



BIO 2006 Annual International Convention (Part I)

The expanding biotech industry of France

9-12 April 2006, Chicago, IL, USA

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Introduction

The McCormick Place Convention Center in Chicago opened its doors today to host the 20th Annual Convention of the Biotechnology Industry Organization (BIO). The world's largest biotechnology event kicked off on a global footing, with an in-depth examination into how nations worldwide are tackling biotechnology and developing strategies and infrastructure to help develop the industry. This report focuses on the recent initiatives and reforms that have contributed to an increased momentum in the growth of the French biotech industry, and describes two of the most interesting drug development start-up companies exhibiting at this year's conference.

Why the French biotech sector is expanding

The French biotech industry, the third largest in Europe, has strong roots in science and research, and companies often originate from public institutes, where scientific projects experience long maturation. The government actively fosters a high-level scientific breeding ground; with an additional billion euros in 2005, research resources increased by more than 10% compared to 2004, the largest increase in 10 years. Meanwhile, several recent government reforms and initiatives are helping to transfer the resulting academic research into innovation and the growth of new biotech business.

In summer 2005, France created three major biotech-related industry clusters to leverage synergies between the country's private and public research facilities, its institutions of higher education and life science companies: Paris' Méditech Santé (for advanced medical technologies), Lyon Biopole (specializing in infectious diseases, vaccines and diagnostics), and Alsace-BioValley (for genomics and non-invasive surgery). The government has also pledged money to support several additional industrial clusters, including a biotech cluster in the Rhône-Alpes region. Giving a compelling case for the success of the French cluster policy, representatives from four companies participating in such clusters discussed how their businesses are benefiting. Pascal Neuville, CEO Faust Pharmaceuticals, recounted why the company relocated to Strasbourg in 2003 to become part of the Therapeutic Innovation Alsation cluster, and how it has benefited from being close to a number of networks of science, business and technology transfer. In particular, he said that to grow a small company you needed access to good people, new technology platforms that help cross-fertilize innovation, and academic labs that can carry out research that cannot be done in-house. These sentiments, as well as the financial incentives of being in France, were echoed by André Choulika, CEO of the small genome engineering company Collectis, and by representatives of two larger companies, bioMérieux and Amgen.

By allowing the country's top scientists and researchers easy access to special financial and tax incentives, the government is also aiding further growth of the industry. The French Trade Minister, Christine Lagarde, discussed how recent policy changes have resulted in arguably the most aggressive R&D tax system in Europe. One aspect of this is the research tax credit, which, since January 2006, has amounted to 10% of annual R&D expenditure plus 40% of the rise in expenditure compared to that of the past two years. Since 2004, fledgling companies have also been able to adopt Young Innovator Enterprise status for their first eight years, which allows a significant reduction in payroll costs by giving a full uncapped exemption from employer payroll taxes provided companies spend at least 15% of their annual expenditure on R&D.

Nevertheless, all is not rosy in the region; Ernst & Young dubbed 2005 a year of contrast for the French Biotech sector. The analysts claimed that, although bankruptcies and merger activities were less than expected, over 50 French biotech companies experienced difficulty in concluding second and third rounds of financing, including fairly well-established companies such as IntegraGen, Faust Pharmaceuticals, Nautilus Biotech and Mutabilis. In 2005, the French industry raised about EUR 150 million in venture funds, compared to nearly EUR 170 million in 2004 (although some very large financings in 2004 skewed the totals for that year). In both 2004 and 2005, about 25 companies accessed private equity, and the number of successful first rounds of financing (eight in 2005) was comparable to that of previous years. Nevertheless, the failed floatation of IDM Pharma early in the year halted IPOs for several months. Ernst & Young also believes that developing stronger managerial talent is a key challenge for France, where the sector has recruited relatively few big pharma executives.

