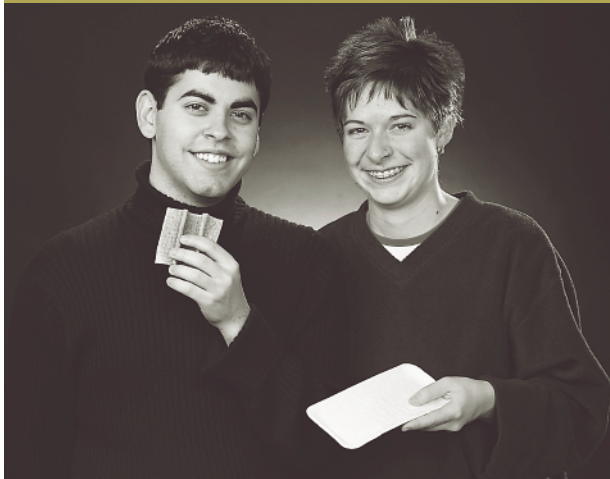


## Research centres, institutes and groups (continued)

### SNAPSHOT



An edible and biodegradable soy-based food packaging tray that will reduce landfill waste is just one of the research projects developed by students participating in Project SOY, an industry-sponsored contest that promotes new uses and marketing strategies for soybeans, at the University of Guelph. Engineering student Eugene Mohareb invented the edible packaging with former students Phuong Nguyen and Marc-Antoine Joly. He is pictured here with Project SOY student co-ordinator Erinn White.

#### Food System Biotechnology Centre

Carries out research built on emerging knowledge of animal and plant genetics and molecular biology to strengthen Ontario's agri-food system.

Alan Wildeman, Director,  
519.824.4120 Ext. 3081 or 2910

#### Geomatics for Informed Decisions

A Canada-wide network of 97 researchers with the common goal of promoting Canada's domestic geomatics industry.

Hugh Whiteley, School of Engineering,  
519.824.4120 Ext. 3634

#### Guelph Centre for Organizational Research Inc.

Composed of a group of specialists in the theory, research and practices of applied psychology, using the latest knowledge to provide practical solutions in human resources management.

Diane Green, Executive Director,  
519.824.4120 Ext. 5072

#### Guelph Transgenic Plant Research Complex

Dedicated to conducting transgenic research involving various crop species.

Peter Pauls, Plant Agriculture,  
519.824.4120 Ext. 2460

#### Guelph Turfgrass Institute

Conducts research and extension, and provides information on turfgrass production and management, urban horticulture and environmental research to the Ontario turfgrass and landscape industries.

Rob Witherspoon, Director,  
519.824.4120 Ext. 6886

#### Hagen Aqualab

Provides state-of-the-art facilities for a broad range of aquatic research programs with practical applications in areas of aquaculture, conservation toxicology, physiology and environmental preservation of water quality.

Denis Lynn, Zoology,  
519.824.4120 Ext. 2746

#### Health & Performance Centre

Multidisciplinary staff specializing in sports medicine and health promotion. Services available to the University and surrounding communities.

Cyndy McLean, Co-ordinator,  
519.767.5011

#### Human Nutraceutical Research Unit

A clinical trial unit that evaluates natural health products, dietary supplements and value-added novel foods in controlled human studies for potential health claims.

Julie Conquer, Director,  
519.824.4120 Ext. 3749

#### Institute for Environmental Policy

Provides a framework for collaborative research and comment on policy issues related to environmental management.

Isobel Heathcote, Director,  
519.824.4120 Ext. 2441

#### Institute for Robotics & Intelligent Systems

Develops intelligent systems that can perceive, reason and act in areas such as natural resources, health care, manufacturing and information technology.

Yang Xiang, Principal Investigator,  
519.824.4120 Ext. 2824

#### Laboratory Services

Offers advanced analytical, diagnostic and interpretive services for government, university and industrial clients to ensure the quality and safety of Ontario's food supply from production to processing.

John Lynch, Marketing Manager,  
519.767.6221

#### Landscape Research Group

Dedicated to understanding and promoting harmony between people and the landscapes that support them.

Nancy Pollock-Ellwand,  
Co-ordinator,  
519.824.4120 Ext. 6577

#### Mathematics of Information Technology & Complex Systems

A Canada-wide network of 174 researchers that provides mathematical models and software tools to help Canadian firms in key sectors of the economy become more productive.

