

Medtronic-Kyphon in Neuchâtel: the harmony between a company and a region

In Neuchâtel, the global medical technology leader Medtronic meets with Swiss quality & efficiency for medical devices within the spinal business

BY MAX BOYSSET, HEAD OF SITE

How a Californian company came to Neuchâtel? Kyphon was founded in 1994 in Sunnyvale, California, around the concept of minimal invasive therapies for the spine, specifically in order to restore vertebral height. The indications are fractures caused by osteoporosis, cancer or trauma. The procedure actually consists of inserting two balloons into the vertebrae, then gradually inflating these using a radio opaque solution, while controlling the volume and pressure of the balloons as well as the height of the vertebrae; subsequently, the balloons are deflated and the voids created are filled with organic cement.

This minimal invasive therapy was an immediate success, mainly in the USA.

Since 1998, the international market has become a key part of Kyphon. Our European headquarters were established in Brussels to serve the European and Asian markets. After recognising the fact that a single production site does not provide sufficient guarantees for the development and continuity of the company, Kyphon's management decided to create a brand new manufacturing plant and distribution center in Europe. In February 2006, Kyphon Sàrl was set up in Neuchâtel.

MOVING FAST

In order to start business without delay, a temporary distribution center and a financial service center were set up. In parallel, the plot of land for the future plant was chosen; the design and the building activities began. These steps and the acquisition of the first production machines were made in an extreme short period of time: one year elapsed between the ground-breaking ceremony and the move to the new plant in July 2007. Moving forward, the very first products ma-

“95% of Medtronic-Kyphon balloons used in the fracture reduction surgery of the spine are manufactured in Neuchâtel”

Max Boysset

nufactured in Neuchâtel were delivered to patients in Europe in February 2008. Kyphon received a «Tell Award” for this achievement.

Kyphon was acquired by Medtronic in November 2007 - a great synergy for both companies. Indeed, the distribution network of the global medical technology leader Medtronic allows access to Kyphon's minimal invasive therapies for many patients around the world. This has brought new dimensions to our business, not only in terms of sales networks, but also in the fields of research and development, marketing and strategy.

In our industry, the certification by the health regulatory authorities of different countries is essential. The Neuchâtel site was certified ISO 13485 in November

2006, FDA registered in December 2008 and registered to the Japanese Health Authority in August 2009.

Today, 95% of Medtronic-Kyphon balloons used in the fracture reduction surgery of the spine are manufactured in Neuchâtel. Each step of the manufacturing process is represented there - plastic extrusion, as well as manufacturing operations and assembly using high process technologies are performed on our site, including primary and secondary packaging. We continue the development and industrialisation of new products around our core competencies: manufacturing balloons for reducing bone fractures

Concerning our role as employers, Medtronic-Kyphon has created 140 jobs in Neuchâtel. With employees from 30

nationalities working together, the environment is intentionally multicultural.

MEDTRONIC AND SWITZERLAND: A STORY OF TRUST

Switzerland offers conditions which respond ideally to the requirements of international medical technology companies. The country provides economic, political and social stability as well as a reliable infrastructure and an excellent quality of life. The university and the local labor pool technology provide a highly skilled workforce, confirming the reputation of Swiss quality and precision technology. These were the reasons that led the management of Kyphon to choose Switzerland as a second manufacturing site. Neuchâtel, with its industrial cluster of companies of pharmaceutical and medical devices, as well as efficient links to the airports in Geneva and Zurich quickly became the candidate of choice.

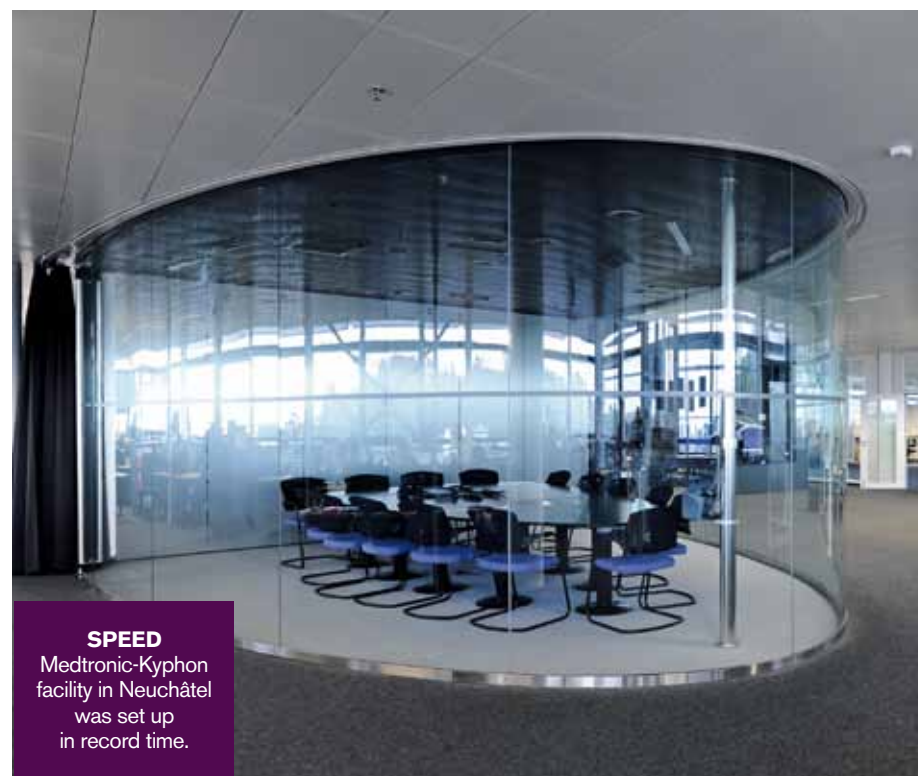
Medtronic's presence in Switzerland dates back to 1967, when the Swiss sales and services office was created. Meanwhile, Medtronic is present on four sites and represents more than 1200 employees in Switzerland: the main site resides in Tolothenaz (VD) with the headquarters for Europe and Central Asia, the manufacturing entity for implantable pacemakers [Swiss Manufacturing Operations (SMO)] and the European Training Center. The customer service and sales offices for the Swiss market are located in Münchenbuchsee (BE). Medtronic recently acquired Invatec in Frauenfeld (TG), an R&D and production center for cardiovascular products.

