

Specialty Chemical Ingredients Initiative - July 2012

Welcome to the SCI E-Update!

We proudly present the Seventeenth Edition of “Cosmetic Industry Connects”, the official update of the Specialty Chemical Ingredients Initiative (SCI), a collaborative effort led by Alberta Agriculture and Rural Development, which includes local industry, research institutions, industry organizations, crop growers, major industry players and service providers.

Inside SCI E-update:

- SPOTLIGHT Dr. David Bressler
- BCN
- Bio-Based Chemical Website Launched
- In-Cosmetics Update
- Challenges & Opportunities in personal care ingredients
- The SCI FAQ – What is Canada Brand?
- FYI...
- Industry & Regulatory
- Upcoming Industry Events

Our SPOTLIGHT is ON

Dr. David Bressler, Executive Director Biorefining Conversions Network (BCN)
<http://www.bcn.ualberta.ca/NetworkMembers/ManagementTeam/DavidBressler.aspx>

The Specialty Chemical Ingredients (SCI) Initiative is pleased to **spotlight Dr. David Bressler**, Executive Director of the Biorefining Conversions Network (BCN),



Associate Professor in the University of Alberta’s Department of Agriculture, Food and Nutritional Science and member of the SCI’s Alberta Strategic Advisory Group. The ‘by invitation only’ SCI advisory group membership consists of senior industry executives with an interest in supporting the successful development of the cosmetic and personal care ingredient industry in Alberta. Advisors provide regional perspective, advice and council to



Helping to build a globally competitive plant-based cosmetic and personal care ingredient industry in Alberta.

the SCI Initiative, validate the Initiative's direction and when it makes sense, collaborate on mutually beneficial projects.

“My research focuses on the development of biomass conversion technologies that are “green” and compatible with existing petroleum technologies and infrastructure. In short, microbial, chemical and thermal systems are used to transform biomass to industrial chemicals, fuels, materials and food. In addition to the environmental benefits of bio-processes, biomass refining can also provide a full complement of biomaterials as alternatives for the global petroleum industry,” explains Bressler.

Dr. Bressler's unique background includes formal training and activities spanning biotechnology, microbiology, chemistry, chemical engineering, and heavy oil upgrading. (He earned his Ph.D. in Microbiology and Cell Biotechnology from the University of Alberta (U of A) and held a Postdoctoral and Research Manger position in Chemical and Materials Engineering at U of A.) As a result, his research integrates chemical and thermal catalysis with synthetic biology, microbial fermentation and enzymatic biocatalysis. His goal is to use multi-disciplinary science to bridge traditional academic discipline boundaries and enable development of cost-competitive integrated biorefineries with multiple value-added product streams.

Due to his involvement in several large strategic networks, including the Biorefining Conversions Network (Principle Investigator, Director), the Canadian

Triticale Biorefining Initiative (Theme Lead), and the recently launched NSERC NCE Biofuelnet (Theme co-Lead, Platform Co-Lead), Dr. Bressler's program interfaces regularly with industry, academia, and government and policy stakeholders.

Links to personal care ingredient industry

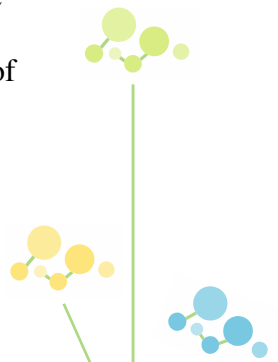
“The work conducted in my laboratory and through the Biorefining Conversions Network aligns perfectly with the goals of the SCI,” says Bressler. “One of the key themes of the BCN is around production of high value chemicals and the personal care and cosmetic sector represents a huge

potential market for these products.” There has been significant interest from the cosmetic sector in green ingredients that are not petroleum derived and Bressler is excited to continue working with these partners to develop some of these projects and expand research in this area.

“An example of a novel technology developed in my lab is a patented pyrolysis process that converts vegetable oil and other fats to a range of products including organic solvents (i.e. hexane), which are heavily used in the manufacturing of cosmetic and personal care ingredients,” explains Bressler.

“The SCI has been an excellent resource for the BCN by helping us link with companies in the cosmetic and personal care space and developing this market in the province. In turn, the BCN can provide technical and research support for companies looking to invest in Alberta, making this a very constructive partnership.”

