it’s important to look at what one gets for the price paid.” Taking SOCAR Research as an example, she argues that “in terms of the quality of services delivered... the overall package we offer is a very good value proposition,” citing that compared to other FSPs and CROs where “the time from database lock to getting the results out and published... [can] take anything from two to six months; SOCAR Research has a very efficient system in place so that we can almost get the study results out within very short timelines following the patient’s last visit thanks to our efficient and highly sophisticated data management process implemented for our trials.” In an industry where the value of bringing a product to market a few weeks or months sooner can greatly outweigh incremental

increases in cost, making the investment in Swiss quality and investment well worth the cost.

MARKET QUIRKINESS

The Swiss pharma market itself, at USD 5.1 billion for 2015, can appear somewhat strange when compared to other countries. At its most basic level, this stems from the fact that while Switzerland is a small country of just over eight million people in the center of Europe, as ALK’s general manager Antonio Pusole puts it, “the country is certainly not Europe in the EU sense.” This is of course a basic political reality, but means that in a context whereby virtually every other European nation state from Iceland to Finland to Romania are members of the EMA, that “Swissmedic does not

Phytomedical Echinaforce Non-Inferior to Gold Standard



**ANDY
SUTER**
—
head of
product
development
& medical
affairs,
Bioforce

Influenza is a generally severe respiratory tract infection which affects around ten percent of adults and up to 30 percent of children every year worldwide,” says Bioforce’s head of medicine and R&D

Dr. Andy Suter, explaining that “in Europe alone, the virus is responsible for around 40,000 excess deaths mainly in the elderly and leads to costs of estimated more than EUR ten billion annually.” This common and severe pathogen is still a largely unmet medical need, with the gold standard treatment Tamiflu (oseltamivir).

Suter explains that Bioforce wanted to investigate if their Echinacea-based “phytomedical treatment, the Echinaforce Hotdrink is as successful as Tamiflu in the treatment of influenza,” and thus “carried out a rando-

mized double blind clinical non-inferiority trial with 473 patients with clinically diagnosed early influenza symptoms (less than 48 hours)... [and] the main parameter was the proportion of recovered patients within the first ten days of treatment.” The results of the trial showed “that the treatment with Echinaforce Hotdrink was not inferior to Tamiflu, leading to the same amounts of recovered patients within this timeframe... [and] this finding was further confirmed also with the patient group with virologically confirmed influenza.”

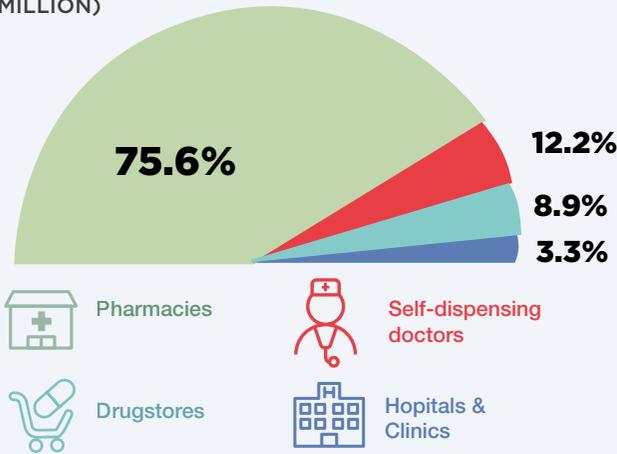
The Echinaforce Hotdrink did demonstrate different results than Tamiflu in one aspect, and Suter enthusiastically shares that the study showed “Echinaforce Hotdrink was superior to Tamiflu by preventing more complications and causing fewer side effects, in particular nausea and vomiting which was five times more present in the Tamiflu group.” As such, this trial has helped to show “that a high quality phytomedical preparation is a viable alternative to the gold standard in treatment of influenza infections, as it stands out in particular with an exceptional tolerability.”



OTC MEDICINE OUTLETS

Source: Interpharma

MARKET VALUE (2015): CHF 766.1 MILLION (USD 782 MILLION)



recognize EMA approvals, and is fully independent, meaning that although the regulations are similar you still are compelled to comply with different requirements.”

Some of these requirements are quite uniquely Swiss, and create some rather stereotypically Swiss market dynamics. Walter Hölzle, president of the Swiss pharma association vips, explains that “products must be marked in our three official languages, and thus packaged specifically for Switzerland,” and that “Switzerland as a quality driven market has very much prioritized patient and physician choice, and as such it is not considered acceptable to substitute an original product with a generic that doesn’t exactly match its specifications; this means 20mg tablets for 20mg tablets, and no breakable larger tablets as seen in The Netherlands.”

These unique requirements, coupled with the fact that “as a small market, we cannot compare our volumes and purchasing power to a country like Germany,” and that “we also do not use tendering in our healthcare system,” lead to a market with very high generics prices. Hölzle says that, “collectively, these factors contribute toward our higher generics prices, which are 50 percent more expensive than in other European countries.”

Beyond rather specific packaging requirements, handling Switzerland’s multilingual environment can be somewhat of a challenge for sales organizations as well. Pusole highlights that while the majority of Switzerland is in most ways quite similar to Germany or Austria, saying “a marketing campaign which works well in Germany will probably work largely well in Switzerland,” and is thus managed within a German speaking DACH region by many affiliates, it can be challenging to move resources across borders as “such materials must also be adapted and translated into both French and Italian,” and sometimes concepts and ideas do not translate well between all three languages. Another particular challenge is that “there are many situations where you are expected to be able to switch easily between the languages; moving between conversations in French, Italian, German, Swiss German and even English at a conference or symposium is really challenging even if you have the languageskills in each individual language.”

The Swiss mentality also demonstrates some interesting contradictions or doublethink in certain regards; on one hand, quality and patient choice are essential aspects of the Swiss market, while at the same time physicians can be

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JURGI CAMBLONG

co-founder & CEO,
Sophia Genetics



PATRICK BRUNNER

country lead, LEO
Pharma

base coverage of the official Swiss health insurance bodies.”

Georg Boonen, CEO of Max Zeller, expands on this point explaining that “in contrast to other European countries, it is possible for evidence-based phytopharmaceuticals to be fully reimbursed by Swiss health insurance companies and this is unique.” He argues of course that “evidence-based phytopharmaceuticals should be considered as a viable and appropriate treatment option in basic care for numerous indications thus ideally complementing synthetic pharmaceuticals,” and it seems Swiss physicians have in general accepted this point as “phytopharmaceuticals are anchored in today’s pharmaceutical market in Switzerland and are an important tool for general practitioners... and are frequently prescribed by physi-

cians.” Moreover, he indicates that, “the trend towards natural treatment alternatives is growing,” and already “some products have made it from niche-status to most prescribed products in their indication; our black cohosh product is such an example. In Switzerland, it is the most prescribed product in the whole indication for menopausal complaints.

DIGITAL PROWESS

As the most innovative country in the world, it would logically follow that Switzerland is at the ICT sector’s leading edge in terms of the use of innovative data-driven analytics, automated digital solutions, and smart, mobile, ‘internet of things’-driven solutions. Indeed, founded in 2015, digital-switzerland is a government backed cross-industry association with the vision of supporting Switzerland’s position as a digital hub, and global center of excellence for developing innovative digital solutions for the global life science, med-tech, fintech and fashion industries.

Sophia Genetics is a leading example of Swiss success in this space, as the Lausanne based company is helping to make personalized and precision medicine

for tens of thousands of patients around the world. “Sophia Genetics has developed SOPHiA, an artificial intelligence which is connecting hospitals and experts, and analyzing the genomic data they produce,” explains CEO Jurgi Camblong. “Last year we helped diagnose 60,000 patients,” says Camblong, but “for 2017, we expect to surpass 100,000 by Q1, and by 2020 we expect to hit the one million patients per year mark,” and already the company is “proud to have now more than 250 hospitals and over 600 experts who are geneticists and biologists using our platform.” At present the SOPHiA AI has access to predominantly next-gen sequencing data, which it can analyze very effectively, but this has thus far been a limiting factor. “To truly continue to enhance the power of SOPHiA, we must start collecting data that is not yet available to us, and adding more information to build a larger collective intelligence,” says Camblong, who continues “we do not yet have indication on therapy outcomes, or even other common patient data like their medical history... [and] Being able to feed this



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ROLAND GOETTE
president Europe, BD

information to SOPHiA will really bring us to the era of real time epidemiology.”

Needless to say, Sophia Genetics is far from the only highly innovative, disruptive tech company based in Switzerland, nor the only in the life science space.

Some find that as a small and highly innovative country, Switzerland is an ideal place to try out new things, and test new ideas

and capabilities in pilot studies. Patrick Brunner, country lead for LEO Pharma, finds that his affiliate’s role is largely “about idea-creation and testing out new approaches. Switzerland is a very well structured country with a clearly defined market and that means it is especially suitable as a pilot-study destination.” This has meant that his affiliate is “one of the first affiliates to maintain its own blog and a Twitter strategy,” and he generally finds that “in terms of internal processes, our size makes us suitable for trying

out new developments.” As such, he believes “it is absolutely no coincidence that we were selected as one of only seven affiliates worldwide to pioneer Kleresca®, LEO Pharma’s first medical device and a treatment for acne deploying innovative biophotonics technology.”

Another actor that is looking to harness the digital dimension to enhance patient quality of life is Ferring, a leader in treatments for the therapeutic category of inflammatory bowel disease. “When you listen to patients suffering from conditions such as ulcerative colitis, you realize that they are often in a miserable situation as, although they keep taking their medicine, they constantly worry about when the next crisis may happen.... We believe we can add value to our drugs by providing devices which will measure the level of gut inflammation in real time thus giving warning signs...Mining and analyzing big data can also be leveraged to track and determine patterns in the day to day life of patients which are associated with their inflammatory crisis,” explains Ferring’s Gilles Pluntz. “I firmly believe Europe and affiliates like Switzerland are well positioned to be the global driver behind these sorts of developments, and as a company this is also exactly where we want to be!” he affirms.

Roland Goette, president of BD Europe, a Medtech leader, fully agrees that Switzerland is emblematic of the sort of sophisticated market where entirely new models of healthcare can be devised by leveraging the power of digital disruption. “One of the largest challenges for the healthcare systems across Europe today is to reduce the length of patients’ stay in hospitals and we will start seeing more smart technology connecting devices placed at the home of the patient with the physician enabling remote care,” he explains. “As a company, we witness a great need for a more sophisticated information exchange with the hospital and within the hospital... there are already plenty of instruments and devices creating a colossal amount of data, yet few hospitals can arrange and process this data so BD is investing heavily in developing solutions for inter-device information exchange and consolidation which will enable hospitals to utilize data mining capabilities, thus allowing them to become more effective,” he confirms.