Founded in Minneapolis, Minnesota, in 1949, Medtronic has its roots in the treatment of heart disease. Meanwhile, the company provides a wide range of products and therapies for the treatment of cardiovascular diseases, Parkinson's disease, diabetes, pain and other neurological and spinal disorders. Every 4 seconds, somewhere in the world, another life is improved by a Medtronic product or therapy. Medtronic does business in more than 120 countries and has scientific, manufacturing, educational and sales facilities worldwide. With approximately 40 000 employees around the world, the company's annual revenue is 15,8 billion dollars.

We truly believe that we only are what we accomplish; every day is a challenge that contributes to our health mission and our future. ■■■



FDA
The site is registered by the US and Japanese health authorities



SPEED
Medtronic-Kyphon facility in Neuchâtel was set up in record time.

Minimally Invasive Surgery comes from Swiss precision at Greatbatch Medical

With the acquisition of Precimed in 2007, Greatbatch has become a powerhouse in orthopaedic surgical instruments. It is now leading the charge with new minimally invasive technologies.

BY PHILIPPE FEHLBAUM, DIRECTOR, ADVANCED TECHNOLOGY & DESIGN, GREATBATCH MEDICAL



PRECISION
Fehlbaum bets on the legacy of the Swiss watchmaking industry.

Greatbatch was founded in 1970 in Buffalo, New York, by Wilson Greatbatch who was one of the two inventors of the implantable pacemaker. Until 2007, Greatbatch, a listed company on the New York Stock Exchange, dedicated most of its activities to industrial batteries, those needed for implantable cardiac surgery as well as the high-tech batteries for space and oil industry. In 2009, its sales exceeded half a billion dollars, of which 130 million came from its orthopaedic unit alone. All together, the group employs more than 3300 employees, among which 800 belong to the orthopaedic division.

Thanks to numerous patents for batteries used in pacemakers and defibrillators, Greatbatch has become the leader in this field with products that cover over 70% of that market. Three years ago, the Board of Directors decided to extend Greatbatch's activities in medtech and acquired Precimed SA, a Swiss company that had built leadership in instruments used in orthopaedic surgery.

A GOLDEN NUGGET IN THE MOUNTAINS OF THE BERNESE JURA
Greatbatch Medical (formerly Precimed) designs and manufactures surgical instruments since 1994. Built on the high precision legacy of the Swiss watchmaking industry, Greatbatch Medical rapidly became a leading OEM supplier of orthopaedic instrumentation, be it for traumatology or for hip, knee, shoulder and spine surgery.

Greatbatch Medical has a Business to Business approach in its niche market. The company's reach is worldwide with competence centres both in Europe and the United States. Its French manufacturing unit is specialised in prosthesis and is able to offer all the steps of a production line, from manufacture of a prototype to sterilised packaging. In the US the focus is on the design and manufacturing of a full range

of sterilisable trays and cases. At Greatbatch Medical, the word innovation has a meaning. Thanks to different patents of global impact, we have been able to manufacture a wide range of standard products, highly appreciated by our business partners. Likewise, our technological expertise is essential for the development of specific products, created in close cooperation with our customers. All these factors have largely contributed to the international reputation of the company.

Greatbatch Medical intends to improve surgical techniques in order to ensure safety to the patient and optimal design to the surgeon. Reductions both in surgery time and convalescence period, as well as lower contamination risks, increased surgical precision and better handling of surgical instruments are keys to our success.

SMALL IS BEAUTIFUL

On our two sites in Switzerland, located in Orvin and Corgémont in the Bernese Jura and where more than 200 people work, we are able to offer our services from concept to production.

The R&D department in Orvin is one of the two technology centres of the Orthopaedic Division of the group. Every day, more than 20 engineers and technicians focus on the development of orthopaedic surgical devices. Some projects are carried out in close cooperation with Swiss technical schools. Due to the excellence and density of the universities in applied sciences in Switzerland, it is more than essential that the Greatbatch Group keeps a R&D department in the area. As a matter of fact, it is considered crucial for the future of the company. Greatbatch spends about 8% of its revenues in R&D and this will only increase. Our field needs constant innovation indeed. Surgeons are very demanding clients. They continually want to improve the quality of their work and are always concerned with the well-being of their patients.

