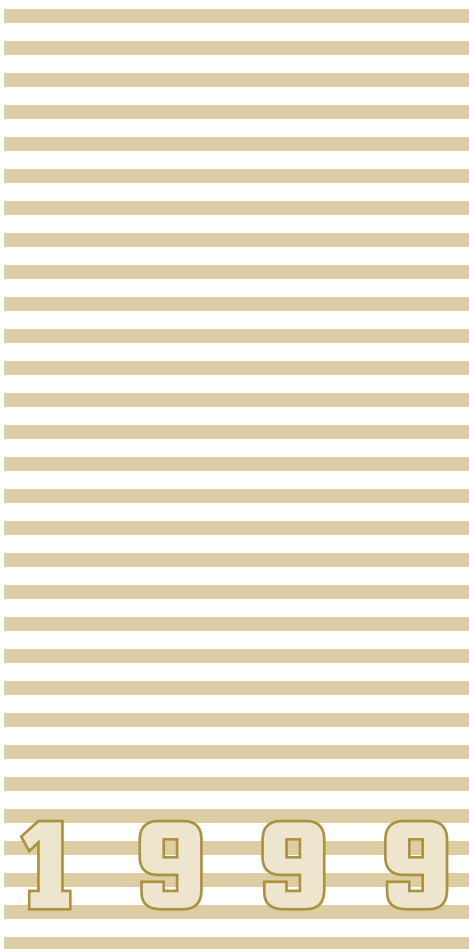




RESEARCH
WORKS



Research Works by attracting funding from many sources

Founded in 1908, the University of Alberta has an enrolment of more than 30,000 students and a staff of 9,000. One of Canada's five largest research-intensive, full-service universities, the University of Alberta in 1998-99 attracted more than \$170 million in external research funding (including clinical trials research, and a partnership share in the research at Tri-Universities Meson Facility [TRIUMF] headquarters).

The largest research institution in the province, the University of Alberta is significantly increasing its research capability, extending its industrial and government partnerships, and is a major engine of economic development through the transfer of University-based technology and knowledge to the commercial sector.

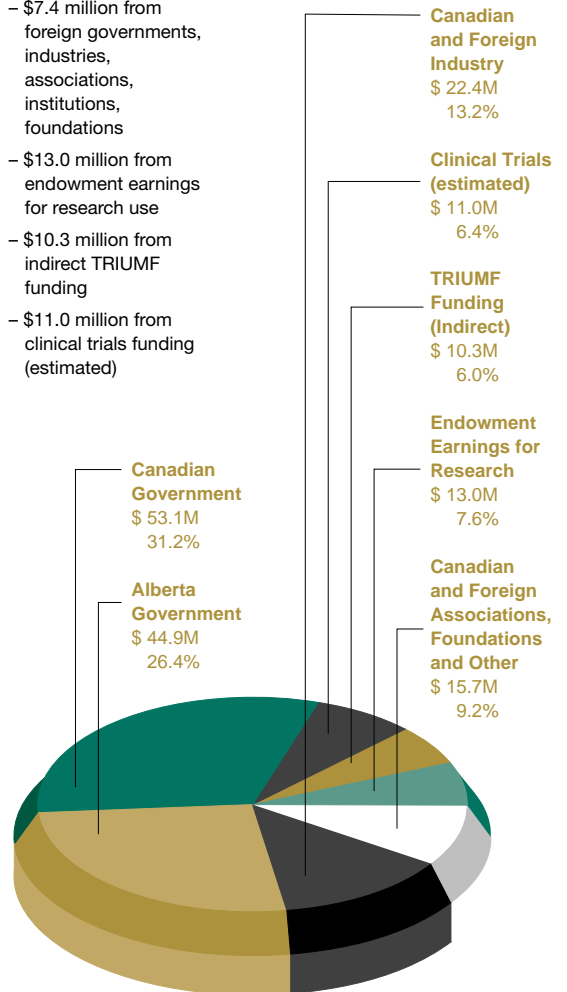
Research Works is an acknowledgement of the many partners – industry, foundations, government agencies and other organizations – with and for which University of Alberta researchers carry out their work. It sets out the economic impact of the University's research activity on the Edmonton, Alberta and Canadian economies. Research works in many ways, from bringing new technologies to market to providing employment to thousands of people in Edmonton and across Alberta.

Most of all, research works by accomplishing what a great university does best: creating and disseminating knowledge.

(Please note that the names of our funding partners may appear more than once in different categories.)

In 1998/99 the University of Alberta received more than \$170 million from external sources for sponsored research:

- \$53.1 million in Canadian Government funding
- \$44.9 million from the Alberta Government, including \$17.2 million from the *Alberta Heritage Foundation for Medical Research*
- \$18.2 million from Canadian industry
- \$12.5 million from Canadian associations, foundations, institutes, local governments, individuals and other sources
- \$7.4 million from foreign governments, industries, associations, institutions, foundations
- \$13.0 million from endowment earnings for research use
- \$10.3 million from indirect TRIUMF funding
- \$11.0 million from clinical trials funding (estimated)



\$2 Billion by 2005

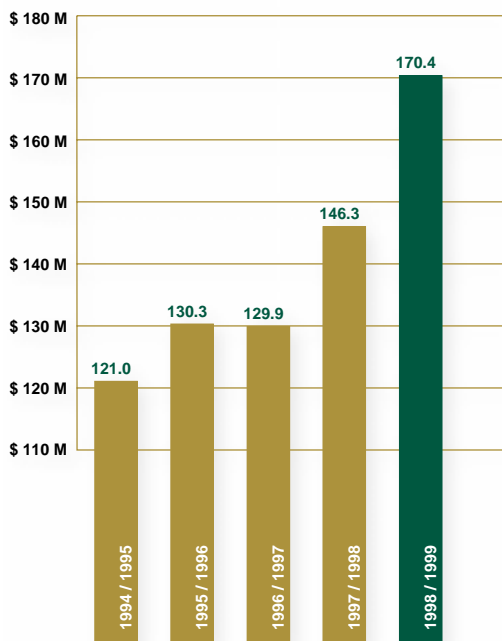
UNIVERSITY OF ALBERTA

\$1 Billion by 2000/\$2 Billion by 2005

Since 1988/89, the University of Alberta has received more than \$1 Billion for research from external sources, achieving its commitment of \$1 Billion by 2000 a year early. Building on this success, the University has set itself a target of attaining a cumulative total of \$2 Billion in external research funding by the year 2005.

Annual Research Funding, 1994/95 — 1998/99

Over the past five years, annual research funding has increased by 40.8%.

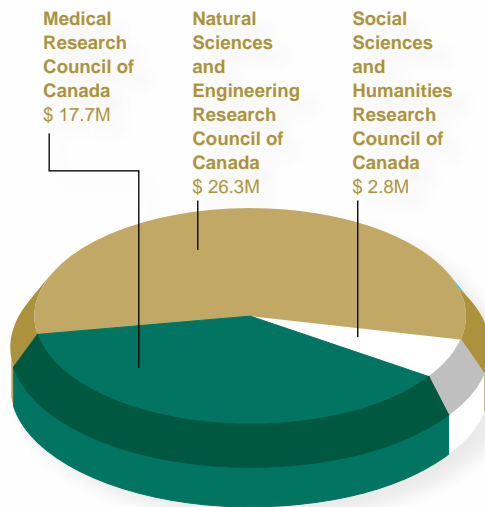


These figures are restated from previous years, and include the University's share of TRIUMF funding and clinical trials funding for all years.

