

BCN BIOREFINING
CONVERSIONS
NETWORK

CHANGING THE NATURE of BIOMASS





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RESEARCH SOLUTIONS FOR INDUSTRY

- Based at the University of Alberta, the BCN is a pan-Alberta initiative focused on supporting the bioindustrial sector by facilitating multi-disciplinary R&D collaborations structured towards achieving commercially viable outcomes.
- The Alberta Ministry of Innovation and Advanced Education (formerly Ministry of Advanced Education and Technology) provided the initial investment to launch the network. The BCN is now funded by the Alberta Innovates Bio Solutions Corporation. Since 2009, a total of \$6.8 million has been invested into the network.
- By applying its broad understanding of the bioindustrial research landscape in biomass conversion technologies and applications, the BCN facilitates partnerships between industry and academic partners that foster innovation and economic development. The BCN model – provision of R&D funding, business development and organization of unique networking events – enables maximum leverage of resources and investments.
- Past and present industry partners include: Syngenta Crop Protection Canada, Sanimax, Imperial Oil through Centre for Oil Sands Innovation (COSI), TerraVerdae BioWorks, P2 Science, Saputo, and others. The BCN has also developed an integrated provincial forestry program in collaboration with Weyerhaeuser, Alberta-Pacific Forest Industries, Daishowa-Marubeni International, West Fraser Timber Co, Millar Western Forest Products, and Alberta Newsprint Company.



THE BCN ADVANTAGE

IDEAL LOCATION. Alberta has a strong economy, highly-skilled and technical labour force, extensive pipeline and industrial infrastructure, world-class research centers, and an abundance of natural resources, biomass and water. These advantages, coupled with increased interest in exploring bioindustrial development opportunities, make Alberta an ideal location for a prosperous and sustainable bioindustry.

MULTIDISCIPLINARY AND INNOVATIVE SCIENCE. Based at the University of Alberta, the BCN strongly advocates multidisciplinary research and collaboration, both within the University of Alberta as well as with other institutions and organizations. The BCN management and research teams include experts from agriculture, forestry, engineering, chemistry, biochemistry, genetics, physics, material science, processing, and food science. Direct access to diverse skill sets and expertise is critical as the industry moves toward integrated biorefineries.

FOCUS ON COMMERCIALIZATION. The BCN focuses on supporting development of commercially viable technologies. Forming strategic partnerships with industry to steer research activities is vital to the network's success. Multiple patents have been filed for novel technologies developed by BCN research projects, which are moving towards commercialization. The BCN itself does not hold any stake in IP; IP policy is developed between partners and research providers directly on a project-by-project basis.

