

CONNECTING THE PIECES



August 2015

Specialty/Renewable Chemical Ingredient (SCI) Initiative's E-News and Upcoming Events

Welcome to the e-news update and highlights of the Specialty/Renewable Chemical Ingredients (SCI) Initiative, a unique government-industry collaborative business development cluster in Alberta focused specifically on the development and commercialization of high-value innovative products and sustainable specialty chemicals from renewable biomass. SCI operates within Alberta's Ministry of Agriculture and Forestry (AF) as part of an effort to facilitate growth of high-value non-food products and ingredients from agriculture. The SCI e-news is distributed occasionally to highlight past and upcoming SCI activities and events.

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Our SPOTLIGHT is ON:

**David Fielder, Research Scientist
AF's Agri-Food Discovery Place
Bio-Industrial Opportunities Branch
Extraction and Fractionation Program**

Since July 2014, the Bio-Industrial Opportunities Branch has been developing an *Extraction and Fractionation Program*, led by senior scientist, David Fielder. This program will assist companies in developing

new products and processing from a wide range of agriculture materials, including industrial crops, specialty botanicals, and agricultural/forestry waste streams. Market sectors that will benefit from this new initiative will include the cosmetic ingredient industry, oil/gas, as well as food and nutraceutical sectors.

Many companies are looking for new ways of creating value from existing side or waste streams and new products may have cross platform applications. The new program will allow development of products and processes from concept to pre-commercialization, but will also cater to companies wishing to improve productivity, yields and purities of existing products or current manufacturing processes.

Small (<1L) and large (<20L) lab scale equipment includes automated pressurized extraction capabilities allowing real-time process data to be captured, membrane filtration and industrial chromatography. Small (<200L) and large pilot scale

processing equipment (>1000L) includes milling, dry separation, extraction, extrusion, centrifugation, purification and drying capabilities.

To support new product and process development, we have a wide range of in-house analytical services. New pilot scale equipment including 2000 and 2500L processing tanks as well as new centrifuges capable of handling ethanol will be installed by AF this year. Several companies have already used the services of the new program and we anticipate further interest throughout 2015.

Further details on our services can be obtained at the Bio-Industrial Opportunities NEW website.

www.agriculture.alberta.ca/bio-industrial

The Bio-Industrial Opportunities Branch, of the Food and Bio Processing Division of Alberta Agriculture and Forestry, plays a significant role in developing Alberta's bio economy. The branch is a unique, integrated team of highly dedicated professionals providing [business development](#) and [technical services](#). The primary objective is to support the agriculture industry for diversification, new opportunities and new markets.

Check out the "Success Stories" Tab with stories highlighting a number of Alberta companies the BIO Branch is working with, including Calgary-based Botaneco Inc.

www.botaneco.com



Connecting the Pieces: Scaling Up Alberta's Biochemical Cluster event a resounding success!

On October 21, 2014, the specialty/renewable chemicals and fuels team from Alberta Agriculture and Rural Development (ARD) and Alberta Innovation and Advanced Education (IAE) collaborated and leveraged our combined connections for a biochemical industry event in Banff, Alberta.

Connecting the Pieces: Scaling Up Alberta's Biochemical Cluster helped facilitate new collaborative business, academic and industry opportunities for future success in Alberta's Biochemical Cluster (Sponsored in part by Growing Forward 2, a federal-provincial-territorial initiative). Over 70 (a unique mix of Alberta, national and international biochemical industry colleagues, stakeholders, innovators and leaders) attended. A number of key international business/industry contacts made by the SCI team were invited to Alberta to speak at this biochemical cluster event and also for opportunities to make Alberta business connections and potential partnerships. These contacts were a result of a targeted specialty chemical ingredient business trip the SCI team (Donna Fleury and Kathy Lowther) took in spring of 2014 to Germany for in-cosmetics ** (the leading

“I again want to thank you and express my appreciation for all the hard work you and your team have done to help companies like Botaneco. I really thought the session you held this past week in Banff was superb, it brought in world class organizations like Croda, Inolex, Lipotec and others, to view our Alberta Specialty Chemicals / Ingredients / Technology landscape and meet with Alberta based companies. The format of the session including short Company pitches followed up with networking and partnering with BCN was very effective. The perseverance of your commitment to our industry is really showing progression, something you should really be proud of. I am honored to be part of it.”