Federal Granting Councils, University of Alberta Awards, 1998/99 (in millions of dollars)

The University of Alberta is in the top five Canadian universities in research awards from the three Federal Government granting councils.

Total Funding: \$46.8 million



Research Puts People to Work

University of Alberta research funding is responsible for the creation of more than 9,400 direct and indirect jobs at the University of Alberta, in Edmonton and across Alberta.

Almost 3,250 University employees are paid through sponsored research:

- 1,220 are full-time
- 2,027 are part-time staff, of whom more than 1,700 are students
- their salaries and benefits totalled more than \$82,150,000 in 1998-99

An estimated 6,170 full-time and part-time jobs have been created indirectly outside the University as a result of its sponsored research funding.

Economic Development Edmonton estimates that more than half of the conventions and conferences held in the Capital Region involve the University of Alberta in some way.

Research works

because of Federal Networks of Centres of Excellence

University of Alberta researchers participate in all fifteen of the Federal Networks of Centres of Excellence (NCEs). NCEs are unique partnerships among industry, universities and government intended to develop the Canadian economy and improve quality of life. These nation-wide networks connect excellent research with industrial know-how and practical investment.

In 1997-1998, a total of 61 universities, 463 companies, more than 100 provincial and federal government departments and agencies, 44 hospitals, and more than 200 other organizations from Canada and abroad were involved in the NCE program.

The University of Alberta is one of three Canadian universities to participate in all of the Networks.

- Canadian Arthritis Network
- Canadian Bacterial Diseases Network (CBDN)
- Canadian Genetic Diseases Network (CGDN)
- Canadian Institute for Photonic Innovations (CIPI)
- Canadian Institute for Telecommunications Research (CITR)
- The GEOIDE Network – Geomatics for Informed Decisions
- Health Evidence Application and Linkage Network (HEALNet)
- The Institute for Robotics and Intelligent Systems (IRIS)
- Intelligent Sensing for Innovative Structures (ISIS)
- Mathematics of Information Technology and Complex Systems (MITACS)
- Mechanical Wood-Pulps Network
- Microelectronics Devices, Circuits and Systems (MICRONET)
- Protein Engineering Network of Centres of Excellence (PENCE)
- Sustainable Forest Management (SFM)
- TeleLearning Network of Centres of Excellence

Two of the Networks, Protein Engineering Network (PENCE) and Sustainable Forest Management, have their national scientific and administrative headquarters at the University of Alberta.

As well, the University is the headquarters of the Prairie Centre of Excellence for Research on Immigration and Integration, established in 1996.

Research works

- Alberta Cancer Board Chair in Palliative Care
- Alberta Conservation Association Chair in Fisheries and Wildlife
- Alberta Construction Association/NSERC Senior Industrial Research Chair in Construction Engineering and Management
- Alberta Heart Foundation Chair in Cardiovascular Research
- Alberta Microelectronic Corporation/NSERC Senior Industrial Research Chair in Thin Film Engineering
- AltaRex/MRC Chair in Tumour Immunology
- Walter Stirling Anderson Chair in Surgery
- Astra Chair in Asthma Research
- Ronald K. Bannister Chair in Business
- Max Bell Foundation
- Belzberg Chair in Constitutional Law
- Chair in Bioethics
- Biomira/MRC Chair in Immunoconjugates
- Breton Plots Endowment Fund
- Bristol-Myers Squibb Chair in Protein and Peptide Metabolism
- John Carter Callaghan Endowed Chair in Cardiothoracic Surgery
- C.W. Carry Chair in Steel Structures
- Carthy Foundation Chair in Business
- Chartered Accountants Chair
- Certified General Accountants of Alberta Chair in Accounting
- A.F. (Chip) Collins Chair in Finance
- Cooperative Chair in Agricultural Marketing and Business
- George M. Cormie Professor of Business
- Firefighters Chair in Burn Research
- Eldon D. Foote Chair in International Business/International Law
- George Ford Chair in Materials Engineering
- J. Alan Gilbert Chair in Medical Education
- Glaxo Wellcome Chair in Viral Research
- Thornton A. Graham Chair in Business

... because of major contributions for research and endowed chairs

- Dr. J.T. Hugill Professorship in Pain Management
- Huculak Chair in Ukrainian Culture and Ethnography
- Chair in Industrial Safety and Loss Management
- C.R. James/MPB Technologies/NSERC Senior Industrial Research Chair in Laser and Spectroscopic Techniques Applied to the Natural Resources Industry
- Stephen A. Jarislowky Distinguished Chair in Finance
- The Killam Memorial Professorships (2)
- Walter C. Mackenzie Visiting Professorship
- Merck Frosst/MRC Chair in Pharmacoeconomics
- Stanley A. Milner Chair in Leadership
- Muttart Chair in Clinical Immunology and Autoimmunity
- NOVA/NSERC Senior Industrial Research Chair in Advanced Pipeline Materials
- NOVA/NSERC Junior Industrial Research Chair in Welding and Corrosion
- Chair in Petroleum Engineering
- David Peikoff Chair in Deafness Studies
- Peter H. Pocklington Chair in Free Enterprise
- Ernest E. and Gertrude Poole Chair in Management for Engineers
- Ernest E. and Gertrude Poole Professorship in Technology Management
- Strathcona County/R.U. Lemieux Chair in Carbohydrate Chemistry
- Syncrude/NSERC Industrial Research Chair in Oil Sands Research
- Taiho Endowed Foundation (for Canada/Japan collaboration in pharmaceutical research)
- TELUS Chair in Strategic Management
- Henry Marshall Tory Chairs (various disciplines)
- Henri M. Toupin Chair in Neurological Sciences
- Tripartite Chair in Occupational Health
- The Variety Club and Northern Alberta Children's Hospital Foundation Pediatric Clinical Research Professorship
- Winspear Foundation Distinguished Chair in Professional Accounting

International

Associations, Institutes, Foundations and Government Agencies...

