INNOVATION PLACE®

Innovation Place Newsletter
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Are you ready for ABIC 2002?

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As we enter the final countdown to the 4th Agricultural Biotechnology International Conference, September 15 - 18 in Saskatoon, Ag-West Biotech staff, ABIC 2002 committees, and conference organizers are working hard to put the finishing touches on the ABIC 2002 package of activities. And what a package it will be!

ABIC is a unique gathering of researchers and business people involved in moving the products of agricultural biotechnology from the lab bench through the boardroom and on to consumers. ABIC features over 60 speakers from around the world, involved in a program that is built around the theme of agbiotech: cultivating convergence. Session topics include Health: Active Molecules from Plants, and Animal Products to Enhance Health, Bioeconomy, Environmental Biotechnology, New Scientific Tools, Public Perception and more.

ABIC participants will have opportunities to network and discuss their business with one another at activities such as the Exhibit Hall, Poster Session and Business Leaders' Luncheon. Conference registrants will be able to tour the facilities of the CLS synchrotron, National Research Council - Plant Biotechnology Institute and other local businesses.

"We want to add value to this conference and several exciting optional satellite sessions are part of that offering," says Peter McCann, president of Ag-West Biotech and chair of ABIC 2002.

The Canadian Regulatory Perspective: A Science-Based Approach to Safety and Benefits, on September 15, is the first of four satellite sessions and leads off ABIC. This workshop will focus on Canada's regulatory system and how it successfully adapts and responds to the latest developments in biotechnology and international challenges using a science-based approach to safety and benefits.

Also on September 15, after the Opening Session of ABIC, we have added a public forum, Ask the Experts, featuring a panel of experts, with different perspectives on biotechnology. The open dialogue about the potential benefits and limitations of biotechnology will be moderated by local talk show host, John Gormley, of 650 CKOM News Talk Radio.

The evening public forum is offered at no cost to the public, and includes a chance to view the Bioproducts Showcase. This display highlights dozens of products derived from renewable biological sources through technology. Products will range from dissolving golf balls and tees, to bio-based lacquers in paints, corn-based dissolving packing materials and other plastics made using polylactic acids, soy-based bio-diesel and candle wax, and fibre board from flax.

Concurrent satellite sessions will be held on September 18: The Bio-based Economy: Moving from Concept to Reality; Biotech Communicators: The Interface Between Scientist and Public; Maximizing Benefits, Minimizing Risks - The Role of Regulation in Strengthening Public Trust; and The Multiple Roles of Metabolic Profiling.

Details on the ABIC 2002 program, registration, sponsor, and exhibitor information can be found at www.abic.net or by phone (306) 683-2242.

SemBioSys establishes presence at Innovation Place

State-of-the-art greenhouse facilities have attracted another nationally-renowned biotech company to establish a presence at Innovation Place.

On May 15, SemBioSys Genetics Inc., headquartered in Calgary, Alberta, took possession of 2,500 square feet of greenhouse space on a trial basis at the L.F. Kristjanson Biotechnology Complex at 410 Downey Road.

Barry W. Moench, D. Hort., manager of plant growth facilities for SemBioSys, says the decision to utilize greenhouse space at the L.F. Kristjanson Complex was easy to make as the company needed top quality greenhouse space. "The design of the L.F. Kristjanson Complex really suits our production needs. We need compartments, not big ranges. And they're very expensive to build. It was a no-brainer to decide to come here."

SemBioSys Genetics was founded in 1994, as a spinout of research conducted by Dr. Maurice Maloney at the University of Calgary. The company's strong intellectual property portfolio was soon fortified by the business acumen of Andrew Baum, who joined SemBioSys as president and CEO in 1998. Prior to joining SemBioSys, Baum served as director of business development for Monsanto. As president of Calgene Inc.s Oils Division, he developed and implemented the company's genetically engineered oils business.