Anna Lawniczak, Mathematics & Statistics,  
519.824.4120 Ext. 3287

#### Metals in the Environment Research Network

Conducts research on the impact of metals on ecosystems in Canada.

Len Ritter, Co-ordinator,  
519.824.4120 Ext. 2980

#### Ontario Rural Wastewater Centre

Promotes environmentally sustainable development of rural and unsewered areas through training, demonstration and applied research on nutrient and agri-food waste management and rural municipal waste water treatment.

Doug Joy, General Manager,  
519.824.4120 Ext. 3048

#### Ontario Weather Network

Uses in-field sensors to measure weather-related factors such as leaf wetness, temperature, rainfall and relative humidity, which are critical to predicting particular crop diseases. Offers weather-related, site-specific data to southwestern Ontario farmers.

Ian Nichols, Ridgeway College,  
519.674.1532

#### Protein Engineering Network

A Canada-wide network of researchers focusing on both discovery and development of proteins, peptides and glycopeptides for application as products or services for medical, veterinary, bioinformatic and other applications.

Hung Lee, Environmental Biology,  
519.824.4120 Ext. 3828

#### Research Programs (U of G/ OMAFRA enhanced partnership)

Further the long-term global competitiveness and sustainability of Ontario's agriculture and food system through excellence in research.

Dave Hume, Interim Associate Vice-President for Agri-Food & Partnerships,  
519.826.3800

#### Shared Hierarchical Academic Research Computing Network

A multi-university, interdisciplinary institute for the development and exploitation of computational tools for research in critical areas of science, engineering and business.

Deborah Stacey, Computing & Information Science,  
519.824.4120 Ext. 2651

#### Sudbury Neutrino Observatory

A worldwide collaboration of 50 researchers devoted to the detection of neutrinos (elementary particles produced by the sun's nuclear reactions).

John Simpson, Physics,  
519.824.4120 Ext. 3982

#### Veterinary Teaching Hospital

Provides clinical training of undergraduate DVM students and graduate students as well as essential services to veterinarians and animal owners in Ontario.

John Tait, Director,  
519.824.4120 Ext. 4102

#### Wild Bird Clinic

Provides treatment and rehabilitation for injured and orphaned birds, trains veterinary students, maintains a database, and educates the public.

Geri Higginson, Veterinary Technician,  
519.824.4120 Ext. 4162

# Research Facts

2002

THE COMPLETE SPECTRUM OF RESEARCH AT THE UNIVERSITY OF GUELPH

## Guelph reaches two \$100-million milestones

The University of Guelph has exceeded two \$100-million research milestones. It has received \$100.8 million in research awards and matching funds from external sponsors, representing a 7.8-per-cent increase over the previous year. As well, the University has accumulated \$116.5 million in infrastructure support from the Canada Foundation for Innovation (CFI), the Research Performance Fund, the Ontario Innovation Trust (OIT), the Ontario Research and Development Challenge Fund, and the Premier's Research Excellence Awards.

Funding for Guelph research has steadily increased over the last five years and has led to new capacity and new partnerships, fuelling value-added outcomes. For example, increases in infrastructure funding from the CFI, OIT and industrial partners have sparked the development of a new \$2.1-million Centre for Food and Soft Materials Science.

Unique to Canada, the centre brings

### SNAPSHOT



University of Guelph researchers Jim Dickey (left), Mark Hurtig, John Runciman and Simon Pearce have developed a novel process of joint cartilage repair. Called mosaic anthroplasty, the procedure grafts healthy cartilage on to a joint with damaged or missing cartilage. Because the replacement tissue comes from an uninjured area of the joint, risks of infection or an immune response against foreign tissue are avoided. Developed for use on horses, mosaic anthroplasty will eventually be used on humans.