are Partners in Research at
the University of Alberta

- African Economic Research Consortium
- American Chemical Society
- American Water Works Association Research Foundation
- Astra Research Center Boston
- Bernice Peltier Huber Charitable Trust
- Billiton Ecuador B.V.
- Foundation for Promotion of Advanced Automation Technology
- Francis Families Foundation (US)
- Juvenile Diabetes Foundation International
- Genetics Institute
- Geological Survey of Denmark/Greenland
- Glaucoma Foundation
- Howard Hughes Medical Institute
- Huber Charitable Trust
- Huntington's Disease Society of America
- Idaho Department of Fish and Game
- International Institute for Environment and Development
- International Olive Oil Council
- International Ozone Association Incorporated
- Leo Pharmaceutical Research Foundation
- Lilly Center for Women's Health
- Los Alamos National Laboratory, University of California
- March of Dimes
- Mayo Foundation
- Metronic Bakken Research Centre (Netherlands)
- Nalco Chemical Company
- National Alliance for Research on Schizophrenia and Depression
- National Aeronautics and Space Agency (NASA)
- National Institutes of Health (US)
- National Kidney Foundation (US)
- National Mining Association (US)
- National Surgical Adjuvant Breast Project
- Noguchi Foundation
- North American Society of Pacing and Electrophysiology
- North Atlantic Treaty Organization (NATO)
- Oncology Nursing Foundation
- Oxagen Limited
- Palm Oil Research and Development Board
- Parker B. Francis Foundation
- Pediatric Oncology Group
- Prevent Blindness America
- Radiation Therapy Oncology Group
- Read-Rite Corporation
- R.P. Foundation Fighting Blindness
- Rural Development Administration, Republic of Korea
- Schering-Plough Research Institute
- Schlumberger Foundation (USA)
- City of Seattle (Public Utilities)
- Sigma Theta Tau International
- Society of Wetland Scientists
- U.S. Department of Health and Human Services
- United States Department of the Interior
- United States Public Health Services

Alberta

- ACT Technologies
- Agrevo Canada
- Ainsworth Lumber
- Alberta Aspen Board Ltd.
- Alberta Barley Commission
- Alberta Canola Producers' Commission
- Alberta Cattle Commission
- Alberta Chicken Producers' Marketing Board
- Alberta Construction Industry (Professorship funds)
- Alberta Dairy Council
- Alberta Egg Producers' Board
- Alberta Energy Co.
- Alberta Energy & Utilities Board
- Alberta Hatching Egg Marketing Board
- Alberta Microelectronic Corporation
- Alberta Motor Association
- Alberta Pacific Forest Industries Inc.
- Alberta Pork Producers' Development Corp.
- Alberta Power Ltd.
- Alberta Pulse Growers' Association
- Alberta Turkey Growers' Marketing Board
- Alberta Venison Council
- Alberta Wheat Pool
- Almita Manufacturing
- Altarex Inc.
- Alternative Fuel Systems Inc.
- Amoco Canadian Petroleum Co. Ltd.
- ANC Timber
- Angiotech Pharmaceuticals
- Apotex Inc.
- Aqualta
- Astra Canada
- AT Plastics
- Baxter Corporation
- Bayer Inc.
- Beatrice Foods
- Beef Information Centre
- Bellanca Developments Ltd.

Canadian businesses invest in research linkages and partnerships at the University of Alberta

- Bell-Northern Research
- BHP Diamonds
- BHP Minerals Canada Ltd.
- BioChem Pharma Inc.
- Biotools Inc.
- Bishop & McKenzie
- Border Paving Ltd.
- Bristol Myers Squibb Canada Inc.
- Buchanan Lumber
- Calgon Carbon Corporation
- Canadian-Alberta Beef Industry Development Fund
- Canadian-Alberta Hog Industry Development Fund
- Canadian Broiler Hatching Egg Commission
- Canadian Egg Marketing Agency
- Canadian Forest Products Ltd.
- Canadian National Railway
- Canadian Pacific Railway
- Canadian Pork Council
- Canola Council of Canada
- Capital Care Group Inc.
- Cartons St. Laurent Inc.
- CEL Corporation
- Celanese Canada
- Chevron Canada Resources
- Chieftain International Inc.
- Cirrus Environmental Services
- Community Services Consulting Ltd.
- Computing Devices Canada
- Cresfar Energy
- CV Technologies Inc.
- Cytovax Biotechnologies Inc.
- D&S International Consultants Ltd.
- Dairy Farmers of Canada
- Daishowa-Marubeni International Ltd.
- DDR Manufacturers & Distributors Inc.
- Deloitte & Touche
- Dendronic Decisions Ltd.
- Dofasco Inc.

Alberta

- Dow Chemical Canada
- Duncan & Craig
- Ecotemp International
- Edmonton Power Inc.
- Eli-Lilly Canada Inc.
- Environmental Science and Technology Alliance Canada
- EPCOR Utilities Inc.
- Epic Energy Inc.
- ESBI Alberta Ltd.
- Europa Travel
- Express Pipelines
- Factors Laboratories
- Field Atkinson Perraton
- Finning Canada Ltd.
- Fisher Scientific
- Fluor Daniel Canada
- Fording Coal
- Fort McKay Industrial Relations Corp.
- Fountain Tire
- Fournier Pharma Inc.
- Fraser Paper Inc.
- Fujisawa Canada Inc.
- GCHEM Environmental Services
- Geospec Consultants Ltd.
- Glaxo Canada Inc.
- Glaxo Wellcome Inc.
- Glycocodeign Inc.
- Greey-Lightnin
- Guilford Press
- Gulf Canada Resources Ltd.
- Hatch Associates
- Helix Biopharma Inc.
- Henry Singer Ltd.
- High Level Forest Products
- Hoechst Marion Roussel Canada
- Hoffman-La Roche Canada
- Hungry Coyote Ltd.

Canadian businesses invest in research linkages and partnerships at the University of Alberta

- Husky Oil Operations Ltd.
- Hydrocarbon Technologies Canada Ltd.
- IBM Canada
- Imperial Oil Ltd.
- Imperial Oil Resources
- INCO
- Inland Construction
- Inland Cement
- Institute of Health Economics
- Interprovincial Pipe Line Company
- International Forest Products Ltd.
- Iogen Corporation
- IPSCO Saskatchewan Inc.
- Janssen-Ortho Inc.
- KC Environmental Group
- Komex International Ltd.
- Labatt Brewing Co.
- Lakeland Peat Moss Ltd.
- Laser Institute
- Louisiana-Pacific Canada Ltd.
- Luscar Ltd.
- MacDonald Dettwiler and Associates
- Manalta Coal
- Manitoba Egg Producers
- Manitoba Model Forest Ltd.
- Maxxam Analytics Inc.
- McCuaig Desrochers
- McLennan Ross
- Medcan Health Management Inc.
- Merck Frosst Canada Inc.
- Metabolic Modulators Research Ltd.
- Micrologix Biotech Inc.
- MicroWear Corporation
- Millar Western Industries
- Milner Fraser
- Mistik Management
- Monsanto Canada Inc.
- MPB Technologies Inc.

