Bringing Research to LIFE

Research Now a Reality
Projects set to launch for Thorlakson Fund recipients

BY KATIE CHALMERS-BROOKS

Which gene mutations are linked to cancer? And does having a serious physical condition put you at a greater risk of dying by suicide?

Two University of Manitoba researchers determined to answers these questions now have the financial means to push forth with their investigations; they are among the 2010 award recipients of the Dr. Paul H.T. Thorlakson Foundation Fund.

Prof. James Bolton (psychology) and Prof. Kirk McManus (biochemistry and medical genetics) wrote the two top-rated proposals for their individual projects. Ten faculty members will share seven awards totaling more than $192,000. Eight students from the B.Sc. medicine program—exploring topics as varied as HIV1 and the driving skills of seniors—will share an additional $40,000.

McManus’s research seeks to identify the genetic origins of cancer in order to develop more advanced therapies. Many genes that are mutated in tumors bring about increases in chromosome numbers, which distinguishes normal cells from cancer cells. If scientists can identify the specific genes involved in specific types of cancers, they can better target and attack those enemy cells, explains McManus.

“The long-term goal is to look for conditions which will allow the specific targeting of cells containing an abnormal genotype or cancer mutation,” he says.

McManus will spend the next year investigating a particular gene involved with colorectal cancer. He will “knock out” the gene RNF20 from mice and see how that affects tumor growth.

“It’s the foundation for which the lifetime of these animals can be significantly extended,” McManus says. “It’s not just a matter of increasing the length of their life but also improving the quality of it.”

He will examine anonymous medical information housed at the Manitoba Centre for Health Policy data repository. This database records all diagnoses—of both physical and mental conditions—made at every doctor’s appointment or hospital visit, and links to vital statistics like suicide. “Manitoba has this state-of-the-art database that really is one of the most advanced databases in the world,” Bolton says.

Bolton will look at health investigations; they are among the 2010 award recipients of the Dr. Paul H.T. Thorlakson Foundation Fund. He’ll examine anonymous medical information housed at the Manitoba Centre for Health Policy data repository. This database records all diagnoses—of both physical and mental conditions—made at every doctor’s appointment or hospital visit, and links to vital statistics like suicide. “Manitoba has this state-of-the-art database that really is one of the most advanced databases in the world,” Bolton says.

He will look at physical disorders like cardiovascular disease, hypertension, chronic obstructive pulmonary disease, inflammatory bowel disease, diabetes, cancer, multiple sclerosis, and asthma. He anticipates mental disorders accounting for some increased risk of suicide but not all, and that any link to suicide will differ depending on the physical condition.

“These findings stand to have a major impact on clinical medicine,” says Bolton, noting doctors could better gauge suicide risk in their patients. “Ideally, findings from my study will help prevent suicides in the future.”

The $3.3 million Dr. Paul H.T. Thorlakson Foundation Fund was established in 1994. The fund supports new researchers as well as established scientists who are embarking on research projects in new territory. Beginning next year, the fund will provide a $5,000 travel award for students or speakers to attend the Canadian National Medical Student Research Symposium, hosted by the Faculty of Medicine.

Faculty of Arts professor James Bolton (left) and Faculty of Medicine professor Kirk McManus wrote the two top-ranked proposals submitted for the Dr. Paul H.T. Thorlakson Foundation Fund.

Ten faculty members will receive funding awards:

James Bolton and Gregory Finlayson
Silvia Cardona
Donna Martin and Roberta Woodgate
Kirk McManus
Zahra Mousavi and Karen Ethans
Malcolm Xing
Steven Whyard

Eight students will receive funding awards:

Alicia Barnard    James Bras
Lisa Freeman    Brett Houston
Kailun Jiang    Lynda Kong
Mark Lipson    Elaine Liu