

MaRS Landing showcases Ontario innovators at anniversary event

RED WINE, dark chocolate and fruit don't just taste great – they're heart-healthy too. These were just some of the food-health links highlighted at an educational networking reception held February 13, 2007, to celebrate MaRS Landing's one-year anniversary of setting-up shop at MaRS, Toronto.

"We've got our feet on the ground in Toronto, which complements our office in Guelph," says Dr. John Kelly, MaRS Landing Executive Director.

"We particularly look forward to enhancing the partnership development of the agriculture and food and health sectors."

The event was themed "Gifts from the heart, for the heart" to recognize the link between Valentine's Day-cuisine and science-based health benefits. More than 100 attendees spent time at the event sampling products exhibited by MaRS Landing affiliates including Dairy Farmers of Ontario, Vinifera for Life, Château des Charmes, Persall Naturals, Ontario Fruit and Vegetable Growers Association, Touché Bakery, Fractec and Cargill Cocoa and Chocolate. Experts such as Dr. Rong Cao of

Heart-healthy wine, chocolate and other Valentine's Day food innovations helped mark one-year reception

Mark Walpole (left) of Vinifera for Life discusses how he's incorporated grape skins as an ingredient in breads to make use of their antioxidant properties, with Ginty Jocius (right) of GJA Communications, medical reporter Ed Ungar (centre) and other attendees at the MaRS Landing one-year anniversary.

Agriculture and Agri-Food Canada, Drs. Alison Duncan and Terry Graham of the University of Guelph, Lois Ferguson of Malibu Consulting International, Murray Porteous of the Agricultural Research Institute of Ontario and John Urbanski of Cargill Foods Company were on hand to explain the antioxidant properties and protective health factors of food and wine.

"The greatest benefit of our Toronto office location in the MaRS Centre is the proximity to stakeholders and being able to bring agriculture to the convergence centre," says Michelle Schurter, MaRS Landing



Development Director. "This continues to enable us to connect rural entrepreneurs and agri-food researchers with key players and activities in life sciences and investment."

"Without the help of MaRS Landing, we would never have made the connections in the Discovery District that we did," says Mark Walpole, Vinifera for Life Director of Operations.

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ALL STORIES
BY KAYLA
DUFFIELD
AND KIM
WALDERBOS

Flocking to animals' defense



Pathobiologist Shayan Sharif of Guelph is studying how feeding probiotics to chickens may reduce *Salmonella* infections and mean a safer food product for consumers.

Guelph researcher finds poultry immunity increases with probiotics

INCORPORATING BENEFICIAL bacteria called probiotics into chicken diets may decrease *Salmonella* infections, says a University of Guelph researcher.

Prof. Shayan Sharif of the Department of Pathobiology is studying the effects of probiotics on *Salmonella* colonization in the chicken gut. He says decreasing *Salmonella* prevalence in the gut will also reduce the contamination risk further down the production chain, including in the consumer product.

“Probiotics can benefit both

the consumer and the animal by decreasing bad bacteria that cause disease,” says Sharif.

The study is developing a better understanding of how probiotics control *Salmonella*, and quantifying the effect of probiotics on *Salmonella* reduction in the intestines of chickens, where bacteria usually reside. Sharif is also looking at how probiotics may create a heightened immune response in poultry, enabling them to fight off disease.

Ultimately, having a chicken product with reduced potential for *Salmonella* contamination on the market could lead to fewer incidences of food-related illness in consumers.

“With probiotics the consumer gets a safer product and the animal gets an improved immune system,” says Sharif.

Animal feed supplements containing probiotics are currently available for purchase in Canada, but Sharif says they cannot be labelled with any health claims. This means that while his research is finding probiotics may decrease *Salmonella* infections in the chicken gut, incorporating such a claim on feed products would first require approval by the Canadian Food Inspection Agency.

● Also involved in this research is Dr. Jim Chambers of Agriculture and Agri-Food Canada.

● This research is funded by the Poultry Industry Council, the Ontario Ministry of Agriculture, Food and Rural Affairs, the Saskatchewan Chicken Industry Research and Development Fund, and the Natural Sciences and Engineering Research Council of Canada.

