



Univalor: a portal to economic prosperity

“Maintaining economic prosperity in Quebec directly involves technology transfer offices,” says Marc Leroux, Univalor’s President and Managing Director. “And our office, thanks to its affiliation with the main group of university research institutions in Quebec, plays a major role on the long road between lab research and market.”

This role has been recognized in the Quebec government’s recent innovation strategy, *Pour un Québec innovant et prospère*, which positions university research transfer at the very heart of the economic prosperity creation chain. The Ministère du Développement économique, de l’Innovation et de l’Exportation, has set out an ambitious objective to spend 3% of the GDP on R&D by 2010, and to stay thereafter amongst the leading countries in this area will not be accessible without resourcing from university laboratories. That’s why Minister Raymond Bachand has earmarked \$16 M in financing over three years for Quebec’s commercialization societies.

The process that leads from the researcher’s board to the market is often long and arduous. Universities are the main source of fundamental advances in science and it takes a lot of time, effort and money to transform these innovations into practical technologies and, ultimately, into useful products. “You seldom see a researcher’s invention find commercial success in itself,” points out Marc Leroux. “It’s the transfer process that makes the difference. You have to pick the diamond out of the rough.”

One striking example of this is BioSyntech Inc, also featured in this newsletter. The scientific advance upon which this company is founded was discovered and presented in 1994 to École Polytechnique de Montréal. But it is only around 2009 that we expect the company to launch its first products and to start off on the brilliant future so many people have predicted for them. “Luckily,” Leroux hurries to qualify, “many inventions attain their goal more quickly, as is the case for many of the companies we cover in this newsletter.”

This explains why many years are generally required before significant royalties are paid out to university establishments. But other measures show a broader picture of Univalor’s success to date: “We have contributed to the creation of

more than 227 high-level jobs everywhere in the Quebec economy since Univalor’s launch six years ago,” he says. “We have transferred many dozens of technologies to industry to enhance their competitiveness, and we have participated in the creation and growth of 22 spinoffs, of which 16 are still active. Together, these spinoffs have raised \$130 M in financing. Of course we cannot proclaim *mission accomplished!* because these numbers remain somewhat modest. But we can certainly declare that we are on the way to accomplish our mission.” ●



Photo courtesy of Ministère des Ressources Naturelles et de la Faune

UNIVALOR’S TRACK RECORD

Invention disclosures processed	393
Active patent families	120
Active patent applications	226
Active patents	50
Number of spinoffs	22
Number of active spinoffs	16
Investments in these spinoffs (M\$)	130
Jobs created	227

Globe Impact manages and measures project risks

“More and more, we realize that we have in hand a high-performance solution,” says Patrick Des Marais, president of Globe Impact, speaking about PMMS (Project Measurement and Management Software). “This is not an incremental improvement, but a breakthrough that offers the very best in project risk management.”

Resulting from work done at HEC Montréal and CIRANO, PMMS is a tool that Globe Impact acquired exclusive rights to through Univalor a year ago. Developed at the outset to measure and control risks associated with the development of information technology and outsourcing projects, its reach has been extended to include all types of projects including R&D and construction.

Present risk management methods concentrate on a single risk at a time and are prone to turning out subjective evaluations. With the help of PMMS, Globe Impact’s approach is systematic, presenting a complete picture of all the risks a project involves.

A seasoned negotiator with over twelve years of consulting experience, Mr Des Marais has nothing but praise for Univalor’s professionalism and dedication throughout the process. “Between the preliminary agreement and the final contract, there hasn’t been a single surprise,” he says.

“Univalor’s people have gained in credibility all along the process, which seldom happens. Usually, people lose in credibility. Still at this point in time, they ask me how they can help. They know how excessively delicate the value transfer chain is, so they remain extremely vigilant.” ●

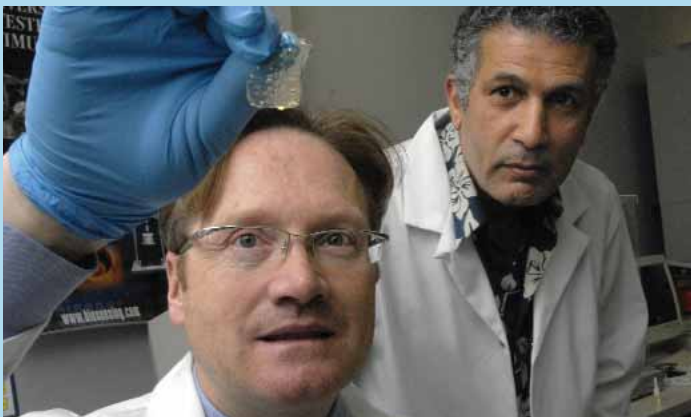


Patrick Des Marais in front of a screen which presents part of his risk management tool.