Alberta

- NACE International Canada
- Napsoschem Ltd.
- Natural Factors Nutritional Products Ltd.
- Northern Telecom Canada
- Norterra Inc.
- North American Construction Group
- Northwestern Utilities
- NOVA Chemicals Ltd.
- NOVA Gas Transmission Ltd.
- Novacor Chemicals
- Novacor Research and Technology Corp.
- Ogilvie & Company
- OMNI Film Productions
- Ontario Egg Producers' Board
- Pacific Biotechnologies Inc.
- Ontario Pork Marketing Board
- Organon Canada
- Orthx Surgical Inc.
- Pacific Biotechnologies Inc.
- PanCanadian Petroleum Inc.
- Paprican
- Pasteur Merieux Connaught
- PCL Constructors
- Petro Canada Inc.
- Petro-Canada Oil and Gas
- Pharmacia & Upjohn Inc.
- Pioneer Hi-Bred Ltd. (Canada)
- Poultry Industry Centre
- Premier Horticulture Ltd.
- Pro-Neuron Inc.
- Quality Color Press Inc.
- RL & L Environmental Services Ltd.
- St. Laurent Paperboard
- Sanofi Canada Inc.
- SCIEX
- Select Therapeutics Ltd.
- Servier Canada Inc.
- Shaver Poultry Breeding Farms

Canadian businesses invest in research linkages and partnerships at the University of Alberta

- Shaw Cable Services Inc.
- Shell Canada
- Shivasoft Inc.
- Shoppers Drug Mart
- Slave Lake Pulp Corporation
- SmithKline Beecham Pharma Inc.
- Solray Pharma
- Somagen Diagnostics Ltd.
- Southbend Construction Co. Ltd.
- Speco Engineering Consultants
- SRW Technologies Inc.
- Stone Consolidated
- Subterranean Technologies Inc.
- Suncor Inc.
- Sun Gro Horticulture Canada Ltd.
- Svalof Weinbell Seed Ltd.
- Syncrude Canada
- SYNSORB Biotech Inc.
- Telus Corporation
- Thompson Bros. (Construction) Ltd.
- Tolko Manitoba Inc.
- TransAlta Utilities Corporation
- TransCanada Pipelines
- TRILabs
- Ukrainian Credit Union
- Union Carbide Canada Inc.
- Waiward Steel Fabricators Ltd.
- Warner Lambert Canada Ltd.
- Wascana Energy
- Weldwood of Canada
- The Westaim Corporation
- Westec Microbes Ltd.
- Western Forest Products Ltd.
- Weyerhaeuser Canada Ltd.
- Wi-Lan Inc.
- Zagros Pharma
- Zeneca Seeds

Research Works

to advance

knowledge

...in agriculture, food and nutrition, forestry, renewable resources and agriculture-biotechnology

- ACT Technologies
- AgrEvo Canada Inc.
- Agriculture and Food Council (Canada)
- Ainsworth Lumber
- Alberta Agricultural Research Institute
- Alberta Aspen Board Ltd.
- Alberta Barley Commission
- Alberta Canola Producers' Commission
- Alberta Cattle Commission
- Alberta Chicken Producers' Marketing Board
- Alberta Dairy Association
- Alberta Egg Producers' Board
- Alberta Hatching Egg Marketing Board
- Alberta Heritage Foundation for Medical Research
- The Alberta Milk Producers' Association Ltd.
- Alberta-Pacific Forest Industries Ltd.
- Alberta Pulse Growers' Commission
- Alberta Pork Producers' Development Corporation
- Alberta Research Council
- Alberta Sport, Recreation, Parks & Wildlife Foundation
- Alberta Turkey Producers' Marketing Board
- Alberta Wheat Pool

- ANC Timber Inc.
- AT Plastics
- Biovision Seed Research Ltd.
- Beef Information Centre
- Buchanan Lumber
- Canada-Alberta Beef Industry Development Fund
- Canada-Alberta Hog Industry Development Fund
- Canadian Broiler Hatching Egg Marketing Agency
- Canadian Diabetes Association
- Canadian Forest Products Ltd. - Alberta
- Canadian Forest Service
- Canadian Pork Council
- Canola Council of Canada
- Cobb-Vantress Inc.
- Dairy Farmers of Canada
- Daishowa-Marubeni International Ltd.
- Danone Institute of Canada
- Ducks Unlimited Canada
- Eli-Lilly Canada
- Environmental Science and Technology Alliance Canada
- Foothills Forest
- Fraser Paper Inc.



Research Works

to advance

knowledge

...in agriculture, food and nutrition, forestry, renewable resources and agriculture-biotechnology

- Hoffman-La Roche
- Institute for Wetland and Waterfowl Research
- International Forest Products Ltd.
- International Olive Oil Council
- Lucas Meyer GMBH & Co.
- Manitoba Egg Producers
- Manitoba Model Forest Ltd.
- Manning Diversified Forest Products
- Medical Research Council of Canada
- Millar Western Industries Ltd.
- Mistik Management Ltd.
- Monsanto Canada Inc.
- Natural Factors Nutritional Products Ltd.
- Natural Sciences and Engineering Research Council of Canada
- Northern Alberta Institute of Technology
- Northwest Peat & Crop
- NOVA Gas Transmission Ltd. Development Association
- Nutri-Quest Inc.
- Ontario Egg Producers' Board
- Ontario Pork Producers' Marketing Board

- Pacific Biotechnologies Inc.
- Palm Oil Research and Development Board
- PanCanadian Petroleum Ltd.
- Parmalat Canada
- Poultry Industry Council
- Ranger Slave Lake Pulp Corporation
- Shaver Poultry Breeding Farms
- Social Sciences and Humanities Research Council of Canada
- Suncor Inc.
- Sun Gro Horticulture Canada
- Svalof Weibull Seed Ltd.
- Syncrude Canada
- Telus Inc.
- TransAlta Utilities Corporation
- Unique Oilfield Technology Services Ltd.
- Weldwood of Canada
- Western Forest Products Ltd.
- Weyerhaeuser Canada
- Wildlife Habitat Canada
- Winrock International
- Zeneca Seeds



Departments & Agencies

Canadian and Alberta Government Departments and Agencies help Research Work at the University of Alberta

- Agriculture and AgriFoods Canada
- Agriculture and Food Council
- Alberta Advanced Education and Career Development (Alberta Learning)
- Alberta Agricultural Research Institute
- Alberta Agriculture, Food and Rural Development
- Alberta Cancer Board
- Alberta Economic Development & Tourism
- Alberta Education (Alberta Learning)
- Alberta Energy
- Alberta Environmental Protection
- Alberta Family and Social Services
- Alberta Federal and Intergovernmental Affairs
- Alberta Fish and Wildlife Services
- Alberta Forestry, Lands and Wildlife
- Alberta Health and Wellness
- Alberta Health Summit
- Alberta Heritage Foundation for Medical Research
- Alberta Hospital Edmonton
- Alberta Innovation and Science
- Alberta Intellectual Infrastructure Partnership Program
- Alberta International and Intergovernmental Relations
- Alberta Municipal Affairs
- Alberta Oil Sands Technology and Research Authority
- Alberta Paraplegic Foundation
- Alberta Research Council
- Alberta Science and Research Authority
- Alberta Sport, Recreation, Parks and Wildlife Foundation
- Alberta Transportation and Utilities
- Alberta Treasury
- Atmospheric Environmental Services Canada
- Atomic Energy Control Board
- Boyle McCauley Health Centre
- Province of British Columbia
- British Columbia Ministry of Forests
- Canada Council
- Canada Foundation for Innovation
- Canadian Council for Archives
- Canadian Forest Service
- Canadian Genome Analysis and Technology Program
- Canadian Heritage
- Canadian International Development Agency
- Canadian Pork Council
- Canadian Wheat Board
- Capital Care Group
- Capital Health Authority
- Caritas Health Group
- City of Edmonton
- City of Fort Saskatchewan
- City of Leduc
- City of St. Albert
- County of Strathcona
- Cross Cancer Institute
- David Thompson Regional Health Authority
- Defence Research Establishment Suffield

