

# ABIC 2006

6-9 August

# newsletter



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## Call for Scientific Posters

Scientists and researchers are invited to submit abstracts of their work and prepare posters for display during the ABIC Conference.

The posters are open to any non commercial institutions. The subject of the posters should be in relation to the topics in the program.

\*One prize, a registration to ABIC 2007, will be awarded to the best poster judged by the Chair of ABIC 2006.

### Guidelines

1. Poster Presenters must be registered, fully-paid conference delegates. ABIC Delegate Registration Form (A) must be completed, including the section regarding Poster Presentation, and returned to the Conference Coordinator with full payment. Abstracts will not be accepted without full payment.
2. The number of posters for presentation is limited. Submissions will be considered on a first-come, first-served basis.
3. Abstract content:
  - a. Limited to one, letter-size page, 8 1/2 inches x 11 inches (21.5 cm x 28 cm).
  - b. Title should be bold, Times New Roman, font size 16, at the top of the page followed by the Presenter (s) name (s) underlined in the list of authors.
  - c. Presenter(s) contact details, including Affiliation(s), should follow the title.
  - d. A blank line should be inserted after the contact details, followed by the abstract.
  - e. Text is to be typed — single line spacing with Times New Roman font size of 12 and should not exceed 300 words.
4. Poster content should include:
  - a. Title, author(s) name(s) and their affiliation(s). Letters should be in letters not less than 1 inch (2.54 cm) high and preferably 2 inches (5 cm) high.

- b. Introduction, materials and methods, results, and discussion. Presenters should select a font and letter size to allow viewers to read the poster from a distance of 4 feet (1.2 meters) or more. (Note: A matte finish on the posters provides better visibility as it reduces glare).
- c. Posters will be on display during the conference and should carry your message without requiring any additional comment.
- d. Material presented must be based on the abstract previously submitted and should be novel, not previously published material.
5. Each associated poster presentation must measure 1 metre x 1 metre. Each poster will be mounted vertically and will occupy one-half of one side of a freestanding, poster display board. The poster board will accommodate pushpins and will be Velcro-receptive. Presenters will be responsible for supplying their own Velcro or pushpins for hanging their posters.
6. Posters will be displayed in a secured area during non-conference hours.
7. Set-up is to be completed by **4:00pm on Sunday 6 August 2006**. Details regarding poster location and removal time will be announced at a later date. All posters must be removed following the conference. Posters remaining on site will not be retained or returned.
8. Poster Presenters are expected to be present at their posters between 5:00pm and 7:30pm on Sunday 6 August 2006.
9. \*Details pertaining to judging criteria will be announced at a later time.

Registration forms and abstracts MUST be submitted no later than Friday 21 July 2006.

All Submissions to be sent to:  
ABIC 2006 Conference Managers  
(61) 2 9265 0700

or email [abic2006@tourhosts.com.au](mailto:abic2006@tourhosts.com.au)

**For more information on ABIC 2006 please visit the official website [www.abic2006.org](http://www.abic2006.org)**

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## Register now!

...to be a part of the Agricultural Biotechnology International Conference (ABIC)  
6-9 August 2006 Melbourne, Australia

**Register at [www.abic2006.org](http://www.abic2006.org) for more information on the program, sessions, speakers, local tours & bookings.**

## In focus – Agbiotech in Saskatchewan & Manitoba

The Canadian provinces of Saskatchewan and Manitoba will be well represented at ABIC as part of a large contingent — “Team Canada”. Senior government ministers from Saskatchewan and Manitoba will lead trade delegations to Melbourne as well as representatives from Saskatchewan Trade and Export Partnership (STEP).

Here we take a closer look at agbiotech in the provinces of Saskatchewan and Manitoba. Nearly half (47%) of all Canadian biotechnology companies have a substantial agbio presence primarily in these provinces.

### Ag biotech alive and well in Saskatchewan

When it was established 100 years ago, the province of Saskatchewan was one of Canada’s wide-open frontiers, and in 2006 it’s still wide-open—but now the frontiers are in agricultural biotechnology and innovation.