-Dr. David Bressler



Biorefining Conversions Network (BCN)

One of Dr. David Bressler's key roles is as Executive Director of the Biorefining Conversions Network (BCN), an organization working to support provincial research communities in the areas of biorefining and biomass conversion technologies. By striving to form strong partnerships between academia and industry, the BCN promotes research programs that are structured towards achieving commercializable technologies in alignment with BCN's mission-- to support Alberta's research community, industry, and other partners for the development of advanced technologies to convert biomass into "drop-in" chemicals and fuels compatible with both traditional and emerging industries. "The BCN has just wrapped up its first funding cycle and completed 17 projects centered on thermal, chemical and biological conversions and feedstock pre-processing and are in the process of finalizing an agreement for a second round of funding. We are excited about the future of the BCN want to continue to work with companies to develop commercial technologies to help advance Alberta's bioeconomy," says Bressler.

Dr. Bressler's research group has extensive experience in fermentation of starch and ligno-cellulosic materials to produce a multitude of chemicals. "The BCN is focused on developing multi-feedstock, multi-product conversion platforms and then working with companies to identify and optimize the most commercially relevant products," explains Bressler. Examples of products that have been investigated in BCN projects include renewable solvents and platform chemicals, lipids and short chain fatty acids, plant based bioactive components such as tocopherols,

tocotrienols and phytosterols, fermentable sugars, bioplastics and protein based adhesives and biofuels such as ethanol and butanol.

In addition to developing and supporting R&D programs, Bressler says the BCN also does a lot of partnership building and extension activities and regularly hosts networking meetings, symposia and workshops. They also publish a newsletter. "This ensures everyone is kept up to date on all BCN activities. Feel free to contact me for further information," encourages Bressler. "BCN's network is built on trust relationships and we are continually looking to engage new industry partners and academics."

For more information on past and upcoming events and to sign up for BCN's newsletter please visit their website:

www.bcn.ualberta.ca

New ARD Bio-Based Chemicals Website Launched

www.agriculture.alberta.ca/bio-basedchemicals

The SCI initiative is pleased to announce our new website as part of the launch of ARD's Bio-Based Chemicals Unit's efforts.

The website provides information about the Specialty Chemicals and the Bio-Based Chemicals Programs, with links to SCI's past newsletters, upcoming events and other information.

Please take a look!



in-cosmetics 2012 Highlights

The Specialty Chemical Ingredient (SCI) Initiative Team (Kathy Lowther and Donna Fleury) recently returned from a very successful out-going mission to the leading global specialty chemical/personal care ingredient and business platform -- in-cosmetics – held this year in Barcelona, Spain. <http://www.in-cosmetics.com/>

With over 100 countries represented, in-cosmetics is the global event and venue where personal care industry executives look to source the newest products/ingredients and to launch their latest developments. The SCI team was successful in reconnecting with and meeting new key industry executives and companies and where possible, facilitating new business, research and technology leads and referrals for Alberta. Fleury and Lowther also attended several innovation zone and marketing seminars, plus a scientific workshop on green formulations/overcoming the technical hurdles.



L-R: Kathy Lowther, Aurora Polo, Donna Fleury at in-cosmetics, Barcelona

One of SCI team's contacts in Barcelona was **Aurora Polo, Trade Commissioner, Consulate of Canada** (above), who helped coordinate several excellent introductions and meetings with Spanish companies for the SCI Team during in-cosmetics. Any Canadian company in the Life Sciences and

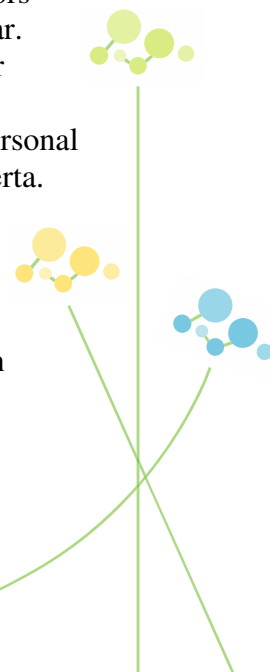
Health Industries sector interested in the Spanish market can contact Aurora Polo at: Aurora.PoloFerrer@international.gc.ca

Thank you as well to **Dr. Feral Temelli with the University of Alberta** who arranged a meeting for the SCI Team with her research contacts and industry partnerships at **Nanomol/ICMAB-CSIC** (research council) while Fleury and Lowther were in Spain at in-cosmetics. The SCI Team travelled to the University of Barcelona – Universitat Autònoma de Barcelona- to facilitate new business, research and technology leads and referrals where possible. They met with Dr. Nora Ventosa, with ICMAB (Material Science Institute of Barcelona) under CSIC (equivalent of our National Research Council in Spain) and her colleagues.

