



Belgium: will its enviable geographic position continue to ensure success in pharma?

Belgium is one of the largest centres for pharmaceutical distribution and has the second highest number of pharma exports per capita worldwide. As well as attracting foreign companies, the country has also produced its own international heavyweights. But how will this small European country fare against its neighbouring European giants and will it survive the threat of the emerging players as the global pharmaceutical industry faces turbulent times?

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ccupying an enviable position both physically and politically in the heart of Europe, Belgium has benefitted extensively from its location in recent years, and the development of the EU has also provided considerable impetus for growth. The headquarters of the EC and home of the European Parliament and NATO, Belgium's capital, Brussels, is the centre of European politics. With the recent enlargement of the EU, the country is also at the centre of a market of 0.5 billion consumers. A well-developed infrastructure combined with world-class education and technical expertise, as well as a physical proximity to the markets and capitals of Western Europe, lends local firms many advantages and has made the country a highly attractive base for international companies to conduct business in Europe.

Measuring only 30500 km² with a population of just 10446000, Belgium is one the smallest countries in the EU, and yet enjoys a GDP of €288.09 billion and a position among the world's ten largest trading nations. With the population divided between the

Flemish speaking Flanders region in the north,
French speaking Walloon region in the south and
a German-speaking region in the west, Belgium
occupies a unique cultural position at the crossroads
between Germanic and Latin Europe. With French,
Flemish and German as official languages and English
widely spoken, the linguistic and cultural diversity is a
key advantage for conducting international business
in the country.

The Belgian pharma sector: an international heavyweight

As well as its worldwide reputation for Moules Frites, chocolate and beer, Belgium is also an internationally renowned centre of pharmaceutical expertise. With the second highest number of pharmaceutical exports per capita, processing and distributing 100–150 tonnes of pharmaceutical products per month, the country is one of the biggest centres in the world for pharmaceutical distribution. It is also home to the European headquarters and main distribution

centres of many international pharma companies, while Baxter, Schering Plough, Pfizer, Sanofi-Aventis, Roche, Abbott and GlaxoSmithKline (GSK) have all made significant investments in the country. With London, Paris, Amsterdam and Frankfurt less than 200 miles from Brussels, and 140 million consumers within 300 miles, Belgium offers excellent access to European markets. A welldeveloped infrastructure and the major port of Antwerp facilitate importation and distribution, while a skilled local labour force enables high quality, high volume manufacturing output.

As well as attracting foreign companies, the country has also produced its own international heavyweights — most notably Janssen, UCB and Solvay. In addition, Belgium is home to a plethora of innovative small and medium enterprises including many cutting edge biotechnology companies and a highly developed service sector.

One industry's decline is another's gain

Equally important to the country's pharma success are the local and regional governments, which have played roles in supporting, promoting and developing the industry. A favourable corporate tax system, cheap rent, the establishment of bio-clusters and additional subsidies have attracted pharma companies to the region and helped ensure their continued presence. With the

decline of Belgium's traditional heavy industries — specifically mining and steel — the government has invested heavily in developing the country into a knowledge-based economy.

Two key tax incentives, unique to the country, have been particularly important for the pharma industry: a 65% tax deductibility on the remuneration of all staff working in R&D and an additional 80% deduction from all future earnings from the ensuing patents. As Yves Verschuren, Managing Director of chemicals and life sciences umbrella organization Essenscia, observed: "When Belgian companies deduct these charges, it allows them to attract top talent, which is usually expensive."

With one in every four employees in the Belgian pharma industry working in R&D, the scheme has helped make the country a leading centre for pharmaceutical R&D activities.

Flanders: investing in biotech

The devolution of the Belgian government in 1993 and the creation of a federal system dividing the country into three main regions has created powerful local governments that have proven extremely beneficial for the life sciences industry. The Flanders government, in particular, has been instrumental in developing the industry, particularly when it comes to biotechnology.

Considered to be ahead of its time in many respects, the Flanders Institute of Biotechnology, the Vlaams Interuniversitair Instituut Voor Biotechnologie (VIB), was created in 1996 to capitalize on the region's expertise in molecular biology, and comprises of 65 research groups in the campuses of Ghent University, the Katholieke Universiteit Leuven (KUL), the University of Antwerp and the Vrije Universiteit Brussel. With Flemish universities at the forefront of gene research (Flemish scientists were the first to decode a complete genome), and established expertise in cancer, coronary disease and Alzheimer's disease research, the Flemish government recognized the industry's potential.

The VIB has been the main engine behind the growth and commercialization of the region's life science sector. Working closely with researchers and commercial partners, the institute has created six successful biotech start-ups. Through the creation of bio-incubators, offering cheap rent and laboratory facilities, the VIB has also attracted innovative companies to the region, which help to further bolster the industry.