-- James Szarko | President & CEO | Botaneco Inc. , Calgary, Alberta October 2014

We purify unique extracts from oilseeds that improve natural authenticity and performance of personal care products



global business event for personal care ingredients <http://www.in-cosmetics.com/>.



Presenter Dr. Albert Soley, R&D Manager, Lipotec SAU, Spain. Lipotec is a world leader in advanced active ingredients through molecular cosmetics and delivery systems. www.lipotec.com. Lipotec was acquired in 2012 by the Lubrizol Corporation (Berkshire Hathaway company). Lubrizol Corporation is a \$6.4 billion technology- driven global provider of specialty chemicals for the transportation (engine, fuel additives), industrial and consumer markets (personal and home care). www.lubrizol.com

‘Connecting the Pieces’ topics with local and international presenters included:

- *Interface of Research and VCs* (Dr. Conrad Plimpton, Managing Director

of Plimpton and Company (also with Desert Angels and Inolex Inc.), USA;)

- *Technology Commercialization* (Joseph Matt, member of Technology Investment Group with Croda Inc., USA);
- *Concept to Commercialization* (David Fielder, Sr. Scientist, ARD).

Ways to ‘Connect the Pieces’ across the biochemical supply chain, included:

- *Perspectives from feedstock suppliers* (West Fraser - Eddie Peace, Quesnel, BC) and Alberta Sugar Beet Growers - Gerald Third, Executive Director)
- *Intermediate/specialty chemicals* (Dr. Albert Soley, R&D Project Manager of Lipotec SAU, Spain and Dr. Alexander Thiemann, Manager Scientific Affairs of Dr. Straetmans GmbH, Germany).
- *Alberta Biochemical Opportunities* were discussed by Morley Kjargaard with IAE and Stephani Carter, Principal with EcoAmmo Sustainable Consulting, AB .



Presenter Dr. Alexander Thiemann, Manager of Scientific Affairs, Dr. Straetmans, GmbH, Germany. Dr. Straetmans develops and markets chemical raw materials and blends with an emphasis on alternative preservation, for manufacturers of cosmetic products. A team of scientists, a technical experienced sales force and a network of distribution partners ensure the company's expertise and presence in over 50 countries around the world. <http://www.dr-straetmans.de/en/>

The event highlight was “a walk through the supply chain” — a lively Alberta company business exchange & industry roundtable, moderated by Jim Lane, Editor and Publisher of The Digest -- the world's most widely-read bioeconomy daily (more than 1 million readers in 190 countries on sustainability, and clean alternatives in fuels, chemicals, energy and materials.) About 20 Alberta companies and researchers were given a unique, effective and energizing platform to present their “elevator-speech” to industry — a chance to say who they are and what they are looking for.

This business exchange lead to significant quality leads and potential for Alberta partnerships/collaboration, research contacts and business connections.

Numerous unsolicited comments from Alberta companies, international industry and academia alike on the importance of holding an event like this—with strategic agenda/speakers and business networking opportunities that lead to many qualified

business leads, potential partnerships, significant B2B connections.

In our participant evaluation survey, 100% of survey respondents said the “Connecting the Pieces” event met their expectations and was a valuable use of their time. As well 96% said they obtained new business, investment and potential collaboration leads.

“... the future in the bioindustry is positive”

“... developing value chains and partnerships are very important to grow the sector in Alberta”

“...mixing with similar but different enterprises is always beneficial.”

