

In this Issue

- 1 Managing the Risk
- 1 High Impact Award
- 1 SYPA Council

- 2 Network Notes
- 3 PrP^{Canada} 2007
- 3 Bioinformatics Bursaries
- 3 Upcoming Events

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PrioNews

Managing the risk

By: David A. Rodger

Can a prion disease be transmitted through surgery and blood transfusions? Are there unidentified prion diseases that might threaten us? Will chronic wasting disease in wild animals jump to the human population? Can we control Bovine Spongiform Encephalopathy (BSE) in Canada without decimating cattle herds, as they did in Europe? These are among the issues facing Canada's public health authorities, issues that are the focus of PrioNet's Theme Five, "Risk Management," led by Dr. Maura Ricketts.

Dr. Ricketts is Director General of Public Health Practice at the Public Health Agency of Canada. Her group trains field epidemiologists to handle disease outbreaks and deals with surveillance, legal and other issues that cross government and agency jurisdictions. From 1998 to 2004 she was with the World Health Organization (WHO). "There I learned that when it comes to public health, no single intervention makes a difference," she says. "You must

consider factors such as human behaviour, capacity development, economic incentives and political will." She is particularly proud of the role she played in setting up WHO's Creutzfeldt-Jakob disease (CJD) surveillance unit for Central and Eastern Europe and China.

Measured against the incidence of other diseases, prion diseases barely register statistically. Dr. Ricketts sees it from another perspective. "When you think about the human victims and their families, it's hard to retreat to population level arguments."

How are we doing so far managing the risk? "We've learned that the main source of human exposure to prions is food, and that human to human transmission can occur. However, there's still no test that can detect the causal agent in either food or living animals. And we know that BSE and variant CJD involve the

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High Impact Award Available

PrioNet Canada's High Impact Fund was announced in January. Established to support research urgencies in response to real-time BSE/TSE events, it is anticipated funded projects will challenge current concepts and address unexplored areas of prion research. Applicants are encouraged to use PrioNet's High Impact Fund as a source of support for research projects having the potential of significant scientific gain over a period of up to 12 months. This fund is available to Scientific Members funded by PrioNet Canada. For more information, visit the Research link at www.prionetcanada.ca. •

SYPA Council

PrioNet's first Student and Young Professional Association (SYPA) Executive Council meeting took place during PrP^{Canada} 2007. The council discussed how SYPA will benefit students and young professionals across Canada. Three additional people have been elected to the council: Bina Khaniya and Stephanie Nakada from the University of Alberta and Colin Anderson from the University of Manitoba. Qasim Khan and Joel Watts from the University of Toronto remain Chair and Vice-Chair respectively; and Shannon Braithwaite from the University of Calgary is the Training Officer. Visit the Education & Training link at www.prionetcanada.ca on how to join SYPA. •

"Canada's BSE and CJD surveillance systems have proven their value"



Dr. Maura Ricketts from the Public Health Agency of Canada is PrioNet's Theme V leader.

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same agent and that both are fatal. On the other hand, our ability to respond to the BSE outbreak is admired at an international level. Canada's BSE and CJD

surveillance systems have proven their value in finding new cases. So has our ability to understand and manage the risks. Continued surveillance is the only way to ensure other risks aren't emerging."

So far, PrioNet's Theme Five researchers have been focusing on how best to respond to BSE and vCJD outbreaks. Some are looking

at ways to model the public and policy processes that happen when a serious health problem arises. Others are seeking quantitative approaches to addressing decision-making when there are conditions of uncertainty. Through analysis they hope to formulate ways to fix the limits of uncertainty. Still others are examining the human face of BSE - - how individuals, families and communities can best recover from a prion-disease outbreak.



Theme V Research Projects

Theme Leader: Dr. Maura Ricketts, Public Health Agency of Canada
Associate Theme Leader: Dr. Michael Mehta, University of Saskatchewan

1. Integrated Risk Management Framework for BSE

Principal Investigator: Dr. Daniel Krewski, University of Ottawa
Co-Investigators:
Dr. William Leiss, University of Ottawa

Dr. Louise Lemyre, University of Ottawa
Dr. Carol Amaratunga, University of Ottawa
Dr. Michael Tyshenko, University of Ottawa
Dr. Maura Ricketts, Public Health Agency of Canada

2. A Cohort Study of the Impact of Prion Disease on Farm Family Community Health

Principal Investigators: Dr. Wilfreda Thurston, University of Calgary and Dr. Carol Amaratunga, University of Ottawa
Co-Investigators:
Dr. Lorne Clearsky, University of Calgary
Dr. Barbara Clow, Dalhousie University
Dr. Elaine Enarson, Brandon University
Dr. Lorraine Greaves, BC Centre of Excellence for Women's Health
Dr. Louise Lemyre, University of Ottawa
Dr. Lynn McIntyre, University of Calgary
Dr. Stéphane McLachlan, University of Manitoba
Dr. Lynn Meadows, University of Calgary
Dr. Tracey O'Sullivan, University of Ottawa
Dr. Frances Shaver, Concordia University
Dr. Alan Smart, University of Calgary
Dr. Josephine Smart, University of Calgary
Dr. Cora Voyageur, University of Calgary