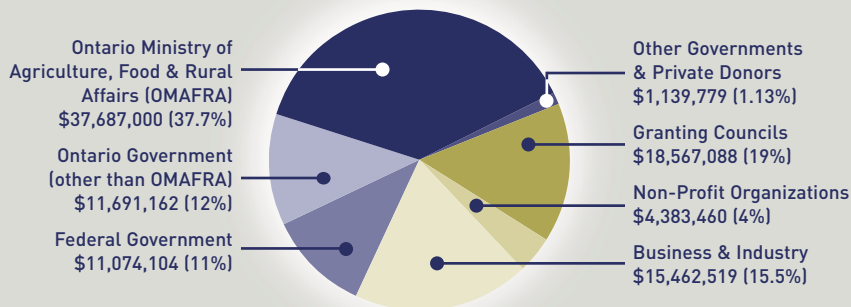
together 19 researcher groups from six U of G departments: Chemistry and Biochemistry, Microbiology, Molecular Biology and Genetics, Engineering, Food Science, and Physics. Research projects address the structure-function relationship of foods, polymers, biopolymers, biological membranes and bacterial surfaces.

### OVERVIEW

The University of Guelph is one of the highest-ranked and most research-intensive universities in Canada. Its basic and applied research strengths cover a complete spectrum, ranging from life sciences, food sciences and environmental sciences to veterinary and pre-clinical medicine to social sciences and humanities.

The University's innovative research and education programs are supported by the most advanced technology and learning facilities available. These include the \$15-million newly renovated food science complex, housing a dynamic one-stop food research program, and a \$9.4-million, 2,800-square-metre addition to the University's engineering and computer science facilities.

### UNIVERSITY OF GUELPH RESEARCH FUNDING FOR 2001



Percentages don't add up to 100 due to rounding.

Total: \$100,005,112

UNIVERSITY  
of GUELPH

## The raw data on Guelph

The University of Guelph was established in 1964, when three founding colleges – the Ontario Veterinary College

(1862), the Ontario Agricultural College (1874) and

Macdonald Institute (1903) – joined with a new college of arts and science.

Today there are six colleges in total, spanning the natural

sciences, social sciences and humanities, three satellite agricultural

colleges at Ridgetown, Kemptville and Alfred, and the Horticultural Research Institute of Ontario (now part of the Department of Plant

Agriculture). The main campus of more than 405 hectares includes a 165-hectare Arboretum and a 12-hectare Research Park.

15,500 Canadian students\*

Largest employer in Guelph

Annual economic impact on city: more than \$400 million

\*There are approximately 13,000 full-time undergraduates, 1,300 part-time undergraduates, and more than 1,600 graduate students at the University of Guelph. Five hundred international students attend from 55 countries.

## Research field stations dedicated to:

Crop Science

Horticultural Science

Veterinary Science

Agroforestry

Environmental Engineering

Turfgrass

Engineering

Animal Science

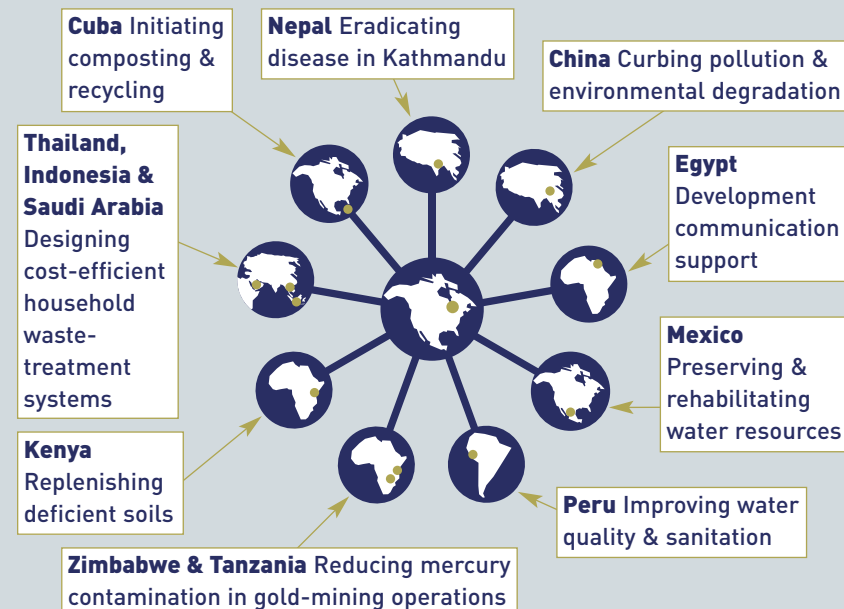
Aquaculture

This research complement includes more than 2,200 hectares of corn, soybeans, alfalfa, cereals and pasture, as well as numerous plots at co-operator farms throughout the province; \$50 million in land and buildings; more than 150 employees; and \$30 million in machinery.