Another institute that has proven useful to the industry is FlandersBio, which was established in 2004 as an association for biotech players in the region. FlandersBio represents the industry internationally and helps to stimulate competition, as well as providing support and help with funding. Ann Van Gysel, CEO of FlandersBio explained: "We



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bring together CEOs or the financial directors; we try to identify the issues that these companies have and to help them achieve what they need."

With long development times and complex, high-risk research, securing funding is one of the biggest challenges for the new generation of biotech firms. Through the Flemish capital fund Gewestelijke Investerings Maatschappij Vlaanderen (GIMV), the Biotech Fund Flanders and the European Investment Fund, the region has ensured the provision of vital seed capital for the industry's development. In 2007, the total amount of venture capital provided to Flemish biotech companies was approximately €100 million, while spin-offs from the VIB raised €340 million, including more than €200 million from regional and international venture capital funds.

The foresight of the Flemish government and the success of these organizations have helped to establish Belgium's growing and vibrant biotech industry. John Verzeele, Director of Inward Investment at Flanders Invest and Trade, explained that Flanders currently "houses no less than 115 companies with biotech activities, with more than 10000 employees, generating a total turnover of close to €2.9 billion. Together, they are responsible for approximately 20% of the total private R&D expenditure in Flanders. The money is well invested: 33 of these companies own 941 patents, resulting in a powerful patent position of 29 patents, on average, per company."

A funding increase in 2007 of 20% to €38.1 million attests to the VIB's success and the Flanders government's ongoing commitment to the sector.

Wallonia: the home of big business

While Flanders has taken the lead in promoting and developing life sciences, the Walloon region in the south is trying to catch up. Created in 2006 as part of the Wallonian 'Marshall Plan', BioWin is a health cluster that aims to stimulate public–private partnerships, boost the local economy and raise the international profile of the industry. With three academies comprising eight major universities specializing in academic research — a quarter of whose 19000 students are connected to the field of biomedical sciences, with an additional 1000 doctoral students completing PhDs in biomedical science — the region has an impressive source of research and innovation to draw upon.

According to Damien Dallemagne, General Manager of BioWin: "Our intention is to become world leaders in three areas: cancer, inflammation and brain diseases." In the case of the numerous start-ups and spin offs, BioWin helps them make the difficult transition from the laboratory to market. Dallemagne explained: "In business we need cash and venture capital. It is very important for us to encourage and train our members to be able to communicate with the business world." With 10 collaborative R&D projects and a partnership with Lyonbiopole (France) under its belt, BioWin has enjoyed some success in its 3-year history and is helping to further develop the industry in the region.

As in Flanders, R&D is at the core of activities in the sector. Wallonia has more than 300 private and public R&D centres, which employ more than 11000 researchers. The region also has its own research cluster, ARESA, which represents more than 100 clinical and pharmaceutical research organizations. Compared with Flanders, however, Wallonia has a much greater emphasis on big business as opposed to entrepreneurial activities. Currently offering some of the highest subsidies anywhere in Europe, the region has attracted and retained GSK Biologicals, UCB and Baxter.

While Dallemagne is adamant that these "subsidies can only be a trigger in terms of investment", the reliance on a handful of large employers attracted by these subsidies could present a problem to the industry's long-term development in the region. According to Veezle of Flanders Invest and Trade: "In all of Western Europe, the level of incentives has gone down - except in Wallonia. This, in my opinion, says that the region has some problems and that they haven't done so well in the past. If a company wants to establish itself there they will find it difficult to attract and retain staff."

BioWin has also come under criticism for its development approach and criteria for supporting projects. According to Eurogentec CEO Jean-Pierre Delwart: "What they want is immediate results, but in terms of R&D, immediate results aren't possible. A certain number of projects are rejected. I believe that more communication is necessary on why a project was rejected."

However, being home to 1000 health biotechnology companies generating a turnover of €2.7 billion, Wallonia still offers considerable potential for the pharma industry.

Lack of unity in Belgium could deter investment

As the industry matures in both Flanders and Wallonia, there is growing potential for cooperation and collaboration, as well as a healthy sense of competition.

Van Gysel from FlandersBio believes that: "partnerships are important, internationally, but certainly more so on a national level. We work together and we need to strengthen these collaborations in the future. If you increase collaboration you will benefit the sector as a whole and, ultimately, we are here to serve the sector as a whole."

Phillippe Suinen, CEO of Invest in Wallonia, confirmed: "We are competitors, but also partners." Recent signs of cooperation, including joint representation at the 2009 Bio convention in Atlanta (GA, USA), point to a warmer relationship in the future.