**Lowther and Fleury also gave 2 debrief and information sharing presentations (Edmonton and Airdrie) on the technical and regulatory information learned at *in-cosmetics* to 50 Alberta Specialty Chemical Industry advisors, companies and colleagues in academia and government. Alberta companies Radiant Technologies, Ceapro Inc. and International Laboratories Canada presented their ‘industry perspective’ of attending the 2014 *in-cosmetics* show.

Biorefining Conversions Network (BCN)

The “Connecting the Pieces” event was co-located with a separate event -- the 5th annual 2014 Biorefining Conversions Network (BCN) Conference in Banff, Alberta, October 21-23. The benefits of co-locating with BCN/University of Alberta was considered by many who attended

strategically important to further B2B collaborations, discussions and industry partnerships.

BCN Web link: <http://www.bcn.ualberta.ca/>

****Date for 2015 BCN-AI Bio Conference Announced! November 23-25, 2015, Edmonton, Alberta. Call for program track proposals/abstracts now open. Deadline for submissions is September 25, 2015.**

<http://www.bcn.ualberta.ca/en/AnnualStrategicRetreat.aspx>

ABLC NEXT 2014 & Synbiobeta 2014

Donna Fleury participated in two very timely and relevant top industry renewable chemicals related conferences in San Francisco in November 2014 -- *ABLC NEXT 2014* and the *3rd Synbiobeta 2014 Conference*. These leading industry events provided an excellent opportunity to meet and connect with relevant decision-makers from leading innovative startups and companies across North America and internationally, many with an eye to Alberta and the potential of advanced renewable chemical and advanced bioeconomy opportunities for collaboration and commercialization. Lots of valuable information, contacts and connections to potential collaborators for Alberta and potential speakers were shared with and introduced to other ARD staff, collaborative partners and industry. Several follow-up meetings and discussions are continuing as a result of these contacts.

- ABLC NEXT, hosted by Biofuels Digest (www.biofuelsdigest.com), brought together leading advance biofuels, biochemical and other advanced bioeconomy companies, start-ups, investors, researchers, policy makers for an excellent three-day jam-packed program of speakers, panel discussions and special presentations. The ABLC Next half-day tour "Hot Tours for Hot Technologies" to the Lawrence Berkeley National Research Laboratory including visits to: The Joint Bioenergy Institute (JBEI), the Advanced Biofuels Process Demonstration Unit (ABPDU) and the Joint Centre for Artificial Photosynthesis (JCAP) were very valuable.

- The 3rd Synbiobeta 2014 conference (www.synbiobeta.com) was an excellent event focused on industrial biotech, molecular biology and synthetic biology innovation/technology, with several connections made for Alberta bioeconomy stakeholders. One of Synbiobeta's conference sponsors Autodesk's Andrew Hessel was also BioAlberta's Guest Speaker at their Annual Meeting/Awards Dinner in Calgary in November 2014.

69th Annual NY Society of Cosmetic Chemists (SCC) Scientific Meeting & Technology Showcase

Kathy Lowther was fortunate to attend the 69th Annual NY Society of Cosmetic Chemists (SCC) Scientific Meeting & Technology Showcase December, 10-12, 2014, in New York.

<http://www.sconline.org/> Over 1000 scientists, specialty chemical industry, raw material suppliers, Sr. Executives and CEOs attended.

Calgary-based Botaneco Inc., one of Alberta's leading specialty ingredient companies (and Alberta industry advisor to the Specialty Chemical Ingredient (SCI) Initiative) was accepted to present their oleosome technology (oil-in-water emulsifier) and new data supporting its usage in hair care and cleanser applications-- in the technology showcase along with over 70 other international companies. The technology showcase was an excellent opportunity to learn about new materials, and emerging technologies and identify potential market contacts/opportunities for high-value specialty ingredients/renewable chemicals from Alberta biomass.