Departments & Agencies

Canadian and Alberta Government Departments and Agencies help Research Work at the University of Alberta

- East Central Regional Health Authority
- Economic Development Edmonton
- Edmonton Catholic Schools
- Edmonton Public Library
- Edmonton Public Schools
- Edmonton Region Community Board
- Electric Transmission Council (Alberta)
- Emergency Preparedness Canada
- Employment and Immigration Canada
- Environment Canada
- Farming for the Future (Alberta)
- Foreign Affairs and International Trade (Canada)
- Government of British Columbia
- Government of Manitoba
- Government of the Northwest Territories
- Government of the Yukon
- Health Canada
- Human Resources Development Canada
- Indian Affairs and Northern Development Canada
- Department of Justice (Canada)
- Kingston, Frontenac and Lennox and Addington Health Unit
- Office of Learning Technologies
- Medical Council of Canada
- Medical Research Council of Canada
- National Archives of Canada
- National Library of Canada
- National Research Council
- Natural Resources Canada
- Natural Sciences and Engineering Research Council of Canada
- Government of Newfoundland and Labrador
- Northern Lights Regional Health Authority
- Parks Canada
- Peace Health Region
- Provincial Health Council of Alberta
- Public Works and Government Services Canada
- St. Michael's Hospital
- St. Paul Health Unit
- Saskatchewan Energy and Mines
- Saskatchewan Dept. of Finance
- Social Sciences and Humanities Research Council of Canada
- Status of Women Canada
- Supply and Services Canada (Edmonton)
- Supply and Services Canada (Hull)
- TRIUMF (Canada's National Meson Research Facility)
- Western Economic Diversification Canada
- Workers' Compensation Board of Alberta

Private & Associations & Foundations

Public help Research Work at the University of Alberta

- Alberta Advisory Committee for Educational Studies
- Alberta Association of Registered Nurses
- Alberta Association of Registered Occupational Therapists
- Alberta Barley Commission
- Alberta Cattle Commission
- Alberta Chicken Producers' Marketing Board
- Alberta Community Council on AIDS
- Alberta Conservation Association
- Alberta Energy and Utilities Board
- Alberta Federation of Labour
- Alberta Foundation for Diabetes Research
- Alberta Law Foundation
- Alberta Lung Association
- Alberta Milk Producers' Association
- Alberta Museums Association
- Alberta Occupational Health Nurses Association
- Alberta Paraplegic Foundation
- Alberta Pharmaceutical Association
- Alberta Sport, Recreation, Parks and Wildlife Foundation
- Alberta Teachers' Association
- Alberta Venison Council
- Alzheimer Society of Canada
- The S.M. Blair Family Foundation
- Arthritis Society
- Association of Professional Engineers, Geologists and Geophysicists of Alberta
- Association of Universities and Colleges of Canada
- The Calgary Foundation
- Canadian Academic Accounting Association
- Canadian Association of Gastroenterology
- Canadian Association of Japanese Auto Dealers
- Canadian Association of Petroleum Producers
- Canadian Bar Foundation
- Canadian Blood Services
- Canadian Cystic Fibrosis Foundation
- Canadian Dental Association
- Canadian Dermatology Foundation
- Canadian Diabetes Association
- Canadian Digestive Disease Foundation
- Canadian Fitness and Lifestyle Research Institute
- Canadian Foundation for Ileitis and Colitis
- Canadian Health Services Research Foundation
- Canadian Institute for Advanced Research
- Canadian Kidney Foundation
- Canadian Liver Foundation
- Canadian Lung Association
- Canadian Masonry Research Institute
- Canadian Psychiatric Research Foundation
- Canadian Race Relations Foundation
- Canadian Red Cross
- Canadian Union of Public Employees, Local #30
- Canadian Urological Association Scholarship Foundation
- Cancer Research Society Inc.
- Canola Council of Canada
- C.D. Howe Institute
- Centre for Research on Computation and its Applications (CERCA)
- Chartered Accountants' Educational Foundation
- Chemical Manufacturing Association
- Children's Health Foundation of Northern Alberta
- Civic Service Union #52
- Crohn's and Colitis Foundation of Canada
- College of Physical Therapists of Alberta
- Council of Canadians
- Danone Institute of Canada

Private & Associations & Foundations

Public help Research Work at the University of Alberta

- Donner Canadian Foundation
- Ducks Unlimited Canada
- Edmonton Civic Employees' Charitable Assistance Fund
- The Edmonton Community Foundation
- Edmonton Social Planning Council
- Electric Transmission Council
- Friends of the Environment
- Friends of Multiple Sclerosis Research Fund
- Glaucoma Research Society of Canada
- Heart and Stroke Foundation of Alberta
- Heart and Stroke Foundation of Canada
- Heart and Stroke Foundation of Ontario
- Henri M. Toupin Foundation
- Hospital for Sick Children Foundation
- Imperial Oil Charitable Foundation
- Institute of Cardiology of Montreal
- Institute of Health Economics (formerly Pharmacoeconomics)
- Institute for Wetland and Waterfowl Research
- International Alliance of Theatre Stage Employees
- Juvenile Diabetes Foundation of Canada
- Kidney Foundation of Canada
- The Metis Settlements General Council
- McLaughlin Foundation
- Minerva Foundation
- MSI Foundation
- Multiple Sclerosis Society of Canada
- Muscular Dystrophy Association of Canada
- National Cancer Institute of Canada
- National Dental Assisting Examining Board
- Neuroscience Canada Foundation
- North American Waterfowl Management Plan Centre (Alberta)
- Northwest Peat & Crop Development Association
- Odd Fellows Rebekah Visual Research
- Osteoporosis Society of Canada
- Parkinson Foundation of Canada
- Pharmaceutical Manufacturers' Association of Canada -- Health Research Foundation
- Potash and Phosphate Institute of Canada
- Rick Hansen Institute
- Roeher Institute
- RP Eye Research Foundation
- Royal Bank Charitable Foundation
- Royal College of Physicians and Surgeons
- Rural Education and Development Association
- Saskatchewan Elk Breeders' Association
- Science Council of Alberta
- Science Council of British Columbia
- Sport Medicine Council of Alberta
- Students' Union, University of Alberta
- Tire Recycling Management Association of Alberta
- Peter and Elizabeth Tower Foundation
- United Nurses of Alberta
- Universiade '83 Foundation Inc.
- University of Alberta (1991) Foundation
- University of Alberta Hospitals Foundation
- Vancouver Hospital and Health Science Centre
- Welding Research Council
- Western Grains Research Foundation
- Wildlife Habitat Canada
- Wild Rose Foundation
- The Winspear Foundation
- World Wildlife Fund Canada

Economic

Diversification

University spin-off companies increasingly are a significant generator of jobs and contribute in an important way to Edmonton's growing reputation as a "Smart City."

