

# Bringing Research to LIFE

## In Brief

### Chen- To Tai Award for Shafai

Lotfollah Shafai, Canada Research Chair in Applied Electromagnetics and professor of electrical and computer engineering in the Faculty of Engineering, was awarded the 2008 Chen-To Tai Distinguished Educator Award by the Institute of Electrical and Electronics Engineers, Antennas and Propagation Society.

The Distinguished Educator Award is awarded annually to an individual for outstanding service to education in the field of antennas and propagation. Shafai is considered one of the world's most innovative and outstanding antenna researchers and is Canada's leading expert in the field of applied electromagnetic and radiating systems. Shafai and his team in the Applied Electromagnetics Laboratory are credited with the development of compact antennas used today in wireless and satellite communications, remote sensing, telemedicine, smart vehicles and navigation systems.

Shafai shares his expertise with students in the lab and has mentored many students along to become entrepreneurs. Companies started by his students include Broadband Network Inc., Spectraworks, NTG Clarity Network Inc. to name a few. Shafai's legacy is his students.

## Upcoming

### Workshop:

#### New Faculty Orientation Animal Care and Use Workshop

Thursday, August 3, 2009

12:00 PM - 1:00 PM

Room 210

Basic Medical Science Building

Bannatyne Campus

and

Friday, August 4, 2009

12:00 PM - 1:00 PM

Room 210

Helen Glass Centre

Fort Garry Campus

## The impacts of Chronic Wasting Disease

BY JANINE HARASYMCHUK

Stéphane McLachlan, associate professor, environment and geography, is leading a first-of-its-kind study into how people are affected by chronic wasting disease (CWD), a highly-contagious, environmentally-transmitted prion disease found in wild animals, particularly moose, deer and elk in Alberta and Saskatchewan.

Prion diseases are fatal and infectious diseases in humans and animals associated with a "sponge-like" degeneration of brain tissue. The best known example of the disease is BSE, which can spread from animals to humans. CWD has not been shown to transmit from animals to humans. However, the World Health Organization recommends that no one knowingly consume any food containing CWD.

"Regardless, CWD has serious socioeconomic implications for hunters, for those in the tourism and nature industries, and especially for Aboriginal communities," said McLachlan.

This multidisciplinary project involves social scientists, wildlife biologists, and veterinarians from the Universities of Manitoba and Calgary, and will work in close partnership with Aboriginal communities. The team will study the biological, socioeconomic, and cultural implications of CWD. It will also address communication gaps among communities, experts, and other stakeholders that may have significant implications for human and environmental health.

McLachlan says the impetus for the research project came out of a decade-long relationship with Aboriginal communities in central Alberta and their concerns about wildlife health. "It's key to have the Aboriginal communities centrally involved in the process. We



Submitted Photo

Stéphane McLachlan, associate professor, Environmental Conservation Laboratory, in the field.

all want a better understanding of what is happening and the implications for the communities as well as for other stakeholders. Yet, it is also important that these communities aren't alienated from their livelihoods by any risks. Part of that approach is coming up with proactive ways of addressing the issues."

The long term trust-based relationship that exists between McLachlan and his team and the Aboriginal communities has snowballed from one community to now include upwards of twelve communities in Alberta and Saskatchewan.

"In a holistic sense, the research is focused on examining why and how this decline in moose and deer health is happening, the implications for the communities, and how they are adapting," said McLachlan. "The role that CWD plays in this larger decline will be explored in this study, which is beginning and ending with the community interests."

One novel approach on the project involves the use of participatory video. Community members will voice their concerns and issues, and this footage

will be compiled along with photos that Aboriginal youth in the communities will be providing. The youth will be hired as part of the research project to document hunters in their daily life. It is hoped that involving youth in the community will help affirm the positive relationships with the environments and traditions that already are in place.

An important aspect of this research is the inclusive and community-driven approach it takes to doing environmental research. The methods and approaches taken represent a case study for community involvement around wildlife health that can be applied around the world.

The \$400,000 research project is funded by PrioNet Canada, one of Canada's Networks of Centres of Excellence, which works to develop strategies to solve the food, health safety, and socioeconomic problems associated with prion diseases. The project also has an additional \$133,000 funding from the Alberta Prion Research Institute, established in 2005 to support research on prion and other protein misfolding diseases.

## New frontiers in research

The University of Manitoba was awarded \$3,276,090 in new funding by the Canada Foundation for Innovation (CFI) to support three major research projects led by Drs. Sabine Mai, Aaron Marshall and Patricia Martens.

"I congratulate these researchers on their success in obtaining this new funding," said Digvir Jayas, Vice-President (Research) at the University of Manitoba. "These projects will enable research in the areas of cell biology, population health and immunology to expand the current boundaries of knowledge and move forward in new directions."

Under the Leading Edge Fund, Sabine Mai, physiology, biochemistry and medical genetics, human anatomy and cell science, and director of the Genomic Centre for Cancer Research and Diagnosis at the Manitoba Institute of Cell Biology (a joint initiative of the University of Manitoba and CancerCare Manitoba), will receive \$1,226,064 in funding for the acquisition of a three-dimensional (3D) nanoBioMedical

Imaging Node (3D-nBMIN). The 3D-nBMIN will enable researchers—for the first time in Canada—to study previously unseen changes that occur in molecules in the 3D space of cells and tissues.

Also under the Leading Edge Fund, Patricia Martens, community health sciences, and director of the Manitoba Centre for Health Policy, will receive \$1,453,780 to fund the Manitoba Centre for Health Policy (MCHP) Leading-Edge Access & Data Enhancement Research Strategy (LEADERS) initiative. This initiative will expand the world-class data repository housed at MCHP with the addition of sixteen key databases (e.g. justice, dentistry, university datasets) and transform scientists' access to the data repository by developing and piloting Repository Access Arms (RAAs). The MCHP LEADERS initiative will assist current and future scientists and policy-makers in answering important health and social policy questions about 'what works' and with whom.

Aaron Marshall, immunology, biochemistry and medical genetics, and Canada Research Chair in molecular immunology, received \$596,246 of new funding under the New Initiatives Fund to purchase equipment required to establish an integrated unit for cell purification and analysis. This facility will fulfill an urgent need for specific isolation and analysis of live cell populations from human blood or other potentially infectious sources. Access to these research capabilities will have immediate impact on research in many areas of biomedicine, including immunology, allergy and asthma, infectious diseases, cancer and regenerative medicine.

The *Leading Edge Fund* (LEF) is designed to enable institutions to build on and enhance already successful and productive initiatives supported by past CFI investment. The *New Initiatives Fund* (NIF) is designed to enhance Canada's capacity in promising new areas of research and technology development.

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Comments, submissions and event listings  
to: [lingsay\\_fagundes@umanitoba.ca](mailto:lingsay_fagundes@umanitoba.ca)  
Phone: (204) 474-9020 Fax (204) 261-0325