The Calgary-based company has now grown to a staff of 65, a team that represents diverse knowledge and experience in all aspects of the biotech industry. "We do some pretty good science and it's science that is applicable. We've gone beyond the lab bench. It's the application of our knowledge that's going to drive the success of SemBioSys," says Moench. "Our goal is to produce biologics or plant-produced proteins that we feel have a pharmaceutical use. The key to our business is that our systems are plant-based. It's molecular farming in a nutshell."

SemBioSys is fundamentally changing the way proteins are made, taking a revolutionary approach to the production, purification, formulation and delivery of protein-based pharmaceuticals, using patented systems and processes that enhance the commercialization process.

"At the core of our business are the proprietary technologies which SemBioSys has invented and developed," says Moench. The Stratosome™ Biologics System, the company's oleosin/oilbody technology platform, provides for unique formulation and delivery advantages. The DermaSphere™ Ingredient System capitalizes on the ability of oilbodies to serve as topical delivery systems.

These proprietary technologies have helped SemBioSys attract a number of industry and manufacturing partners, including Syngenta, Metabolic Pharmaceuticals and a multinational fine chemical manufacturer.

The company's Stratosome™ Biologics System makes it relatively easy to generate unprecedented quantities of pure protein for clinical trials and manufacturing.

Moench says that SemBioSys has chosen to develop and apply its technologies using safflower seed, which can be transformed by the insertion of a genetic construct.

First, conventional gene transfer technology is used to introduce a copy of the native oleosin protein with an attached target protein (an "oleosin fusion") into the safflower. The oleosin fusion is targeted to oilbodies as the seed develops. "We're using the oilbodies that are naturally in the plant; we haven't changed the oilbodies at all. We use the oilbody as a carrier; our technologies enable us to attach proteins to the oilbody to get a volume of proteins that are sufficient for analysis and for pharmaceutical Stage One or Stage Two certification."

Safflower is also easy to work with from a regulatory perspective, says Moench. "The percentage of safflower crop grown in North America is very minimal, so from a regulatory

standpoint it's really easy for us to achieve confinement regulations." Safflower is also readily contained because of the small acreage produced, also because it has no weedy relatives in the western hemisphere.
Safflower can also be grown counter-seasonally in northern and southern hemispheres. The crop currently being grown in the L.F. Kristjanson Greenhouse will produce transgenic seed for field production this winter in Chile. "We hope to have enough seed to plant a few hectares for production as well as agronomic studies," says Moench.
After harvesting the seed in the greenhouse, the genetically-engineered seed will be packaged and shipped to SemBioSys' Calgary headquarters, according to strict regulatory protocols.
Moench says the seed will be analyzed and processed in Calgary using a proprietary method to extract and purify the oilbodies. "They can take one seed and analyze half of it, and make a determination on the presence and stability of the protein it contains, and then grow a viable plant from the remaining half-seed."
In large-scale processing, the oilbodies are then removed via centrifugation and the target protein can be purified from the remaining enriched fraction simply and inexpensively.
Proteins are custom-designed to individual industry partners' requirements. The biological proteins may be used to develop new pharmaceutical therapies. "For example, it may be possible to treat wounds directly with a protein-based medication applied topically," says Moench.
"Our partners will ask us to design a specific protein, and then deliver that finished product back to them. They rely on us to deliver a sufficient quantity of the relevant protein, to allow them to do clinical trials."
SemBioSys' personal care division uses the DermaSphere™ Ingredient System to extract the non-transgenic oilbodies of the safflower plant, creating a natural oil-in-water emulsion that's ideal for use in topical skin care products. "We have a SemBioSys employee in the U.S. working on the dermal side of the product," says Moench.
While Moench lives in Calgary and works primarily at SemBioSys headquarters, he's been spending two days a week at the L.F. Kristjanson greenhouses at Innovation Place.
Moench enjoys interacting with other tenants of the research park. "The knowledge base that exists at Innovation Place also attracted us to this location. The knowledge we can draw on just in the L.F. Kristjanson Complex alone is another reason for our decision to conduct our test of the facilities here and to determine if a longer-term presence is feasible."