With a 10-year head start, however, Flanders is still some way ahead of Wallonia in terms of development, support and industry maturity. Furthermore, regional divisions limit the possibilities for cooperation and present an additional problem for international representation of the Belgian pharmaceutical industry. On a national level, Pharma.be, created to represent the industry nationwide has not enjoyed the success of its regional counterparts. With an ongoing secession movement, particularly strong in Flanders, and considerable political problems at a national level, the lack of unity and questions regarding the long-term future of Belgium could potentially deter investment in the country.

Belgium not immune to downturn

Despite its many benefits and attractions, the Belgian pharmaceutical industry has not been immune to global changes within the life sciences industry; longer pipelines, increased competition and huge development costs all contribute to the changing pharma business model. Recent job cuts at local heavyweight Janssen and restructuring at UCB attest to the problems many of the pharma giants are experiencing.

Other companies in the region, particularly those that have already experienced problems, have anticipated and adapted to the market and introduced structural changes; for example, GSK Bio, with its emphasis on advanced vaccine development, and Baxter, which specializes in high-tech manufacturing and enhanced customer service, are both enjoying continued success and are expanding their Belgian operations. Despite recent mergers, the trend seems to be to streamline operations and increase specialization. The result is an increase in subcontracting and the use of specialist service providers.



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Success in biotech: can this be sustained?

Biotechs are of particular interest to pharma companies looking to develop their pipelines. Belgium is home to a remarkable number of innovative biotechs; the research produced by the 13 major universities in the country — two of which are in the international top ten for scientific research — has resulted in an impressive number of start ups, developing best or first-in-field compounds. With the pioneering work of Flanders in support and development, the country's biotech industry is remarkably mature.

One success story is Innogenetics, which was founded in 1985. With two divisions — a specialty diagnostics business and a therapeutics business that develops therapeutic vaccines — it was one of the first biotech companies to be listed on a European stock exchange in 1996. With an impressive selection of products in development, the company was purchased by Solvay in September 2008 for €200.7 million.

Another successful company is Tibotec, established in 1994 by ex Johnson & Johnson employee Rudi Pauwels. Tibotec and its sister company Virco exemplify the kind of company currently thriving in the Belgian environment. Specializing in HIV/AIDS research, the companies provide quantitative phenotype prediction for HIV resistance testing. They also own the largest P3 laboratory in the world, as well as a resistance database containing more than 200000 samples. In 2002, Tibotec-Virco became part of Johnson & Johnson. This type of success is crucial in encouraging financiers to lend the huge sums required to create such a venture.

Established in 2002, Ablynx is another one of Flanders' success stories. A spin off from VIB research, the company develops human therapeutics for oncology, inflammation and immune diseases, and now has its own subsidiary in the US. Meanwhile, Thrombogenics, which focuses on developing therapies for the treatment of

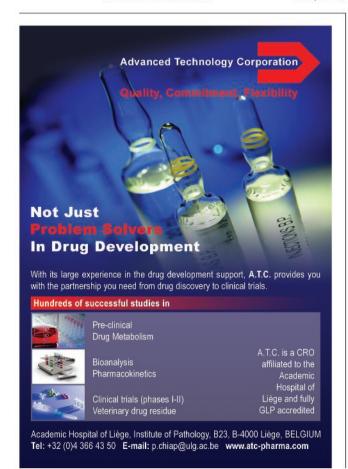
cancers and vascular diseases, successfully floated on the Euronext in 2006. With products already undergoing both Phase II and III clinical trials, the company looks set to become one of the first biotech companies in the country to launch a product on the market — this/offers a great source of inspiration for other Belgian biotech companies and their backers.

While the success of many of these first generation biotech companies attests to the pioneering support and development of the industry, the sector still faces considerable challenges. With development times of approximately 10 years, finding the necessary capital is becoming increasingly problematic. Following enthusiasm in the late 80s and early 90s, venture capital firms are more reluctant to invest, and the current economic climate has compounded these problems. While many firms did successfully complete investment rounds in 2007, the outlook has recently become much more bleak. The presence of a dedicated biotech fund and investment tools in Flanders may well prove to be vital for ensuring the continued health of the industry in the region, as it will help ensure the provision of seed capital and early funding.

With many compounds in development based on research from the 1980s, there is a danger that the next wave of biotech start ups may not be able to ensure adequate funding. In the current environment, collaboration between biotechs and large pharmaceutical firms is becoming increasingly important.

Outsourcing vital to industry success

Underpinning Belgium's pharma industry, and vital to its continued success, is the wealth, variety and quality of the service industry. The plethora of CMOs, CROs and other service organizations are well placed to benefit from the increasing industry trend for subcontracting and specialization. The country is home to a number of world-class CROs capable of conducting national and international trials from preclinical to Phase IV. The presence of many large players in the country provides a





pharmaceutical company spin off, is a good example of the entrepreneurship, advanced technical skills and specialization that typify the CRO sector in Belgium. Concentrating on Phase I trials, the team has already participated in more than 450 clinical trials, and has amassed impressive expertise and reputation in clinical

pharmacology.