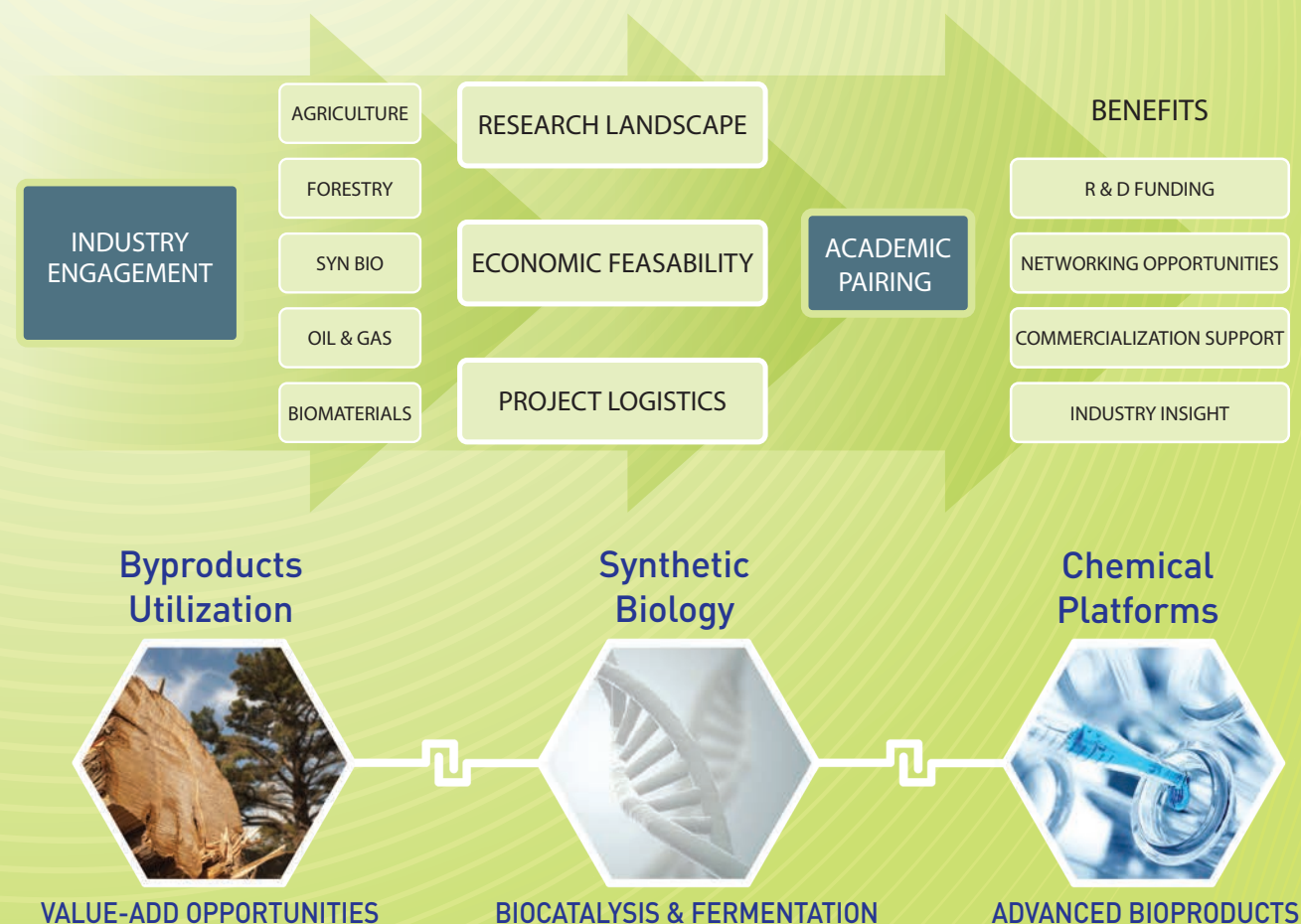
STRONG AND INTERACTIVE PARTNERSHIPS. Industrial and scientific relationships are built on trust with ongoing commitment to open and consistent communication coordinated by the BCN. This interactive approach has proven highly successful and beneficial for all partners.

DIRECT ACCESS TO RESOURCES AND EXPERTISE. As a network, the BCN represents a large pool of expertise and resources in the bioindustrial space. This offers substantial benefits to partners including access to a broad spectrum of academic expertise, a variety of funding agencies, government support groups, and increased ability to leverage financial contributions.



THE BCN MODEL

The BCN supports collaborative bioindustrial R&D efforts that focus on developing innovative biomass conversion technologies. In alignment with the biorefining concept, BCN projects seek to capitalize on value-added opportunities by harvesting under-utilized feedstocks and conventional waste streams for the production of bio-based products such as fuels, platform chemicals, solvents, plastics and polymers. This objective is achieved through the BCN model and the three strategic themes depicted below.



LEADERSHIP

The BCN is led by Executive Director Dr. David Bressler (Department of Agricultural, Food and Nutritional Science, University of Alberta). Dr. Bressler has a multidisciplinary background in biotechnology, analytical and synthetic chemistry, chemical engineering, and industrial microbiology. His multidisciplinary research program focuses on industrial application of chemical, thermal and biological systems for biomass conversion into advanced biofuels, platform chemicals and other value-added commodities. Dr. Bressler has proven success working with industry to develop applied conversion technologies.

Dr. David Bressler is supported by a management team that helps to attract new industrial, academic and government partners into the network, develop and implement new bioindustrial initiatives and facilitate R&D collaborations. In addition, the BCN hosts a variety of extension and networking events and supports the activities of other bioindustrial stakeholders.

The BCN is highly connected to both Alberta's and Canada's R&D communities and has access to a diverse set of expertise ranging from chemistry, biochemistry, physics, material science, processing, food science and engineering (food, chemical and environmental). BCN Principle Investigators include Canada Research Chairs, NSERC Industrial Research Chairs and established scientists as well as young rising stars.



get involved

The BCN is actively seeking academic collaborators and industry partners who share a common interest in shaping the future of biorefining conversions. Please visit our website or contact us to learn more about the network or to discuss opportunities within the BCN.

annual strategic retreat

The BCN hosts an annual strategic meeting each fall. These events bring together academic, industrial and government representatives from the traditionally separate agriculture, forestry, oil and gas and petrochemical sectors. Please visit our website for more information on past and future retreats.

stay up-to-date

Stay connected with the BCN by signing up to receive our newsletter. This informative tool provides updates for upcoming conferences, featured networking events, important industry announcements, and career opportunities. The BCN also connects to our audience via Facebook, Twitter and LinkedIn. Visit our website and find out how to follow us using different social media outlets.



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