For more information on Nanomol, please check out their YouTube video: <http://www.icmab.es/nanomol/>

Challenges and opportunities in personal care ingredients

The SCI Initiative was pleased to have Dr. N.F. Han (one of our Senior industry executive advisors) speak at our SCI update meeting for Alberta industry advisors and invited guests earlier in the year. Dr. Han provided some insights for Alberta industry regarding the opportunities and challenges for personal care ingredients processing in Alberta. Here is a recap of his presentation, which was sponsored by Growing Forward, A Federal-Provincial-Territorial Initiative. This was followed by an excellent industry discussion and networking session.



Alberta firms looking to supply personal care companies with natural ingredients should be aware of the pitfalls going in -- and work to overcome them.

This year, or perhaps next, the global market for natural personal care products and cosmetics is expected to pass \$10 billion. As consumers shift their preference from conventional products to those made from natural, plant-based ingredients, there's a kind of gold rush going on.

Companies across North America -- both well-established players and aggressive start-ups -- are vying to supply the natural ingredients for this new generation of moisturizers, sunscreens and cosmetics.

One company leading the way is Botaneco, a Calgary-based specialty ingredient supplier to beauty and personal care product makers. Botaneco's patent-protected manufacturing

process centers on *oleosomes* - microspheres within oil-bearing seeds that offer proven moisturizing characteristics.

According to Dr. Nam Fong Han, Botaneco's Executive Chairman and Chief Operating Officer, Alberta companies must enter this space with their eyes wide open. In his view, they'll need to address three key issues.

1. Scale. As Dr. Han surveys the natural ingredients scene in Alberta, he sees mainly smaller companies with just a handful of

staff. "Botaneco is a good-sized company," he says, "but many smaller companies lack the know-how to secure a deal and the resources to properly market their product."

2. Technical depth. Developing and marketing a natural product ingredient takes time. Companies face a lengthy R&D period *before* they have a saleable product and a long sales cycle -- anywhere from six months to three *years* -- to finally bring a dollar in the door.

As Dr. Han sees it, the technical demands on *all* parts of the operation are significant and

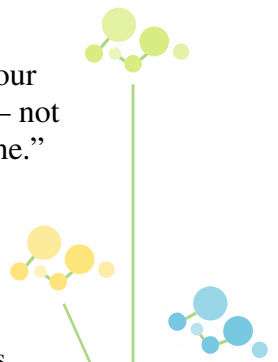
"The cosmetic and personal care industry is actively looking for new naturally derived plant-based ingredients and Alberta companies are well positioned to take advantage of this opportunity. Continued support for new initiatives and development in this high value-added industry will improve competitiveness, create jobs and a diversified economy in Alberta."

– Dr. N.F. Han

any technical shortcomings will make the challenge much greater. If a new product requires a buyer to change their production process even a little, that's typically a deal-killer. Thus, suppliers should develop their ingredients to suit the personal care companies' manufacturing methods. Technically speaking, that's a tall order.

"These companies can be very old-fashioned," says Dr. Han. "They don't want to have the capital investment to develop a new production process. You have to tell them how to use your ingredient on *their* production line -- not how it works on *your* production line."

3. Location. Companies that aim to supply the personal care market need to be where the action is. "About 80% of the world's leading cosmetics companies have their offices and laboratories in New York or New Jersey," says Dr. Han. "You have to be close to them."



The case for cooperation

Suppose you're a young Alberta company developing a plant-based ingredient that's ideal for making a natural care product. Another start-up across town is doing the same. They're the enemy and you need to defeat them, correct? Not so fast, says Dr. Han.

In his analysis, small companies can partly compensate for the limitations of their size by working together. For example, a joint venture could establish a presence for several companies in a location close to where the buyers are. The same approach could allow R&D staff to serve more than one firm. Several companies could also jointly hire and pay an experienced (that means expensive) technical sales representative.

Says Dr. Han: "You sell A, I sell B. Let's go and hire one sales guy to sell both. All the small players want to innovate on their own, and that's great, but sometimes you have to come together to succeed."

The SCI FAQ's!

Each issue we publish Frequently Asked Questions as part of our ongoing effort to ensure those interested in our project are provided with as much information as possible.