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CEO (2000 to 2016), Siemens Healthineers

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MARTIN ROHRBACH

partner & life sciences leader, KPMG



JUERG ZUERCHER

EMEA biotech leader & partner, EY

Contrary to Switzerland's robust innovative output in the ICT space, and usefulness as a testbed for international companies, this innovative spirit doesn't always necessarily translate into Switzerland being an early adopter of innovative technologies however. Sandrine Deprost-Catelin, general manager for ResMed, says she believes "that Switzerland, in this context, represents two sides of the coin." The first side is that the Swiss are rather cautious, and thus "everything takes a bit longer to implement in Switzerland." Deprost-Catelin cites her own experience in telemedicine which "has not yet fully arrived in Switzerland despite all of the benefits it has to offer; there is no reimbursement and physicians, home care providers and nurses are not familiar with this technology and want to be sure of its utility (pilot studies are currently running with major hospitals and customers)." On

the other hand, "once it is implemented it will be done correctly with utmost accuracy and patient compliance to the extent that Switzerland can and will be a role-model to other countries." Deprost-Catelin emphasizes that telemedicine will not be used only due to economic rationale, "but rather for the rationale of providing high quality medical solutions for its patient."

In terms of utilizing domestic healthcare data, Switzerland actually lags significantly behind other countries like Sweden and the UK, in large part due to the private and cantonal fragmented nature of the healthcare system. As a major provider of automated hospital equipment, former Siemens Healthineers CEO Urs Suter (who stepped down in December 2016 after 16 years as CEO) admits that Siemens' "equipment and our systems produce a significant amount of data of which most is not used." He argues that "this is due to the tight regulations protecting the data as this data remains private," and on a more general note contends that while "there are many discussions surrounding trends such as big data, or personalized medicine for instance, nonetheless there is still a lot of progress and work to be done until we can transform these trends into reality." Moreover, Switzerland is not necessarily in the greatest position to



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lead such trends as “in terms of information volume, it is clear that Switzerland is limited by the size of its population,” but regardless Switzerland “has the advantage

of having high accuracy and quality data, and therefore I am confident that this is where we can contribute.” With a warning tone, Suter notes that Siemens is “the leading medical devices company in Switzerland,” and as “Switzerland has a splendid and exciting domestic life science industry... and for the benefit of the local industry we must work together collaboratively to remain at the leading edge of the life sciences sector.”

Banding Together to Take on the Giants



THOMAS A. TÓTH VON KISKÉR
—
CEO,
Tillotts
Pharma

Unlike many SMEs in the life science industry today, which “are being pushed to evermore riskier areas of innovation... towards the eventual goal of going public via an IPO or being acquired,” CEO Thomas

Tóth von Kiskér declares that gastroenterology-specialist “Tillotts Pharma, is steadfast in its commitment to forging a sustainable business model.” As such, the company has instituted “a balanced strategy,” with their own in house R&D activities as well as “a fairly aggressive in-licensing strategy,” and has recently submitted a product developed in house – TP05 – for registration, while simultaneously taking the big step of starting pre-clinical development on a biologic compound, TP10.

Tóth von Kiskér’s licensing strategy is certainly aggressive, as Tillotts seeks “a product, product portfolio, or company with approximately EUR 50 up to EUR 150 million (USD 53 to USD 160 million) in sales within the digestive system such as gastroenterology or hepatology,” which “would represent quite a significant commitment from our side, relative to Tillotts’ current revenue,” he admits.

However, as an SME in a world “trending towards global licensing deals and escalating valuations,” Tóth von Kiskér argues that, “it is critical that SMEs such as Tillotts Pharma forge strategic alliances with one another.” He explains that “as Tillotts covers Europe, the Middle East and Asia, and our parent company Zeria Group covers Japan,” that a “very significant priority for the company going forward is finding a strategic partner in the US,” that is specialized either in the gastroenterology or hepatology segment. Such an arrangement would be highly mutually advantageous, as not only would such a strategic alliance create a new global pharma player, but the two partners “could also share costs, risk, as well as expertise in developing new compounds.”

SWISS BIOTECH’S FUNDING QUANDARY

Another quirky feature of the Swiss ecosystem is the manner in which life sciences entrepreneurs attain the material resources to bring their inventions to market. “What I would highlight as the main differentiator between the Swiss startup environment and that encountered in the US is actually the funding landscape.

Access to capital is critical for innovative biotech startups, and the Swiss financing context remains highly



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Q&A with Metrohm CEO Jodok Reinhardt



JODOK REINHARDT
—
CEO, Metrohm

Herisau's homegrown success story enjoys world renown as an innovator of chemical analytical devices focusing on titration, ion chromatography, process analysis and electro-chemistry.

What do you understand to be the latest trends in the analytical instruments market?

Overall, we are seeing steady mar-

ket growth of somewhere in the region of four to seven percent in the demand for analytical instrumentation. Society essentially needs more, quicker and more reliable analytical results with increasingly lower limits of detection; from the analysis of the coffee you drink to complex scientific questions in pharmaceutical research. Metrohm is well placed to grasp these emerging opportunities. Already our equipment is deployed in virtually every lab in the world. Our instruments even appeared in a science fiction lab in the Avatar movie!

How do you manage to maintain your innovative edge?

Simply put: focus. We don't lose

ourselves in a multitude of products and services. For example, titration is a small niche market but one that has tremendous appeal for us. Niches like these enable us to remain at the forefront of innovation.

Why do you think Switzerland is such a talented nation when it comes to innovation?

Innovation is risky and dangerous. An innovative idea is a vulnerable seed that requires a protective environment. The stable economics and continuity in Switzerland allows the corporations to take risks. It's funny, stability and little change in the country on one hand, allows for vitality, dynamics and innovation on the other.

fragmented," observes KPMG's head of life sciences for Switzerland, Martin Rohrbach. "We possess numerous venture capitalists and private equity players, and the government tends to chip in too, but it is all fairly disorganized and there can be an intense level of competition for initial investment." He adds that, by comparison, the US is blessed with "very well-established and extensive funding network across the biotech community, so that while there

is still a fair amount of competition to secure backers, there are nevertheless plenty more potential sources of capital to pursue."

Nic Alexakis, CEO of the Swiss Biotech Association, agrees that "there remains noticeable gaps in the funding cycle for start-ups" and that "companies can find it challenging to set the ball rolling since Switzerland does not enjoy the same easy-going style of VC culture and therefore



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RONALD SCOTT
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the pathway to securing investment can be long and laborious.” Ordinarily, in Switzerland, “companies must first find a private lead investor, and then set about identifying and securing a handful of additional co-investors – either individuals or companies – to get them over the finish line to an IPO,” he recounts.

That said, in comparison to the rest of Europe, the Swiss statistics certainly do look admirable. “Right now, there are some 400 biotech companies currently operating in Switzerland at various stages of development, and within only the last couple of years, the country has witnessed a definite proliferation of startups...Even the financing environment demonstrates some signs of improvement, with well over CHF 400 (USD 415) million invested in 2015 alone,” he confides.

Even once companies reach the IPO stage, however, startups are faced with the stark disadvantage that “Europe lacks a large, dominant stock exchange for biotech equity financing and this has an impact on the biotech community right across the continent,” according to Juerg Zuercher, EY’s biotech leader for the EMEA region. Relative to the US with its NASDAQ and NYSE as the two core exchanges, “the situation in Europe is considerably more fragmented, with biotech financing scattered across a wide array of locations – from the Scandinavian stock exchange, to the LSE and AIM in London, to the various affiliates of Euronext and not least the Swiss Stock Exchange (SIX).” This makes it tremendously difficult for analysts to follow the biotech sector, as they have to keep track of what is happening on each individual exchange. “A biotech company’s decision

“**THERE ARE SOME 400 BIOTECH COMPANIES CURRENTLY OPERATING IN SWITZERLAND AT VARIOUS STAGES OF DEVELOPMENT, AND WITHIN ONLY THE LAST COUPLE OF YEARS, THE COUNTRY HAS WITNESSED A DEFINITE PROLIFERATION OF STARTUPS**

NIC ALEXAKIS SWISS BIOTECH ASSOCIATION

regarding where and how to obtain financing can actually become pretty complicated: very rarely do we see IPOs in Europe generating the heavyweight proceeds frequently witnessed on the NASDAQ or NYSE,” explains Zuercher.

Moreover tribalism and silos tend to be common features of the European biotech-financing panorama. “Generally, when electing to remain within Europe, French companies tend to head towards the Euronext in Paris, German companies to Frankfurt and so on.” In the long run, this diversity of options may pose a potential risk for the Swiss life science ecosystem as a whole, with several high-profile Swiss biotechs, such as CRISPR Therapeutics and AC Immune, already making the headlines for opting to go public on the NASDAQ in preference to the SIX.

“Ultimately capital is mobile, and even if excellent scientific and innovation activities are being carried out in



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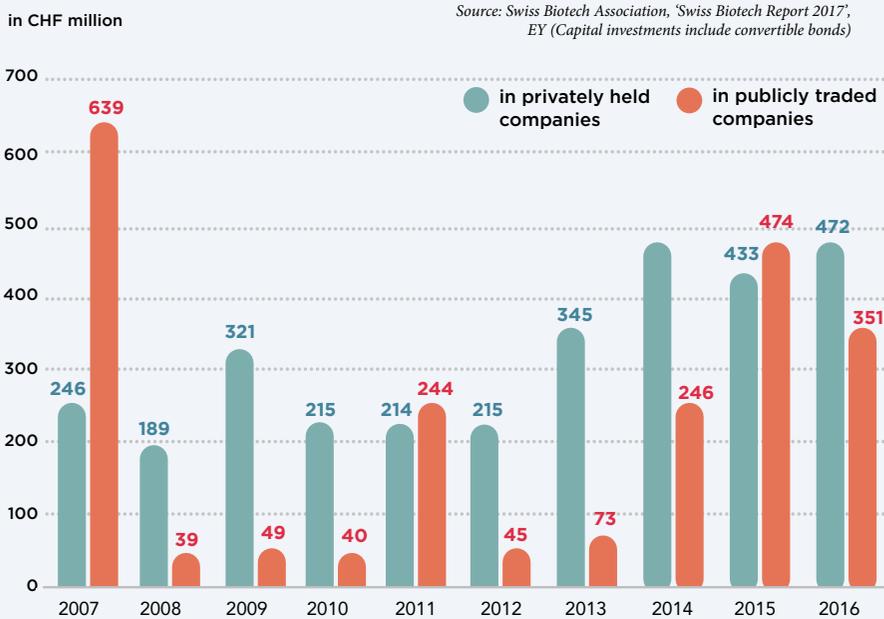
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CAPITAL INVESTMENT IN SWISS BIOTECH COMPANIES



Switzerland, innovators will always have alternative options on hand to raise capital elsewhere,” warns Zuercher. For the Swiss financing ecosystem this could become problematic if the SIX fails to maintain its appeal. “A clearly identifiable gravitation towards US-based financing does pose a long-term existential challenge: if more and more Swiss startups end up with predominantly American investors, some of them could well be pressured into eventually relocating to the US, which would obviously serve to weaken the Swiss innovative ecosystem,” he cautions.

Nor is the trans-Atlantic funding discussion limited just to private sector affairs. Basilea’s CEO, Ronald Scott, explains that his company “was established as a spin-off from Roche in the year 2000 and started out with the full research capabilities of a pharmaceutical company in the area of antibiotics and antifungals... [alongside] some of Roche’s pre-clinical

assets.” This niche proved to be quite challenging, as “many of the big drug producers have been pulling away from R&D in the area of antibiotics,” as they set about restructuring and consolidating their business models. “Luckily government agencies have, to some extent, stepped into the breach where large pharma has moved out,” he perceives. Thus, today, Basilea works “in partnership with the US government, which is paying for the majority of the late-stage development costs to bring its antibiotics to US patients, after reaching an agreement in 2016 with the Biomedical Advanced Research and Development Authority (BARDA) to develop the product for the US market as well.”

