



Pacific

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In This Issue

• Life Sciences

Sectoral Overview / Trends

Client Success

www.twinstrand.com

www.xenon.pharma.com

www.chromos.com

www.anormed.com

www.angiotech.com

www.clinotech.com

www.uilo.ubc.ca

Missions

LIFE SCIENCES

Sectoral Overviews / Trends

British Columbia has one of the fastest growing life sciences sectors in North America, placing in the top ten when compared to 51 US clusters. BC is home to QLT, Angiotech and Aspreva, which are among the world's first profitable biotech companies. The BC cluster is comprised of over 90 private sector firms and includes world-class research centres as well as universities, teaching hospitals and technical colleges.

BC is currently the seventh largest biotechnology community in North America. It is Canada's fastest growing biotech region, and is second in terms of market capitalization and revenue. It is positioned to become the second largest centre in Canada in terms of research and development in biotechnology, the number of biotechnology firms located in the province, and the number of people employed in this sector.

Companies in this cluster operate across a broad range of biotechnology activities including therapeutics, diagnostics, pharmaceuticals, medical devices, agriculture, marine, forestry, and environment. However firms in the health care sector dominate the cluster, with approximately 60% of BC's biotech companies developing biopharmaceutical and biomedical applications. Product focus areas include cardiovascular diseases, new classes of antibodies to AIDS/HIV, cancer therapies, drug delivery systems, and the treatment of inflammatory diseases.

Each year, BC hosts the annual Bio-Partnering North America conference in Vancouver (<http://www.techvision.com/bpn/>). The conference, which will celebrate its 5th anniversary in February 2007, offers companies from around the world the chance to meet potential partners and showcase the best of their technologies.

The BC biotechnology cluster is well positioned for rapid growth and success. Following are updates from some of BC's companies who have made recent news in the sector.

Client Success

Twinstrand Therapeutics

www.twinstrand.com

Twinstrand Therapeutics is a clinical-stage drug discovery and development company. TST10088, the company's lead drug, targeting ovarian and lung cancers, is now in a Phase I clinical trial. In addition to cancer, Twinstrand's

product platform has broad potential in the treatment of diseases including, but not limited to: hepatitis, HIV/AIDS, as well as fungal and parasitic infections.

Twinstrand has been awarded a contract for research and development of a human polyclonal antibody (antidote) to ricin poisoning. The two-year \$2.2 M CDN (\$1.9 M USD) contract was granted, in a competitive process, by the United States Defense Threat Reduction Agency Joint Science and Technology Office for Chemical and Biological Defense.

Ricin is a highly toxic protein derived from the widely-available castor bean plant. The toxin has a known history as a bioterror agent and presents an ongoing threat to military personnel, civilian populations and first responders. There is currently no antidote or approved vaccine to ricin poisoning. Twinstrand intends to file two Investigational New Drug (IND) applications for the ricin countermeasure program in Q1 2007 and Q3 2008.

Twinstrand is seeking further funding opportunities and partners internationally to develop its countermeasure and therapeutic programs.

Xenon Pharmaceuticals

www.xenon.pharma.com

Xenon is a privately owned, clinical genetics-based drug discovery and development company engaged in developing small molecule therapies based on the genetic causes of select metabolic, neurological and cardiovascular diseases. Xenon's lead products include XEN401 (pain) and XEN501 (cardiac arrhythmia), both of which are in IND-enabling pre-clinical development.

Xenon has received a strategic equity investment of USD \$5M from Takeda Research Investment, Inc., a wholly owned subsidiary of Takeda Pharmaceutical Company Limited, the largest pharmaceutical company in Japan. In addition, TRI and Xenon have entered into an agreement where Takeda Pharmaceutical Company Limited, through TRI, receives a Right of First Negotiation to select atherosclerosis discoveries made by Xenon. Atherosclerosis is a process resulting in the formation of plaques that eventually narrow the coronary arteries causing coronary heart disease. Coronary heart disease is the most common form of heart disease, and remains the single most common cause of death for both men and women in Western countries.

This investment is an important achievement for Xenon, as it builds closer ties with a leading Japanese pharmaceutical company that is also developing a very significant global presence.

Chromos Molecular Systems

www.chromos.com

Chromos is a biopharmaceutical company with two drug development programs focused on inflammatory diseases and thrombotic disorders. The Company's lead program focuses on the treatment of acute relapses associated with multiple sclerosis. Chromos generates revenue from its proprietary ACE System technology to engineer production quality cell lines to manufacture biopharmaceutical products including monoclonal antibodies.