Multi-million dollar prospect

BioSyntech’s first moment of glory came four years ago when its product healed hockey player Serge Savard’s cartilage, a seemingly unattainable feat at that time.

Another distinguishing feature the company holds is to have been among the first spinoffs to come out of École Polytechnique de Montréal thanks to the work of its commercialization society. “Our relation to Polytechnique and Univalor is constantly intensifying,” attests Claude LeDuc, president of BioSyntech. This includes giving funds



Odotech’s electronic nose

Odotech, a spinoff company stemming from the École Polytechnique de Montréal in 1998, collaborated with Univalor to the end of 2005. From that time on, formal links were ended, apart from royalty payments – and it couldn’t be better! Because things are only improving for this company. As president and co-founder Thierry Pagé reveals, “the market is progressing, which means that Univalor will be receiving royalties for a good while more.”

The company, which has hired many École Polytechnique graduates among its 45 employees, is a pioneer in the area of olfactometry. Its product, OdoWatch®, is the first system to measure olfactory nuisances in real time.

Because of growing environment preoccupations

of \$1M to the BioSyntech/NSERC chair, held by Dr. Buschmann of École Polytechnique de Montréal.

BioSyntech’s revolutionary technology is a gel based on chitosane, an extract from the shells of shellfish, which is introduced in wounded cartilage. By performing microperforations in the nearest bone marrow, blood that is rich in pluripotential cells mixes with the gel. The combination ends up completely renewing the cartilage. In addition, the same technology can be applied to multiple afflictions in orthopedics and other therapeutic fields such as the treatment of diabetic wounds.

The first products, scheduled to be launched around 2009, target a colossal multi-billion dollar market in which no product presently satisfies patient needs. Of course, the current royalties BioSyntech generates for Univalor are negligible. But, quickly adds the entrepreneur with a sly smile, “the best is yet to come.” ●

Claude LeDuc holds a sample of the BST-CarGel® product. In the background, Dr. Abdellatif Chenite, main researcher.

Phostech Lithium: \$46 M invested, and counting

Had Univalor not supported Phostech Lithium at two crucial moments of its existence, both financially and with business advices, this promising spinoff would not have seen the light of day. Which would have been an unfortunate turn of events because the company holds a leading edge technology in the key area of renewable energies. Attesting to its potential is a \$43 M investment by German player Sud Chemie, of which \$35 M are for the construction of a lithium phosphate manufacturing unit in St-Bruno.

Phostech Lithium is the brainchild of researcher Michel Gauthier, whose 27 years at IREQ (Hydro-Quebec's research institute) led him to develop the famous ACEP accumulator. It is in this context that he became familiar with lithium phosphate and its unequaled qualities in making higher-performance cathodes for electrical batteries.

One year after Hydro-Quebec questioned its involvement in

pations and the increasing proximity of industrial and residential zones, the need to measure odours that can trouble residents and employees becomes more and more acute, which only makes OdoWatch® that much more relevant and timely. Its system of sensors translates chemical components of an odour into electrical signals that are analyzed by a neural network calibrated with laboratory olfactometric measurements.

At the time of the spinoff, Polyvalor and its successor Univalor were not yet organized to formally accompany a budding company into maturity, a capacity Univalor has since acquired. But Polyvalor has invested tens of thousands of dollars in the spinoff and has continued to be a valuable resource. As Pagé attests, "it's clear that, whenever I needed business counsel, I never hesitated to call the people at Polyvalor and Univalor."

There are obvious and tangible results to this relationship, such as royalties, but Thierry Pagé underscores another advantage: "As a leader in our sector and as a spinoff from

École Polytechnique de Montréal, part of the prestige we garner spills over to both Univalor and Poly." ●



Thierry Pagé in front of an OdoWatch® device test table.