“Our hope is that one day Basel will be more like Boston in terms of the ease of access to private capital for startups in the very early stages of inception... We would like to see Swiss entrepreneurs being willing to take risks and go beyond their comfort

zones and for the financiers to be willing the back them and propel the many bright ideas that are being cultivated here into commercialization,” affirms Christof Klöpfer, CEO of the investment promotion agency Basel Area Swiss. “What we need are more role models... Of course, Actelion is a splendid example of a local start-up that developed into one of the major biopharma companies of the world and we already witnessed multiple smaller success stories such as Basilea... All of this helps to open the Swiss eye to the endless opportunities out there and to the virtues of being bold. I am confident that this is only a matter of time before we see much greater progress on this front,” he enthuses.

MID-CAPS AND MINNOWS: AT THE VANGUARD OF CREATIVITY

In view of the manifold hurdles encountered when attempting to raise capital, Switzerland’s medium capitalized entities and SMEs have grown adept at punching well above their weight. After the giants, Roche and Novartis, some of the larger companies in the Swiss pharma



RICCARDO BRAGLIA
group vice chairman & CEO, Helsinn



NIC ALEXAKIS
CEO, Swiss Biotech Association

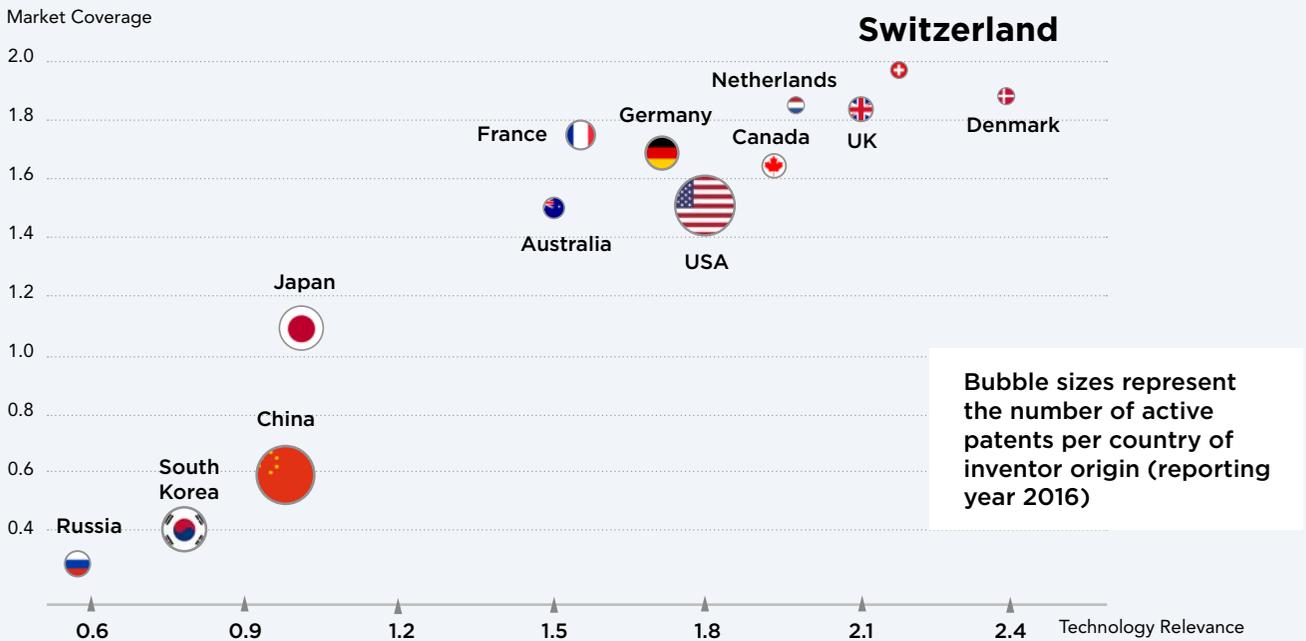
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COMPARISON OF COUNTRIES' PATENT NUMBER AND POSITIONING

Source: Swiss Biotech Association, 'Swiss Biotech Report 2017'



sector like Ferring and IBSA are privately held, and some have developed rather specialized strategies for driving impactful R&D with limited financial firepower. Both Ferring and IBSA specialize in improving the efficacy and value of products by optimizing delivery forms, and while this sounds a lot like “supergenerics” development, the results often go beyond what would be expected from “supergener-ics” players outside of Switzerland. Gilles Pluntz, Ferring’s SVP for Europe-Canada and chairman of the group operating committee, illustrates their strategy with MINIRIN, a peptide which normally needs to be injected, as peptides would usually get destroyed in the stomach. “As injections are typically not patient-friendly, we developed a nasal spray. Then we acknowledged that for children taking a nasal spray every night is not the optimal solution. Therefore, we went back at it again and succeeded in developing a tablet and later a fast dissolving melt formulation which proved to be absolutely the right solution for children,” he proudly recalls. “Given our mid-size, our R&D has to be carefully focused. We spend considerable money on new chemical entity R&D but in comparison to Big Pharma players, this is not a lot, which makes excellent life-cycle-management a necessity for our business model.”

In IBSA’s case, taking the example of their new Tirosint-Sol product, head of Swiss business operations Maleša

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Ulrico Sidjanski explains how clinical trials have demonstrated that this formulation breaks new ground in that “unlike other forms of levothyroxine, Tirosint-Sol isn’t affected by being taken with food and coffee to the same extent” so is considerably more patient-centric and less disruptive to patients’ lifestyles. “We are generating some early but not yet conclusive evidence that Tirosint-Sol may still be effective even when taken alongside proton pump inhibitors,” he reveals.

Privately-held Helsinn takes a slightly different tack, seeking to leverage their very specific expertise in late-stage clinical development and registration of assets for cancer supportive care. Group CEO and vice chairman Riccardo Braglia explains that their strategy since the Group was founded 40 years ago has been “to work via in-licensing of innovation... we license products which have a proof of concept, having completed phase IIa for example, and develop them through phase IIb and phase III, and then handle all of the work required for manufacturing and regulatory approval... Once approved, we license out the product to our partners around the world



SHIGEO TANIUCHI

head of EMEA, Santen



ORLANDO OLIVIERA

SVP & GM, Tesaro



BENOIT DUBUIS

president, BioAlps

for commercialization, with the exception of the USA where we have our own sales organization.”

According to Braglia, Helsinn has “even had situations where we have developed a product and then handed back rights to the originator after leveraging our expertise in development of cancer supportive care products.” However, as recently as 2016 they have “decided that, based on our experience in cancer supportive care, we can now expand our vision to include the development of therapeutics – drugs to treat the cancer itself. As our first step in this direction, we have in-licensed full rights to Pracinostat, a phase III ready acute myeloid leukemia treatment, from San Diego based MEI Pharma.” At the same time as carrying out this very focused strategy towards R&D, as Helsinn is “looking to get involved in earlier stage innovation,” the Group has taken a rather incongruous step and “incorporated a [USD 50 million] corporate venture fund, Helsinn Investment Fund, based in Luxembourg.”

The less capitalized a venture is, of course, the more its management needs to be creative to ensure the biggest bang for every buck expended. Thomas Tóth von Kiskér, CEO of gastroenterology specialist Tillotts Pharma, argues that, “Pharma and life sciences SMEs are increasingly facing an external context which features significant barriers for smaller players, and where companies without a certain minimum size and financing capacity may find it evermore difficult to compete.” He notes that, “Companies can fill their pipeline with new products, either by in-licensing/M&A, or developing them internally.” When it comes to product development, the average cost of developing a new drug on their own is now far beyond the means of most private SMEs, while the valuations for licensing and product/asset acquisition opportunities have “escalated alongside M&A transactions to dizzying levels, with valuations that don’t necessarily reflect

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reality,” and as such “it has become extremely difficult – especially for smaller pharma companies - to find opportunities to license or acquire products or companies for a reasonable price.”

The solution, he says, is collaboration and strategic partnerships: “by collaborating with each other, SMEs can cover the whole world or large regions, and either afford the high pricetags to acquire suitable products or jointly develop them. Doing so, they can share risks, costs and profit from each other’s specific expertise, be it in marketing, regulatory or other fields.”

CLUSTER OF CLUSTERS

“Switzerland is most known in the pharmaceutical industry for the giant drug multinationals based in and around the Basel area,” admits Piero Poli, president and CEO of Rivopharm. Indeed, with Basel spoken of in the same breath as Boston as one of the de-facto pharma capitals of the world, the names of Zurich and Geneva, let alone Lugano or Bellinzona do not have the same ring. Yet, for anyone familiar with Switzerland’s famously efficient and effective train network, which interconnects both urban and rural areas, the idea that only known centers like Basel have framework conditions conducive to success for life sciences companies is laughable. As Helsinn’s group vice chairman and CEO Riccardo Braglia aptly observes, “To be sitting anywhere in Switzerland and to be part of the Swiss life science industry and all the networking that this entails is a tremendous asset... our country is renowned for its thought-leadership on pharmaceutical innovation and for its immense scientific output in terms of patent filings, so being able to tap into such a vibe definitely confers great advantage.”

That said, to cast Switzerland as a homogenous life-science utopia is also patently false, For the country comprises a collection of 26 beautiful but distinctive cantons; each offering a different mix of attributes spanning taxes, economic conditions, location, quality of life and accessibility to talent. Indeed, compared to larger countries, Switzerland remains remarkably diverse for a nation of just over eight million people. “We have four official languages... we have multiple centers of excellence with different strengths within a relatively small geography, and of course we have fantastic infrastructure linking

everyone very effectively,” explains Nic Alexakis, CEO of the Swiss Biotech Association. Illustrating these differences, Alexakis gives the examples that “in the German speaking cantons, particularly around universities, there is a bit more of a sense of possessiveness of research than in French and Italian speaking Romandie, where you see a more open, collaborative and relationship-driven environment,” yet unsurprisingly “many feel that the German cantons are more direct and transparent.”

“It is fundamental to appreciate that Switzerland is very diverse culturally and there are many different personality types behind the languages spoken. It would be a mistake to treat the people of Geneva as French because their mindset is quite different. Likewise, to assume that those from Zurich are Germanic in their personality can be misleading. Each of the 26 cantons and communities has to be treated on its own terms. Unlike other countries on the continent like France, which has a very strong preference for centralization and statism, Switzerland is notable for being highly federalized, agrees Frederic Bengold, Servier’s general manager.

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Alexakis cautions though that, “this diversity, which can also be seen as fragmentation, can also become a drawback.” One issue is that “economic development and public investment in research and innovation is largely controlled at the cantonal level rather than at a national level, and as such rather than cooperating they compete,” he laments. “The difficulties that the Swiss biotech and wider life sciences communities have encountered when attempting to band together for economic promotion initiatives is a case in point, as budgets tend to get channeled towards cantonal or regional focused organization,” he recalls.