What is Canada Brand?

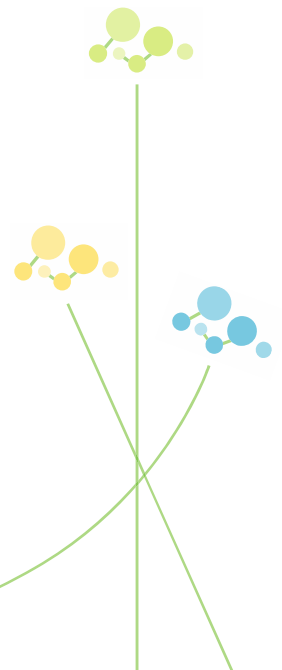
The Canada Brand initiative, an Agriculture and Agri-Food Canada (AAFC) program, is designed for those who have a role in producing, promoting or supporting

Canadian food and agriculture products. Canadian companies can apply to the program to be able to use the Canada Brand strategy for domestic or international markets. To use the tools, 'you' must be producing or promoting Canadian products. **Canada is respected and recognized around the world!** Our pristine landscapes, friendly people, and trustworthy nature are recognizable trademarks of our vast country. Simply put, *Quality is in our nature!* The **Canada Brand** strategy uses Canada's strong image to help companies cut through the clutter and distinguish themselves in the global marketplace.

To preserve the value of the Canada Brand graphics, research, photos, and tools they can only be used if:

- The products are originally grown, raised or harvested in Canada.
- The last substantial transformation of the product occurred in Canada, such that the product changes its nature and becomes a new product bearing a new name commonly understood by the consumer (e.g. cocoa powder to chocolate).

To get more information or to apply to start using the Canada Brand suite of tools, go to: <http://www.marquecanadabrand.agr.gc.ca/join-joignez/join-joignez-eng.htm>



FYI...

ARD Productivity Improvement Initiative

Alberta Agriculture and Rural Development's **Productivity Improvement Initiative** strives to assist producers and processors remain competitive, despite increased competition, rising prices, and a shortage of qualified employees, through increased efficiencies and technological capabilities. Employing tools such as facility assessments, hands-on coaching, and workshops, the Productivity Improvement Initiative works with companies who are in the business of growing and are looking to improve their current level of productivity, whether that be through increased automation or adopting lean practices.

Assessments & Coaching:

There is the opportunity to have a consultant conduct an on-site assessment of your facility, covered 100% for qualified, approved applicants. We offer *three options* aimed at enhancing competitiveness, boosting productivity and increasing market share: automation/equipment, lean manufacturing or lean & green.

Workshops:

"Lean in the Office" 1-day workshop will be offered this October in Edmonton and Lethbridge.

Best Practices Tour:

Alberta agri-processors will have the opportunity to go to Ontario and tour plants demonstrating best practices in lean principles and sustainability.

E-Learning Tool:

Want to learn more about lean principles and tools and how to introduce them into

your facility? Try our e-learning tool *The Lean Journey*, by visiting <http://agriculture.alberta.ca/leanjourney>

Lean & Green:

Interested in reducing your environmental impact but also realizing cost savings, increasing revenues, attracting top talent and driving productivity improvements? Check out our lean & green tip sheets and tools online.

For more information visit:

<http://agriculture.alberta.ca/productivity>

Contact: Nicola Stevens

Alberta Agriculture & Rural Development

Tel 403 948-8511, Toll-free at 310-0000

Email: nicola.stevens@gov.ab.ca

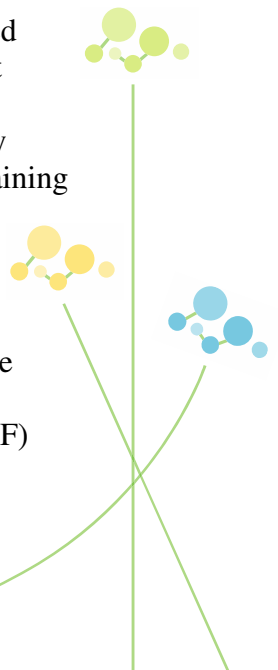
CAAP FUNDING STILL AVAILABLE IN ALBERTA

<http://www.agfoodcouncil.com/summer-2012-catalyst-newsletter?id=794>

The Agriculture and Food Council of Alberta (AFC) is accepting applications for uncommitted Canadian Agricultural Adaptation Program (CAAP) funding to help Alberta's agriculture industry respond and adapt to emerging challenges.