## University of Guelph Research Park is home to offices and laboratories of:

- AgriTours Canada Inc.
- Agriculture and Agri-Food Canada
- Canadian Animal Health Institute
- Canadian Dairy Network
- Canadian Food Inspection Agency
- ESG International
- Elanco/Provel
- First Line Seeds Ltd.
- George Morris Centre
- Geosyntec Consultants International Inc.
- Gustafson Partnership
- Health Canada
- James Richardson International
- Kahntact Marketing Inc.
- Lipid Analytical Laboratories
- Matteis Realty
- Monsanto Canada Inc.
- Nanodesign Inc.
- Ontario Agri Business Association
- Ontario Dairy Herd Improvement Corporation
- Ontario Problem Gambling Research Centre
- Ontario Universities Application Centre
- Semex Alliance
- SHUR-GAIN
- Strategic Research Associates
- Syngenta Crop Protection Canada Inc.

## International development connections



## UPDATE

## Research achievements

- Discovering faster, more accurate ways to detect, control and destroy *E. coli* 0157:H7 at its source
- Developing an in vitro propagation method to help preserve endangered medicinal plant species
- Designing an agronomic life-support system that can guarantee the quality and safety of food sources in space and on Earth
- Devising a surgical compressor that produces less scarring
- Extending the range of products containing high levels of DHA – the omega-3 fatty acid important for brain and retinal development and protection against cardiovascular disease
- Developing a waste-water treatment system that significantly reduces surface-water pollution in agricultural areas
- Monitoring insects to identify environmental changes that could threaten the ecosystem and limit diversity

# Research centres, institutes and groups

Any of the centres, institutes and groups listed below may be contacted directly through the University of Guelph Web site at [www.uoguelph.ca](http://www.uoguelph.ca) by typing the name of the centre into the "Search" field on the right-hand side of the home page. For new additions to this list, please visit the Research Facts Web site at [www.uoguelph.ca/research/facts/facts.html](http://www.uoguelph.ca/research/facts/facts.html)

## **Animal Biotechnology Embryo Laboratory**

Introduces new reproductive technologies and makes them more available to Canadian producers.  
Ann Hahnel, Director,  
519.824.4120 Ext. 8399

## **AquaNet-Aquaculture Network**

Dedicated to increasing the efficiency of aquaculture production through species diversification, biotechnology and environmental sustainability.  
Jim Ballantyne, Zoology,  
519.824.4120 Ext. 2708

## **Arboretum Gene Bank**

Preserves the genetic diversity of some of Ontario's rare woody plants and DED-resistant elms, and produces seed for restoration work.  
Alan Watson, Director,  
519.824.4120 Ext. 2356

## **Axelrod Institute of Ichthyology**

Promotes the development of graduate teaching and research, and supports international teaching and research, as well as editing and publishing activities relating to fish biology.  
David Noakes, Director,  
519.824.4120 Ext. 8217

## **Biocontrol Network**

Focuses on developing environmentally friendly pest control and biocontrol strategies to protect crops.  
Peter Krell, Microbiology,  
519.824.4120 Ext. 3368

## **Business Development Office**

Evaluates new inventions for commercialization; develops business opportunities through research contracts, patenting and licensing; and transfers results of U of G research to industry.  
Constance Hearty, Director,  
519.824.4120 Ext. 6471

## **Col. K.L. Campbell Centre for the Study of Animal Welfare**

Promotes the welfare of animals through research and education.  
Ian Duncan, University Chair in Animal Welfare,  
519.824.4120 Ext. 3652

## **Canadian Arthritis Network Core Facility**

Addresses fundamental questions about diagnosis and treatment of arthritis.  
Mark Hurtig, Clinical Studies,  
519.824.4120 Ext. 4028

## **Canadian Bacterial Diseases Network**

A Canada-wide consortium of 53 researchers and laboratory personnel whose work focuses on bacterial disease and is targeted towards development of new vaccines and therapeutic agents.  
Terry Beveridge, Microbiology,  
519.824.4120 Ext. 3366

