Research at the University of Guelph is pushing human discovery forward and improving the world we live in. Continuous advancements in the scale, diversity and ambition of research projects across all departments have helped shape U of G into a leading research institution.

Researchers form locally collaborative, invaluable partnerships among researchers, external organizations, industries and governments that have fostered studies and initiatives to flourish and extend well beyond campus.

The Ontario Ministry of Agriculture, Food and Rural Affairs-U of G Partnership is a shining example of a successful and long-lasting relationship. It provides opportunities to improve and promote research and strengthen the agri-food industry regionally and worldwide.

U of G values research that contributes to our greater understanding of society, how we think and what the world is made of. These big ideas then help promote critical thinking. At the same time, we produce practical applications and research innovations to mobilize knowledge to create jobs and grow the economy.

Fostering an inclusive and innovative community for all minds to develop and work at their highest level is what makes U of G special. It’s the catalyst that inspires us to continually advance research and improve life.

Malcolm Campbell
Vice-President, Research
Members of the University’s Centre for Cardiovascular Investigations study factors leading to heart failure, backed by a prestigious Catalyst Grant from the Canadian Institutes of Health Research. Their research may lead to new therapies for correcting heart problems and extending lives.

FUNDING BOOST FROM NATIONAL AGENCIES

Research funds awarded from the Tri-Agencies and the Networks of Centres of Excellence were up 4.6% over 2014-15. The Tri-Agencies are the Canadian Institutes of Health Research (CIHR), the Natural Sciences and Engineering Research Council (NSERC), and the Social Sciences and Humanities Research Council (SSHRC).

This year, U of G received nearly $5 million from the federal government for social sciences and humanities research, ranging from changing stereotypes about disabilities to investigating climate change, digital privacy, and spousal and parent-child relationships. More than half of that funding went to Prof. Carla Rice, Department of Family Relations and Applied Nutrition, and holder of the Canada Research Chair in Care, Gender and Relationships. Rice received a coveted $2.5-million SSHRC Partnership Grant to bring together researchers and community partners to study ways to challenge misconceptions about disability and marginalized communities.

TRI-AGENCIES RESEARCH AWARDS

- NSERC Research Tools and Instruments - 42% success vs. national average of 33%
- NSERC Discovery Grants to Early Career Researchers - 82% success vs. national average 75%
- SSHRC AWARDS - up 9%
- NSERC AWARDS - up 6%
- NSERC AWARDS - up 4.6%
Prof. Carl Svensson, College of Engineering and Physical Sciences, uses this gamma-ray spectrometer, called the Gamma-Ray Infrastructure for Fundamental Investigations of Nuclei (GRIFFIN), to investigate nuclear structure and astrophysics and to learn how different elements form. GRIFFIN operates at TRIUMF in Vancouver, Canada’s national laboratory for basic and applied research in nuclear and particle physics.

RESEARCH INFRASTRUCTURE SUPPORT

Canada Foundation for Innovation and Ontario Ministry of Research, Innovation and Science Ontario Research Fund (Research Infrastructure) programs awarded almost $7 million in 2015-16.

Funding from the Canada Foundation for Innovation and the Ontario Ministry of Research, Innovation and Science provides our researchers with cutting-edge lab facilities and equipment they need to push the frontiers of knowledge in all disciplines and to conduct research from discovery to technology development. Funded research at U of G improves health, ensures a cleaner environment, supports evidence-based policy-making and helps Canadian businesses to compete.

Canada Foundation for Innovation (CFI) funding up $2,276,706 from $2,049,940 in 2014
Ontario Research Fund (Research Infrastructure) program funding from the Ontario Ministry of Research, Innovation and Science up $1,776,706 from $1,575,250 in 2014
Latin America has traditionally been a Catholic and conservative region. Yet 80 per cent of Latin Americans today live in countries where gay marriage is legal. Jordi Diez, a professor in the Department of Political Science, looked at Argentina, Chile and Mexico to find out why, in the first comparative study of its kind. What he learned is the subject of his book called The Politics of Gay Marriage in Latin America (Cambridge University Press). It argues that much of the answer lies in the ability of advocacy groups to form alliances to inform the debate.

The University of Guelph has a long-standing commitment to international development in dozens of disciplines. International research grew significantly in 2015-16.

The University of Guelph has a long-standing reputation as one of the most inventive universities in Canada. U of G research has led to global efforts to develop new vaccines to improve human and animal health, new crop varieties to improve farm yields and new biodegradable plastics to divert waste from landfills.