Active University of Alberta Spin-off Companies

Company	Year Founded	Employees
Acugene Inc./Acugen Inc.	1997	1
AgriGenomics Inc.	1998	1
Alberta Asthma Center	1997	11
Alberta Microelectronic Corporation	1982	65
AltaRex Corp.	1995	47
AVRA Software Lab Inc.	1998	3
Biomech Designs Ltd.	1982	2
Biomira Inc.	1985	175
Biomotion Inc.	1994	2
Biotoools Inc.	1996	23
Boreal Laser Inc.	1988	5
CanBiocin Inc.	1997	3
C-FER Technologies Inc.	1983	52
CV Technologies Ltd.	1992	40
Cytovax Biotechnologies Inc.	1986	14
DB Robinson and Associates	1976	40
DNA-B Diagnostics	1994	4
Geolsotopes Analytic Inc.	1998	1
Harding Instrument Co. Ltd.	1969	40
Indico Technologies Corp.	1995	4
Integrated Construction Engineering Systems (I.C.E.S.)	1994	2
Isotechnika Inc.	1993	20
Isodiagnostika	1996	17
Isopharmika Inc.	1996	3

Research Works for Economic Diversification

Active University of Alberta Spin-off companies:	48
Direct jobs in Spin-off companies:	1,185
Indirect jobs created by Spin-off companies:	2,255

Company	Year Founded	Employees
L&R Wang Enterprises Ltd.	1990	2
Metabolic Modulators Research	1997	7
MTI Meta Tech Inc.	1997	1
Myrias Software Corp.	1982	40
NeuroMotion Inc.	1996	8
Orthopaedic Innovations Ltd.	1996	6
Ovo-Biotechnica Inc.	1991	1
PharmaTEC Global Inc.	1996	60
Phosphatek	1996	1
PISA Inc.	1995	2
Prairie Biological Research	1984	8
Raylo Chemicals Inc.	1963	150
Regional Data Management Inc.	1996	2
ROAM-IT (Canada) Holdings Inc.	1998	2
SimChem Inc.	1994	1
StatCo International Inc.	1994	4
SynPhar Laboratories Inc.	1987	75
SYNSORB Biotech Inc.	1994	35
Telephotogenics Inc.	1996	2
TRLabs	1986	178
Transpath Inc.	1996	5
The Laser Institute	1984	15
WavePOINT Systems Inc.	1997	5
Wildlife Genetics International	1998	1

research works

Many of the world's major health care-related companies and institutions sponsor research at the University of Alberta for the development of new drugs, treatments, applications and clinical trials. Among our research partners are...

- 3M Pharmaceuticals
- Abbott Laboratories Ltd.
- Adria Laboratories of Canada Ltd.
- Akzo Nobel
- Allelix Biopharmaceuticals Inc.
- Alliance Pharmaceuticals
- AltaRex Corp.
- AMDG Inc.
- Amgen Canada Ltd.
- Amylin Pharmaceuticals Inc.
- Angiotech Pharmaceuticals, Inc.
- AnorMed Inc.
- Apotex Inc.
- ASTRA Canada
- ASTRA Research Centre, Boston
- Axcan Pharma
- Baxter Corporation
- Baxter Travenol Laboratories
- Bayer Inc.
- Berlex Canada Inc.
- Biochem Pharma, Inc.
- Biomira Inc.
- Biotech Corp.
- Boehringer Ingelheim Canada Ltd.
- Briana Bio-Tech Inc.
- Bristol-Myers Squibb Pharmaceutical Group
- British Biotech
- Burroughs Wellcome Fund
- Cambridge Neuroscience Inc.

for better health

- Cangene Corp.
- Centocor Inc.
- Ciba-Geigy Canada Ltd.
- Control Dynamics Inc.
- COR Therapeutics
- Cordis Corporation
- CTI Inc.
- CV Technologies Inc.
- Cyanamid Canada Inc.
- Cytovax Biotechnologies Inc.
- Daiichi Pharmaceutical Co. Ltd.
- DepoTech Corporation
- Dupont Pharma
- Eisai America Inc.
- Eli-Lilly Canada Inc.
- Eli-Lilly & Company (USA)
- F. Hoffman-La Roche AG
- Fisons Corporation Ltd.
- Fournier Pharma
- Fujisawa Canada Inc.
- Fujisawa USA
- Genencor Inc.
- Glaxo Canada Inc.
- Glaxo-Wellcome Inc.
- Helix Biopharma Inc.
- Hoechst Marion Roussel Canada Research Inc.
- Hoffman-La Roche
- Howard Hughes Medical Institute
- ICOS Corporation
- Inter Medico
- ISIS Pharmaceuticals
- Isotechnika Inc.
- Janssen Ortho Inc.
- Janssen Pharmaceutical Inc.
- Johnson & Johnson

Pharmaceutical research works for better health

- Joslin Diabetes Center
- Kabi Pharmaceuticals
- Knoll Pharmaceuticals Canada
- Ligand Pharmaceuticals
- Medcan Health Management Inc.
- Medimmune Inc.
- Merck & Co., Inc.
- Merck Frosst Canada Inc.
- Merck KGAA
- Metabolex Inc.
- Metabolic Modulators Research Ltd.
- Micrologix Biotech Inc.
- Natural Factors Nutritional Products Ltd.
- Nellcor Puritan Bennett
- Neopraxis Pty Ltd.
- Neose Technologies Inc.
- The Noguchi Institute
- Nordic Merrell Dow Research Inc.
- Novartis Nutrition Research AG
- Novartis Pharma Canada Inc.
- Novo Nordisk Canada Inc.
- Ortho-McNeil Inc.
- Oxagen Ltd.
- Pacific Biotechnologies Inc.
- Parke Davis
- Pasteur Merieux Connaught Laboratories Inc.
- Pfizer Canada Inc.
- Pharmacia & Upjohn
- Pro-Neuron Inc.
- Procter & Gamble Co.
- Protodigm Ltd.
- Roche Diagnostic Systems
- Rhône Poulenc Rhorer
- Roche Diagnostic Systems
- Ross Laboratories
- Salpep Biotechnology Inc.
- Sandoz Canada
- SangStat Canada
- Sanofi Canada Inc.
- Schering Canada Inc.
- Sciex
- Searle Canada Inc.
- Select Therapeutics Inc.
- SEQUUS Pharmaceuticals Ltd.
- Sertoli Technologies Inc.
- Servier Laboratories France
- Smith & Nephew Richards
- Smith Kline & French Canada Ltd.
- SmithKline Beecham Biologicals
- SmithKline Beecham Pharma Inc. (U.K.)
- Solray Pharma
- Solvay Kingswood Inc.
- Somagen Diagnostics Ltd.
- Spectral Diagnostics
- Sterling-Winthrop Inc.
- Stiefel Canada Inc.
- SYNSORB Biotech
- Syntex Inc.
- Texas Biotechnology Corp.
- The Upjohn Company of Canada
- UroMed Corporation
- ViroPharma Inc.
- Warner Lambert Canada
- The Westaim Corporation
- Wyeth Ayerst Canada
- Wyeth Ayerst Research (USA)
- Zagros Pharma Ltd.
- Zenea Pharmaceuticals

research works

to advance the frontiers
of knowledge, through...