## **Canadian Co-operative Wildlife Health Centre**

Maintains surveillance and diagnosis of diseases in wild animals as a collaborative activity of Canada's four veterinary colleges.  
Doug Campbell, Staff Wildlife Pathologist,  
519.824.4120 Ext. 4556

## **Canadian Institute for Food Inspection & Regulation**

Supports a range of educational, research, communication and other initiatives in food safety, animal disease and food regulation.  
Jim Pettit, Interim Director,  
519.824.4120 Ext. 3664

## **Canadian Network of Toxicology Centres**

Conducts environmental, health-related research to address Canada's need for timely, accurate and unbiased data on environmental health risks associated with metals and chemical agents.  
Len Ritter, Executive Director,  
519.824.4120 Ext. 2980

## **Canadian Research Institute for Food Safety**

Fosters links among researchers, the food industry, consumer groups and regulatory agencies to bolster the Canadian agri-food sector through public protection, enhancement of trade and increased awareness.  
Mansel Griffiths, Director,  
519.824.4120 Ext. 2269

## **Centre for Cultural Studies**

Dedicated to supporting collaborative activities and research projects, which bring together University and local community members, particularly with a social justice commitment.  
Christine Bold, Director,  
519.824.4120 Ext. 6049

## **Centre for Educational Research & Assessment**

Focuses on ways in which educational structures and processes produce positive learning outcomes, such as educational completion and transition to work.  
Fred Evers, Director,  
519.824.4120 Ext. 2196

## **Centre for Families, Work & Well-Being**

Promotes individual and family well-being through research, consulting and community education.  
Linda Hawkins, Executive Director,  
519.824.4120 Ext. 3109

## **Centre for Food & Soft Materials Science**

Researches the use and development of soft materials such as food, polymers, biological membranes and proteins of critical importance to all sectors of industry.  
John Dutcher, Director,  
519.824.4120 Ext. 3950

## **Centre for the Genetic Improvement of Livestock**

Conducts genetic research for numerous animal industries, including aquaculture, beef, dairy, poultry, swine and sheep.  
Jim Wilton, Director,  
519.824.4120 Ext. 3647

## **Centre for Land & Water Stewardship**

Encourages projects that examine the sustainability of land and water resources, and serves as an umbrella for several research and extension projects at U of G.  
Stewart Hilts, Director,  
519.824.4120 Ext. 2702

## **Centre for Materials Research**

Develops new knowledge and technology relevant to the future needs of Ontario's materials and manufacturing industry.  
Val Davidson, School of Engineering,  
519.824.4120 Ext. 4367

## **Centre for Psychological Services**

Provides psychological services to the University and local community, and promotes the profession of psychology to students, U of G and the community.  
Brenda Kenyon, Director,  
519.824.4120 Ext. 2578

## Sponsored research chairs

- Dairy Microbiology (NSERC/Dairy Farmers of Ontario)
- Egg Materials Science (Ontario Egg Producers Marketing Board)
- Land Stewardship (OMAFRA)
- University Chair in Animal Welfare (OMAFRA/Mona Campbell/The Eden Conservation Trust)
- Seven Canada Research Chairs in the disciplines of geography, evolution & biology, life sciences related to human health, analytical chemistry, food science & technology, history & microbiology.

## **Cliff Ecology Research Group**

Uses a hierarchical approach to examine the physiological, population and community ecology of old-growth forests on limestone cliff ecosystems.  
Doug Larson, Botany,  
519.824.4120 Ext. 2679

## **Controlled Environment Systems Research Facility**

Conducts multidisciplinary research and development in space and earth sciences. Sponsored jointly by U of G and the Centre for Research in Earth and Space Technology.  
Michael Dixon, Director,  
519.824.4120 Ext. 2555

## **Couple & Family Therapy Centre**

Serves a wide range of clients with diverse problems and provides students with research and clinical experience.  
Jean Turner, Director,  
519.824.4120 Ext. 6426

## **Electrochemical Technology Centre**

Comprises a team of researchers from chemistry and physics (Guelph) and chemical engineering (Waterloo) who conduct research in a variety of areas of pure and applied electrochemistry.  
Nigel Bunce, Chemistry & Biochemistry,  
519.824.4120 Ext. 3962

Please see next page