Saskatchewan Synchrotron Institute launched

Saskatchewan businesses and researchers now have a new institute dedicated to advancing the many benefits from the Canadian Light Source (CLS) synchrotron, under construction at the University of Saskatchewan.
At a press conference held July 24, Premier Lorne Calvert and Secretary of State (Western Economic Diversification) (Indian Affairs and Northern Development) Stephen Owen announced matching contributions of $500,000 to establish the Saskatchewan Synchrotron Institute (SSI).
The SSI will be a "virtual" institute. Temporarily located at the CLS, it will ensure Saskatchewan maximizes the benefits from its investment in Canada's only synchrotron by co-ordinating and delivering research and supplier strategies and programs.
"This new investment in synchrotron infrastructure will ensure that Saskatchewan researchers and suppliers can take advantage of the economic and scientific benefits associated with

the synchrotron project," Calvert said. "The Institute will place our province in a competitive position for attracting and retaining innovative researchers."
"This announcement highlights the federal government's commitment to strengthening Canada's research and development performance and helping Western Canadian businesses turn innovation into new products faster," Owen said. "Western Economic Diversification Canada's ongoing support of the Canadian Light Source also helps build a critical mass of business support and highly-skilled employees for the facility."
SSI director Dennis Johnson, former Vice-President (Research) of the University of Saskatchewan, says, "It's critical that Saskatchewan scientists, students, businesses and government agencies actively participate in the CLS to ensure that this province can fully share in the scientific, economic and social benefits of this tremendous new project. The funding announced today will go a long way toward advancing that goal."
The Saskatchewan Synchrotron Institute will be financially administered by the University of Saskatchewan and governed by a management board made up of representatives from various groups including Canadian Light Source Inc., the University of Saskatchewan, the University of Regina, Saskatchewan Industry and Resources and Western Economic Diversification Canada.
The SSI will:
• encourage the development of university and college synchrotron-related training and research programs at provincial institutions;
• conduct a supplier needs assessment to ensure that Saskatchewan companies are aware of the opportunities the synchrotron presents and the requirements to take advantage of these opportunities;
• provide matching funding for Saskatchewan-based industrial and academic researchers to visit international synchrotrons for training on applications of synchrotron science;
• provide information seminars to provincial suppliers, researchers and stakeholders on synchrotron opportunities;
• ensure Saskatchewan researchers are actively involved in using the CLS;
• encourage the development of CLS-related learning experiences in Saskatchewan schools;
• provide financial support for post-doctoral fellowships or research positions; and,
• stimulate new industrial investment in Saskatchewan.
The SSI website was also launched on July 24 at www.sasksync.ca .
The Saskatchewan Synchrotron Institute will be in operation for two years, until the CLS is commissioned in 2004.
Federal funding for this project was provided for in the December 2001 federal budget and is therefore built into the existing financial framework.
The province's funding comes from the Strategic Investment Fund, which supports projects and infrastructure that will lead to the development of innovative products, processes, and technologies resulting in a significant economic impact.

SRC appoints new Energy Branch director

President and CEO of the Saskatchewan Research Council (SRC) Dr. Laurier Schramm recently announced Dr. Patrick Jamieson has been appointed director of SRC's Energy Branch.
Based at Regina Research Park, Dr. Jamieson will guide SRC's petroleum research and development opportunities through partnerships and alliances with the Petroleum

Technology Research Centre (PTRC), government agencies, the University of Regina and the energy industry.
"We feel this is a coup not only for SRC, but for the Province of Saskatchewan, in attracting talent like Dr. Jamieson to work here," says Schramm. "He is renowned for his work in the chemicals, oil and gas, manufacturing and transportation industries. His proven leadership in technology organizations make him an excellent candidate for leading SRC's Energy Branch."
Dr. Jamieson comes to SRC after working on an extensive multi-million dollar project with Canadian Pacific Ships in the U.S. for the past two years. From 1996 to 2000 Dr. Jamieson was president and CEO of C-FER Technologies Inc. in Edmonton, a not-for-profit engineering technology development and contract research company. Prior to this, he worked with Imperial Oil in Canada and the U.S. in numerous roles including Manager of Environmental Services.