- Alberta Energy Co.
- Alberta Oil Sands Technology and Research Authority
- Alternative Fuel Systems Inc.
- American Chemical Society
- Amoco Canadian Petroleum Co. Ltd.
- Battelle Pacific Northwest Laboratories
- Canadian Association of Petroleum Producers
- Chevron Canada Resources
- Chieftan International Inc.
- Cirrus Environmental Services Inc.
- Colt Engineering
- Cresfar Energy
- D&S International Consultants Ltd.
- Environmental Science and Technology Alliance Canada
- Express Pipeline Ltd.
- Fording Coal
- Gulf Canada Resources
- Husky Oil Ltd.
- Hydrocarbon Technologies Inc.
- Imperial Oil Chemicals Division
- Imperial Oil Ltd.
- Interprovincial Pipe Line Co. Ltd.
- Luscar Ltd.
- Manalta Coal Ltd.
- Mobil Exploration & Product Development Center
- NOVA Chemicals
- NOVA Gas Transmission Ltd.
- Novacor Chemicals Ltd.
- Novacor Research and Technology Corp.
- PanCanadian Petroleum Ltd.
- Petro-Canada Inc.
- Petro-Canada Oil and Gas
- Shell Canada Inc.
- Shell Oil Products Ltd.
- Suncor Inc.

University of Alberta Commercialization Achievements

Since 1993:

- Licensing and royalty revenue totalled \$14.3 million
- 407 Reports of Invention were filed
- 90 Canadian, U.S., and international patents were issued
- 915 Licenses, Options, and Agreements signed, primarily with private-sector companies
- 38 new spin-off companies formed, employing more than 600 people, attracting more than \$140 million in investment to Alberta
- \$120 million in contract research

In 1998-99:

- Licensing revenues exceeded \$3.8 million, the highest of any Canadian university
- 59 new Reports of Invention were submitted
- 14 Canadian, United States or international patents were issued covering 13 distinct technologies
- 257 licenses, options or agreements were signed, primarily with private-sector organizations
- The University of Alberta and its spin-off companies hold more than 250 issued patents.

- Syncrude Canada
- Talisman Energy Inc.
- Texaco Canada Resources Ltd.
- TransCanada Pipeline Inc.
- Ulster Petroleum Ltd.
- Union Oil Co. of California
- UOP Engineering Products
- Wascana Energy
- Westec Microbes Ltd.

investment

International industries invest in research at the University of Alberta

- 3M Central Research Laboratories
- A/F Protein
- Alliance Pharmaceuticals
- Alteon Inc.
- AMDG Inc.
- American Biosystems Inc.
- Amogen Inc.
- Aquanova International Ltd.
- ARCO Exploration and Production
- Battelle Pacific Northwest Laboratories
- Baxter Health Care Corporation
- Baxter Travenol Laboratories
- Bristol-Myers Squibb Pharmaceutical Research Institute
- British Biotech
- Burroughs Wellcome Fund
- Cambridge Neuroscience Inc.
- Cell Therapeutics
- Centocor Omc.
- Clintee Nutrition Co.
- Cobb-Vantress Inc.
- Cochlear Corp.
- Control Dynamics Inc.
- COR Therapeutics
- Covance Periapproval Services
- CTI Incorporated
- Daiichi Pharmaceuticals Co. Ltd.
- Depotech Corporation
- Dow Chemical USA
- Dywidag Systems International
- Eastman-Kodak Co. Ltd.
- Eisai America Inc.
- Eli-Lilly & Co.
- Exxon Chemical Americas
- F. Hoffman-La Roche AG
- Finnsugar Bioproducts Inc.
- Firmenich SA
- Fujisawa US
- Genetics Institute Inc.
- Genomics Solutions
- Glaxo Wellcome PLC
- Glycobiotics Inc.
- GTC Technology Corp.
- Hoffman-La Roche
- Hydrocarbon Technologies Inc.
- ICOS Corporation
- Institut de Recherches Internationales Servier
- International Forest Products Ltd.
- Isis Pharmaceuticals
- Kabi Pharmaceuticals Sweden
- Landmark Graphic Corp.
- Ligand Pharmaceuticals
- Lucas Meyer GMBH Ltd.
- Medimmune Inc.
- Medtronic Bakken Research Centre (Netherlands)
- Merck & Co. Inc.
- Merck Groupe Liplha France
- Metabolex Inc.
- Mobil Technology Company
- Nalco Chemical Company
- Narsad Research
- National Storage Industry Consortium
- Nellcor Puritan Bennett
- Neopraxis Pty Ltd.
- Neose Technologies
- Northern Telecom (USA)

investment

International industries invest in research at the University of Alberta

- Novartis Nutrition Research AG
- Nutri-Quest Inc.
- Oxagen Ltd.
- Pari GmbH
- Pediatric Oncology Group
- Pfizer Inc.
- Pharmacia & Upjohn Co.
- Pioneer Hi-Bred International Inc.
- Placer (PNG) Pty Ltd.
- Pro-Neuron Inc.
- Procter & Gamble Inc.
- Quantum Corporation
- Radiation Therapy Oncology Group
- Roche Laboratories
- Ross Laboratories
- Salpep Biotechnology Inc.
- Schering-Plough Research Institute
- Seagate Technology Inc.
- SEQUUS Pharmaceuticals
- Sertoli Technologies
- Shell Oil Products (USA) Ltd.
- Siemens Corporate Research Inc.
- SmithKline Beecham Pharma (UK)
- Teledyne Industries
- Texas Biotechnology Corp.
- Trophix Pharma Inc.
- Unimin Corp.
- Union Oil Company of California
- UOP Engineering Products
- Uromed Corporation
- U.S. Silica Company
- ViroPharma Inc.
- Weyerhaeuser USA
- Winrock International
- Wyeth Ayerst Research



Collaborative activities with other post-secondary institutions world-wide helps research work at the University of Alberta

- Carleton University
- Columbia University
- Dalhousie University
- Drexel University (USA)
- Duke University (USA)
- Lakehead University
- Laurentian University
- McGill University
- McMaster University
- Meharry Medical College (USA)
- Memorial University of Newfoundland
- Northern Alberta Institute of Technology
- Northwestern University
- Ohio University
- Okanagan University College
- Ontario Institute for Studies in Education
- Oregon Health Sciences University
- Queen's University
- Red Deer College
- San Francisco State University
- Simon Fraser University
- Universidade de Coimbra (Portugal)
- University of Bergen (Norway)
- University of British Columbia
- University of Calgary
- University of California at Los Angeles
- University of Idaho
- Université Laval
- University of Lethbridge
- University of Leuven (Belgium)
- University of Manitoba
- University of Massachusetts at Boston
- Université de Montréal
- University of New Brunswick
- University of Ottawa
- University of Pennsylvania
- Université de Québec
- University of Rochester
- University of Saskatchewan
- Université de Sherbrooke
- University of South Carolina
- University of Toronto
- University of Vermont
- University of Victoria
- University of Waterloo
- University of Western Ontario
- University of Windsor
- Villanova University
- York University
- University of Zimbabwe