Over 20 scientific presentations/papers were given on topics ranging from innovations and emerging trends; global regulations; green chemistry/sustainability issues to formulations and formulating. The

importance of Green Chemistry in personal care sector and new and novel plant-derived functional actives/molecules/ingredients was highlighted throughout the conference -- i.e. top-line sustainable bio-based chemicals can be produced with a good bottom line for the company/stakeholders.

While there, Lowther took advantage of a co-located professional development workshop 'Fragrance as a Science' --- to better understand the chemical nature (conventional and bio-based), regulatory background and potential of this high value market.

For more specific presentation/workshop information please contact Kathy Lowther.

Funding Updates

Alberta Innovates Bio Solutions - Alberta Bio Futures Program

The Alberta Bio Future (ABF) program was launched on March 12, 2015. Its purpose is to expand a competitive, sustainable and profitable bioindustrial sector (materials, chemicals and energy) through an integrated program with a strong industry focus. ABF also has been designed to encourage and support collaborations and partnerships-between industry, the academic community, government departments and other funding agencies.

Three funding streams: 1. Equipment Utilization (continuous intake of applications); 2. **Product and Technology Commercialization - launched July 6, 2015. Alberta-based companies invited to apply with Letter of Intent. Application deadline September 2, 2015;** and 3. Research and Innovation (launching soon)

For more information go to: <http://bio.albertainnovates.ca/funding/abf/>

Growing Forward 2 Alberta Programs
<http://www.growingforward.alberta.ca/>

Alberta Innovates Technology Futures Industry Funding:
Micro-voucher, Voucher and Product Demonstration programs.
<http://www.albertatechfutures.ca/CapacityBuildingPrograms/IndustryFunding.aspx>

Other industry funding such as: Alberta Finland Innovation and Commercialization Program; Alberta Innovates nanoWorks Program, Alberta-Ontario Innovation Program
<http://www.albertatechfutures.ca/capacitybuildingprograms/industryfunding.aspx>

German-Canadian Centre for Innovation and Research (GCCIR): Alberta- Germany Collaboration Fund for Product Development and Commercialization
<http://www.gccir.ca/alberta-germany-collaboration-fund-gccir/alberta-germany-collaboration-fund.html>

BioEnterprise – Building Ag-Bio Based Businesses www.bioenterprise.ca

Sustainable Development Technology Canada
www.sdtc.ca

Climate Change and Emissions Management Corporation (CCEMC)
Shovel-Ready Projects - Submission due: July 2, 2015

The CCEMC is now inviting EOIs for shovel-ready projects that can deliver significant and sustainable near-term greenhouse gas reductions in Alberta.
<http://ccemc.ca/apply/expressions-of-interest/>

NRC-IRAP
Various programs, such as Concierge Service, Business Innovation Access Program (BIAP), etc.
<http://www.nrc-cnrc.gc.ca/eng/irap/index.html>

NSERC-CRSNG

Various partnership grants such as Connect, Engage, Student Training in Industry grants from the Natural Sciences and Engineering Research Council of Canada (NSERC)

http://www.nserc-crsng.gc.ca/Innovation-Innovation/index_eng.asp

Genome Alberta

<http://genomealberta.ca/funding/>

****New** NRC Bio-Based Specialty Chemical Program**

The new NRC Bio-based Specialty Chemicals (BSC) program works with companies to develop innovative technologies that produce high-value specialty chemicals from biomass as an alternative to traditional fossil fuel feedstocks.

<http://www.nrc-cnrc.gc.ca/eng/solutions/collaborative/bsc.html>

Mitacs

Connecting universities with industry and community partners

<http://mitacs.ca/en/programs/converge>

Regulatory

Health Canada – Important Information for Stakeholders, March 2015

Implementation of Advance Notice of Importation Process Pilot for Cosmetics and Drugs

Health Canada is informing stakeholders of a one-year pilot, from March 13, 2015 to March 11, 2016, concerning the implementation of a process for the advance notice of importation of cosmetics and drugs under section (s.) 9 of the Cosmetic Regulations (CR) or s.A.01.044 of the Food and Drug Regulations (FDR).

