Switzerland: At a turning point

Current changes are likely to foster an attractive environment for biotechnology.

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In recent years, Swiss companies have often attracted attention through the worldwide biotechnology community. In 1990, Hoffmann-La Roche (Basel) bought the symbol of American biotechnology, Genentech (South San Francisco, CA). A few months ago, the announcement of the merger of Ciba (Basel) and Sandoz (Basel) to form Novartis gained worldwide attention, not only because it was the largest merger in history, but also because Novartis will be the second largest pharmaceutical company in the world. In the meantime, Swiss biotechnology has largely been overlooked to date. According to the famous Ernst & Young reports, there are supposed to be virtually no biotechnology companies in Switzerland. However, a closer look shows that biotechnology in Switzerland has reached a very high level of economic development, and that conditions are likely to foster the development of biotechnology in the coming years. Biotechnology has been largely overlooked because of the small size of the country, but to a greater extent because of the privacy and discretion of the Swiss.

The major players in Swiss biotechnology are the large Basel-based pharmaceutical and chemical companies Roche, and Ciba and Sandoz, (the latter, as I mentioned, will soon become Novartis). These companies have powerful R&D capabilities—mostly because of their acquisition of Genentech and Chiron and their strong worldwide cooperation with biotechnology companies and research institutes. They also have huge production facilities and very strong worldwide marketing and distribution capabilities, as well as huge financial reserves.

In addition to these large pharmaceutical and chemical companies, there are other important Swiss players in the biotechnology industry. One of them is Nestlé (Zurich), the largest food and nutrition company in the world. Despite some research successes, Nestlé remains reluctant to sell biotechnology products because of low consumer acceptance for genetically engineered food. Another very successful company is Ares-Serono (Geneva), a pharmaceutical company that has virtually become a biotechnology company in recent years.

There are also small biotechnology companies in Switzerland that are mostly start-ups from universities—a fact that has been largely overlooked, even in Switzerland itself. A recent study by the Center for Economics and Management (WWZ) at the University of Basel shows that there are almost 100,000 people overall working in biotechnology, with almost 30 small biotechnology companies that do their own research and production. Most of these companies provide specific services for the large pharmaceutical companies and have experienced only slow growth, and none of them develop therapeutics. However, there are some very successful suppliers of high-technology equipment for biotechnology, such as Bioengineering AG (Wald) and Infors (Basel). In more general terms, more than 150 small companies do some business with biotechnology, mostly as suppliers.

Even with this high level of expertise in biotechnology, Switzerland could do much better. There is concern about the low dynamic of biotechnology start-ups. However, conditions for biotechnology in Switzerland are undergoing significant change.

The most important are changes at the university level. Swiss universities and research institutes do outstanding research in such fields as microbiology, biochemistry and biotechnology. Despite the small size of the country, there are two Nobel prize winners in Switzerland: Werner Arber at the University of Basel and Charles Weissmann at the University of Zurich. Until now, the ten Swiss public universities have been heavily dependent on both the public administration and officials from the federal government or the regional "cantons". But because of budget deficits and general concerns about international competitiveness, these universities, while remaining public universities, are now becoming independent from government oversight. These changes will have a major impact on the universities: They will improve flexibility and competitiveness; they will foster cooperation with industry and the creation of start-up companies; and they will further improve technology transfer (e.g., the Swiss National Science Foundation priority program, which was launched three years ago).

The second major change that is occurring in Switzerland is the reemergence of entrepreneurial spirit. Until recently, entrepreneurial spirit was diminished in Switzerland because of the general prosperity and almost nonexistent unemployment. Layoffs at Ciba, Roche, and Sandoz in the past three years have dramatically changed the situation in the labor market. At the same time (the first time since World War II), unemployment in Switzerland has increased from almost zero to 4.3%. Rather suddenly, a large pool of experienced people has become available for the creation of start-up companies.

The above changes should create much better conditions for biotechnology start-ups. (Until now, there has been no sufficiently developed venture capital community in Switzerland.) But there is plenty of money in Switzerland that is available at very low interest rates. Furthermore, the creation of the European unlisted securities market EASDAQ should foster the development of the venture capital community. Switzerland's decision to defer membership to the European Community (EC) has made it difficult to hire people from abroad because of administrative hurdles, particularly for small companies. However, it is likely that the ongoing negotiations between the Swiss government and the EC will improve this situation. Independence from the EC currently permits more flexibility and less bureaucracy. In Switzerland, for the most part, regulations are implemented by the regional government, the 24 cantons. The cantons have incentives to cooperate with local industry and to do their job efficiently. For example, administrative procedures for building biotechnology facilities from companies like Schering-Plough (Basel) and Ares-Serono were accomplished very efficiently within a few weeks.

Whether the conditions for biotechnology will improve strongly depends very much on the national referendum on genetic engineering likely to be held next year. Switzerland is at a turning point. If the referendum is accepted, genetic engineering will be subject to heavy restrictions and the attractiveness of Switzerland will be diminished. If it is rejected, the political climate would seem to bode well for biotechnology. ///

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