

THE BUZZ



News about the Ontario Ministry of Agriculture, Food and Rural Affairs – University of Guelph Partnership

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IN THE NEWS

Welcome Readers!

Each issue of The Buzz aims to showcase a diverse cross-section of Partnership research and innovation and highlight upcoming Partnership-related events.

RESEARCH and INNOVATION

Green materials for greener cars



School of Engineering Prof. Manju Misra and Plant Agriculture Prof. Amar Mohanty have created hard plastic and foam auto parts composed of up to 20 to 30 per cent soy. These soy-based compounds can be used to create components and levers for car seats, interior panels and storage compartments. Given unpredictable, ever-fluctuating oil prices, soy oil and fibre can act as an economically sound and environmentally friendly alternative for the auto industry. "Soybeans are a cheaper,

more sustainable source of industrial material, and it takes significantly less energy to turn them into useable parts," says Misra. "Applying this resource to the automotive market will open doors for producers." Ontario soybean producers have a natural competitive advantage since their crop is produced in the heart of the Canadian manufacturing country. Researchers have found that using soy stalk fibre as reinforcement is further increasing the total amount of soy components in the final biocomposite plastic to as high as 70 per cent. Funding for this research is provided by the OMAFRA-U of G Partnership, the OMAFRA-U of G Bioeconomy Project, the Grain Farmers of Ontario, and the Manitoba Pulse Growers Association.

Avian influenza viruses and vaccinations

Avian influenza is an infection caused by avian influenza A viruses. While these viruses occur naturally among birds, avian influenza is very contagious and can make domesticated bird species like chickens, ducks, and turkeys sick. Because of its high mortality rate, avian influenza A poses a significant risk to the viability of the poultry industry in Canada and worldwide. Currently, there is a shortage of effective methods for containing the virus in chickens. Professor Shayan Sharif, Dept. of Pathobiology (OVC), is

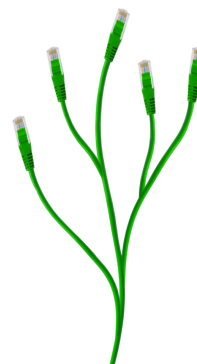
working on developing a new vaccine platform. This platform will make use of a novel and inactive form of the virus that will stimulate both antibody and cell-mediated immune responses, thereby conferring greater virus immunity on chickens. Ultimately, Sharif hopes that his vaccine formulation will provide a safe and effective method for control of this virus in poultry flocks, hence reducing the risk of transmission to humans. "Introducing vaccination as an efficacious and cost-effective strategy will enhance consumer confidence in Ontario poultry products," says Sharif. "We expect that at the end of this project, we will have obtained results that will improve food safety in Ontario."



AGRI-FOOD AND RURAL LINK

The OMAFRA-U of G Partnership has grown on the net

The OMAFRA-U of G Partnership launched a new interactive and innovative website to showcase Partnership programs. The new website has been redesigned to make learning about partnership research and research results easier. Interactive and innovative tools like social media, a news feed, an events calendar, videos, and clear language summaries have been integrated into the website. One of the most exciting aspects is the [Research Link](#), which provides real time access to Partnership research and results. Information from the early 1990s to present day can be found through the Research Link. "I invite you to read more about the exciting work we have accomplished in this website," said Rich Moccia, AVP Research (Strategic Partnerships). "The information showcases what we have already done and highlights the capacity of what the Partnership will help us achieve next."



Field Crop News at your fingertips



As part of a Partnership-funded Knowledge Transfer and Translation (KTT) initiative, OMAFRA's Mike Cowbrough and U of G's Prof. Francois Tardif developed a website that acts as both an archive and information portal. This new website (www.fieldcropnews.com) was designed to allow field crop farmers better, faster access to accurate data crucial for crop management. It features informative

articles on a range of diverse topics ("[When is it Time to Retire Your Red Clover Crop?](#)", "[Forage Report](#)", "[Taking that Fall Cutting of Alfalfa?](#)"), all of which are updated frequently. Cowbrough and Tardif note that their website is the home of the best applied information for field crop production in Ontario. The weekly crop reports featured on the website reach more than 30,000 Ontarians, while the use of social media to push website content has more than tripled traffic to the website. Currently, Cowbrough and Tardiff are developing an application for Android and Blackberry that they hope will further increase website usage.