Potential investors thus find themselves confronted with a complex array of investment promotion and support entities, ranging from the federally funded Switzerland Global Enterprise, to regional agencies like the Greater Zurich Area and Greater Geneva Bern area organizations, to individual cantonal economic development teams – before even considering the often overlapping sector focused associations, and innovation and startup focused entities like Swissnex and Switzerland Innovation. As such, once a potential investor has decided to invest in Switzerland there can be a bit more to site selection than might be seen in other countries. Yet by and large, while there may be 26 separate cantons and a myriad of different potential locations, they can generally be broken down into a few groupings. The first key question is usually German or French, and whether it makes more sense to be close to the Geneva or Zurich

international airport, although Italian-speaking Ticino, which has a well-developed ecosystem of privately owned life science SMEs, has begun to make a concerted effort to attract its first major international life science investor.

DECISION POINTS

American oncology biotech Tesaro and Japanese ophthalmology specialist Santen are two of the most recent companies to have had to make the decision of where to set up shop in Switzerland. For Tesaro, SVP and general manager international Orlando Oliveira explains that “at the beginning we considered locations in the UK, the Netherlands and Switzerland as the three broad options,” and his team “concluded that Switzerland offered the best package to us overall given its central location, fantastic infrastructure, business-friendly environment, easy collaboration with the local authorities, and the massive pool of talent for the pharma and biotech sector that is frankly just incredible.” Once Switzerland had been decided upon, Tesaro “looked at the Zurich area, Basel, and Zug predominantly,” and in the end selected Zug. Without mentioning taxes or financial incentives, Oliveira explains the attractiveness of Zug, saying that “with companies like Novartis, Johnson & Johnson,

Privileging Collaboration over Competition



THOMAS BOHN

—
executive director,
Greater
Geneva Bern
area (GGBa)

“If a company establishes a presence in one canton, it is very likely that its employees will be commuting to and from another canton,” says Thomas Bohn, executive director of the Greater Geneva Bern area (GGBa). Indeed,

he cites Biogen’s investment in Solothurn as “a perfect example of this, given that Bern is just a few kilometers away and people are commuting from Bern to Solothurn on a daily basis, with a positive impact on our greater Geneva- Bern region,” and indeed with Zurich, Basel, Lucerne, Bern, Zug and a myriad of smaller towns being at most an hour or an hour and twenty minute train ride from one another, commuting

from one canton to another for work is a daily reality for hundreds of thousands of Swiss workers; rendering the idea of inter-cantonal competition for investment, while fierce at times, as somewhat of a false dichotomy.

Back in 2010, the cantons of Bern, Fribourg, Vaud, Neuchâtel, Geneva and Valais, started working together under the banner of the GGBa “to work hand in hand toward enhancing the economy of the region and promoting a positive image of Western Switzerland abroad” according to Bohn, who contends that “the creation of a crosscanton business acquisition structure was a historic step forward for our region.” By collaborating more and competing less, these cantons have been able “to pool their assets, skills and resources to be stronger together” in the face of international competition, and better project the message that “wherever in Switzerland you may be, you are in the best place you could be.”



STEFANO RIZZI
director of the
economic division,
Ticino Department of
Economy & Finance

Roche, Amgen, Shire, and Biogen with significant presence in Zug the pool of talent is highly attractive,” and the town “has great connectivity to Zürich airport, it’s incredibly easy to get Swiss and foreign talent to locate here due to the quality of life, and Zug is also becoming more and more of a hub for small- and mid-sized biotech companies which gives it a very specific and special feel.”

For Shigeo Taniuchi, head of the EMEA region at Santen, the decision process was a bit different. “Given that we were setting up a regional headquarters, this needed to be a longterm strategic decision rather than merely a matter of selecting the destination where we pay the least taxes... From a managerial point of view it was essential to have a geographically and culturally central location and the key constellation Switzerland has to offer is the ability to access and manage the diversity and complexity of the different markets... Swiss professionals carry the benefit that they are already mastering the art of managing the cultural diversity,” he explains.

Next came the question of identifying the best canton and city. In the beginning, Santen “assessed Basel, as it does have many local champions, a good location and good talent,” however ultimately they opted for Geneva. “The attractiveness of Geneva is simply that it extrapolates benefits and expertise beyond the healthcare and

life science industry, thus creating a healthy balance of talent,” says Taniuchi, which was considered important for the company because “we realized we needed talent in different functions, supply chain management for instance, and Geneva offered top caliber expertise across a broad variety of fields. Moreover, it enjoys excellent public infrastructure and a stellar level of cultural and social life which eases the process of attracting talent from the outside.”

The western Switzerland life science cluster around Geneva and Lausanne – often referred as the “Health Valley of Switzerland” – has had a more volatile growth trajectory than the Basel hub. Benoit Dubuis, president of the BioAlps cluster organization and chairman of Geneva’s new Campus Biotech, recounts that “in biotechnology, Geneva has been a source of several fantastic success stories already. Serono, which was later acquired by Merck, came to Geneva in the 1970s and continued its growth under Fabio and then Ernesto Bertarelli; by the time of its sale in 2006, it was the third largest biotech company in the world. Biogen was also founded in Geneva



GIORGIO CALDERARI
chairman, Farma
Industria Ticino (FIT)



SHAHBAZ ARDALAN
managing director,
Alpex Pharma



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before moving on – the “gen” in Biogen initially stood for Geneva rather than anything to do with genetics or genome.” However, when Merck acquired Serono in 2006, the massive Serono campus in the Geneva area was shut



IT WAS ESSENTIAL TO HAVE A GEOGRAPHICALLY AND CULTURALLY CENTRAL LOCATION AND THE KEY CONSTELLATION SWITZERLAND HAS TO OFFER IS THE ABILITY TO ACCESS AND MANAGE THE DIVERSITY AND COMPLEXITY OF THE DIFFERENT MARKETS

SHIGEO TANIUCHI SANTEN

down in 2012, and the impact on the Geneva cluster was substantial.

Moreover, over the last five years, western Switzerland has lost multiple multinational regional headquarters; Shire relocated their European HQ from Eysins to Zug in 2013, Alexion relocated their EMEA HQ from Lausanne to Zurich in 2015. Thus, while there is “a strong heritage and tradition of biotech in the region, and a wealth of experience and talent” according to Dubuis, and indeed the BioAlps and Health Valley organization have a significant membership of young and highly innovative companies, from a strictly business-oriented perspective, the western Switzerland life science cluster ranks as less mature than those around Zurich and Basel.

TICINO: MILAN'S SWISS SUBURB?

Don't let the Sprezzatura (studied carelessness) fool you! Tucked away on the south side of the Alps, the majority Italian-speaking canton Ticino can feel almost like a suburb of Milan at times. Yet, anyone who visits either the canton's economic center Lugano or capital Bellinzona, will quickly pick up on the fact that despite being separated from the rest of the country by snow-packed and ski-chalet sprinkled mountains, Ticino is very much a part of Switzerland. “From a business owner or manager's perspective, Ticino offers all of the advantages of any canton in Switzerland in terms of an open business environment,” attests Alpex Pharma's managing director Shahbaz Ardalan, who points out “You don't lose time due to excessive bureaucracy or circular discussions with authorities, and instead can really focus on your clients, products, and growing your business without significant political distractions,” as might be the case outside of Switzerland's borders.

True to Swiss form, the life sciences are of course an important part of the Ticinese economy, with Stefano Rizzi, director of the economic division at the canton's Department of Economy and Finance, explaining that, “the life sciences sector constitutes a bright spot within the context of the cantonal economy. With approximately 240 companies employing nearly 4,200 FTE employees, the life sciences industry generates 21 percent of all Ticino exports, about CHF 1.1 billion (USD 1.11 billion).” Rivopharm's president and CEO Piero Poli clarifies that “Ticino is really a perfect example of the excellence of

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MARKUS ARIGONI
CEO,
Micromacinazione

Swiss SMEs in the pharma industry, as this canton with a population of only 330,000 has a pharmaceutical industry which collectively produces over CHF 2.3 billion (USD 2.3 billion) worth of pharmaceuticals and employs well over 2,000 people.”

Indeed, barring Zambon, with no true multinational pharma players with a significant presence in Ticino, the Ticinese pharma industry is almost exclusively made up of privately owned SMEs. IBSA is the largest pharma company based in Ticino, and head of Swiss business operations Sidjanski affirms that, “as the largest privately owned pharmaceutical company in Switzerland, the company remains very committed to the community and families which exist around the company here in Ticino.” This commitment to the region is a key feature of the company’s strategy according to Sidjanski, who says “keeping our development, production and distribution activities concentrated “under one roof” in Ticino and the nearby areas of Italy along the border... we can ensure that we are able to deliver overall quality “from the grape to the bottle” so to speak.”

Despite the limited size of the canton’s population and corresponding pharmaceutical community, with the 27 members of the Farma Industria Ticino (FIT) association generating combined revenues of a single blockbuster drug, these members form a diversified miniature pharma ecosystem with true cluster dynamics, synergies, and innovation infrastructure.

Giorgio Calderari, chairman of FIT boasts that “the great strength of this small territory is that if you view the pharma industry as a sort of “virtual company”, you will essentially see a CHF two billion (USD two billion) entity with over 2,000 employees, and a huge range of capabilities and specializations.” He further explains that “almost all of our members offer some third-party contract capabilities in addition to their own business, and as such you can view FIT as a big CDMO with a great range of capabilities,” with

Ticinese Niche Tactics



PIERO POLI
—
president
& CEO,
Rivopharm

While generics player Rivopharm has been a part of the Ticino pharma community since the 1960s, the business hardly resembles the company that president and CEO Piero Poli acquired back in 2005. Static, burdened

with debt, and with weak financial performance, Poli recounts, “the core of the business at that time was providing a range of basic medicines from the WHO’s list of essential medicines to different entities and programs linked to the WHO as well as other buyers in developing countries. No substantial R&D was being conducted,” and toll manufacturing was an important activity for the business. Among many other changes, Poli took the step of “transitioning from a model where we sold dossiers to one where we sold registrations... [and] starting in 2005, we began investing in building up an internal R&D department and a solid regulatory affairs team to register our products in various European markets.” Rivopharm has also begun establishing/acquiring commercial offices abroad, in the UK and Germany thus far. The strategy has clearly been a success, as Poli asserts that “in 12 years’ time, we have grown the business from CHF eight million (USD eight million) to over CHF 40 million (USD 40 million), with staff only increasing from 41 people in 2005 to 160 today.”

As Poli continues to develop the business, Rivopharm’s “R&D strategy is focused on very niche products, which have been overlooked by other generics companies, which often means they can be quite difficult to develop!” Already the company has “successfully identified several such opportunities and developed products which have been the first generics to be launched in certain markets,” enthuses Poli. Moreover, he highlights that “Going forward, we are very interested in opportunities to establish our own presence in the CEE Region (Central & Eastern Europe), as well as in the Baltics.”

facilities which are for the most part “approved by regulators worldwide, including the FDA, EMA and Japanese PMDA.” As such, Calderari proclaims “whatever your need, someone in Ticino will be able to help!”