UPDATES:

Who's new to Saskatchewan research parks?

New to Regina Research Park is:
• **Saskatchewan Population Health & Evaluation Research Unit** (SPHERU) - Regina Office, located at 160 - 10 Research Drive. Contact Ann Bishop at
(306) 585-5674.

Another first for Amana Tech

Amana Tech Inc., a web solutions company headquartered at Innovation Place, recently announced it has achieved certification as a Registered Web Presence Provider for Microsoft® FrontPage® version 2002. Amana Tech Inc. is the first company in Saskatoon and the second in Saskatchewan to achieve this certification.
This certification is very significant for Amana Tech Inc. as it can now extend the benefits of the Microsoft services to its clients.
The Web Presence Provider (WPP) program was designed to help Microsoft Office and Microsoft FrontPage customers identify those companies that have demonstrated successful support with all of the features of FrontPage version 2002 in a commercial environment. Program members also benefit from close communication with Microsoft's product development and support teams.
Microsoft FrontPage is the world's leading web site creation and authoring tool and has sold over 5 million licenses to date. FrontPage® version 2002 web authoring software provides a fast and easy way to create, manage, and publish professional web sites. The software is designed for non-programmers, yet robust enough for experienced web site developers.

ISC appoints interim CEO

Information Services Corporation (ISC) of Saskatchewan, headquartered at Regina Research Park, has announced the appointment of Mark MacLeod as the new interim president and chief executive officer (CEO) of the Crown Corporation.
Chris Axworthy, Minister Responsible for ISC, says, "MacLeod's proven leadership in the technology sector makes him an excellent candidate to provide leadership at ISC on an

interim basis. I am pleased to have an individual with his vast range of experience and knowledge join ISC in this senior role."

MacLeod brings more than 14 years of experience in the information technology sector, including president of Software 2000 Inc., which he founded in 1988. The Regina-based company provided large-scale Local and Wide Area Networking services to Western Canadian business. MacLeod is currently a partner in the Windward Group, specializing in business development, strategic marketing and intermediary services. He was named to the ISC Board of Directors earlier this year.

MacLeod has been retained for one year while a national search is conducted. He replaces former president and CEO Fraser Nicholson, who resigned from ISC June 14 to accept a position with a private-sector company based in Atlantic Canada.

The Information Services Corporation of Saskatchewan was established on January 1, 2000 to integrate Saskatchewan's land survey and land titles systems and registries. For more information visit: www.isc-online.ca.

TRLabs partners with Samsung

A new three-year research and development partnership agreement has been signed between South Korean electronics giant Samsung and TRLabs, bringing benefits to both the Saskatoon and Regina research offices of the telecom research consortium.

Samsung is expected to be a particularly strong partner in growing the TRLabs wireless research program.

Gibs Song, of the Samsung Advanced Institute of Technology, notes that the relationship with TRLabs is only a beginning. "There are many outstanding technologies that Samsung can take advantage of in areas as diverse as energy, biotechnology, nanotechnology, and photonics. The partnership with TRLabs will provide a platform for expanding Samsung's relationship with western Canada."

Roger Pederson, TRLabs' president and CEO, says, "Samsung will be an important presence as TRLabs moves forward with ambitious business plan goals," referring to a repositioning of TRLabs to achieve a balance between the nurturing of ideas that expand the frontiers of technology, and the movement of ideas into the marketplace.

"Along the way, we continue to have strong success at training the minds that can create a future only limited by imagination. We look forward to making an innovative future happen with Samsung and the TRLabs consortium," says Pederson.