OMAFRA-U of G Partnership research videos

Did you know that Agri-Food and Rural Link has a [YouTube Channel](#)? Agri-Food and Rural Link supports the production of videos based on Partnership research. The new [OMAFRA-U](#)

[of G Partnership Knowledge Translation and Transfer website](#) features videos from Research and KTT, the Research Magazine, and News@ (close to) Noon. Click [here](#) to browse the entire video collection on the website, which are formatted for viewing by OMAFRA users. All of the videos were produced by [SPARK](#) students at the U of G, and are a cost-effective means of providing a high quality communications product.

CATALYST CENTRE (BUSINESS DEVELOPMENT)

New Agreement Promises to Advance Ontario Bioproducts Economy

The University of Guelph's Catalyst Centre is happy to report a new license agreement with emerging Ontario bioproducts company WhiteCloud Innovations Inc. The license relates to intellectual property developed at the University's Bioproducts Discovery and Development Centre useful for the production of polymer resins that incorporate lignin, a common co-product of cellulosic ethanol production. "WhiteCloud is honoured to be working with such a progressive university as Guelph, under the esteemed guidance of Drs. Amar Mohanty and Manju Misra. We are firmly entrenched in the world composite market and applications within several industries that are of game changing magnitude", said WhiteCloud CEO Catherine Tredway. "The Catalyst Centre is thrilled to work with such a committed and entrepreneurial Ontario company", said Erin Skimson, Catalyst Centre's Director. The research that led to the development of the intellectual property was funded in part by OMAFRA.



STRATEGIC INITIATIVES

Animal Health Strategic Investment (AHSI) wraps up

The \$7.5 million Animal Health Strategic Investment (AHSI) initiative is now in its 5th and final year. It has supported over 50 research projects in emergency preparedness, baseline disease surveillance and animal health testing. The AHSI wrap-up event, hosted by the Animal Health Laboratory (AHL) through its partnership with OMAFRA, celebrated the OMAFRA-AHL Investment Fund. OMAFRA Acting Deputy Minister Karen Chan delivered the opening speech at the event, followed by other presentations from OMAFRA staff, AHSI project leads and Ontario Veterinary College personnel. The AHSI wrap-up event took place at the Holiday Inn Conference Centre in Guelph (601 Scottsdale Drive) on November 8th from 8am-4pm.



RESEARCH STATIONS

Ontario Pork visits U of G's Arkell Swine Research Station

Located just 10 minutes away from U of G's main campus is a fully functioning Yorkshire hog operation within the U of G Arkell Swine Research Station. In addition to the Partnership and the University, another significant stakeholder in Arkell Swine Research Station's continuing research operation is Ontario Pork. Representing some 1700 pork producers who market hogs in Ontario, Ontario Pork also acts as the official spokes-group for Ontario's pork industry. Recently, Ontario Pork board members and staff paid a visit to the Arkell Swine Research Station. The visit aimed to strengthen ties between the university's research station and an important industry partner.

Prof. Bob Friendship, U of G Department of Population Medicine and Swine Coordinator for Arkell Swine Research Station, was hopeful about a strengthening collaboration. "We've [traditionally] had very good relations with Ontario Pork. They're a very important funding partner. They need to know who the players at U of G are and we need to know who the players at Ontario Pork are as well, so it was a very positive thing for them to come and look at the facility". John de Bruyn, board member of Ontario Pork, was equally enthusiastic about the visit, writing that thanks to his visit to Arkell, he now has a better understanding of how swine research is done in Ontario and why it is important to Ontario's economy. "Leading edge research will continue to be an important part of what makes Ontario a great place to produce pork".



AGRICULTURE & FOOD LABORATORY

DNA fingerprinting and beyond

The Agriculture and Food Laboratory (AFL) is taking their expertise in molecular techniques to new levels in the quest to advance food safety. The present status of the taxonomy of microbial species in Bergey's Manual of Systematic Bacteriology (2nd ed) is mainly based on comparative genetic analysis of the nucleotide sequences of the small subunit ribosomal RNA that is contained in all microorganisms. DNA sequence analysis is widely considered to be the best genotypic method for microbial species identification.