Moreover, the canton also boasts a fully-fledged life sciences R&D ecosystem. Rizzi elaborates that “a total of

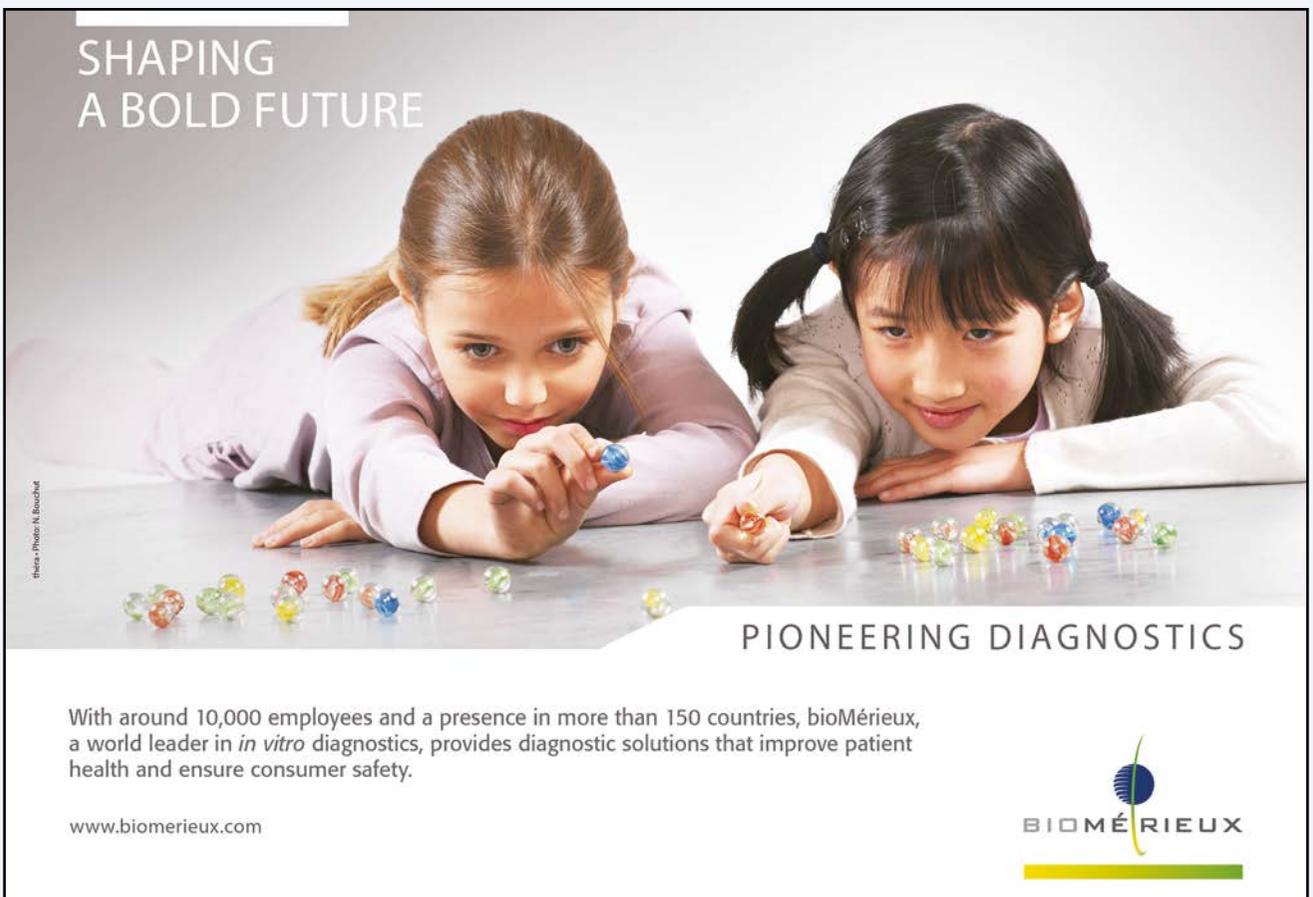
FARMAINDUSTRIA TICINO MEMBER COMPANIES' CORE ACTIVITIES

Licensing In	12
Licensing Out	14
Co-Development	14
Trading	5
Drug Product CMO	10
Drug Substance	8
Other CMO Activities	5

Source: FarmaIndustria Ticino

75 research institutes and laboratories are active in the canton in different fields and sectors,” with “the two main academic centers, the University of Italian Switzerland (USI) and the University of Applied Sciences and Arts of Italian Switzerland (SUPSI), employing over 1,500

collaborators, and carrying out CHF 45 million (USD 45.45 million) of research each year.” With internationally known and respected institutions such as “the immunology focused IRB (Institute for Research in Biomedicine) in Bellinzona, the Institute of Oncology Research (IOR) and the Oncology Institute of Southern Switzerland (IOSI), the Cardiocentro Ticino and the Swiss Institute for Regenerative Medicine (SIRM), and for the neurosciences the Neurocentro Ticino,” the canton generates quite a lot of impactful medical research for what is ultimately a community of 330,000 people. With this robust academic and research infrastructure in place, the canton has more recently been looking to turn that research into commercial innovation locally, and now has all the support mechanisms in place to foster the development of a start-up ecosystem, with the public-private partnership AGIRE Foundation fostering innovation and entrepreneurship, and the Tecnopolo Ticino techno-park and Lugano MedTech center around Lugano serving as incubators for young and innovative life science companies.



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TICINO: BASTION OF PHARMA SERVICES

Given its rapidly maturing pharmaceutical ecosystem, Ticino offers many advantages for entrepreneurs and SMEs. As Alpex's Ardalan elucidates, "While there are true homegrown Ticinese pharmaceutical companies, Alpex like many other businesses is here for a reason. Ticino has long attracted entrepreneurs from Northern Italy and further afield, and for far more reason than just the high quality of life and beautiful natural surroundings." Of course, from a foreign perspective, Ticino offers all the advantages of being in Switzerland, however, the region also offers distinct advantages over other Swiss hubs of pharmaceutical activity. "Ticino is somewhat lower cost than Northern Switzerland, and while salaries are higher than in Northern Italy, holistically the cost of operating a business is not much higher in Ticino than just across the southern border," explains Ardalan. Moreover, with central Milan less than an hour and a half from Lugano by either car or train, Ardalan argues that, "Ticino is extremely well

located geographically... [as] we have easy access to the workforce around Milan, and the skilled graduates coming from the excellent universities in the region. This also means that logistically all three airports around Milan are easily accessible."

Gabriel Haering, CEO of Lugano-based Cerbios, a specialist in process development and contract manufacturing of High Potency Active Ingredients (HPAIs), very much concurs. "Situated where we are, we're able to blend Germanic rigor with Italian creativity. Ticino's reputation as a top-notch service provider to the pharmaceutical industry is growing in leaps and bounds. Not only is the canton a good catchment area for attracting stellar talent from Italy, but the local authorities are also incredibly supportive, to the point where we have received financial backing for investments projects that contribute positively to the local economy and employment," he reveals. "The region has taught itself how to attract companies to relocate to Switzerland: crucially not just by providing tax benefits, but by offering a strong and stable platform that

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allows the company to grow,” agrees Paolo Galfetti, CEO of Applied Pharma Research (APR).

Preferential access to multiple markets is another important consideration given the fact that Ticino straddles the gateway dividing North and South Europe. “Comprising part of Switzerland, we gain seamless access to the Germanic and Northern parts of Europe and yet, at the same time, are able to tap into the historic chemical pedigree of Italy and engage directly with Southern Europe. We have the very strong economic powerhouse of Milan and Northern Italy literally on our doorstep, which affords us ready access to a multitude of pharma and chemical companies... Effectively we sit astride two very different marketplaces and find ourselves easily doing business with both,” concludes Markus Arigoni, CEO of contract micronization outfit, Micromacinazione.

Despite this enviable pharma ecosystem, Ticino and Lugano still have a limited profile within the international and even Swiss pharmaceutical communities, however. Rivopharm’s Poli argues that “the perception of the Ticino pharma cluster is rather understated because for the most part, the companies here are not marketing-oriented entities,” and that “many of these companies operate under an out-licensing business



Photo courtesy of Corden Pharma

model, and thus are not particularly well known in the wider international pharmaceutical community.” Indeed, IBSA and Helsinn, to date, constitute the only two commercially-oriented pharmaceutical innovators based in Ticino, and Helsinn only has commercial operations in the US, with neither yet possessing the real brand firepower to immediately make Ticino known worldwide.

That said, Ticino’s profile and international recognition has been steadily increasing over recent years following a concerted effort by the members of FIT. As Caderari explains, the early 2000s marked a turning point for the

Q&A with Max Zeller CEO, Georg Boonen



GEORG BOONEN
—
CEO,
Max Zeller

The CEO of phytopharmaceutical success story Max Zeller explains the immense benefits of plantbased medicines.

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How would you assess Swiss physicians’ attitudes towards prescribing phytopharmaceuticals?

Phytopharmaceuticals are anchored in today’s pharmaceutical market in Switzerland and are an important tool for general practitioners. The trend towards natural treatment alternatives is growing and is supported by the fact that phytopharmaceuticals are frequently prescribed by physicians. In contrast to other European countries, it is possible for evidence based phytopharmaceuticals to be fully reimbursed by Swiss health insurance companies and this is unique. Some products have made it from niche-status to most prescribed products in their indication; our black cohosh product is such an example. In Switzerland, it is the most prescribed product for menopausal complaints.



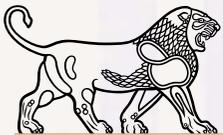
Ticino pharma cluster, as “the current generation came to the front, with several sons taking over leadership of their family companies, some others structuring their business in a more industrial way by hiring professional managers, and a few newer entrepreneurs creating and acquiring companies here in Ticino.” This new generation “saw the opportunity for FIT to have a more impactful role,” according to Calderari, “and thus aimed to accomplish two things; to work towards building a true pharma cluster and support cluster dynamics and synergies, and to collaborate to jointly promote and brand Ticino within the international pharmaceutical industry.” The most important step in this direction “has been organizing the Piazza Ticino at CPhI, starting in

Paris in 2014,” which has now become an annual event.

