CIHR IRSC

The Prairies

The Prairies at a glance

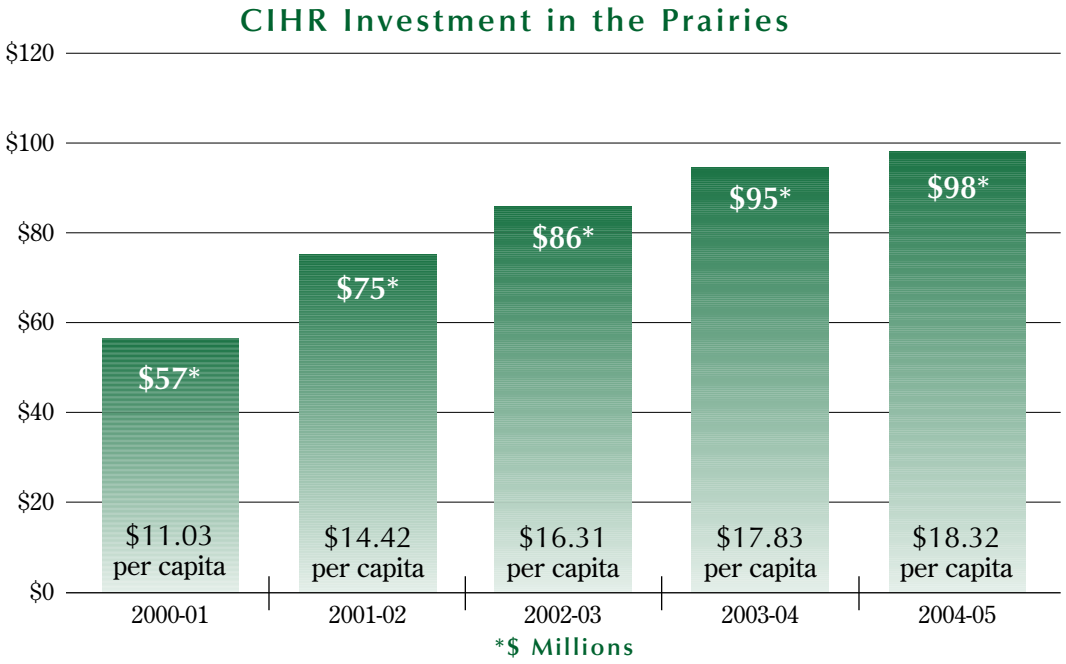
Some of Canada's most exciting health research discoveries have their roots in Manitoba, Saskatchewan and Alberta.

In 2004-05, CIHR awarded approximately $98 million in funding for health research in Canada's three Prairie provinces, an increase of more than 72% from 2000-01. This funding supports more than 1,170 projects by principal investigators in nine funded institutions.

About the Canadian Institutes of Health Research

The Canadian Institutes of Health Research is the Government of Canada's agency for health research. Its objective is to excel, according to internationally accepted standards of scientific excellence, in the creation of new knowledge and its translation into improved health for Canadians, more effective health services and products and a strengthened Canadian health care system. Composed of 13 Institutes, CIHR provides leadership and support to close to 10,000 researchers and trainees in every province of Canada. For more information visit www.cihr-irsc.gc.ca

Canadian Institutes of Health Research (CIHR) supports health research in Manitoba, Saskatchewan and Alberta



Funding excellence
CIHR-funded health research in Prairie universities

Universities in Manitoba, Saskatchewan and Alberta are known for their expertise and research achievements in a variety of areas. Here are some examples.

Improving Health Care Access for Aboriginal Peoples and Northern Residents
Brandon University, Manitoba

Brandon University's Rural Development Institute helps strengthen rural communities both in Canada and internationally through research and information on issues unique to rural areas. The Institute provides an interface between academic research efforts and the community. Many of its innovative projects relate to Aboriginal peoples and northern residents. One example is a recent project looking at health care access by residents of First Nations and Métis communities, and regional centres in northern Manitoba and Saskatchewan. Dr. Robert Annis and co-investigators Drs. Fran Racher of the School of Health Studies, and Bonnie Jeffery of the University of Regina will lead a dialogue in northern communities in Manitoba and Saskatchewan to document the challenges and what can be done to improve the access, affordability and acceptability of health care. The researchers will talk with people who live in the North and with their health service providers. The intent is to capture both the content of the dialogue and the process undertaken. This will increase our understanding of how a participatory, community-based approach to research can support local empowerment and movement to action.

