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March 7, 2016

The Alberta Innovates Bio Solutions (AI Bio) quarterly e-newsletter is for stakeholders in Alberta's research and innovation system and the agriculture, food and forest sectors. It offers information about the research and innovation activities at AI Bio and in the global bio sectors. The e-newsletter aims to advance knowledge in Alberta's bio community and stimulate new project ideas, connections and collaborations. Click on a business line category in row above to skip down to that section.

General

EVENT: Register for Alberta Innovates Bio Solutions Impact Innovation 2016 event May 11, 2016 in Edmonton  

[Alberta Innovates Bio Solutions](#) - February 28, 2016

[Registration](#) is now open for the Alberta Innovates Bio Solutions' Impact Innovation 2016 annual public lecture in Edmonton on Wednesday, May 11, 2016. It is free and open to the public. Be entertained and informed about the science and innovation we're supporting. Each year we welcome staff from Alberta Innovates, government, researchers, private industry, producer and processor organizations, industry associations, funding agencies and others. Get ideas for new science or partnership projects, make connections with others in Alberta's research and innovation system, and meet our speakers and AI Bio staff.

(1) Sustainable Agriculture and Forestry Production

Helping Alberta Farmers Break into the Lentils Game  

[Alberta Innovates Bio Solutions](#) - March 04, 2016

As the world's largest exporter of lentils, Canada sends over 95% of its crops to other countries, particularly in Southeast Asia, where the demand is growing. But few of these lentils come from Alberta, even though the province is rich in agricultural land and expertise....

Managing forest regeneration after mountain pine beetle outbreaks  

[Alberta Innovates Bio Solutions](#) - February 27, 2016

The provincial government and our forest industry are challenged with deciding how best to manage lodgepole pine stands that have been attacked by the mountain pine beetle. While much research has been done in British Columbia, Alberta's pine forests are unique—unlike many B.C. forests, they often don't include another species that will take

over, and that could cost Albertans in the future.

(2) Bioindustrial Innovation

EVENT: Alberta planning delegation to international bioindustrial conference

[Alberta Innovates Bio Solutions](#) - March 04, 2016

As in previous years AI Bio is playing a central role in organizing the Alberta presence at the [2016 World Congress on Industrial Biotechnology](#), the world's largest conference for business leaders, investors and policy-makers in bio fuels, bio-based products and renewable chemicals. This year's conference takes place April 17-20, 2016 in San Diego.

FUNDING: Researchers invited to apply by April 13, 2016 to CNC Challenge 2.0 funding call

[Alberta Innovates Bio Solutions](#) - February 28, 2016

Alberta Innovates Bio Solutions and Alberta Innovates Technology Futures are collaborating on a new funding program CNC Challenge 2.0. This program supports early-stage work to demonstrate technical feasibility of cellulose nanocrystals (CNC) in high-value applications with potential for commercialization. Up to eight grant recipients may receive about \$25,000 in funding for their CNC project research, up to one kilogram of CNC from the AITF pilot plant, and access to AITF's researchers, capacity and facilities. Successful projects have the potential for ongoing support toward commercialization. Researchers from Canadian institutions, companies or other organizations are invited to apply by April 13, 2016.

Ceapro Inc. of Edmonton gets U.S. patent for PGX technology

[Digital Journal](#) - February 25, 2016

Edmonton biotechnology company Ceapro Inc. has been issued a [U.S. patent for its Pressurized Gas eXpanded \(PGX\) technology](#)....

Selection of bioindustrial commercialization projects in final stage

[Alberta Innovates Bio Solutions](#) - February 25, 2016

AI Bio is in the final stage of selecting proposals for the commercialization of new bioindustrial products or technologies in Alberta....

First major bioindustrial conference in Edmonton a success

[Alberta Innovates Bio Solutions](#) - February 25, 2016

Nearly 300 key players in the bioindustrial sector gathered at the [Bioindustrial Innovations: Unlocking Value and Tackling Climate Change](#) conference co-hosted by AI Bio in late November 2015. Click on headline for more information....

Fuel made from plants is like 'running on solar energy': Globe and Mail

[Globe and Mail](#) - November 26, 2015

Calgary has become a small but increasingly vibrant hub for the development of technologies that use biomass to replace fossil fuels, says this [story in the Globe and Mail](#)....

(3) Food Innovation

Miniaturized Device Will Detect Food-Borne Pathogens in Meat

Alberta Innovates Bio Solutions - February 28, 2016

In Alberta's meat processing facilities, products must be regularly tested for harmful food-borne pathogens like E. coli. Samples are usually sent to an off-site laboratory for analysis, a process that's both expensive and slow.

Dr. Kevin Swallow: Food scientist brings new products to market

Alberta Innovates Bio Solutions - February 28, 2016

It's been two decades since Swallow began his career in food science, but his fascination hasn't waned. He continues to enjoy the people he works with and the problems he solves at the Food Processing Development Centre in Leduc. Here, he develops food products from Alberta's crops. "It's an interesting and exciting environment to be in," he says.

Developing a rapid, early-stage detection method to prevent food-borne disease

Alberta Innovates Bio Solutions - February 27, 2016

Listeria monocytogenes can be fatal to those with compromised immune systems and the elderly, and can cause stillborn births when women are exposed during pregnancy. Unfortunately, sources of contamination usually aren't identified until it's too late, simply because there isn't an efficient and effective way to detect the bacteria in the food processing plant at an early stage.