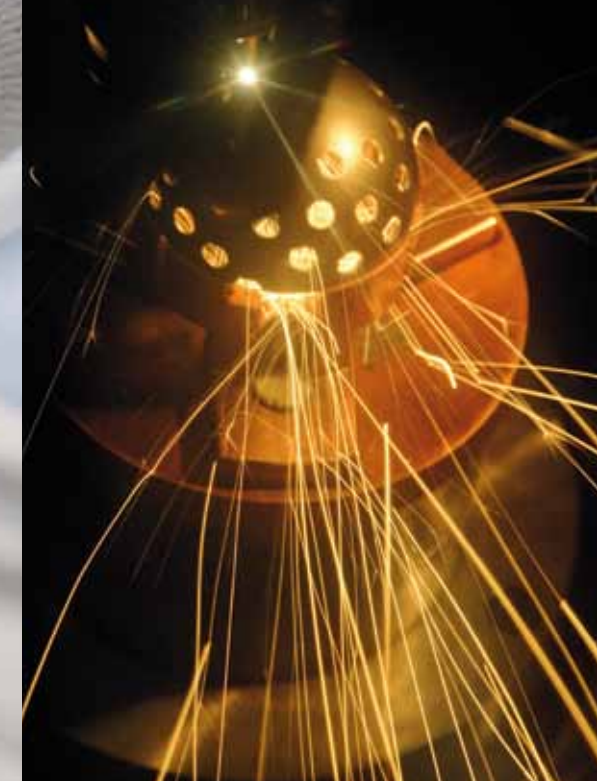
"Surgeons are demanding clients. They continually want to improve the quality of their work"

Philippe Fehlbaum

PHOTOS: DR



MANUFACTURING
From components passivation to laser cutting, processes are constantly improved.



In recent years, a new surgical technique was developed in orthopaedic procedures called minimally invasive surgery. It allows implanting a hip prosthesis within a small incision of 6 to 8 cm, as opposed to 20 to 30 cm in the conventional procedure. To achieve this, a surgeon needs specific tools. This is our mission. Our job is to understand the targeted surgery and then to submit a variety of instruments to make it possible. Each instrument must meet very strict rules. The "cleanability" and the safety of the instruments are just two among many other aspects that we are asked to comply with in order to market any new device. We must never forget that at the end of a surgeon's hand, there is a person. As the saying goes, the patient lives with his implant and the surgeon with his instruments...

The orthopaedics market increases 10% to 15% annually. In order to follow this expansion, Greatbatch Medical is not only investing in research and development but in the quality of its production. This means that we must constantly improve and optimize our manufacturing processes while meeting the high quality requirements of our customers. The human factor is also essential to the growth of the company. Greatbatch has always sought to create a work environment in which its employees have legitimacy and feel appreciated.

In this context, our potential relocation to a single production site in Switzerland makes sense for an industrial group wishing to have roots in a region rich in know-how and technical skills inherited from generations past. ■■■

Edwards

IMPLANTS
In Nyon, physicians get familiar with new delivery system of aortic valves

Edwards Lifesciences: united in fighting cardiovascular diseases

In Edwards's Nyon facility, 130 people and leading physicians focus on state-of-the-art training of heart valves therapies for doctors.

BY PATRICK VERGUET,
CORPORATE VICE PRESIDENT EMEA,
EDWARDS LIFESCIENCES

Edwards Lifesciences, which has its EMEA (Europe, Middle East and Africa) Headquarters and training centre in Nyon, traces its roots back to 1958, when it was established by Miles "Lowell" Edwards. More than 50 years on, the company is the global leader in the science of heart valves and hemodynamic monitoring.

Lowell Edwards was a 60-year-old recently retired engineer with 63 patents in an array of industries, an entrepreneurial spirit and dreams of helping patients with heart disease. His fascination with healing the heart started in his teens, when he suffered two bouts of rheumatic fever. This rare but potentially life-threatening disease can damage the heart by scarring its valves and eventually can cause the organ to fail.

With a background in hydraulics and fuel pump operations, Edwards believed the human heart could be mechanised, but his idea was met with hesitation when he presented the concept to Dr. Albert Starr, a young surgeon at the University of Oregon

Medical School. Instead, Starr encouraged Edwards to focus first on developing an artificial heart valve, for which there was an immediate need. After only two years, the first Starr-Edwards mitral valve was designed, developed, tested and successfully implanted in a patient.

A TRADITION OF INNOVATIONS

The first valve implant was performed on 21 September 1960, at the University of Oregon Medical School. The patient, a 52-year-old farmer named Philip Amundson, had a scarred and deformed heart valve as a result of childhood rheumatic fever. The procedure went well and newspapers throughout the world reported the success of the "miraculous" heart surgery. Amundson enjoyed a healthy and productive life until his death from an unrelated cause a decade later.

Less than 12 months after introducing the world's first commercially available replacement mitral heart valve, Edwards and Starr introduced the first mechani-

cal aortic replacement valve. These innovations spawned a company, Edwards Laboratories, which set up shop in Santa Ana, California, USA; not far from where Edwards Lifesciences' global headquarters are today.

In 1966, Edwards Laboratories was purchased by American Hospital Supply Corp. and became American Edwards Laboratories and was later acquired by Baxter International Inc. in 1985. In early 2000, the company was spun off as the independent, publicly-held corporation named Edwards Lifesciences and began trading on the New York Stock Exchange under the symbol "EW."