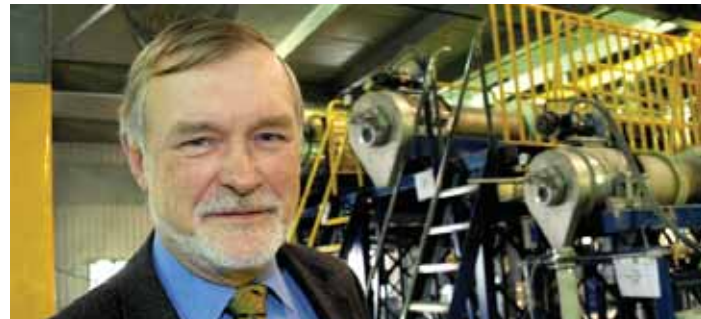
When entrepreneurship makes all the difference

While Univalor has helped launch many companies, it has seldom had the opportunity to assist in the complete reorientation of a company, as has been the case with Alert B&C.

Previously going under the name Genomics One, the company was a high-profile player in the field of biotechnology in Quebec. "But the sector stopped being hot at some point, so we decided three years ago to move in

the area of accumulators, Michel Gauthier left IREQ and found himself at Université de Montréal where a research team, including co-inventor Nathalie Ravet, led crucial studies in this key sector. There, he negotiated the acquisition of three pivotal patents upon which his company is based.

In December 2000, he whipped up a business plan with the help of Univalor, who injected \$150 000 in the nascent



Michel Gauthier inside Phostech Lithium's manufacturing unit.

company. Then, at a time when the company was having a hard time finding the financial partners it needed, Univalor threw in a second life-line with a contribution that kept Phostech afloat. Barely a few months later, the company linked up with Sud Chemie who lent its vast resources to the venture.

And the venture is worth all the efforts if you take into account what Gauthier describes as a booming market for accumulators that could reach \$50 B: "We really hold the key to a major material whose use will define the coming century, and for the time being we know of no other product that could match it." ●



Dr Suzanne L. Lebel, Alert B&C's president.

another direction," recalls Dr Suzanne L. Lebel, president of Alert B&C.

In search of a technology that would allow it to stand out, the company spotted the MAB (Metastable Atom Bombardment) process, developed at the physics department of Université de Montréal.

The technology is a module for detecting dangerous biological or chemical agents. In contrast with other technologies in the market which are analytical, MAB is both analytical and synthetic, which means that it can identify any agent in a split second.

Alert B&C's product is of interest to many sectors: national security, defence, police, airport services, agro-food. The company has just closed its first sale at a unit cost of \$340 K and is working on upgrading its device from "transportable" to portable.

And what about Univalor in all this? "Very simple, they've been extraordinary," comments Dr Lebel. "One of Univalor's main advantages stems from its team, of which some come from the entrepreneurial side of business, like Marc Leroux, as well as many members of the board of administration. When you negotiate with someone who knows the road you're travelling, who intimately knows the difficulties you are confronted with, it's an outstanding advantage." ●



World's Best Technology, WBT 2007

One of the most cutting-edge technology events in North America.

For a second year in a row, technologies that Univalor has brought forward have caught the attention of the jury at the World's Best Technology Showcase, which took place last May in Arlington, Texas.

Three technologies created by researchers at the Arts and Science Faculty of Université de Montréal were among the 75 technologies presented to an audience that included investors, representatives from US federal laboratories and a full 300 representatives from *Fortune 500* companies.

The first technology, a plasma gas sterilization process, was developed by Michel Moisan from the Physics Department and his multidisciplinary research team (Vector, May 2007). The second, an error detection method for object-oriented software, was presented by Yann-Gaël Guéhéneuc, principal inventor and assistant professor at the Department of Computer Science and Operations Research.

The third technology, a real-time image reconstruction

algorithm, is the invention of a research team lead by Jiri Patera from the Centre for Research in Mathematics. The presentation of these three technologies prompted a lot of interest and Univalor is now gearing up to manage the upshot of this great exposure. ●



To the right, Luc Morisset, Senior Manager, Business Development, Univalor, with Yann-Gaël Guéhéneuc at WBT 2007.

Spinoffs spinning inside Univalor



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Bridging Knowledge and the Economy

Mission: commercialize research results from Université de Montréal, École Polytechnique de Montréal, CHU Sainte-Justine, Mother and Child University Hospital Center, Institut de recherches cliniques de Montréal, Hôpital Maisonneuve-Rosemont, Hôpital du Sacré-Coeur de Montréal and Institut universitaire de gériatrie de Montréal. Univalor is also one of the commercialization offices for the Centre hospitalier universitaire de Montréal (CHUM) and the Montreal Heart Institute.

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