"CAAP is still open for business," said AFC Chair Heather Broughton. "The Council approved 82 projects valued at more than \$17 million in the first three years of the program. AFC is committed to attracting high quality projects in which to invest the remaining CAAP funds."

Agriculture and Agri-Food Canada's five-year CAAP program builds on the success of the previous Advancing Canadian Agriculture and Agri-Food (ACAAF)



program. AFC manages Alberta's \$21.9 million share of CAAP funding. CAAP's objective is to facilitate the agriculture, agri-food and agri-based products sector's ability to seize opportunities, respond to new and emerging issues, and pathfind and pilot solutions to new and ongoing issues in order to help it adapt and remain competitive.

CAAP will fund:

- Projects that have projected benefits that exceed costs.
- Applied and adaptive (not basic) research.
- Projects that analyze or test solutions and strategies to address issues and opportunities.
- Projects that test or analyze innovative products, processes or technologies.
- Regional and multi-regional projects.

The suggested activity end date for projects is October 31, 2013, with the final report due December 31, 2013. "At this point we are looking for projects that fit into a shorter time frame," Broughton said. "We encourage any and all potential applicants who feel their project may be a good fit for CAAP funding to contact us as soon as possible."

The next Letter of Intent deadline is August 17, 2012. More information about the CAAP program and future deadline dates is available at: www.agfoodcouncil.com/caap-funding.

For more information, please contact:

Rachel Peterson, Communications Manager
Agriculture and Food Council of Alberta
Phone (toll-free): (855) 469-3714 ext. 226
Email: rachel.peterson@agfoodcouncil.com

CANADEKA Program

The CANADEKA program, a result of the partnership with the Centre for the Development of Industrial Technology (CDTI), and NRC-IRAP, encourages joint technology cooperation projects between small and medium-sized enterprises in Canada and firms in Spain through industrial research, technological development and innovation.

In Canada, any interested firm should first contact:

Dr. Bill Dobson

Director, Ontario Region, NRC-IRAP

E-mail: bill.dobson@nrc-cnrc.gc.ca

Tel: 416-954-8330 to register their interest in CANADEKA

For more information click on

<http://www.nrcnrc.gc.ca/eng/ibp/irap/about/spain.html>

BIOSPAIN 2012

Sept 19-21, 2012

Bilbao, Spain

<http://www.biospain2012.org/en/index.cfm>

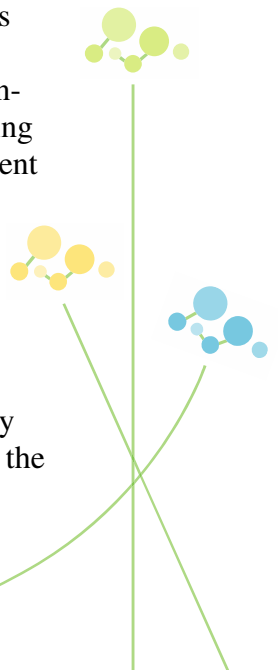
The most important biannual event in biotechnology in the south of Europe will take place in Bilbao (North Spain) this year. In 2010, the event was a success, attracting over 1300 delegates, 650 companies from 25 countries, featuring 168 exhibitors and holding over 2100 on-to-one partnering meetings, becoming the 7th largest biotech partnering event organized in 2010.

Aurora Polo, Trade

Commissioner, Consulate of

Canada will be coordinating a potential delegation of Canadian companies to BioSpain 2012. If any

Canadian company or institution in the



Life Sciences (biotechnology) and Health Industries (pharmaceutical and health technology) sectors wish to have more information on this event, please contact Aurora Polo at:
Aurora.PoloFerrer@international.gc.ca

Industry & Regulatory

NHPD Consultation - revised draft guidance document - pathway for licensing natural health products making modern health claims

<http://www.hc-sc.gc.ca/dhp-mps/consultation/natur/modern-eng.php>

The Natural Health Products Directorate (NHPD) is seeking your feedback on proposed revisions to the existing guidance document titled Evidence for safety and efficacy of finished natural health products, version 2.0.

These proposed changes are outlined in the revised draft document titled Pathway for licensing natural health products making modern health claims.