The University of Alberta has long performed research in disciplines (both traditional and emerging) which have an economic impact on Alberta and the world. Examples of current research include:

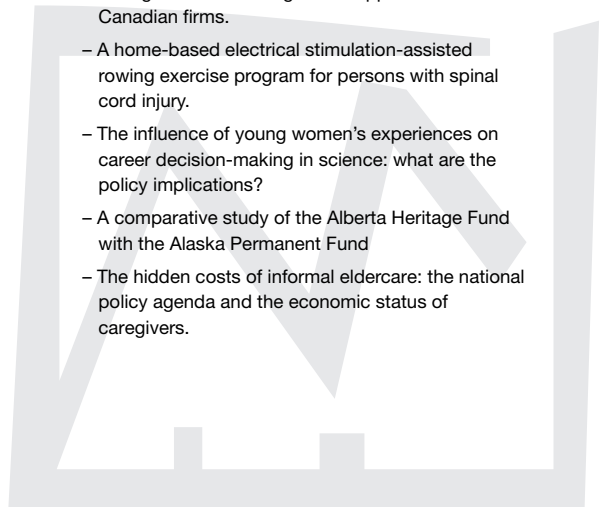
Agriculture, Food and Nutrition

- Reducing the cost of dairy production by understanding feed intake regulation.
- The effects of ginseng on stress response and immune response.
- Dietary intake of adolescents: where does beef fit in?
- Linkage studies of herbicide tolerance and blackleg resistance in *Brassica napus canola*
- Nutrition education for social change: women and body image.
- Where, what and how much food do Canadian consumers purchase? Food purchasing patterns and determinants.
- Export competitiveness of Alberta and Canadian value-added food products in the Asia-Pacific region.
- Mechanisms by which diet fat alters cell structure and metabolism.



Humanities, Social Sciences, Society

- Clothing choices to protect against skin cancer.
- Restructuring the Canadian tax system.
- Canadian sport and leisure industries in the context of globalization.
- An integrated print and electronic history of women's writing in the British Isles.
- New product development in the Canadian and Australian feature film and television program production industries: a comparative study.
- Ethical issues and public sector restructuring: performance indicators and accountability.
- Case studies of Internet use in Alberta schools.
- Effects of exercise on quality of life in cancer patients.
- The intersection of art and commerce: a study of management in cultural industries.
- Breast cancer prevention as a motive for exercise participation.
- Managing global software outsourcing arrangements: challenges and opportunities for Canadian firms.
- A home-based electrical stimulation-assisted rowing exercise program for persons with spinal cord injury.
- The influence of young women's experiences on career decision-making in science: what are the policy implications?
- A comparative study of the Alberta Heritage Fund with the Alaska Permanent Fund
- The hidden costs of informal eldercare: the national policy agenda and the economic status of caregivers.



Forestry

- Remediation of contaminated soil containing mercury.
- Aspen dynamics in regenerating stands in the boreal forest.
- Native prairie reclamation following wellsite disturbance.
- Effects of forest fires and forest management practices on genetic diversity in white spruce in Northern Alberta: benchmarks for genetic biodiversity indicators and criteria for sustainable forest management.
- Caribou conservation in west-central Alberta: a forest management perspective.
- The potential for the impact of logging on the hydrology and water quality of western boreal lakes.
- The effect of forest structure on the dynamics of tent caterpillar populations.



Environment

- Restoration of riparian and flood plain wetlands affected by transportation systems in the Athabasca valley of Jasper National Park.
- Effects of resource availability on individual reproductive success in boreal mammals.
- Biodegradation of crude oil aromatics by a cold-tolerant bacterium.
- Longer term impacts on birds of harvesting the boreal mixed-wood forest.
- Interactions of aquatic vertebrates on the small lakes of western Canada.
- The assessment and restoration of biological communities and biogeochemical processes in mountain lakes affected by past human activity.
- Habitat use and hunting behaviour of female polar bears.
- Alternatives to sandbags for temporary flood control measures.
- Reuse of steel fibers from recycled tires.

Health Sciences and Biotechnology

- The effectiveness of three educational strategies for the dissemination of clinical practice guidelines to primary care physicians.
- Design and evaluation of novel antiviral agents for human immunodeficiency virus and herpes virus.
- The genetic factors of liver disease.
- Functional, structural and metabolic studies of the failing and infarcted heart.
- Sex steroids and vascular function.
- Hospitalization trends and variation.
- The role of nitric oxide in the regulation of arterial blood pressure.
- The application of molecular biology to develop new tools for genomic research.
- Design and investigation of novel anti-tuberculosis agents.
- Genetic analysis of Prader-Willi syndrome: implications for normal human brain development.
- Study of skin problems in tar sand workers.
- Mechanisms of cardiac defibrillation.
- Peripheral nerve regeneration.
- Spinal cord microstimulation to activate paralyzed muscles.
- Design, implementation and evaluation of a computerized injury surveillance system for hospital emergency departments.
- Enhanced mobility for persons with spinal cord injury.
- From chaos to order: making sense of waiting lists in Canada.
- Molecular and genetic analysis of stress tolerance in plants.
- Development of human skin equivalent as a wound coverage and its efficacy in the quality of healing.
- Prenatal care: its role in health promotion of pregnant women and the prevention of preterm and term low birth weight.
- The role of microbial processes on sulfate-enriched tailings deposits.
- Development of microsatellite markers.
- Echinacea: its health potential in boosting immune response.

Applied Science, Energy and Technology

- The formability, microstructure and performance of high strength microalloyed steel products.
- Effect of recycled water from composite tailings process on bitumen recovery from oil sands.
- Rehabilitation and strengthening of steel structures.
- Risks from landslides in western Canada.
- Vehicle emission submodels for urban traffic control planning.
- Environmentally efficient flaring in the energy industry.
- Protocol design for local and metropolitan networks.
- Ergonomic, vibrational and impact studies on 240, 320 and 360-ton heavy trucks.
- Developing a lab-on-a-chip.
- The geology of the McMurray formation, Athabasca oil sands deposit.
- Applications of machine learning in robotics, rehabilitation, and high-energy physics.
- Building high-performance artificial intelligence applications.
- Geochemistry and geopetrology of the earth's mantle.
- Observations and numerical simulations of convective cloud systems.
- Application of hydrogeology and quantitative migration analysis to petroleum exploration.



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2000, 10235-101 St, Edmonton, Alberta
Phone: (780) 423-3003

1900, 350-7th Ave SW, Calgary, Alberta
Phone: (403) 260-8500

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For additional information:

Fax: (780) 492-3189

E-mail: david.norwood@ualberta.ca

<http://www.ualberta.ca/~univhall/vp/vprea/>

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