Network Notes

- Another PrP^{jc} (Prion Protein Journal Club) hosted by Drs. Charles Holmes, Luis Schang, Brian Sykes, and Howard Young took place in January at the University of Alberta. Dr. Jack Jhamandas, Professor of Medicine (Neurology) at the University gave a presentation on "Neuronal effects of Amyloid beta protein: Lessons for understanding actions of Prion proteins."
- On February 15, The Department of Anthropology at the University of Calgary unveiled the Prion Disease and Social Research Lab to provide a work place for local and visiting social science prion researchers and students, and to act as a central location for data storage for the Alberta Prion Research Institute project "TSEs and Social-Economic Impact in Alberta."
- Two PrioNet Canada investigators were honored at the Alberta Prion Research Institute's Scholar Celebration on February 21. The first two scholars inducted into this program are Dr. David Westaway from the Alberta Centre for Prions and Protein Misfolding Diseases, University of Alberta, and Dr. Stefanie Czub from the National and OIE BSE Reference Laboratories, Canadian Food Inspection Agency. Congratulations!
- The Second Annual Student and Young Professional Day took place before PrP^{Canada} 2007. Attended by over 50 students, post-docs, and young professionals, the event included two guest speaker presentations and time dedicated to attendees introducing themselves and their research projects.
- Two satellite meetings supported by the Alberta Prion Research Institute and PrioNet Canada were held after PrP^{Canada} 2007. These events included the Protein Structure Dynamics Research Group and the Farm Family Health Network. For more information on these events, visit www.primmeeting.ca.
- Several PrioNet researchers from Theme V traveled to Costa Rica in March to present a short course on BSE Risk Management. This initiative was supported by TDV Global Inc., the Canadian International Development Agency, the Costa Rican Ministry of Agriculture, and the PAHO/WHO Collaborating Centre in Population Health Risk Management (Ottawa). What was the outcome? Read the next issue of *PrioNews* for details.





PrP^{Canada} 2007

Canada's prion research conference

The Alberta Prion Research Institute and PrioNet Canada partnered to present PrP^{Canada} 2007 – Canada's prion research conference from February 18-21, 2007. 230 people attended this event themed "Exploring new terrain." Over twenty projects from PrioNet and the Prion Institute were represented in the program along with renowned guest speakers such as Adriano Aguzzi, Robert Will, and Jiri Safar (to name only a few!), workshops, and a poster session.

Students and post-doctoral fellows participated in the Highly Qualified Personnel Oral Presentation Award competition held during the conference program. The successful candidates included:

Creutzfeldt-Jakob Disease Theme - Angela Catford, University of Guelph; Prion Protein Structure & Function Theme - Kevin Goggin, University of Sherbrooke; BSE Theme - Brenda Murdoch, University of Alberta; Risk Management Theme - Troy Stozek, University of Manitoba; Chronic Wasting Disease Theme - Gregory Wilson, University of Alberta.

The poster session (with 44

participants) and related competition made for an excellent evening. The winners were:

Post-doctoral Fellow Competition: Shigeki Tsutsui, University of Calgary
Student Competition:

First place – Braden Sweeting, University of Toronto

Second place – Rhiannon Harris, University of Manitoba

Third place - Colin Anderson, University of Manitoba



(L-R) Braden Sweeting, Shigeki Tsutsui, Colin Anderson, and Rhiannon Harris.

The conference demonstrated that there is great momentum within the Network and enthusiasm about what the future has in store. PrP^{Canada} 2007 thanks Thermo Fisher Scientific, GE Healthcare, and the Canadian Food Inspection Agency for their support. For photos and conference highlights, please visit www.prionmeeting.ca.

Bioinformatics Bursaries

PrioNet Canada will provide funds for PrioNet Canada graduate student and post-doctoral fellows to attend courses presented by the Canadian Bioinformatics Workshop (CBW). The program includes a core bioinformatics course, proteomics, genomics and a workshop for developing bioinformatics tools. Selection of the recipients of the bioinformatics workshop bursaries will be made by the organizers of CBW. Application forms and schedule information is available on the CBW website at www.bioinformatics.ca. If you are interested in applying, please e-mail admin@prionetcanada.ca.

Upcoming Events

Genome Canada Bioinformatics Platform - Applied Computational Genomics Course

April 13-19 – Montreal

July 25-31 – Edmonton

www.gcbioinformatics.ca/training



Prion Public Lecture Series

Jay Ingram, Canadian science journalist and host of Daily Planet, is presenting a prion public lecture series.

May 28 - Toronto

May 29 - Ottawa

May 30 - Winnipeg

May 31 - Vancouver

www.prionetcanada.ca

Bioinformatics Workshops

Various dates and locations across Canada - see web site

www.bioinformatics.ca

PrioNet members can apply for bursaries to attend.

Transmissible Spongiform Encephalopathies - Informa Life Sciences

June 26-28

Berlin, Germany

www.iir-events.com/IIR-conf/LifeSciences

Prion2007

September 26-28

Edinburgh, Scotland

May 16 – Abstract deadline

July 19 – Early bird registration deadline

www.prion2007.com



PrioNet Canada

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