Throughout its long history, the company has continued its legacy of heart valve innovation. Today, the company's line of tissue heart valves, provided under the Carpentier-Edwards brand name, have become the choice of surgeons worldwide due to their durability, performance and positive quality-of-life benefits for patients, making Edwards Lifesciences the world leader in heart valves.

Tissue heart valves provide an important benefit compared with mechanical valves, as patients avoid the need associated with mechanical valves of having the lifelong prescription of blood thinners, its associated risks and the impact of needing to ca-

refully manage diet and daily routines.

From its success in replacement valve therapies, Edwards Lifesciences applied this experience to developing products for heart valve repair. Today, the company is the world's leading manufacturers of products for the surgical repair procedure – called annuloplasty – and its Carpentier-Edwards annuloplasty product is among the most sought-after by surgeons around the globe.

In addition to its heart valve therapies, the Edwards organisation is credited with pioneering many other medical innovations, including the Swan-Ganz catheter, the first technology ever used for haemodynamic monitoring of critically ill patients, and the Fogarty line of embolectomy catheters, the first catheter-based technology used to remove blood clots from arms and legs.

DOCTORS' TRAINING AT THE FOREFRONT

Since 2007, Edwards in Europe has been pioneering the introduction of the revolutionary transcatheter aortic valve implantation (TAVI) through its Edwards SAPIEN valve. This tissue valve is indicated for high risk patients, who are usually elderly and with other co-morbidities. The TAVI procedure avoids the need for traditional open heart surgery. The valve is instead implanted either via the femoral artery using the NovaFlex transfemoral delivery system or via the apex using the Ascendra 2 transapical delivery systems.

It is important for Edwards to work closely with doctors to train them to use their products effectively to ensure the highest level of procedural success. The company's Nyon facility hosts a state-of-the-art training centre including simulators, wetlab and an auditorium which can accommodate live satellite transmission. Here healthcare professionals are trained by other leading

physicians in valve implantation and repair. Edwards moved to Nyon from Saint-Prex in June 2009 specifically to establish the training centre and to accommodate its growing team, which now numbers in excess of 130 people.

Across the whole of Europe, the company employs more than 730 people. This includes in excess of 200 at its manufacturing plant in Horw, Lucerne, where most of the Edwards heart valves used in Europe are manufactured.

Edwards continues to invest heavily in research and development in its search for new generation products to improve the lives of patients. Between 2000 and 2009, annual investments in R&D rose from 50 million dollars to around 179 million dollars, representing more than 13% of sales. The company is continuing to develop in its familiar tried and trusted territory – heart valves. Its aim is to make further progress in heart surgery products that are used to repair and replace heart valves, and to work on techniques for making surgery less invasive and traumatic for the patient.

Prior to his death in 1982, Lowell Edwards was only the sixth person in history to receive the American Medical Association's Layman's Citation for Distinguished Service. The citation describes Edwards as "a man of honour and courage whose inventive genius brought about the development of the artificial heart valve and whose long devotion to human welfare in the science of medicine has given new life and hope to victims of heart disease throughout the world."

The original vision of Lowell Edwards continues today. Edwards Lifesciences is a global company with annual revenue in 2009 exceeding 1.3 billion dollars and more than 6500 employees dedicated to furthering Lowell Edwards' original vision to help clinicians, patients and their families work together as a united community fighting cardiovascular diseases. ■

In Geneva, Bracco Research listens to the harmony of cells

The Swiss based research unit of Italian leader in diagnostic imaging Bracco develops contrast agents revealed by ultrasound techniques. It is now reinforced to apply those techniques in drug design and delivery.

BY FRANÇOIS TRANQUART, MD, PHD,
DIRECTOR BRACCO SUISSE SA

Bracco Imaging S.p.A. is one of the world's leading companies in the diagnostic imaging business. Based in Milan, Italy, Bracco Imaging develops, manufactures and markets diagnostic imaging agents and solutions meeting medical needs and facilitating clinical solutions. Bracco Imaging is a subsidiary of Bracco S.p.A, the holding company of the Bracco Group, which also markets ethical and over the counter (OTC) pharmaceutical products in Italy as well as advanced medical technology systems worldwide.

The Bracco Group also offers diagnosis services through the Milan-based Centro Diagnostico Italiano (Italian Diagnostic Centre). The Company operates in over 80 markets worldwide, either directly or indirectly, through subsidiaries, joint ventures, licenses and distribution partnership agreements. Bracco Imaging is an innovative R&D player with an efficient process oriented approach and a track record of innovation in the diagnostic imaging industry. With over 300 employees worldwide (12% of the total Group workforce), of proven technological excellence this network is completed by satellite laboratories and partnership with universities, private and public R&D centres, clinical centres, etc. Bracco has a strong traditional commitment to R&D, with investments approx 9% of its turnover.

AVANT-GARDE ATMOSPHERE

Bracco Research SA was founded in 1989 in Geneva and is now part of Bracco Suisse SA. In 1997, Bracco Imaging BV Geneva Branch Office was created as a division of the Finished Goods Operations of Bracco Imaging S.p.A., and both companies moved in 1998 to a new building in Plan-les-Ouates, a high-tech area on the outskirts of Geneva.