Neorphys: discovering new drugs for pain and female sexual dysfunction

Neorphys is a niche pharmaceutical company founded in September 2005 by two ex-Synt:em employees, Roger Lahana (Neorphys CEO) and Karine Larbouret (Neorphys VP). The company is focused on two indications: that of nausea-free acute pain management, in which the two founders gained significant experience while at Synt:em, and a newer indication, female sexual dysfunction (FSD). Neorphys has a strong medicinal chemistry background and aims to use rational design to produce clinical candidates; the business strategy will be to outlicense candidates after phase II clinical trials.

The company has a rather interesting and unusual history: Dr Lahana took the decision to set up a new company following a failed merger between Synt:em and Sonus, after which Synt:em began a period of consolidation, starting by closing down the discovery department led by Dr Lahana. The team had been working on opioid receptor agonists, and Dr Lahana believed that the program still had commercial potential. Dr Lahana and Dr Larbouret, at that time a young chemist on Dr Lahana's team, decided to establish a new company to continue work on the target, planning to recruit additional ex-colleagues from Synt:em. They have since recruited two further members of their old team and are in the process of hiring another.

Not wanting to put all its eggs in one basket, Neorphys is currently investigating not only the opioid receptor target, but also a second class of receptor related to pain, as well as two separate receptor targets for the FSD indication. Dr Lahana fully recognizes that the opioid market is a crowded one, but states that they would not be considering this approach if the company did not have a strong scientific rationale to address the unmet medical needs of the analgesic market - specifically the issue of nausea. The opioid receptor agonist program is the company's most advanced, and Neorphys is currently exploring several chemical series of morphine derivatives (the Neorphine series) that it hopes will provide candidates without the nausea side effects of current opioids. The company plans to patent its own opioid agonists within the next 12 months or so, but is also in negotiations with CLL Pharma (which acquired all of Synt:em's assets in December) to inlicense an undisclosed patent covering a number of opioid agonists that Dr Lahana's team identified while at Synt:em. Neorphys is also considering a second class of receptor related to pain, but this project is still at a very exploratory stage.

The company's second target indication, FSD (for which the first drug candidate will be called Neoxytin), represents an as-yet unexploited and potentially very lucrative market, and Neorphys believes that diversifying in this direction will help attract investors. Christel Gros, a senior chemist who was in charge of peptide chemistry at Synt:em, will be developing the FSD project at Neorphys (the most active FSD compounds that have been isolated to date are peptides). As a starting point, the company is investigating agonists of the melanocortin receptor subtypes MC3 and MC4, the best validated receptor class for this indication. After analyzing a significant number of patents filed for this indication, Dr Gros has come up with proposals for a new series, and the company has begun to explore the series and plans to patent it as soon as it gets animal proof of concept. Neorphys is also investigating a second, undisclosed, receptor target for this indication.

So strong was their conviction that the project they were working on at Synt:em had commercial potential, that Dr Lahana and Dr Larbouret were happy to set up Neorphys using their own money. They have since obtained several grants and subsidies and are planning to close their first financing round before the summer. The company is seeking EUR 0.5 million, which together with its current reserves, ongoing grants and the French research tax credit, should give a total of EUR 1.2 million over two years. Using this money, the company plans to obtain validated proof of concept in relevant animal models for an opioid drug candidate within 12 to 18 months (possibly sooner if negotiations regarding the Synt:em patent are successful). In parallel, it hopes to obtain some initial leads in FSD over the next two years. A second round of financing would be required to begin GMP production and preclinical and clinical development of any candidate drugs. Meanwhile, the company is putting in place several partnerships, including two collaborations to secure its future needs for validated animal models of FSD.

In the last few years of the squeezed climate in which European pharma/biotech companies have found themselves, the story of a company closing down a department or project despite a strong team and promising candidates is still, unfortunately, an all too common one. The difference here is that key team members, convinced that a project is commercially viable, have had the courage and been in an environment that is supportive enough to allow them to form their own company and continue with the project. Neorphys very much gives the impression that it has the business savvy necessary to identify viable opportunities, as well as the detailed knowledge of what a small start-up company will need to survive; and it will no doubt be an interesting one to watch over the next few years.