Background

The Evidence for safety and efficacy of finished natural health products guidance document, version 2.0 (December 2006) is being replaced by two revised draft guidance documents: Pathway for licensing natural health products making modern health claims, version 1.0 and [Pathway for](#)

[licensing natural health products used as traditional medicines, version 1.0.](#)

Information on the document

The revised draft document being consulted on [Pathway for licensing natural health products making modern health claims](#) contains several changes.

Highlights of the major changes to the document are as follows:

This revised draft guidance document replaces [Evidence for safety and efficacy of finished natural health products, version 2.0](#);

This document is also replaced by the revised guidance document titled Pathway for licensing natural health products used as traditional medicines, version 1.0.

There are extensive revisions to the content including the addition of revised appendices and annexes, and a reorganization of the document.

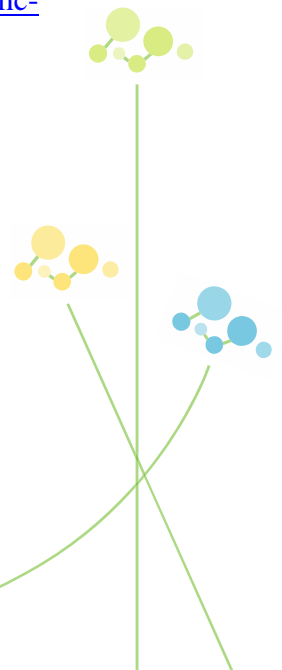
How to get involved and deadline

This consultation is open for comment starting May 23, 2012 until August 21, 2012.

Please submit your comments via email, fax or by mail to:

Email: nhpd_consultations_dpsn@hc-sc.gc.ca

Fax: 613-948-6810



New European Regulation on Cosmetic Products Comes Into Force July 11, 2013

On July 11, 2013, the new EU Regulation on cosmetic products comes into effect: Regulation (EC) No 1223/2009. This new regulation increases the requirements for assessing the safety of cosmetic products, and includes requirements for Product Information Files, Responsible Person and their obligations, GMPs and others. An online notification system for cosmetics products was launched in January, and a user manual is available at:

http://ec.europa.eu/consumers/sectors/cosmetics/cpnp/index_en.htm

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:342:0059:0209:en:PDF>

<http://www.cosmeticseurope.eu/publications-cosmetics-europe-association.html>

Upcoming Industry Events

Canada

Cultivating Natural Bioactives International Conference
July 9 – 11, 2012
London, ON
<http://naturalbioactivesconference.com>

BCN Strategic Workshop: How to build a skilled labour force to support the emerging bioeconomy
Sept. 30 – October 2, 2012
Banff, AB
<http://www.bcn.ualberta.ca/en/AnnualStrategicRetreat.aspx>

Growing the Bioeconomy Conference
October 2-5, 2012
Banff, AB
<http://www.ales.ualberta.ca/Bioeconomy/Overview.aspx>

Banff Venture Forum 2012
October 4&5, 2012
Banff, AB
<http://banffventureforum.com>

PAC Conference 2012
Sept 28-30
Ottawa, ON
http://www.pac.ca/index.php/pac/pac0229_pac_conference_ottawa_2012

7th Annual Pacific Rim Summit on Industrial Biotechnology and Bioenergy
October 10-12, 2012
Vancouver, BC
<http://www.bio.org/events/conferences/where-east-meets-west-pacific-rim-summit-industrial-biotechnology-and-bioenergy>

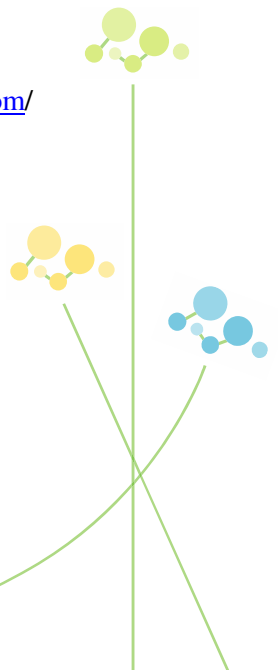
International

2012 International Congress on Natural Products Research
July 28-August 1, 2012
Grand Hyatt, New York
<http://www.icnpr2012.org>

Cosmoprof North America 2012
July 22-24, 2012
Las Vegas
<http://www.cosmoprofnorthamerica.com/>

Natural Products Expo Asia 2012
23-25 August, 2012 Hong Kong, China
www.naturalproductsasia.com

Beyond Beauty Paris
Sept 10-12, 2012
Paris
www.beyondbeautyparis.com



BIOSPAIN 2012
Sept 19-21, 2012
Bilbao, Spain
<http://www.biospain2012.org/en/index.cfm>

