



Canadian Cancer Society  
Société canadienne  
du cancer

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### **Study of arsenic in drinking water and cancer risk: among 71 new grants announced by the Canadian Cancer Society**

Toronto – A cancer prevention study, funded by the Canadian Cancer Society’s new Prevention Initiative, will investigate the risk of bladder and kidney cancer associated with environmental exposure to arsenic in drinking water. The study is one of 71 new research grants announced today by the Canadian Cancer Society.

“These important new projects represent tremendous hope for making cancer history, and we are excited to add them to our portfolio of research investments,” says Dr Christine Williams, Director of Research, Canadian Cancer Society Research Institute. “Funding research continues to be absolutely critical to our mission of eradicating cancer and enhancing the quality of life of people living with cancer. We are very grateful to our donors for making the research possible.”

The other new grants announced today (see below) represent a broad range of research funded by the Canadian Cancer Society – from prevention studies to genetics, biology, immunology, psychosocial issues to palliative care. These grants are selected through a rigorous peer-review process.

The Canadian Cancer Society is the largest national charitable funder of cancer research in Canada.

#### **Nova Scotia drinking water study**

Dr Louise Parker, of Dalhousie University in Halifax, is the Canadian Cancer Society Endowed Chair in Population Cancer Research. She will receive \$575,000 over three years to carry out a study of cancer risk and drinking water quality. “In many parts of Canada, a large proportion of the population gets its drinking water from untreated water wells,” says Dr Parker. “In Nova Scotia, it’s particularly high, with 45 per cent of households relying on well water.”

Dr Parker will examine the cancer risk of low to moderate levels of arsenic in drinking water. She says the research will help policy-makers in Nova Scotia and elsewhere in Canada decide whether the cancer risk warrants new approaches to water testing and treatment.

Arsenic occurs naturally in some rock types and can leach into drinking water through drilled or dug wells. Both tasteless and odourless, arsenic at high levels is known to cause

cancer – specifically kidney, bladder, lung and skin cancers – but it is not clear how much arsenic people are consuming and how this is affecting their risk of cancer.

Arsenic levels of up to 700 micrograms per litre have been reported at some wells in Nova Scotia. Health Canada has set an acceptable upper limit of 10 micrograms per litre of water.

Dr Parker will carry out the study by using extensive data on bladder and kidney cancer rates in Nova Scotia and mapping these data to different measurements of arsenic accumulation in participants' bodies and in their drinking water.

Health Canada recommends that Canadians living in areas where there are high levels of arsenic in the groundwater have their drinking water tested for arsenic contamination.

### **More new grants**

Also among the 71 new research grants announced today by the Society:

#### **The cost of cancer**

Dr Murray Krahn, Toronto, will receive \$675,000 over four years to investigate the healthcare costs of treating 18 of the most common cancers in Ontario and BC. Understanding the costs and cost-effectiveness of cancer treatments is crucial for those making funding decisions for the cancer care system.

#### **Lung cancer**

*More Canadians die of lung cancer than of breast, prostate and colon cancers combined. Several new lung cancer research grants were awarded, including:*

Dr Wan Lam, Vancouver, will use detailed genetic comparisons to investigate why some people who have never smoked get lung cancer (\$379,000 over three years).

Dr Linda Penn, Toronto, will develop a new molecular diagnostic tool to root out and target the most aggressive, fast-growing lung cancers (\$637,000 over five years).

Dr Ming Sound Tsao, Toronto, will use genetic analysis to determine which early-stage lung cancer patients are at risk of having their cancer come back after surgery and which patients are most likely to benefit from chemotherapy in addition to surgery. This will help develop a more personalized approach and prevent damaging side effects caused by unnecessary treatment (\$690,000 over five years).

#### **Family issues**

**Diet and breast cancer prevention:** Dr Michelle Cotterchio, Toronto, will examine whether phytoestrogen-rich foods – such as soy, flaxseeds, fruits and vegetables – are

associated with a lower risk of developing certain types of breast cancers (\$158,000 over two years).

**HPV and cervical cancer:** Most sexually active women will have at least one infection from the human papillomavirus (HPV). Dr Jacques Archambault, Montreal, will study genetic variations in HPV to determine why only some of these women develop cancer (\$510,000 over four years).

**Childhood brain cancer:** Brain cancers are very aggressive, and many are resistant to treatment. Dr Peter Dirks, Toronto, will investigate whether the different types of cells within brain tumours may need different types of therapies in order to effectively treat the cancer (\$549,000 over four years).

### **Pancreatic cancer**

#### *Lowest survival rate*

Patients with pancreatic cancer face a very grim prognosis. Dr Jeremy Wulff, Victoria, is working to develop a completely new type of drug molecule that blocks the interaction between two proteins known to play a role in causing pancreatic cancer. It is hoped that this will one day lead to new treatment options for patients (\$35,000 for one year).

For a complete list of the new Canadian Cancer Society–funded research grants across the country, visit [www.cancer.ca/research](http://www.cancer.ca/research).

### **About the Prevention Initiative**

The Canadian Cancer Society believes that at least 50 per cent of cancers can be prevented. This year, the Society awarded the first set of research grants within a special Cancer Prevention Initiative. The projects will advance the field of cancer prevention research by identifying interventions against modifiable risk factors and conditions. These include behaviours, biological factors, occupational exposures or environmental conditions that may be changed to reduce the risk of developing cancer.

The Canadian Cancer Society will invest approximately \$3 million a year in this new initiative.

### **About the Society**

The Canadian Cancer Society is a national community-based organization of volunteers whose mission is the eradication of cancer and the enhancement of the quality of life of people living with cancer. In 2007/2008, the Canadian Cancer Society spent \$49.5 million on research. When you want to know more about cancer, visit our website at [www.cancer.ca](http://www.cancer.ca) or call our toll-free, bilingual Cancer Information Service at 1 888 939-3333.

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