Saskatchewan’s researchers and scientists today are testing the limits of understanding and knowledge, making brilliant discoveries. A century-old tradition of prairie know-how is now translating bright ideas into successful products and technologies on a global scale.



This province is home to nationally and internationally recognized research facilities and institutes, and is working in partnerships through Ag-West Bio to reach out to companies around the world. For example, the Vaccine and Infectious Disease Organization (VIDO) is working with researchers in Germany, South Korea, and Australia. This type of collaboration with the international science community is essential, and ABIC provides a vital forum for people in the ag biotech industry to exchange ideas.

### Life Sciences: The power to transform

Saskatchewan researchers are using bio-based science to grow hardier and more productive crops, understand how infectious diseases work, and develop cleaner sources of energy like fuel from grains and forest waste. According to a KPMG study, in terms of business costs the province ranked first in Midwest North America for R&D in biomedical, clinical trials, and pharmaceutical manufacturing.

There are requirements for all of this to happen. Nothing can take place without a strong network of university, government, and private enterprise to build a biotech centre of excellence—and Saskatchewan has all three. Canada’s largest science project in 30 years, the Canadian Light Source synchrotron, was built thanks to these unprecedented levels of partnership. It is now one of the most powerful research tools in North America and promises to be a catalyst for breakthroughs in medicine and biotechnology.

### Ag Biotech: Setting the Pace

Saskatchewan is Canada’s fastest growing ag biotech centre, home to 30 per cent of Canadian research. The results speak for themselves. For example, Saskatchewan researchers have created the world’s first genetically modified commercial canola variety and the world’s first genetically engineered animal vaccine.

### Agri-value: Diversified expansion

One of the fastest growing segments of the global agriculture industry is food products. Saskatchewan’s \$2-billion a year industry includes more than 250 processors and more than 7,000 employees with an annual payroll of about \$227 million.

However, increased demand for food isn’t the sole driver behind growth in agri-value. Crops for non-food uses are contributing as well. With 44 per cent of Canada’s cultivated farmland—50 million acres—Saskatchewan is perfectly positioned to supply crops for bio-fuels, green construction materials and other environmentally friendly products. →

## →Opportunities: The Saskatchewan edge

The technology has changed, but Saskatchewan is just as rich in potential now as it was a century ago. Co-operation and innovation are a Saskatchewan tradition and there's room for everyone as the province and its people expand and build on its strengths.

These strengths are coupled with the province's tax structure, which features the lowest corporate income tax rate in Western Canada for manufacturers and processors. There is a 15 per cent provincial tax credit for scientific research and development expenditures, and a 7 per cent provincial tax credit on equipment purchased for manufacturing and processing. As well, 100 per cent of eligible R&D expenses can be used against net income for the purpose of calculating federal tax credits.

For more information on these and other subjects related to agricultural biotechnology developments and prospects in Saskatchewan, contact Ag-West Bio at [agwest@agwest.sk.ca](mailto:agwest@agwest.sk.ca), or visit them online at [www.agwest.sk.ca](http://www.agwest.sk.ca). We also invite you to visit the booth at ABIC 2006 to discover science and technology solutions.

## Sustainable Agriculture in Manitoba.

Advances in sustainable agriculture will be the keys to farming in the 21st century, as long-term solutions are needed to face economic and environmental challenges.

Developing sustainable agricultural resources and energy systems are among the goals of the National Centre for Livestock and the Environment (NCLE) in Manitoba.

"The NCLE is the only research facility where scientists will be able to study ecological interactions associated with agriculture practices in a total crop and animal production system," says lead scientist Karin Wittenberg, animal science. "There's nothing like it in North America."

This unique facility involves animal scientists, food scientists, plant scientists, soil scientists, microbiologists, biosystems engineers and agricultural economists, along with federal and private partners. Livestock production can be examined from every angle to develop the most productive, humane, sustainable and environmentally friendly production practices. Researchers can also conduct assessments of everything from manure additives to alternative energy sources.