Moreover, Ticino’s attractiveness as an investment environment for outside companies has also steadily improved over recent years, with elements of the current R&D and start-up ecosystem being very new. One major development has been the completion of the AlpTransit project and the Gotthard Base Tunnel – the longest and deepest traffic tunnel in the world – which has cut the train ride from Lugano to Zurich down to just over two hours. Rizzi contends this forges “an important psychological link with the greater Zurich area as well as a physical connection,” and that “Going forward, we see the potential for Ticino to become almost like a suburb of Zurich from an economic

perspective, and our cantonal government wishes to collaborate more closely with the Greater Zurich Area economic organization to forge new economic links and relationships.” Another major development has been the introduction of a “new law for economic innovation (LIInn) [which] provides support of individual innovative projects and companies in the canton,” according to Rizzi. This law “can leverage a CHF 20 million (USD 20.19 million) budget for 2016-2019, which can be directed to accomplish a variety of objectives. Main focuses will be pre-competitive research, network creation initiatives, and incentives to bring product development work to Ticino,” and to accomplish these objectives the Ticinese government “will be able to fund private sector R&D projects up

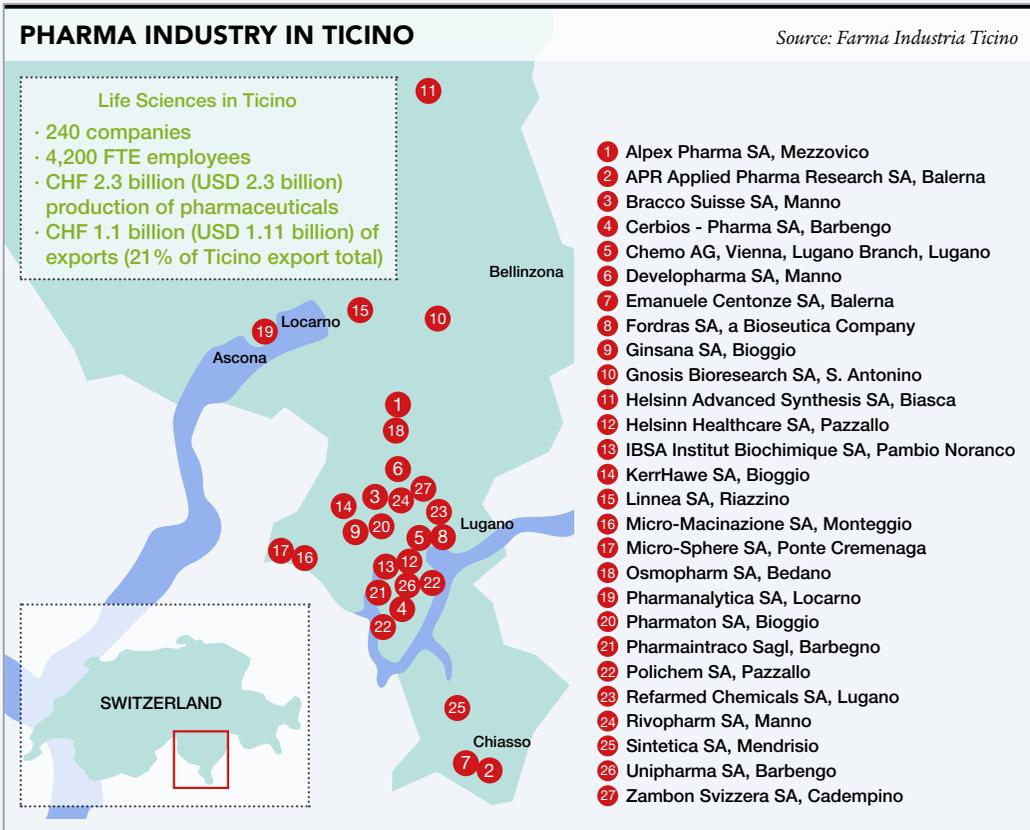
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with a significant presence here. I think it would be great if a mid-sized innovative pharma company were to bring their European headquarters in Ticino, as it would bring a different flavor to our cluster, and help us be a bit more on the map in certain circles.” While he admits “Ticino is too small for Big Pharma players,” Calderari cites the example of Celgene which “currently has their European headquarters in Boudry, canton Neuchatel, which is a small town a decent train ride

to 30 percent (max. CHF one million (USD one million),” on a case-by-case basis.

With this new level of connectivity to the rest of Switzerland and new mechanisms in place with which to incentivize R&D investment in the canton, the Ticino pharma community looks forward to attracting new investors to further enhance the development of the Ticino pharma ecosystem. Already, the members of *Farma Industria Ticino* have committed to investing over USD 650 million over the next three years, with 60 percent of that in R&D. In terms of manufacturing investments, the region’s largest pharma player IBSA will be strengthening their footprint further, with Sidjanski highlighting that IBSA “holds all of the necessary planning approvals to begin construction of a new facility next to our headquarters in Pian Scairolo,... we are calling this new project “Core Pharma” and will be investing CHF 50 million (USD 50 million) to construct a new manufacturing facility.” Taking things to the next level however will mean attracting international investors, as Calderari asserts, “what we are still missing is an international business aspect of the cluster, as we have no international pharma companies

away from either Geneva or Zurich,” and suggests that a somewhat younger “mid-sized US biotech could find a very good fit in our community.”

‘SONDERFALL SCHWEIZ’

Unified by a reputation for innovation, excellence, and unrivaled quality, Switzerland, in reality, constitutes a patchwork of diverse communities with widely varying areas of expertise, cultures, and business environments. Physically divided by the lofty peaks of the awe-inspiring Alps, Switzerland’s different clusters are united by what divides them, and held together by quirky internal tensions and contradictions. The resulting nation thus runs on a somewhat bizarre and convoluted complex of systems sometimes incomprehensible to outsiders. Yet, as the Swiss are indeed Swiss - immensely capable, incredibly well educated, and inconceivably pragmatic - they make it function fabulously, which is indeed the essence of Swiss exceptionalism, the muchvaunted ‘Sonderfall Schweiz’. ❄️

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DRIVING CHANGE

Preface: Diabetes is well managed in Switzerland's patient-centric healthcare system, yet with new data showing Novo Nordisk's GLP-1 has strong cardiovascular benefits, Switzerland GM Mads Stoustrup explains how the company is working to drive a change in treatment standards.



Mads Stoustrup
NOVO NORDISK

HCLS: Switzerland has been recognized as the most innovative country in the world, and is known to have a highly innovative and high quality healthcare system. How is this translated into the way diabetes is treated in the country?

MADS STOUSTRUP (MS): The Swiss healthcare system is of a very high quality, with patients having broad access to innovative treatments and high quality care. Patients with diabetes are treated by approximately 220 specialist endocrinologists, with between 2000 and 3000 GPs treating primarily type II patients. The system is very patient-centric, with patients and their treating physicians having a high degree of input and tending to prefer high quality innovative products. We see this clearly when we bring new innovations to Swiss patients and have seen high rates of adoption and penetration of our new generation of insulin (Tresiba®, Ryzodeg®) and combination products (Xultophy®).

HCLS: What would you highlight as an area where there is a significant potential for Switzerland to improve the treatment of patients suffering from diabetes?

MS: We are very proud to see some fantastic results from the LEADER trial with our Victoza (liraglutide), the GLP-1 liraglutide, which not only shows how Victoza can treat glucose levels, but also how it benefits cardiovascular health. Adults with diabetes are two to four times more likely to die from heart diseases. Demonstrating that a product like Victoza

has benefits beyond treating diabetes itself is a huge accomplishment. Moreover, data from our SUSTAIN and DEVOTE trials helps to demonstrate the significant impact of new and innovative treatments on patients' lives.

The LEADER results have already led to a change in the Swiss medical guidelines for treating type II diabetes patients and it is now becoming "standard practice" to treat high risk patients with one of the products shown to have cardiovascular benefits. We are working to encourage this amongst GPs, as many patients are still being treated using established oral treatments and there is some resistance to switching to an injectable treatment. The cardiovascular risk reduction combined with superior effects on glucose and weight that we have seen with Victoza (liraglutide) is something unseen with any of these established oral treatments, and Novo Nordisk has an important role to play in supporting this change in the treatment paradigm.

However, as medical marketing in Switzerland is less about visits to physicians' offices than in other countries, we work to ensure that we can engage physicians in other relevant situations, including symposiums, conferences, and continuous medical education programs. For the most part, we still focus on these sorts of traditional communication channels in Switzerland, and given the patient-centric nature of the Swiss healthcare system, it is essential to clearly lay out the benefits that new innovations bring to patients in a persuasive and precise manner. ❁



ADULTS WITH DIABETES ARE TWO TO FOUR TIMES MORE LIKELY TO DIE FROM HEART DISEASES. DEMONSTRATING THAT A PRODUCT LIKE VICTOZA HAS BENEFITS BEYOND TREATING DIABETES ITSELF IS A HUGE ACCOMPLISHMENT.

A REPUTATION FOR SERVICE IN MEDTECH

Much like its sister pharmaceutical industry, the Swiss medical devices (medtech) sector is a powerhouse driving Swiss economic growth, generating sales of CHF 14.1 billion (USD 13.8 billion) in 2015, a respectable 2.2 percent of Swiss GDP in total, according to the 2016 Swiss Medical Technology Industry (SMTI) sector report, published by SWISS MEDTECH (comprising Medical Cluster and FASMED). More significantly, the sector has shown a constant increase in turnover of around six percent annually since 2010, easily outpacing average GDP growth. Urs Gasche, President of FASMED, the industry's trade and export association, stresses further that "labor productivity reached approximately CHF 260,000 per employee", driving home the value that the sector truly delivers to the wider Swiss economy.

Not all is smooth-sailing, however: looking forward, SMTI defines innovation and market access as the greatest challenges for medtech companies in Switzerland. While the industry has benefited from "stable and liberal regulations", critical to the successful development of an investment-heavy, research-intensive sector, Gasche laments, "we have seen indications of a negative trend recently, for example, the mass immigration initiative and an increase in market access regulation." In 2014, the Swiss voted to reintroduce ceilings and annual quotas on foreign immigration by a razor-thin majority of 50.3 percent, a result at odds with the European Union's free movement principle, potentially jeopardizing various critical political and economic bilateral relations. This issue is particularly sensitive for the medtech sector given that "exports comprise approximately 90 percent of total turnover... [averaging] around CHF 10 billion (USD 9.8 billion) per year since 2010." At the same time, "it currently takes ten years to develop and receive regulatory approval for a new product, and another five until an innovation is accepted into the Swiss DRG

hospital system and reimbursed by health insurance providers," Gasche adds, which is detrimental not only to the medtech companies but the very patients they are seeking to help.

Nevertheless, "86 percent of [existing] companies are planning investments in Switzerland, mostly due to the availability of highly qualified personnel and the efficiency of Swiss labour productivity," Gasche boasts. While the Swiss medtech sector has benefited from the traditional suite of advantages – strong quality guarantee, premium technology, a broad knowledge and innovation base, as well as political and economic stability – human capital is undoubtedly the jewel in Switzerland's crown. Medtech companies are exploiting this not just in technical innovation but also on the Swiss reputation for service.



URS GASCHÉ
president,
FASMED



HENK MEERTENS
vice-president
(Benelux, Central Europe, Greece and Israel) Medtronic





**MADELEINE
STÖCKLI**

CEO, B Braun



**PHILIPPE
HÜGLI**

country coordinator,
Boston Scientific

For instance, Swiss behemoth B Braun Medical has an unassailable base in its country of origin, enjoying “very strong customer loyalty and brand equity”, as CEO Madeleine Stöckli puts it. “The company was created with a strong manufacturing mandate ... given our longstanding presence in the market and wide product portfolio, today we are [also] a supplier for every single hospital in Switzerland.” Nevertheless, the company has emphasized customer-centric service, which is how B Braun has long been seen as a premium brand of the highest quality. Coupled with the high living costs in Switzerland, Stockli admits, “maintaining this level of service is expensive, which puts us at a disadvantage when confronted with pressures on prices ... carrying out daily deliveries to every Swiss hospital does not come cheap.”

Here the specter of parallel imports – legal in Switzerland – looms: it is simply cheaper for a German distributor to export products to Swiss hospitals as they work with lower overheads.

Further stressed by the 2015 surge in CHF against the euro but unwilling to sacrifice its premium service,

B Braun decided to implement efficiency-focused measures like digitization and automation, with the ultimate goal being to contain costs without sacrificing their emphasis on quality service. Stöckli affirms, “our vision is to eventually have in place an automated digital system that defines and controls the pathway of a product from the raw material through the manufacturing process and eventually to the bedside of the patient.” For instance, with automated order management, “customers scan a product when they use it in a hospital, that automatically places an order to replace that product with a delivery the next day.”