Probing p

PROBIOTICS ARE slowly being introduced into food products and gaining a reputation for their health-enhancing potential. A University of Western Ontario researcher has been involved with their progress, and says the anti-infective and anti-inflammatory properties of probiotic products could make them an alternative to antibiotics for managing some conditions.

Prof. Gregor Reid, Department of Microbiology, Immunology and Surgery, says probiotics could be beneficial in every consumer's diet. He has shown that certain probiotics improve the urinary and reproductive (urogenital) tract health of women.

“The potential is huge,” says Reid. “Probiotics could be looked at as a way to restore and maintain health, and avert or better manage many human health problems.”

Reid and his colleagues at the Lawson Health Research Institute in London, ON, are studying the mechanics behind probiotic bacteria and how they affect the human host. He's finding these “good” bacteria can have a two-fold impact. First, they help the body to maintain good health by regulating the immune system and keeping the internal organisms in balance.

Second, they can ward off and even treat some illnesses. Reid says in one study probiotics were found to improve the effect of antibiotics, and in another study probiotics were better than antibiotics at curing vaginal infections, without the side effects of antibiotics which of course

Probiotics' potential

Researcher finds good bacteria can offer health benefits

kill all bacteria – good and bad.

To be termed probiotic, the United Nations and World Health Organization guidelines state products containing beneficial bacteria must be clinically tested and proven to be advantageous. Canada has not implemented these guidelines and as a result, many products on the market claiming to be probiotic, have no clinical proof of their claims.

Fortunately, consuming these unproven products poses little to no danger, says Reid, because probiotics are non-toxic organisms. But consumers can't be guaranteed any benefits unless the product has been shown to be effective.

Reid says probiotics should be consumed in moderation.

“Activia, Canada's only probiotic dairy product with proven clinical documentation, is excellent for regu-

larity,” says Reid, “but as with any product, you shouldn't overdo it.”

While Reid is a world leader in women's health and probiotics studies, Canada as a whole lags behind in probiotic work. Reid says research is primarily focused on products that kill bacteria, such as antibiotics. But with the huge opportunity in this research area, Reid says more young scientists should be encouraged to enter the field.

He's doing his part. Reid is president of the International Scientific Association for Probiotics and Prebiotics, an organization that promotes credible probiotic science. He also co-ordinates the London District Sanofi-Aventis Biotech Challenge, which encourages high school students to be the scientists of the future.

● *His research is funded by the Natural Sciences and Engineering Research Council of Canada and the Ontario Ministry of Agriculture, Food and Rural Affairs.*



John Kelly (left), MaRS Landing, along with Dr. Alastair Glass, Deputy Minister of Research and Innovation, and his wife Jan, sample the dark chocolate fountain at the MaRS Landing anniversary event at MaRS.

One year at MaRS

● CONTINUED FROM FRONT COVER

MaRS Landing's arrival at MaRS in the Discovery District has had a positive impact.

“MaRS Landing has brought a significant agri-food presence into the Discovery District, providing better communication and connections between agri-food and health science and innovation,” says Ross Wallace, Director of Corporate Strategies for MaRS.

MaRS Landing will continue to be the gateway for agri-food researchers and rural entrepreneurs into the Discovery District. They have fostered linkages to Toronto-based groups such as the Ontario Genomics Institute, The Centre for Applied Genomics, University of Toronto's Program for Food Safety, Nutrition, and Regulatory Affairs and the Ministry of Health Promotion, which help MaRS Landing connect agri-food resources and researchers across the province. These links, and others, will position MaRS Landing as the agriculture and food hub in Toronto.

Food products such as yogurt are being enhanced with probiotics to improve consumer health.