For example, Richard Sparling, microbiology, is examining the biosynthetic processes that allow



certain bacteria to produce methane — a potential fuel — as an end product.

University researchers are also working with the Manitoba Zero Tillage Research Association (MZTRA) to investigate sustainable crop systems. The MZTRA operates a non-profit, producer-directed research farm that conducts zero tillage-related research and demonstration activities, like the long-term crop rotation study being conducted by Martin Entz, plant science. Current research projects also include a whole-farm analysis of energy, examinations of the inputs and economics of cropping systems, soil and environmental assessments, and studies on greenhouse gas emission and carbon sequestration measurements taken at various landscape positions.

A third aspect of sustainable agriculture focuses on post-harvest technology and preservation. Digvir Jayas, biosystems engineering, and Canada Research Chair in Stored-Grain Ecosystems, notes: "Sustainable agriculture will feed our increasing world population with minimal negative impact on soil, water or air quality. Preserving this food effectively will also significantly reduce the negative impact on the environment because less food will have to be produced, reducing the area of cultivated land required and needing less fertilizer, water and fuel." ■



## Speaker biographical

### Dr. Ganesh Kishore

Ganesh "Kish" Kishore, Vice President, Science and Technology and Chief Biotechnology Officer, joined DuPont in June 2002 after an exciting twenty year research and executive management career at Monsanto Company and an 18 month stint as a Venture Capitalist/Advisor and entrepreneur. Prior to his association with Monsanto Company, Kish received a PhD in biochemistry at the Indian Institute of Science and postdoctoral training in microbiology and Chemistry at The University of Texas at Austin.

Kish has made several significant contributions to the field of biotechnology and nutrition. In his early days at Monsanto, he developed manufacturing processes for the manufacture of Aspartame, the sweetener ingredient in Nutrasweet and Equal. Subsequently, he led the research effort on Roundup Ready technology, the most successful plant biotech trait commercialized thus far. He was awarded the Queeny Award by the Monsanto Company for his contributions to this program.

Kish was one of the major architects of the biotechnology programs at Monsanto, leading the R&D efforts across a wide range of disciplines. Currently, at DuPont, Kish is leading the efforts to build a broad biotechnology platform to help transition the chemical company to a biotech and chemical company.

Kish is co-founder of Metahelix Life Sciences Pvt. Ltd in India and Mogene LC, in St. Louis. He serves on the advisory and governing boards of venture capital groups, educational institutions and biotech boutiques.

His personal mission is to increase agricultural productivity, sustainability and reliability and promote the development of diet and nutrient based systems for managing human health. ■

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## Session synopsis

**Tuesday 8th August 2006, 4:00pm – 5:30pm**

### Battling the Elements and the Invaders.

Abiotic stresses such as extreme temperatures, low water availability, high salt and mineral deficiencies or toxicities severely diminish productivity of crops, particularly in Australia's severe agricultural environment. They are also increasingly important globally because of the declining availability of good quality water, land degradation and community pressures to move away from chemical intervention in agriculture.

Interconnected signal transduction pathways that lead to multiple responses to abiotic stresses have been difficult to study using traditional approaches because of their complexity and the large number of genes and gene products involved in the various defensive and developmental responses of the plant.

However, techniques of genetic mapping and improvements in screening techniques have resulting in major advances in strategies for breeding for stress tolerant crops. Emerging functional genomics technologies now allow a "systems" approach to be taken to abiotic stress responses through which networks of stress perception, signal transduction and defensive responses can be examined from gene transcription, through protein complements of cells, to the metabolite profiles of stressed tissues.

These approaches are revealing novel targets for selection, screening and engineering abiotic stress tolerance.

### Speakers

**Dr. Manny Delhaize** (CSIRO Plant Industries, Australia)

**Dr. Matthias Wissuwa** (International Rice Research Institute, Philippines)

**Dr. Donald King** (UK Department for the Environment, Food and Rural Affairs (DEFRA))