TODAY WE ARE A SUPPLIER FOR EVERY SINGLE HOSPITAL IN SWITZERLAND.

MADELEINE STÖCKLI B BRAUN

Other leading medtech companies echo the view that investing in premium service is not only worthwhile but critical. Urs Suter, outgoing CEO of Siemens Healthineers Switzerland vows, “I am very proud of the way we work with our customers, which is characterized by an open mindset and trusting relationships. I can genuinely look back onto my 17 years as CEO and note that there has never been an open dispute with a customer; we were always able find sustainable solutions together.” A great example is their new platform for laboratory diagnostics, as Suter recounts: “Part of the developing phase was to interview over a hundred of our existing customers to precisely understand their needs and expectations and ensure the new platform will satisfy their needs and meet their expectations.” The bonus, Suter adds, is that “including our customers in the development process of new products also brings the benefit of having decades of experience coming together to collaboratively find needed solutions.”

It should come as little surprise that the industry is driving this focus all the way to its logical conclusion. Suter emphasizes, “we have been providing medical devices and laboratory equipment for decades, and our clear ambition is to add a portfolio of services accompanying these devices. We no longer want to be simply seen as a systems provider, but as a total solution provider.” This is not only driven by the increasingly larger-sized projects customers wish to undertake requiring





more complex and extensive infrastructure with lifetime maintenance needs, but also sensible concerns about keeping their portfolio accessible to global markets.

Philippe Hügli, country coordinator for Boston Scientific, concurs, philosophizing, “as the environment in which we work evolves, we must mirror the external changes with our own internal adaptations ... as seen across Europe and in other regions, payers are asking more and more in terms of evidence of outcomes and value for cost.” To compete in this environment, he suggests, companies must differentiate their business to create a “triple win situation for all stakeholders: best outcomes for the patient, great value for payers, and support for healthcare professionals. For medtech companies ... this means providing more than just products; we need to provide significant value-added services that constitute a full treatment solution.”

True to form, Boston Scientific’s Swiss affiliate has led the charge on this. As Hügli describes, “Boston Scientific



AS SEEN ACROSS EUROPE AND IN OTHER REGIONS, PAYERS ARE ASKING MORE AND MORE IN TERMS OF EVIDENCE OF OUTCOMES AND VALUE FOR COST.

PHILIPPE HÜGLI
BOSTON SCIENTIFIC

generally operates as a group of separate divisions which are managed vertically, yet there are some aspects which must be synchronized or coordinated in an individual country, particularly around corporate messaging.” In Switzerland, the company designed the ‘Customer Insight Initiative’, arranging interviews through a third-party with 120 doctors, nurses and other staff members at various healthcare institutions, with the aim of assessing the gap between the reality and the perceptions of Boston Scientific’s activities in the country. The results “revealed some fairly simply gaps and oversights that were easily addressed, as well as some deeper strategic issues”, so in response, “we launched five basic tasks to get some quick wins, and five strategic initiatives”, Hügli adds. So valuable was this initiative that the company has already begun to incorporate selected aspects into a global ‘Customer Centricity Initiative’.

For Henk Meertens, vice-president (Benelux, Central Europe, Greece and Israel) for Medtronic, one of the

first hurdles is public perception. He discloses, he “recently participated in a meeting with representatives from a hospital where we presented Medtronic as a possible partner to help them solving their problems. Prior to that presentation, they did not even consider Medtronic as they only saw us as a medical device supplier.”

Globally, Medtronic has put forth the concept of ‘value-based healthcare’, which, in the words of global CEO Omar Ishrak, is about “tying clinical value and economic value of medical devices together.” As Meertens elaborates, “many healthcare systems operate very inefficient today as they are based on pay for service vs. pay for outcome. Actors in the healthcare systems are paid for treating patients, not necessarily for being efficient and ensuring outcomes that patients could reasonably expect.”

As one of the largest medtech companies in the world, Medtronic sincerely sees itself as the solution. Leveraging on their strong experience in lean manufacturing, six sigma and operational excellence, Medtronic has created a new Integrated Health Solutions (IHS) business, focused on collaborating with hospitals to apply efficiency and best practices, including the outsourcing of non-core responsibilities like material management. Beyond that, Medtronic has launched two innovative integrated practices in as many years. The first, Diabeter, is “a group of clinics focused on type one diabetes patients covering the entire patient care pathway: diagnosis, treatment and follow up—the follow up is extensive and goes on for years”, Meertens marvels. Electronic monitoring is also used to enable physicians to engage with patients remotely, both reducing the impact of disease on patients’ daily lives and healthcare costs associated with hospital visits. The second initiative focuses on obesity with a clinic covering the complete patient care pathway, because “in the past, many patients fell back into old behaviors, which significantly decreased the clinical benefit of the surgery. Our practice includes motivation through strong post-surgery engagement, as these patients really need to change their lifestyle,” Meertens explains.

As the global healthcare landscape changes rapidly, who and where better than leading medtech companies in Switzerland to lead the transformation of the medtech sector from a dealer of devices to a full partner in delivering patient outcomes. ✨



FERRING WELL

Gilles Pluntz, chairman of Ferring's Group Operating Committee and SVP Europe-Canada, describes how the European region can contribute to Ferring becoming the global leader in reproductive health and the thinking engine for global pharmaceutical trends, as well as the significance of Switzerland within Ferring's wider strategy.

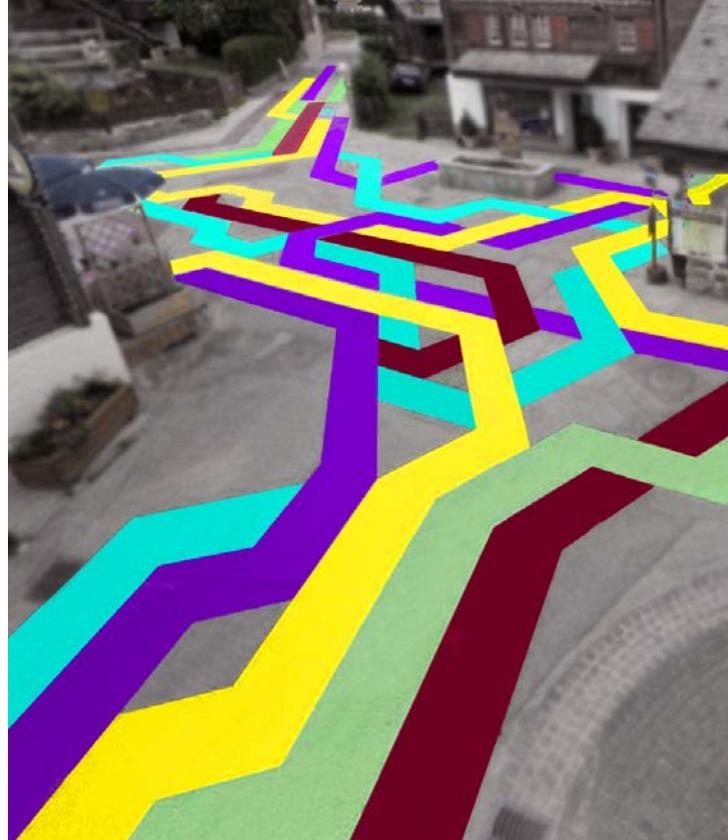


Gilles Pluntz
FERRING

HCLS: Michel Pettigrew, president of the executive board and COO of the Ferring group said he wants Ferring to hit the EUR 3 billion mark by 2020 and become the uncontested leader in reproductive health. What can Europe contribute to this ambition?

GILLES PLUNTZ (GP): We can be the thinking engine which will create a state of the art platform of services adding value to our drugs. For example, REKOVELLE our newly approved drug for controlled ovarian stimulation (COS) in Europe is associated with a diagnostic tool which evaluates the level of the ovarian reserve of a given woman by measuring a specific hormone called the Anti-Mullerian hormone (AMH). If this information is combined with her weight, you can create an algorithm which tells the doctor what the best dose of the product is. This will ensure that the stimulation process will generate the optimum number of fertilizable eggs. Personalized medicine; intelligent and avoiding extremes, state of the art!

Moreover, I believe that in terms of drugs we should continue pointing our research towards fertility and maternal health. So much need to be discovered, for example in the area of egg implantation following an in vitro fertilization process; nobody fully understands the bio-chemical dialogue between a mother's endometrium and the embryo before it implants. Understanding



this dialogue and possibly developing drugs that help it will greatly improve the chances of baby born. That's one of our opportunities in terms of drugs and there are also great opportunities in the area of services to patients: young women starting a professional career should be thinking about children, and when they do, they should also think Ferring! We can achieve this as we are already the major player in this segment and we must be recognized as the company for fertility, obstetrics and maternal health.



WE MUST BE RECOGNIZED AS THE COMPANY FOR FERTILITY, OBSTETRICS AND MATERNAL HEALTH.

HCLS: What is the significance of Switzerland in all of this?

GP: Beyond the fiscal advantages, Switzerland is at the heart of Europe, it is very attractive to international talents and I am confident it makes sense to be here. Although the costs of operating in Switzerland are indeed very high, it remains one of the best place in Europe as it has the right ecosystem established, whether that be academia, research, industry— all is here and very well linked. Moreover, in contrast to large countries—where typically one player is dominating—the abundance of pharma and med-tech players present here means that every company in Switzerland is equal.



THE SLOPE TO SUCCESS

With rapid international expansion founded on Swiss manufacturing excellence, charismatic former skier Urs Lehmann is leading homeopathy specialists Similasan into a new era.

Urs Lehmann, CEO of Swiss homeopathic therapy manufacturer Similasan, has taken an unusual route into the healthcare and life science industry. A former World Champion skier and current president of Swiss-Ski, the Swiss skiing association, Lehmann explains that he “was an early convert to the Similasan brand from my days as a professional sportsman where I had to be very careful about which synthetic drugs I was

consuming so as not to fall foul of doping regulations.”