Chromos' proprietary ACE System is a versatile chromosome-based gene delivery and expression platform with broad applications. The ACE System is uniquely designed to allow genetic engineering of production cell lines with multiple genes in order to ensure correct post-translational modification of the product and / or improve the cell line's performance in a bioreactor, thus reducing the cost of production of the therapeutic protein product.

Chromos Molecular Systems has entered into a cell line engineering service agreement with Y's Therapeutics, Inc. of Burlingame, California to develop a cell line using Chromos' ACE System for potential use in the clinical and commercial manufacture of a therapeutic protein candidate.

Under the agreement, Chromos will engineer cell lines specific for the expression of a recombinant protein of Y's using the ACE System. Y's Therapeutics has the option to use the cell lines for scale-up and manufacture of the protein product under agreed license terms, following the cell line engineering phase of the agreement.

AnorMED

www.anormed.com

AnorMED is a chemistry-based biopharmaceutical company focused on the discovery, development and commercialization of new therapeutic products in the areas of hematology, oncology and HIV. The Company's product pipeline includes MOZOBIL, currently in pivotal Phase III studies in cancer patients undergoing stem cell transplants; AMD070, currently in proof of principle Phase I/II studies in HIV patients; and several novel classes of compounds in pre-clinical development that target specific chemokine receptors known to be involved in a variety of diseases.

AnorMED has announced that it will receive U.S. \$10 million in cash to amend the license agreement with San Francisco-based Poniard Pharmaceuticals for its proprietary anti-cancer drug picoplatin. The new agreement will expand the licensed territories to worldwide, forego future development milestones and reduce royalty payments. AnorMED initially licensed picoplatin to Poniard Pharmaceuticals Inc. in April 2004.

Angiotech Pharmaceuticals

www.angiotech.com

Angiotech Pharmaceuticals is a global specialty pharmaceutical and medical device company with 14 facilities in 6 countries and over 1,500 employees. Angiotech discovers, develops and markets treatment solutions for diseases or complications associated with medical device implants, surgical interventions and acute injury.

Angiotech has acquired Quill Medical Inc. of North Carolina. Angiotech's Surgical Specialties division and Quill entered into an exclusive manufacturing and distribution agreement in 2004 for the Contour Threads product line to be used in minimally-invasive aesthetic and cosmetic surgery.

With the completion of the acquisition of Quill, Angiotech now fully owns the rights to develop applications for the Contour Threads product line and their full range of products.

Clinotech Diagnostics & Pharmaceuticals

www.clinotech.com

Clinotech Diagnostics & Pharmaceuticals Inc is engaged in research and development, production and distribution of medical diagnostics and therapeutic products worldwide. Their primary focus is on the early detection and monitoring of human diseases as well as providing treatment for illnesses.

Clinotech is part of a joint venture project supported by CIDA for manufacturing medical devices in Africa. Under the JV, Clinotech and its local partners in Nigeria will be able to extend the reach of their in vitro diagnostic medical devices/laboratory test kits throughout Africa. The project's initial focus

is mainly on HIV/AIDS, Communicable and tropical disease diagnosis and monitoring, but is expected to extend into collaborative R&D in infectious diseases.

Clinotech has teamed up with McGill University AIDS Centre, Ottawa Health Research Institute, University of Ottawa, UBC Child and Family Research Institute and other partners in Canada, along with Ibadan University in Nigeria, in an effort to coordinate Canadian and African researchers in capacity building to prepare to perform trials on prophylactic vaccines, microbicides, new generation IVD medical devices and other prevention means.

Clintoech is pursuing a bid opportunity with the African Development Bank through the South African Development Community (SADC) on a project to provide support for the control of communicable diseases, including HIV/AIDS, TB and Malaria. The SADC is currently establishing rules and procedures for the project, and will begin reviewing bids in early 2007.

UBC University-Industry Liaison Office (UILO)

www.uilo.ubc.ca

UBC's University-Industry Liaison Office (UILO) helps to guide breakthrough UBC research to market.

UILO's services include facilitating collaborative research, protecting intellectual property, assisting in prototype development, licensing technology, creating spin-off companies, and providing educational programs.

A report just published by the California-based Milken Institute ranks UBC 8th in North America, and number one in Canada, for its technology transfer and commercialization activities in biotechnology. Creating an index which included patenting, licensing and spin-off activities, the report, titled 'Mind to Market: A Global Analysis of University Biotechnology Transfer and Commercialization', goes beyond measuring the simple scale of activities to determine which universities are better positioned to capitalize on their innovation assets. In achieving its eighth place ranking, the report praised UBC's 'consistent performance' across all of its technology transfer indicators.

Missions

In September, BC Biotech led a mission of biopharma companies and organizations to Singapore and Japan, where they participated in Japan Biotech Week activities and meetings with potential partners organized by our missions.