The choice of the Geneva location is in line with the Company's philosophical and strategic approach favouring the establishment of research groups in those areas that offer a combination of high skills, innovative ideas and a lively, avant-garde technological atmosphere, as scientific parks, universities and high-tech laboratories. The R&D centre of Plan-Les-Ouates operates

as part of Bracco's integrated research network (including advanced research centre at the BioIndustry Park near Ivrea, Northern Italy and Princeton in the US).

Today the Plan-Les-Ouates units globally employ about 75 highly specialised people. The research unit concentrates on the development of new diagnostic imaging products with a focus on products for ultrasound. It is also the centre specialised in the study of drug delivery technologies and their use for designing novel products. This activity was successful with the approval of SonoVue in 2001, and then by the achievement of phase I with a new blood pool agent in 2009. A new molecular imaging agent for angiogenesis assessment will enter into clinical phase in 2010.

Research starts in the discovery team where new contrast agents, including molecular imaging agents, are designed and synthesized. The acoustic properties of these agents are extensively analysed in the physics lab, where new imaging and measurements methods are investigated. Dedicated software solutions are also developed in this group, to aid clinical diagnosis in the major indications of contrast ultrasound.

In the echographic pre-clinical imaging lab, the contrast products are tested to verify their efficacy. Extensive studies are also performed on the interactions of novel agents with various isolated receptors or cells. The safety profile of the agents is the object of numerous in-depth studies. In 2010, this centre will be reinforced by adding chemistry activities and enlargement of biological facilities.

FROM LAB TO PLANT

The R&D pilot unit is in charge of process development and technology transfer based on experiments carried out by the discovery team. In addition, this group has the mission to manufacture pilot-scale batches of drug product that are tested in clinical studies. Analytical and microbiological labs are responsible for the development of quality control methods that are used for raw materials and final product analyses as well as for stability studies. The Galenics and Pharmaceutical Development



FRANÇOIS TRANQUART
Bracco Research
develops new diagnostic
imaging products with
a focus on ultrasound.

“The proximity of a research unit and a manufacturing plant is essential to ensure the development and production of high quality products.”

François Tranquart

unit develops packagings of pharmaceutical quality and medical devices meeting medical and marketing needs.

The manufacturing plant of Bracco Imaging BV Geneva Branch Office, produces the Company's latest second generation contrast medium for ultrasound, (SonoVue), the result of Bracco's extensive research efforts in the field of ultrasound. This agent, based on Sulphur hexafluoride

microbubbles, enhances echo signals from blood. It leads physicians to visualise the vascular system and to enhance organs to enable detection or characterisation of defects or lesions in various organs as well as monitoring of treatment efficacy. It is of particular interest for dynamic studies of the microcirculation in conjunction with contrast-specific imaging modalities. The production line consists in an FDA approved

fully automated aseptic filling line for vials with lyophilisation capabilities. The plant includes also a secondary packaging line where finished product presentations are assembled.

Quality control activities are performed by the microbiological and analytical labs of Bracco Imaging BV.

The proximity of a research unit and a manufacturing plant is essential to ensure the development and production of high quality products in a favourable environment with easy links between experts in various fields as well as opportunities for new developments from biology and formulation to production at industrial scale. ■



ALLERGIES
Since 1999, the entire allergies business of UCB has been transferred to Switzerland.



GLOBAL
UCB has established its Biologics Center of Expertise in Bulle in 2009.

UCB Farchim builds leadership in antihistaminic therapies

“High tech in the green” is the motto of the canton of Fribourg. In the capital of the Gruyere region, Bulle, his is exemplified by UCB Farchim, that produces and commercialises worldwide blockbusters for its parent Company the Belgian group UCB.

BY JACQUES MARBEHANT,
DIRECTOR OF UCB FARCHIM

UCB Farchim was created in Switzerland in 1986 for commercial purposes only. At least, in the initial phase. In 1996, things changed when UCB Farchim settled in its current site in Bulle, in the canton of Fribourg, and started industrial operations. It focused then into the production and commercialisation of drugs fighting allergies (Zyrtec et Xyzal). And in 1999, the entire allergy business of the Belgian group UCB was transferred to Bulle.

To face the success of its antihistaminic products, the site has been expanded with the building of new industrial facilities. As of today more than 200 millions Swiss francs have been invested on the 100 600 square meters of the Swiss site. In 2005, the Bulle manufacturing plant has been registered by the FDA for the production of the active ingredients of its blockbuster, Zyrtec.

Since 2006, the site of Bulle has expanded its manufacturing capacity to produce and deliver its worldwide UCB anti-epileptic

and blockbuster Keppra. In 2009, UCB established its Biologics Center of Expertise in Bulle in order to manage its manufacturing expertise globally.

FOCUSING ON BIOPHARMA

2004 was a turning point in the history of UCB Farchim parent company, the UCB Group who is headquartered in Brussels. Founded in 1928, UCB was a pharmaceutical and specialties chemicals company. Still, after the takeover of British company Celltech and the disposal of its activities in surface specialties, UCB became a leader in the biopharmaceutical industry. This focus was reinforced after the 2006 acquisition of Schwarz Pharma in Germany.

With more than 8000 people employed worldwide of which 230 in Bulle, sales of 3,1 billion euros in 2009 and a market capitalisation of around 5,8 billion euros, UCB looks for solutions for people living with severe diseases. UCB teams develop, produce and market innovative medicines with

PHOTOS: DR

a focus on the fields of the central nervous system and immunology disorders. Within a few years UCB has transformed itself into an R&D driven company, investing more than 20% of its revenues in R&D every year.