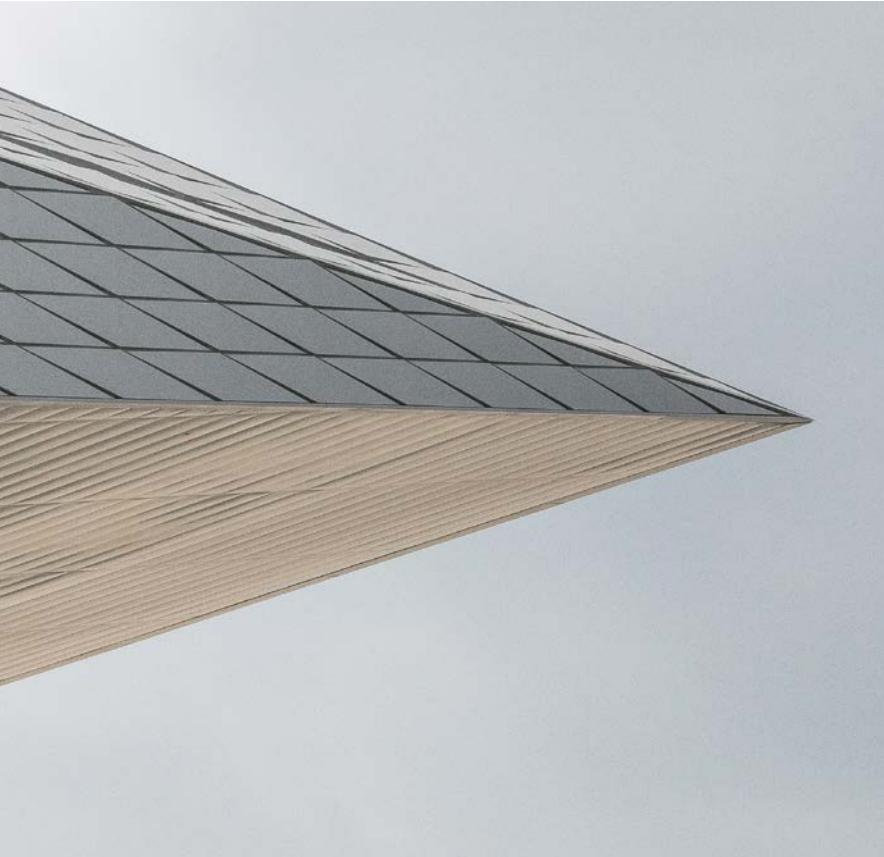
Upon finishing his sporting career, Lehmann embarked on a PhD in economics before taking up a role at international logistics outfit VIA MATT-Gruppe, from which he was headhunted by Similasan in 2009. Lehmann notes that “though I had no prior experience in pharmaceuticals, the Jüstrich family [owners of Similasan since 2007] believed that I had the right leadership qualities and analytical mindset to oversee a restructuring of the business, portfolio diversifications and expansion into new overseas markets.”

This strategy of international expansion has borne considerable fruit, with Similasan now distributing its 150 homeopathic

preparations in the USA, South Africa, the Netherlands, Austria and Canada. 80 percent of the company’s production is sold abroad and Lehmann has plans to expand even further afield, illustrating that “We are currently in the process of expanding our footprint to cover swathes of Latin America and Central Europe. We are already on the market in Colombia and Peru, and are in the process of market registration in Mexico and Brazil. Another milestone was passed in November last year when we delivered or first consignment of eye drops to the Czech market.”

Nevertheless, as somewhat of a national hero himself, Lehmann is keen to emphasise that Similasan is, and always will be, a Swiss brand at heart. He asserts that “the recognition and awareness of the





Similasan brand within Switzerland is absolutely huge as demonstrated by the fact that we have been voted by the readers of Reader's Digest the "most trusted Swiss healthcare brand" an unprecedented 14 years in a row!"

As an export-driven company, Similasan is obviously susceptible to market fluctuations and the strength of the Swiss franc has been an issue; forcing Lehmann to conduct a thorough analysis of process optimizations and slash the company's marketing budget. However, mass layoffs or moving manufacturing outside of Switzerland were never an option; Lehmann concluding that "Being Swiss is ultimately part of our DNA and Similasan's owners are very conscious of what they regard as their social commitment and moral obligation to the Swiss economy." ❄️

URS LEHMANN FACTSHEET

- World Champion Downhill Skiing (Japan 1993)
- PhD (Economics), University of Zurich (2004 - 2009)
- President, Swiss-Ski (2006 - present)
- CEO, Similasan (2009 - present)
- Member of Board of Trustees, Laureus Foundation Switzerland (2008 - present)
- "As an industry, we must do more to win over hearts and minds and raise awareness as to the real efficacy of homeopathic remedies"
- "Being Swiss is ultimately part of our DNA"



Photo: Urs Lehmann wins the men's downhill world title at Morioka-Shizukuishi, Japan, 1993

A GENUINE ONE STOP SHOP

The managing director of CordenPharma Switzerland elaborates on the role the Swiss facility plays within CordenPharma. He furthermore highlights how the company is tailoring their service offering to cater to the needs of multi-national companies, mid-sized companies as well as start-ups.



Juerg Burger
CORDENPHARMA

HCLS: CordenPharma has rapidly expanded and today can be found across the globe. Could you please define what the company is today?

JUERG BURGER (JB): CordenPharma belongs to the ICIG group, which was founded in 2006 with the vision to build a global industrial conglomerate covering non-GMP chemical production (WeylChem), and pharmaceutical cGMP manufacturing (among other businesses) – the latter being covered under the CordenPharma umbrella. The ICIG group is a privately-owned industrial holding with a declared vision to grow the company. Unlike the 'typical' private equity investor, ICIG do not plan to remediate acquisitions with the exit strategy to sell them off again; instead, ICIG clearly communicates a strong commitment to establish long-term growth with high visibility in the market. The company has rapidly expanded by acquiring sites from pharmaceutical companies deemed not of strategic importance to their former owners anymore, using these as pillars to carry the company, and over time developing them to form a real Contract Development and Manufacturing Organization (CDMO). We have grown dramatically since I have started. Three years ago, we had to fight for each new project; today, supported by our strong global Marketing & Sales organization estab-



lished in 2015, we are running on much higher capacity utilization and are in expansion mode! Globally, we have generated some EUR 345 Million (2015) in turnover – ten percent of which was here in Switzerland—and the target set by our investors is to reach EUR one Billion (USD 1.07 billion) by 2020 – I am confident that we will achieve that!

HCLS: What is the role the Swiss affiliate plays within the group?

JB: CordenPharma Switzerland plays two different roles. On one hand, we are a small molecule development site within our Small Molecule Technology Platform and are currently building up critical mass in development capacity. Secondly, we are part of the Peptides, Oligonucleotides, Lipids & Carbohydrates Technology Platform, which supplies peptides, phospholipids and carbohydrates, (which can be further formulated into injectables under our Injectables Platform) to our customers. Most of these molecules' application calls for small-scale quantities—for complex carbohydrates we are talking about up to 100kg (220 lbs) at peak sales. We are really a dedicated facility for the manufacturing of niche products – for example synthetic phospholipids which later go into liposome formulations, or products needed for novel technologies. As such, we function as an entrance gate for some projects at an early stage – which then, after being successfully developed and thereby exceeding our capacities, are transferred within our integrated network of facilities with the available larger scale capacity.

HCLS: What would you say is the main revenue driver of your business today?

JB: Innovation today is really coming within the area of what we call Bio-Organics, where classical small molecules are more or less historical and competition in this segment is tight. What's more, the pharmaceutical in-



dustry is developing more niche indications and segments such as orphan drugs, and trends such as personalized medicine, which really drive our business, the latter raising the demand in small quantity needs each year. Nonetheless, we face the challenge that this site only derives one third of annual sales out of the commercial business, while the other two thirds are still project-based, which is resource intensive. For instance, project-based business means that a customer needing process optimization or root scouting asks us to first provide material for clinical trials tests.

However, at that time the customer does not know the future prospects of this project, so there is not only a risk for our customer but also for us. The solution is to find the right balance in how much effort to invest at that point in time into process optimization.

HCLS: What are some of the synergies created within the different facilities?

JB: We are a genuine one-stop-shop! Any first-time customer can turn out to stay decades with us. It may start out with a customer needing a small mol-



Photo courtesy of: CordenPharma

ecule peptide, which at a later stage could turn into a formulation or fill & finish, so as the customers' needs change and grow, we respond by transferring the API to CordenPharma Brussels in Belgium or CordenPharma Colorado in the US, or to our facilities which handle Drug Product development and manufacturing – CordenPharma Latina and CordenPharmaCaponago in Italy, or CordenPharmaPlanksadt in Germany. While the customer grows, we are able to flexibly meet changing needs through the different assigned roles of the facilities across the globe, taking care of every aspect in between such as logistics! We are fully prepared to satisfy any customer need that may arise during this process, which gives our customers and us a genuine mutual commercial benefit.

HCLS: What would your ideal project look like and why are you the right partner for these projects?

JB: The perfect project for us is of course in a late-phase, with commercially repetitive supply and a steady stream of annual sales revenue.

We offer flexibility in terms of capacity, utmost responsiveness, especially in the transparency of treating and handling projects. We create an open culture with our customers and share any relevant information, as we believe that being on the same page is crucial. Moreover, a key differentiator is our project management expertise, which is only rarely matched by some of the really large companies, which also lack the flexible independence which we provide. We ensure the highest level of operation by regularly surveying our existing customers and self-auditing based on the results. When asked, our customers often respond by naming technical knowledge and the ability to solve technical challenges in a speedy and competent way as a key strength. That is due to the variety of customers we serve, which include large multi-national companies, medium-sized companies and start-ups.

The service expectation of these groups could not be more different; start-ups, for instance, often have questions regarding project management, need regulatory and compliance support and require access to a technical expert; large multi-national companies, in contrast, are typically seeking a service provider offering high quality services for the lowest price possible. Overall, I am confident that we really differentiate ourselves by being a full-service partner which tailors solutions to the individual needs of our clients. ❄️



NEW HORIZONS

Riccardo Braglia, vice chairman and CEO of Helsinn, a leader in cancer supportive care, discusses the Group's entrance into the field of oncology therapeutics.



Riccardo Braglia
HELSINN GROUP

HCLS: What is Helsinn's specific approach and contribution to treating cancer?

RICCARDO BRAGLIA (RB): Helsinn's key focus over the last 15 years has been the development of cancer supportive care products, based on the concept that with innovative treatments many types of cancer can now be viewed as a chronic disease. Cancer patients can live longer and longer because of new therapies, but unfortunately this doesn't mean they have a good quality of life. Patients face terrible side effects from both the cancer and the therapies they are treated with, which include cachexia, nausea, vomiting, and many other painful and uncomfortable symptoms. Thus, for the last 15 years Helsinn has invested in the development of a pipeline of cancer supportive care products which will help those living with cancer to enjoy a better quality of life.

Recently we decided that, based on our experience in cancer supportive care, we can now expand our vision to include the development of therapeutics – drugs to treat the cancer itself. As our first step in this direction, we have in-licensed full rights to Pracinostat, a phase III ready acute myeloid leukemia treatment, from San Diego based MEI Pharma.

HCLS: Many companies, innovators and investors are active in the crowded oncology field. What is Helsinn's unique approach or competitive edge?

RB: Oncology is a crowded and competitive field, so we try to focus on very innovative niche targets. Our strategy since the Group was founded 40 years ago has been to work via in-licensing of innovation, and to be flexible when working with partners. We license products which have a proof of concept, having completed phase IIa for example, and develop them through phase IIb and phase III, and then handle all of the work required for manufacturing and regulatory approval. Usually we handle the registrations with the FDA, EMA, China FDA and Swissmedic directly, and work with our partners in other markets to prepare the submissions; for example, in Japan

Once approved, we license out the product to our partners around the world for commercialization, with the exception of the USA where we have our own sales organization based in New Jersey. However, we are very flexible and in some cases also co-develop with partners in specific countries like Japan and China, or co-market as we do with our partner Eisai. We have even had situations where we have developed a product and then handed back rights to the originator after leveraging our expertise in development of cancer supportive care products.

This model is very fast and flexible, which is an advantage over big pharma. We can't compete with them in terms of the size or scope of our organization or financial firepower, but we can be the fastest and most agile and use that to our advantage. ✨

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