That's a Wrap

Spud Smart - February 25, 2016

A team of researchers at the University of Alberta, supported by Alberta Innovates Bio Solutions, is conducting a study into the use of potato waste products such as peels and culls to produce a film product that's not only better for the environment but is also rich in antioxidants, a property that could actually extend the shelf life of many food items. Reprinted with permission from Spud Smart and Issues Ink.

(4) Ecosystem Services and Biodiversity

Alberta's Ecosystem Services and Biodiversity Network launches new website

Ecosystem Services and Biodiversity Network - March 04, 2016

The new website is designed to share information on ecosystem services across many organizations in Alberta. The network is a multidisciplinary group of experts, including from Alberta Innovates Bio Solutions, working to build the knowledge required to implement an ecosystem services market approach to land management in Alberta. Ecosystem services tools can help government and industry make land-use decisions.

Researchers Make Tracks in Large-Carnivore Monitoring

Alberta Innovates Bio Solutions - March 04, 2016

A three-year project supported by AI Bio is helping researchers assess the populations of bears and wolves in southwest Alberta, and create a monitoring framework to stay on top of population trends. Morehouse leads the grizzly bear portion of the project, and her colleague David Ausband (a PhD candidate at the University of Montana) leads the wolf portion of the work. The team also includes Greg Hale, a provincial wildlife biologist.

EVENT: Register now for Land Use 2016 conference May 4 to 5, 2016

Alberta Land Institute - February 28, 2016

The Land Use 2016 conference, co-hosted by Alberta Land Institute and Alberta Innovates Bio Solutions, is western Canada's premier forum on land use research, planning, and policy. To be held May 4 to 5, 2016 at the Edmonton Westin Hotel, the conference brings together decision makers and researchers from Alberta and around the world. Speakers will explore the theme of Regional Planning — how it influences the provision of ecosystem services, the

use of agricultural land, and governance.

Algar Ecosystem Services Project - Year in Review Update

Silvacom - February 28, 2016

This pilot project located in northeastern Alberta in the Algar region, is a key initiative of the [Ecosystem Services Roadmap](#). Led by the Silvacom Group and funded by Alberta Innovates Bio Solutions, it looked at the changes in ecosystem services and the costs and benefits associated with restoration efforts taking place in the Algar area, through the Landscape Ecological Assessment and Planning (LEAP) framework. Phase 1 concluded at the end of 2015. Phase 2 is in progress. A year in review update is provided...

(5) Biological Greenhouse Gas Management

Gemstone Cattle Company in Research Collaboration

Livestock Gentec - January 08, 2016

About 500 registered and commercial Hereford and Angus cattle pasturing in the Hamlet of Gem, near Brooks in southeastern Alberta are part of a collaborative research project. Owned by the Gemstone Cattle Company these cattle are helping researchers to better understand [feed efficiency in extensive grazing](#). The project's principal investigator is Edward Bork. It is funded by Alberta Livestock and Meat Agency, and the CCEMC Biological GHG Management Program which is administered by Alberta Innovates Bio Solutions. The project will provide a comprehensive picture of the grazing behaviour of cattle with different RFI (residual feed intake) efficiencies, thereby increasing our understanding of the role of rangelands in storing carbon and reducing greenhouse gas emissions. Read more about this project on pages 28-30 in [Beef and Range Report](#).

The Right Approach to Climate-Smart Agriculture

Fertilizer Canada - December 07, 2015

Canada, led by the province of Alberta, is implementing climate-smart agriculture by reducing greenhouse gas emissions from fertilizer use in crop production. Fertilizer Canada has led two projects in Alberta, with financial support from Alberta Innovates BioSolutions and CCEMC, to provide NERP-based 4R Nutrient Stewardship training for farmers and the crop advisors who support them.

(6) Alberta Prion Research Institute

EVENT: International workshop on emerging prion disease issues in cattle, sheep and cervids to be held in Calgary on April 4 to 5, 2016

Alberta Innovates Bio Solutions - February 28, 2016

The Alberta Prion Research Institute is partnering with the Alberta Livestock and Meat Agency and the Canadian Food Inspection Agency to host an international workshop on emerging prion disease issues in cattle, sheep and cervids....

Alberta Prion Research Institute completes two funding calls

Alberta Innovates Bio Solutions - February 28, 2016

The Alberta Prion Research Institute, a business line in Alberta Innovates Bio Solutions, has completed two funding competitions since its refunding in 2015 by Alberta Economic Development and Trade....

The Serendipity of Science

Alberta Innovates Bio Solutions - February 27, 2016

A few years ago, research of the University of Alberta's Dr. Jack Jhamandas on amyloid protein came to the attention of Harvard University cancer specialist Lloyd Demetrius. "Dr. Demetrius asked me to look at the paper he was writing on cancer and Alzheimer's—to make sure he was doing justice to our work," Dr. Jhamandas says. "It was very interesting. And it gave me some ideas for how we might approach Alzheimer's disease."

The Alberta Prion Research Institute held its annual research meeting on February 2 to 4, 2016

Alberta Innovates Bio Solutions - February 25, 2016

The annual meeting of Prion Institute-funded researchers, at which they present updates on their research, was held on February 2-4, 2016 in Calgary....

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