2009 marked an important turning point in the execution phase of our strategy, with the launch of three new products in major markets. In the course of the year, we gained regulatory approvals for and launched Cimzia, Vimpat and Neupro in either the U.S. or Europe, or in both.

These developments, together with other achievements during the year, have strengthened our confidence in our potential and in our aspiration to become the patient-centric global biopharmaceutical leader in severe diseases of the central nervous system and in immunology.

SUPERFAST APPROVALS

In 2009, we not only obtained approval (in May for the U.S. and in October for Europe) for Cimzia for adults suffering from rheu-

matoid arthritis (RA), but also launched the product in the U.S. within two days of approval, and in Germany, the first European country, within two hours of approval!

In June 2009, we also obtained approval to launch Vimpat in the U.S. for the treatment of the most common form of epilepsy, launching the product only a few days later. In Europe, where Vimpat was approved in September 2008, we launched the therapy in 11 new countries in 2009 including France, Greece, Italy and Scandinavia.

Neupro was made available in Europe in June 2009 for all patients suffering from Parkinson's disease and was additionally approved for the treatment of restless legs syndrome. With the recent successful launch in Italy, Neupro is now available in most EU countries with the exception of France and Belgium.

Finally, Toviaz was approved in the U.S. for the treatment of overactive bladder, following its earlier approval in Europe in October 2008. This enabled Pfizer, which has

worldwide marketing rights, to launch the therapy in the U.S. in April 2009.

Between 2008 and 2009, approval of new molecular entities developed by UCB was unmatched by any other company in its peer group.

Meanwhile, for the future, progress was made with epratuzumab, a novel antibody for systemic lupus erythematosus, with the successful completion of its Phase IIb dose-ranging study. In addition, we underscored the value of our strategic partnerships by working with our partner, Amgen, to advance CDP7851, or anti-sclerostin, a novel antibody for the treatment of bone loss disorders, into Phase II with trials for the treatment of postmenopausal osteoporosis as well as in fracture healing.

UCB completed two Phase III clinical trials that investigated the efficacy of brivaracetam, a new treatment for epilepsy, with one of these trials demonstrating a significant reduction in seizure frequency. After review of these results and discussions with opinion leaders and regulatory authorities, we plan to carry out another Phase III study to confirm the drug's efficacy. Approval of such a new treatment would strengthen UCB epilepsy therapy business build today on Swiss made Keppra. ■

“Since 2006, UCB Farchim has expanded its manufacturing capacity to produce blockbuster drug Keppra”

Jacques Marbehant

BioArk: Build to last in Valais

In Monthey (Valais), BioArk is more than an incubator for start-ups. Thanks to its long term commitment as a tool for local economic development, it is growing into an industrial site.

BY MASSIMO NOBILE,
SITE MANAGER, BIOARK

When you bet on new technologies, life sciences are undoubtedly the most risky. The realization of a biotech project is indeed on a different scale, both in terms of time and resources, than information and communication technologies or engineering venture. Aware of this difference, The Ark Foundation for Innovation in canton Valais has not hesitated to commit itself, setting up a complete economic development tool to meet this “biotech” challenge.

Clearly supported by the city of Monthey and its region, the enterprise come true in 2004 with the creation of BioArk – a 2500 square meter facility equipped with modules to be used as laboratories and offices as well as shared equipments necessary for the development of the companies to be. While ultimate changes in the construction were finalized in 2009, a first company, ExcellGene, moved in already in 2005. Since then, more than a dozen start-ups or SMEs have already benefited from this exceptional environment.

TARGETING FOR LONG TERM

If during the last twenty years, the most prominent success of Western Switzerland advanced research in Life Sciences mainly occurred in towns like Lausanne or Geneva, the fact is that Valais remains the second Swiss canton in terms of jobs in biotechnology and fine chemistry. Promo-

ting innovation in life sciences through the Ark Foundation and BioArk, is therefore a consolidation process to capitalize, thanks to new technologies on what has already been achieved, particularly in terms of manpower and infrastructures. For example, the Company of Chemicals Plants (Société des Usines Chimiques), that will become later Ciba-Geigy, and Lonza, today’s leader of life science active ingredients and custom manufacturing, opened up the way in Valais, more than a century ago.

The objective of the Ark Foundation is to develop and to dynamize the business landscape in Valais through the creation of companies and jobs with high added value. With special facilities dedicated to biotechnology, tailored business coaching, active support in seeking funds and access to a network of specialists, the Ark’s and BioArk’s incubator are essential partners to support start-ups in their long-term development needs. Accordingly, The Ark and BioArk act neither like a financial investor looking for short term return on investment nor like a real estate investor.

BioArk is a real tool for economic growth. Its goal is to ensure the long term existence of the companies on its setting. This approach is significantly different from traditional incubators, allowing entrepreneurs to hope for a different future for their start-ups.

THE ANSWER TO EXPANSION NEEDS

This long term strategy is the reason why BioArk, which started with a focus essentially on start-ups, has now opened its site for industrial production. It is also consistent with the environment provided by Monthey. Its workforce, its location and its policy make the city an exceptional place for both start-ups and SMEs to grow. Secondly, although the site remains «Life Sciences» oriented, all kinds of complementary technological innovations deserve to find a structure for their development at BioArk. Therefore, the site has welcomed Cortex-IT, a local start-up with a very strong growth potential. Finally, economic expansion, even when focused on technological innovations, inevitably responds to critical mass factors. Allowing BioArk to become a global site for industrial implementations triggers an innovation dynamic



hence feeding the global concept of economic development in Valais.