The AFL conducts routine identification of "unknown" samples (bacteria, yeasts and fungi) using DNA from the microorganisms, provides analysis of microbial population profiling in a complex sample, identifying a high percentage of species in samples by deep sequencing of targeted genomic regions of microorganisms. The ability to see as many sequence regions as possible in an organism improves the ability to compare strains of bacteria to each other. This is essential in identifying the source of food borne outbreaks as well as the historical path of organisms within a food processing environment.

STAFF AND STUDENT NEWS

Owen Roberts and Rich Moccia honoured for 25 years of service

Owen Roberts, Director, Research Communications and Rich Moccia, Associate Vice-President, Research (Strategic Partnerships) were honoured at the 10th Annual Community Breakfast for 25 years of service at the University of Guelph. Both Roberts and Moccia have played crucial roles in the OMAFRA-U of G Partnership's success thus far.

Highly Qualified Personnel scholar Scott Cieslar strengthens industry connections

A Ph.D. candidate in the Department of Animal and Poultry Sciences at the University of Guelph, Scott Cieslar is discovering how feeding a selenium-enriched diet to dairy cows improves the health of both the cows and the humans who consume their milk. During his work, Cieslar developed close ties with Alltech Canada's Guelph Office as a main supplier of selenium. As a recipient of a Partnership-supported Highly Qualified Personnel (HQP) grant, Cieslar was encouraged to work closely with industry. The benefits of this relationship - and the HQP program - are realized by both students and industry partners. Thanks to Alltech's work with Cieslar, the company saw the value of hiring someone with advanced education locally, and now employs a U of G Ph.D. in their Guelph office. As he nears the final semester of his Ph.D. work, Cieslar realizes that, thanks to his experience with the HQP program, he may have a leg up on the competition when it comes time to

find a job. "The exposure to companies and industry that HQP students get is great," says Cieslar.

Amanda Mansz, OVC alumna, expands her skill set

When Amanda Mansz graduated as a Doctor of Veterinary Medicine (DVM) in 2008 from the Ontario Veterinary College, she was certain she wanted to be a clinical veterinarian. However, she decided to return to the OVC where she began her Anatomic Pathology Residency in 2011. Currently in her 4th semester of this 9 semester program, Mansz's studies will lead her to a Doctor of Veterinary Sciences (DVSc) degree. The DVSc is a unique post-professional degree that provides advanced discipline training and research at the doctoral level. The normal basis for admission to DVSc studies is a DVM or equivalent degree. The program itself is a mixture of course and investigational work on an applied problem combined with advanced discipline training.

As a DVSc student, Dr. Mansz's duties include working in post mortem performing autopsies, biopsy screening, taking classes, and conducting research around Johne's Disease. Her research aims to discover why some calves infected with the microbacteria that cause Johne's, a chronic wasting disease in cattle, can clear the infection while others become ill. One of the things that Mansz is most positive about is the overlap between the veterinary teaching hospital and the OMAFRA-U of G Partnership-supported Animal Health Laboratory. "The cool thing about the veterinary teaching hospital and the Animal Health Laboratory," she says, "is that we use the same facilities. Our gross pathology rounds are done as a group - the AHL shows their interesting cases and we [veterinary teaching hospital] can show ours at the same time, so we can learn from each other." Mansz's research and tenure at the veterinary teaching hospital are supported by the Veterinary Clinical Education Program (VCEP), which supports the U of G and the Ontario Veterinary College (OVC) as a leader in the public health field.

COMING EVENTS

- Emergency Management Research Highlights and Expo will take place at the OMAFRA Conference Centre at 1 Stone Road on December 7, 2012, 9:30am-3pm. Contact Bronwynne Wilton for more information at bwilton@uoguelph.ca
- High Density Apple Orchards: Adoption of New Horticultural Techniques and Cultivars will take place at the Simcoe Research Station, University of Guelph on December 12th from 8:30 to 4:30pm. For more information, click [here](#).
- Environmental Sustainability Research Highlights and Expo will take place on January 24, 2013. Please save the date and watch for more information to be released shortly. Contact Bronwynne Wilton for more information at bwilton@uoguelph.ca.

Look for the next issue of The Buzz in December 2012!

About The Buzz

The Buzz is the electronic community news vehicle for the OMAFRA-University of Guelph Partnership. Click [here](#) to view previous issues of the Buzz.

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Find out more about the OMAFRA-U of G Partnership at:

http://uoguelph.ca/omafra_partnership

<http://www.omafra.gov.on.ca/english/about/uofg/>