EVENTS

London Swine Conference
 April 3-4, 2007
 London Convention Centre,
 London
 → John Bancroft,
 Conference Chair
 t 519-482-3333
 e info@londonwine
 conference.ca
 w londonwineconference.ca

**Growing the Margins:
 Energy Conservation and
 Generation for Farms and
 Food Processors**
 April 11-13, 2007
 London Convention Centre,
 London
 → John McMullen
 t 416-426-7029
 e coordinator@gtmconf.ca
 w gtmconf.ca

**The Good Food Festival and
 Market**
 April 27-29, 2007
 International Centre,
 Mississauga
 → Lois Ferguson, Co-Chair
 t 1-800-265-3673
 e loisferguson@bellnet.ca
 w goodfoodfestival.net

**Canadian Micronutrient
 Conference**
 May 4, 2007
 Canadian College of
 Naturopathic Medicine,
 Toronto
 → Bob Bonisteel
 t 613-692-0296
 e bbonisteel@rogers.com
 w canadianmicronutrient
 conference.com

**BIO 2007 Annual
 International Convention**
 May 6-9, 2007
 Boston, MA
 t 202-962-6655
 e reg2007@bio.org
 w bio2007.org

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PROFILE

Fighting back against obesity

THE OBESITY epidemic is growing, and one Canada Research Chair says we must address this problem before it gets out of hand.

Obesity is much easier to prevent than reverse, says Prof. Arya Sharma, Canada Research Chair in Cardiovascular Obesity Research and Management at McMaster University. He says if it's not prevented, for many patients medical treatment or surgery may become the only solution.

"Consumers must avoid getting to a point where lifestyle changes will no longer prevent the problem," says Sharma.

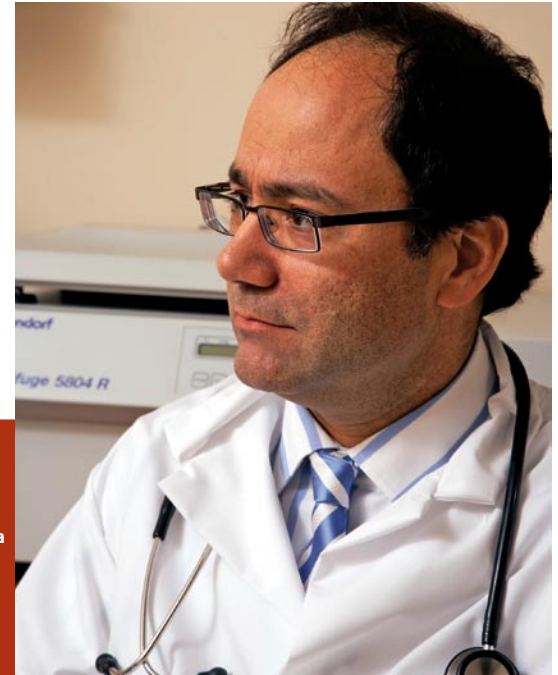
Sharma, scientific director of the Canadian Obesity Network, is studying the links between obesity, hypertension and cardiovascular disease, with hopes of better understanding why people gain weight and how this leads to

cardiometabolic complications. He says increased physical activity, as well as addressing issues around eating, is the first step in preventing obesity. Being more active, eating a good breakfast and taking time to eat without feeling rushed or stressed is a good recipe for preventing weight gain.

Once established, obesity becomes a chronic disease and should be treated accordingly, says Sharma. Commercial weight loss programs are sometimes used by overweight persons, but these programs don't always address obesity as a chronic problem and instead give temporary results.

Sharma says the food industry needs to start producing and promoting products that taste good and are healthy, while building consumer education and decreasing the promotion of unhealthy products.

"Industry must educate consumers not just of the



RIDGEWAY PHOTOGRAPHERS

Preventing obesity is much easier than reversing it, says Prof. Arya Sharma of McMaster University, scientific director of the Canadian Obesity Network.

benefits of eating healthier," says Sharma, "but also of potential risks of unhealthy choices."

Until 2002, Sharma was a Professor of Medicine in the Department of Nephrology and Hypertension at the Franz-Volhard-Klinik-Charité in Berlin, Germany. During his time in Berlin he was in charge of a hypertension and obesity clinic. He has post-doctoral degrees in internal medicine and nephrology.

Sharma has lectured on and written more than 200 scientific journal articles related to obesity and hypertension. His primary interest is to inform his audiences of the connections between excess body weight and ill health.

● Sharma's research is funded by the Canadian Institutes of Health Research, the Heart and Stroke Foundation of Canada, the Networks of Centers of Excellence Program and various industry partners.

LINDO design

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Canada

Ontario