PPMA Show
Sept 25-27
Birmingham UK
<http://www.ppmashow.co.uk/>

Sustainable Cosmetics Summit Latin
American edition
Sept 25-27, 2012
Sao Paulo
www.sustainablecosmeticssummit.com

2012 Cosmetic Science Symposium
Oct 3-4, 2012
Newark NJ
www.personalcarecouncil.org/live-meeting/2012-cosmetic-science-symposium

27th IFSCC Congress
October 15 - 18, 2012
South Africa
www.ifsc2012.co.za

on beauty Organic & Natural Cosmetics Expo
and Congress
Oct 16-17
Darmstadt, Germany
<http://www.on-beauty.com/>

Pack Expo 2012
Oct 28-31
Chicago
<http://www.packexpo.com/pei2012/public/MainHall.aspx?ID=1266>

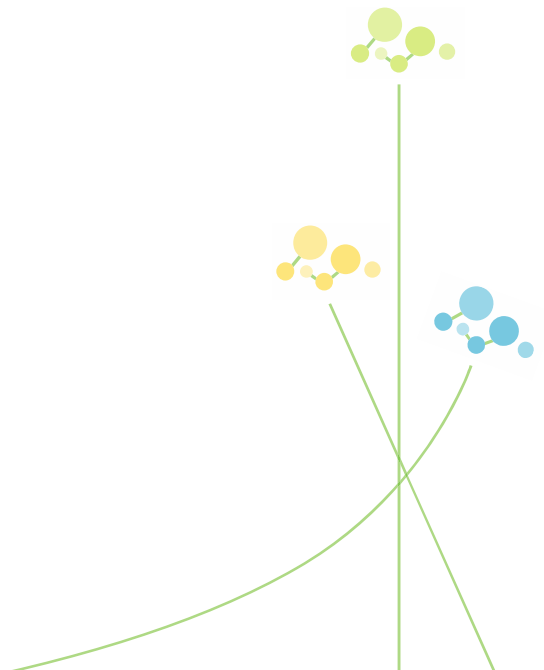
in-cosmetics Asia
6-8 November, 2012 Bangkok, Thailand
<http://www.in-cosmeticsasia.com/>

Sustainable Cosmetics Summit Asia Pacific
edition
12-13 November, 2012 Hong Kong, China
www.sustainablecosmeticssummit.com

cosmoprof Asia 2012
Nov 14-16
Hong Kong
<http://www.cosmoprof-asia.com/>

SCS Formulate
13-14 November, 2012 Coventry, UK
<http://www.scsformulate.co.uk/>

Sustainable Cosmetics Summit European edition
Nov 28-30, 2012
Paris, France
www.sustainablecosmeticssummit.com



About the Specialty Chemical Ingredient (SCI) Initiative:

The Specialty Chemical Ingredient (SCI) Initiative is focused on and helping to build a globally competitive plant-based cosmetic & personal care *ingredient industry* in Alberta.

The SCI Initiative collaborates with and includes partners from local industry, research institutions, industry organizations, growers, international cosmetic firms and service agencies, including funders. The emerging Alberta specialty chemical ingredients industry is beginning to see a growth in critical mass and core capacity.

The priority for the SCI Initiative is on the enhancement of the Alberta cosmetic ingredient industry's capabilities, capacity, and to increase market access, competitiveness and opportunities for existing and new Alberta companies, researchers and organizations.

The goal of the SCI is to support the bio-based processing industry with 1) growth in Alberta, 2) utilization of extracts/ingredients from traditional and non-traditional Alberta grown crops, and 3) creation of a diversified economy for this high value added industry.

SCI's Team at ARD

Kathy Lowther, SCI Initiative Lead

Email: kathy.lowther@gov.ab.ca

Donna Fleury, SCI R& D

Email: donna.fleury@gov.ab.ca

Comments, Ideas, Suggestions

You are receiving this issue of '*Cosmetic Industry Connects*' E-Update because you have requested to be on the distribution list. The SCI Team is proud of the fact that we receive messages of appreciation after every issue. We welcome your comments, suggestions and ideas for other articles or information you would like to see included in the next issue.

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If you have comments, suggestions or ideas, or if you no longer wish to receive our updates or newsletter please email us at: kathy.lowther@gov.ab.ca



www.agriculture.alberta.ca/biobasedchemicals

Alberta