Today, BioArk gathers eight companies (ExcellGene, SwissBiobank, Augurix, Swissaustal Biotech ASSCO, Human Haptics, Cortex-IT and CimArk) and about 60 people. To meet BioArk’s initial objectives – ensuring the long lasting existence of companies and jobs – it is now time to launch the project’s second phase: BioArk2. These new facility of about 6000 square meters will offer customized premises for industrial production, modular constructions for “wet” as well as “dry” labs and offices. Taking into account the average life cycle of a start-up, BioArk wishes to offer them expansion prospects. Therefore, BioArk2 is more than just an extension to the former premises: it is a response to the existing needs of business developments.

Today’s BioArk’s companies in residence profiles sustain that bet on their growth fed by technological innovations dynamic. ExcellGene, the first company to settle, was a spin-off of the Swiss Federal Institute of Technology Lausanne (EPFL). It has developed proprietary clean technologies resolving problems of expression and manufacture of recombinant proteins from mammalian cells. Nearly one hundred customers worldwide have already been satisfied with its services.

Originally from Chile, Swissaustal Biotech is exploiting ten years of research on micro-organisms living in extreme environments into the discovery of new bioactive compounds. Swiss BioBank mainly focuses its activities on cryogenic preservation of umbilical cord blood, a starting point to the regenerative medicine of the future. After marketing its first product, Simtomax™, Augurix, a medical technology company, is fast moving in the field of “Point-of-Care” diagnoses, an essential component of the personalised medicine of tomorrow. ASSCO Engineering is a leader in chemistry and biotechnology productions planning. Human Haptics SA specialised in the promising field of biomechanics.

In short, there is today in BioArk a strong sense of technological innovation among the companies in residence. For them, the BioArk2 project will soon become a key asset. ■

TOOL

State of the art labs, tailored coaching and support for fund-raising attract biotechs in Valais.



PHOTOS: DR

GROWTH

BioArk2 will offer new facilities for companies in residence’s expansion.

Alphacos: a healthy dose of quality

In Courroux, in the canton of Jura, Alphacos designs and manufactures packaging machinery for the pharmaceutical industry with a strong specialization into flexible containers.

BY JEAN-LUC MULLER,
CEO ALPHACOS SA

Bausch Advanced Technology Group (BATG) combines an extensive experience of over 25 years in engineering and manufacturing of machinery dedicated to the pharmaceutical, cosmetic and chemical industry. Founded in 2007, the Group benefits from a well-established corporate infrastructure with 5 major packaging machinery suppliers as its cornerstones. With its expertise utilized across the facilities Alphacos SA and A-Pack Technologies SA in Switzerland, Base Europe in Germany, Basim Maquinas Ltda. in Brazil and Bausch Advanced Technologies, Inc. in the USA, the group has excellent worldwide coverage.

The pharmaceutical packaging products in which BATG specializes are syringes, vials, cartridges, ampoules and IV bags. The group mainly focuses on pharmaceutical primary packaging and offers solutions ranging from small batch processing to full packaging lines covering machines such as washers, sterilization tunnels, filling and closing machines, tray loaders, labeling machines, nester / de-nester, buffer units, laminar flow units, safety device assembly machines, bag making machines, aseptic bag filling machines and many more.

CLOSE TO CUSTOMERS

We believe building a strong client relationship is very important for creating in-

novative new products. Therefore each BATG location was chosen to be geographically close to our customers, to offer the level of service and support they require.

The group also has a wide network of international sales agents who are committed to find and maximize business opportunities. Carefully chosen agents in 40 different countries enable the group to keep in touch with their customers in a common language. All representatives are recruited locally, thus having the advantage of first-hand local knowledge of the area, the industry and the customers. To sustain a professional relationship with its worldwide customers and be able to provide fast and competent support on BATG machines