<http://www.hc-sc.gc.ca/dhp-mpps/compli-conform/import-export/notice-avis-eng.php>

FDA issues draft FSMA (Food Safety Modernization Act) Voluntary Qualified Importer Program (VQIP)

<http://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/ucm448728.htm>

Upcoming events

Alberta

October 21-22, 2015

NHP/FI 'Building Success' Conference
Edmonton, Alberta

**Sponsorship & booth registration deadline
September 30, 2015**

Contact: Susi Kosmulalage
kosmulal@ualberta.ca
www.afdp.ualberta.ca

November 17-19, 2015

2015 National Hemp Convention
Deerfoot Inn & Casino
Calgary, Alberta

For more info/registration contact the Canadian Hemp Trade Alliance (CHTA) website:

<http://www.hemptrade.ca/>

November 23-25, 2015

2015 BCN- AI Bio Conference
Bioindustrial Innovations: Unlocking Value and Tackling Climate Change
Shaw Conference Centre
Edmonton, Alberta

Call for program track proposals/abstracts now open. Deadline for submissions is September 25, 2015.

<http://www.bcn.ualberta.ca/en/AnnualStrategicRetreat.aspx>

BioAlberta

Check website for upcoming local events
www.bioalberta.com

National/International

September 1-3, 2015

Sustainable Chemicals & Plastics
Adoption & Applications Summit
San Diego Marriott Del Mar San
Diego, CA

<http://www.infocastinc.com/events/sustainable-chemicals/registration>

September 10 & 11, 2015

Happi's Anti-Aging Conference &
Tabletop Exhibition
Hyatt Regency
New Brunswick, NJ

<http://conference.happi.com/>

September 21-23, 2015

IFSCC

Zurich Switzerland

<http://www.ifsc2015.com/index/ifsc-conference/home-ifsc-con.html>

September 30 – October 1, 2015

In-cosmetics Brazil

São Paulo, Brazil

<http://www.in-cosmeticsbrasil.com/>

October 7-9, 2015

Cleaning Products US 2015

Arlington, Virginia

<https://www.cleaningproductsconference.com/cpus>

October 14-15, 2015

SCC California 2015 Suppliers' Day
Long Beach Convention Center Long
Beach CA

<http://www.caliscc.org/suppliers-day-info.html>

October 15-16, 2015

Cosmetic-360 Innovations & Solutions
Carrousel du Louvre, Paris

www.cosmetic-0360.com/en

October 20 – 21, 2015

Sustainable Cleaning Products Summit
Paris, France

<http://www.sustainablecleaningsummit.com/>

October 21-23, 2015

Sustainable Cosmetics Summit Europe
Paris, France

<http://www.sustainablecosmeticssummit.com/Europe/>

November 3-5, 2015

[in-cosmetics Asia 2015](http://www.in-cosmeticsasia.com/)

Bangkok, Thailand

<http://www.in-cosmeticsasia.com/>

November 2-5, 2015

ABLNext

San Francisco, CA

<http://advancedbiofuelssummit.com/>

November 4-6, 2015

SyBioBeta San Francisco 2015

San Francisco, CA

<http://synbiobeta.com/conferences/synbiobeta-san-francisco-2015/>

November 17 – 18, 2015

AGRI Innovation Forum

Winnipeg, Manitoba

<http://www.agri-innovationforum.com/>

November 24 – 26, 2015

Global Bioeconomy Summit

Berlin, Germany

www.gbs2015.com

From the SCI Initiative

Co-Leads: Kathy Lowther & Donna Fleury
www.agriculture.alberta.ca/biobasedchemicals

To Contact Us or to Unsubscribe

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kathy.lowther@gov.ab.ca or
donna.fleury@gov.ab.ca Thanks!