An example of the direct link between business and academia and the benefits it produces can be found in Advanced Technology Corporation (ATC), which is partnered with the Accademic Hospital of Liege. The company's access to hospital facilities, staff expertise and patients allow it to offer a complete service, covering everything from small to major trials. Patrice Chiap, General Manager of ATC Pharma, explained: "In the Walloon region, we are unique in being able to offer our services in a facility that is directly attached to a university hospital" with "access to extremely experienced staff and academic medical expertise." ARESA has even created a virtual CRO, WarRDeR, comprised of a variety of its members.

Trial length the shortest in Europe

Again favourable legislation supports the sector, allowing Belgian companies to incept and conduct clinical trials with remarkable speed and efficiency. As Dominique Demolle, Director of Aepodia explained: "Belgium is the most competitive in Europe when it comes to the timelines for regulatory approval. The efficacy trials in Belgium are the shortest in Europe. In terms of approval and set up, it is

with Belgium in terms of timelines for regulatory approvals."

With such competitive legislative advantages and local research expertise, Belgium conducts the highest number of Phase I clinical trials per capita in Europe.

Can Belgium continue to attract investment?

A skilled local workforce producing one of the highest levels per capita of gross national product output in the world has helped Belgium remain competitive in manufacturing. Recent national acquisitions by companies, such as Indian CMO and generic producer Jubilant, have reinforced the sector and reflect the growing presence of Asian generic manufacturers in the market.

Engineering is another strong sector in Belgium, and the country is home to several international, as well as local, companies capable of catering to all requirements of the industry, for example, Canadian engineering giant SNC-Lavalin's life science department, and Belgian firms Egemin and Xitechnix.

Backing up the R&D sector are specialist logistic providers, such as LifeLine Critical Logistics and B.P.L., that provide support to CROs and large players. An understanding and knowledge of the needs of the sector and the development of advanced packing, cooling and monitoring systems has enabled LifeLine Critical Logistics to ship and handle the delicate and vitally important samples, chemicals and materials that allow Belgian companies to operate international trials and research.

As the service sector grows

in importance to the global pharmaceutical industry, Belgium is also becoming home to companies offering ancillary services, such as executive training (C.E.L.forpharma, for example). As Managing Director of C.E.L.forpharma Luc De Langhe explained: "We are seeing more and more people coming from large pharmaceutical companies because they want to open up their vision, think outside the box, get new ideas and interact with other people." The result is "people really learning new skills and tools". Such openness would, until recently, have been unheard of in the closed and insular world of pharmaceutical communications. As large pharmaceutical firms increasingly rely on subcontracting, it is likely that the sector will continue to grow and diversify.

of much of the industry is the Belgian entrepreneurial nature. A culture of starting and growing small and medium-sized companies has helped to contribute to its variety. The current economy, however, is inevitably proving problematic for

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the sector as a number of clinical trials and major manufacturing and engineering contracts are being put on hold. Many contract organizations currently feel that the future, at least in the short-term, is somewhat uncertain and there is also the fear that research will be conducted in cheaper regions, such as Eastern Europe.

Conversely, other areas of subcontracting are benefiting from the current market. As companies seek to maximize their profits and budgets are frozen, the use of temporary staff for a growing range of positions is increasing while companies are turning to specialist contractors to help increase efficiency. For many of the smaller companies in Belgium, marketing and communication present an obstacle to gaining contracts and wider recognition. Many innovative companies with laboratory and university backgrounds find making the transition to a commercial enterprise challenging; although support from organizations such as

ARESA, BioWin and FlandersBio can help companies overcome these problems, many of the smaller players in the industry still need considerable development and growth before they can compete effectively in the international market. In the current financial market many companies are concentrating on their core business and not all will survive.

Will Belgian pharma survive?

With growing competition from Asia, the US and the rest of Europe, coupled with increasing globalization, Belgium's position in the pharmaceutical industry is far from guaranteed. The industry is entering an unprecedented period of change, but the microcosm and evolving ecosystem in Belgium offers insight into the direction the industry may be heading. With large pharmaceutical companies rethinking and reorganizing their business models, and trying to maintain their competitive edge, subcontracting, specialization, value-added services and increased customer focus are becoming increasingly important.

One thing that is certain, however, is that Belgium is not standing still in the constantly changing industry. With world-class R&D and academic institutions, a highly advanced service industry and a biotechnology industry at the centre of innovation, Belgian pharma is well placed to face and contribute to the industry's future.

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