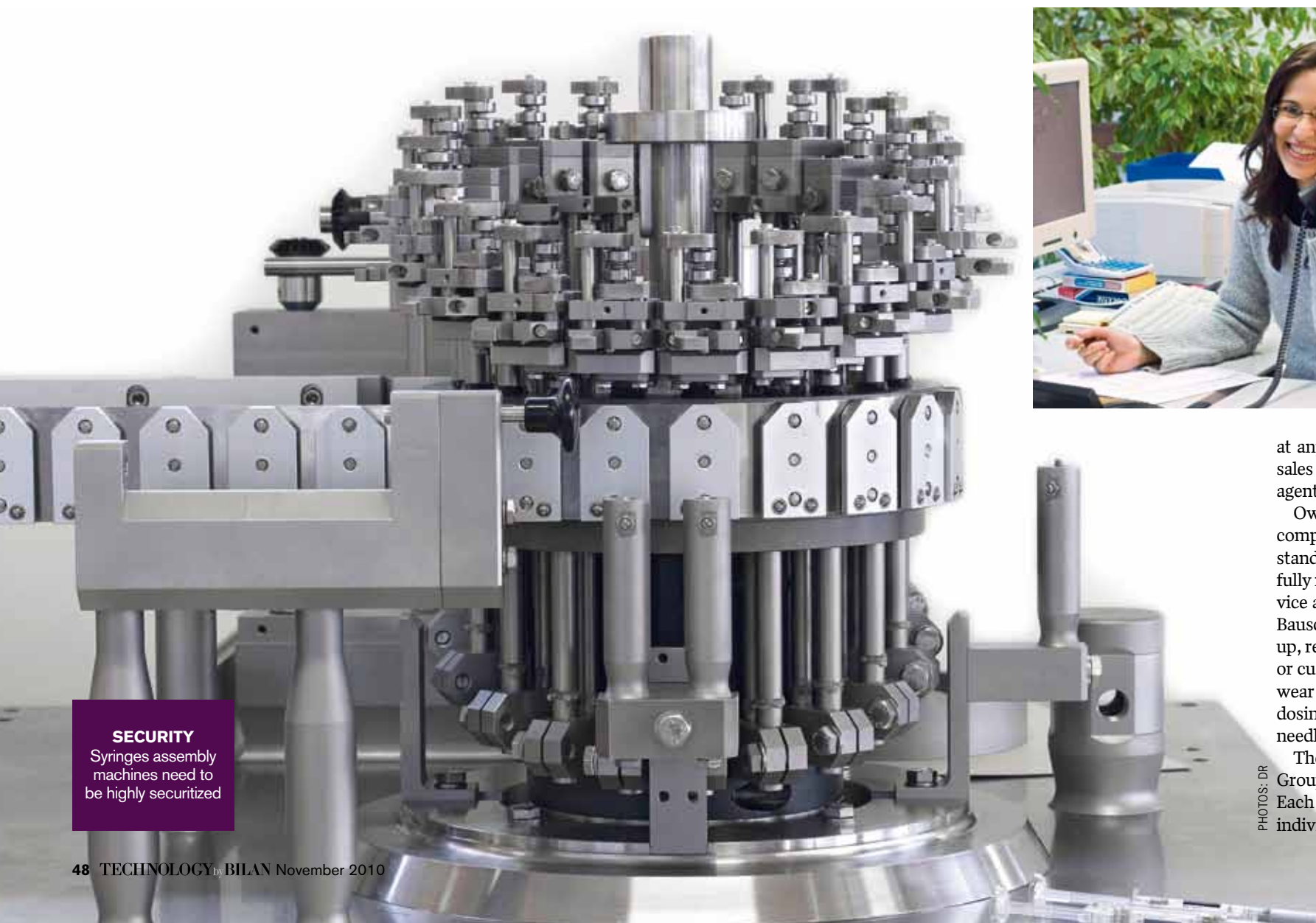
teams talk to the customers to understand exactly what they need their machines to achieve and then use this information to tailor the machines accordingly. BATG is able to look at the customer's existing machines and develop a report on what will best utilize their current capabilities as well as providing new purpose-built machinery. The group has found that this allows them to create exact solutions for their client's pharmaceutical packaging needs.

Research and development plays a key part in BATG's business strategy. The European base in Switzerland (Alphacos SA and A-Pack Technologies SA), as well as its three other manufacturing sites, has full product responsibility and state-of-the-

engineering and building first contacts to the industry at the same time.

In addition to in-house research and development BATG works with several partners in the industry on a project basis to achieve the best possible solutions for each customer. The cooperation with specialized companies allows BATG to work and introduce customers to technology which is complementing the machines they buy or already have, like isolators or clean room equipment for example.

With each new pharmaceutical product costing its clients on average 650 million euros, with patents that can take ten years, they need the best delivery times so that they can sell their products as quickly as



SECURITY

Syringes assembly machines need to be highly securitized



ON DEMAND
Alphacos builds customized packaging solutions for its pharmaceutical clients



at any time, the group regularly organizes sales trainings across the globe to keep its agents updated on the latest developments.

Owing to its international presence and in compliance with the relevant international standards, the group has already successfully implemented high level customer service and customized project management. Bausch's services include installation, set-up, repair and maintenance of Bausch and/or customers existing machines, spare and wear-parts, machine accessories such as dosing pumps and filling, rinsing or gassing needles, as well as consulting services.

The business strategy of the Bausch Group is based on customized solutions. Each machinery order is undertaken on an individual project basis. The group's expert

art testing and development equipment. The R&D capabilities are centered on developing innovative new machines but also on improving testing abilities for both existing machinery and machines of its customers. The group is constantly developing new systems and procedures so that the products run more smoothly.

AIMING FOR THE TOP 3

BATG is also working with a large network of technical schools and universities, each year giving mechanical and electrical engineering students the chance to participate in an internship at one of the manufacturing facilities, or even write their diploma there. Thus students are given the chance of getting a richer understanding of machine en-

possible and start to recoup their massive investment. Bausch Advanced Technology Group is a key partner in this process, with efficient, reliable products created by highly experienced engineers who understand the time-sensitive, quality-focused nature of our customers projects.

BATG has a particularly strong presence in the US pharmaceutical market, which is the world's largest, with Europe and South America, primarily Brazil, following. BATG has delivered machinery products to eight out of the top ten pharmaceutical manufacturers worldwide and is currently in the top five in its industry. The next years for BATG will see it raising its brand awareness across its global markets, with the aim of reaching the top three providers for this type of product. ■