Exciting Discoveries in Breast Cancer
University of Alberta, Edmonton

Scientists at the University of Alberta have made some critical discoveries that give clinicians and patients more information on how to treat breast cancer. Principal researcher Dr. Mark Glover, a biochemist at the University of Alberta, and his team have demonstrated a sequence of biochemical events that helps explain what goes wrong with DNA when women get hereditary breast cancer. The team later discovered how a key enzyme involved in repairing DNA is put together and how it works. This development opens up new therapies for making cancer cells more vulnerable to attack. Dr. Glover first became prominent in the field in 2001, when he and his team recreated the first three-dimensional structure of a critical portion of the *BRCA1* protein (the gene related to hereditary breast and ovarian cancers). That work started a flood of inquiries from around the world because of its implications for designing screening programs for breast cancer.

Lighting the Way to Innovation
University of Saskatchewan, Saskatoon

The Canadian Light Source is Canada's national synchrotron facility. Owned and operated by the University of Saskatchewan and located on the Saskatoon campus, the state-of-the-art light source produces light millions of times brighter than the sun with powerful magnets and radio frequency waves that accelerate electrons to nearly the speed of light. This light shines down beamlines to experimental stations where scientists can "see" the microscopic nature of matter. This information is used to design new drugs, build more powerful computer chips, and help with the clean-up of mining wastes, to name just a few applications. A growing number of CIHR-funded Canadian health researchers use synchrotron light. World leader Dr. Louis Delbaere, a Canada Research Chair in Structural Biochemistry, uses synchrotron X-ray crystallography to study protein structures — vital information in the design of new drugs to treat heart disease, diabetes, cancer and more.
Dr. Dean Chapman, Canada Research Chair in X-ray imaging, uses synchrotron X-rays to produce exquisitely clear pictures of bone and soft tissue like cartilage in joints. These new windows into the body could help doctors diagnose diseases like cancer and arthritis earlier, alleviating pain and saving lives.

Enhancing Quality of Life
University of Calgary

Health researchers at the University of Calgary Faculty of Medicine are helping improve the quality of life of millions of Canadians by addressing two of the most common causes of pain and disability: migraine headaches and osteoarthritis. Dr. Gerald Zamponi and his team are looking for ways to tackle migraines by addressing fundamental questions related to the role of calcium channels in brain function and the molecular mechanisms that regulate their activities. Dr. Cy Frank has gained international recognition for his pioneering research into ligament healing and repair. A renowned knee surgeon, Dr. Frank is investigating a new gene therapy that promises to delay or prevent osteoarthritis. He is working with an outstanding team of researchers from medicine, kinesiology, and engineering at the University of Calgary's McCaig Centre for Joint Injury and Arthritis Research. Together, they are addressing the causes, prevention, diagnosis and treatment of conditions related to bones, joints, muscles, connective tissue, skin and teeth, with a particular focus on osteoarthritis.

Celebrating excellence: CIHR award winners in the Prairies

Some of Canada's finest health researchers are in Prairie provinces. CIHR has been proud to recognize their achievements.

Dr. Wayne Lautt
University of Manitoba, Winnipeg

Dr. Wayne Lautt, professor, Department of Pharmacology, Faculty of Medicine, has been involved in medical breakthroughs related to the vascular integrity of transplanted livers, the detection of early renal dysfunction in liver disease, the liver's ability to regenerate, and the pharmaceutical reversal of insulin resistance in type 2 diabetes. In 2004 Dr. Lautt was a finalist for the CIHR Michael Smith Prize. This award recognizes outstanding Canadian health researchers who demonstrate innovation, creativity, leadership and dedication to health research.

Dr. Yu Luo
University of Saskatchewan, Saskatoon

Dr. Yu Luo, assistant professor in the Department of Biochemistry, has received a CIHR New Investigator Award, given to Canada's brightest young health researchers at the beginning of their careers. Dr. Luo is a "rising star" at the University of Saskatchewan, representing the future of Canadian medical research. Dr. Luo studies *recombinases*, enzymes essential for gene repair that have been linked to breast cancer when they go awry. Antibiotics can also work with these enzymes to release toxins. Dr. Luo's work at the Canadian Light Source synchrotron has high potential payoff for cancer treatment and preventing complications from antibiotics.