U of G faculty, students and staff collaborate with experts in other universities and research centres in Canada and abroad. Among all peer-reviewed journal articles written or co-written by U of G researchers, about one-third involve at least one international collaborator.

$48 MILLION
in research funding

289 PROJECTS
research in 64 COUNTRIES

UP 23%
In 2012, Canada imported $105-million worth of hazelnuts. Prof. Elliott Currie, College of Business and Economics, is developing cropping systems to grow them locally instead. Although it can take up to five years for orchards to fully develop, each hazelnut tree lives for up to 100 years—and that longevity could lead to stable jobs in Ontario.

INVESTING IN AGRI-FOOD RESEARCH

Agri-food is a $50-billion industry in Ontario. It’s supported by the unique research partnership between the University of Guelph and the Ontario Ministry of Agriculture, Food and Rural Affairs.

The partnership funds a diverse research program that oversees Laboratory Services, a veterinary clinical education program, research stations and infrastructure, and a highly qualified personnel (HQP) program. The HQP scholarship program equips graduate students with specialized, practical training in agri-food business, research and innovation. The Undergraduate Student Experiential Learning (USEL) initiative strengthens the industry’s competitiveness and sustainability by enhancing its human resources capacity.

INVESTING IN AGRI-FOOD RESEARCH

HQP scholars and their employers have benefited from knowledge sharing and workplace innovation.

SINCE 2010

125

HQP scholars and their employers have benefited from knowledge sharing and workplace innovation.

SINCE 2010

35

USEL students have conducted research under the mentorship of U of G faculty and OMAFRA specialists.
A look at our past starts with nineteenth- and twentieth-century rural Canada and Guelph’s Rural Diary Archive project. For Prof. Catharine Wilson, College of Arts, the diaries provide insight into the social relationships of early rural Canadian neighbourhoods. Citizen historians from around North America have volunteered to transcribe hand-written diary pages into digital text. All pages are accessible for viewing.

MOBILIZING KNOWLEDGE AND INNOVATION

The Catalyst Centre at U of G helps transform the University’s world-class research into innovations that improve life.

U of G researchers make discoveries and mobilize knowledge to develop new products. In 2015–16, products of U of G research to reach the market were the PurPod100 coffee pod, Smart Green Technologies’ green roofs and diagnostic testing for Clostridium perfringens. These advances demonstrate the University’s commitment to improve life locally and globally.

Ontario Centres of Excellence

research funding awarded in 2015-16

$879,247

Royalty revenues up 7.1% from last year to

$2,643,725

Active intellectual property licence agreements up 29% from last year

New patent filings up 17.1% from last year

$879,247

$2,643,725
LEADERSHIP

Donor-supported research at the University of Guelph

Christine Baes
Sience – Canadian Dairy Network – Holstein Canada Professorship in Dairy Genetics

Theresa Bernardo
IDEXX Chair in Rearing Technologies and Broad-Control Animal Health

Jason Coe
NorStall Prêt-à-Cher Chair in Canine Communications

Steve Crawford
Professorship in the Department of Integrative Biology – Saugeen Ojibway Nation

Brady Deaton
Michael McCain Family Chair in Food Security

Dan Gillis
Professorship in the School of Computer Science – Saugeen Ojibway Nation

Ernesto Gimenez
Peaches Family Chair in Sil Health

Linda Hannula
Kennis Chair in Environmental Governance – Kennis Cold Corp.

Alexandra Hofmaner
Barbosa Farm Professorship in Poultry Welfare

A. Max Jones
Professorship in Integrated Plant Production Systems for Vegetatively Propagated Horticulture Species

David Kelton
Dairy Farmers of Ontario Dairy Cattle Health Research Chair

Elijah Kiarie
McIntosh Family Professorship in Poultry Nutrition

Donna Lero
Jarislowsky Chair in Families and Work

Tina Widowski
Col. K.L. Campbell University Chair in Animal Welfare

Nina Jones
Eukaryotic Cellular Signalling

Scott Weese
Molecular Microbiology

James France
Molecular Microbiology

Evan Fraser
Molecular Biodiversity

Lawrence Aylmer
Care, Gender and Relationships

Carl Rice
McGill University

Canada Research Chairs

Aaron Berg
Hypothyroidism and Renal Sparing

Susan Brown
Collaborative Digital Scholarship

Myrna Dawson
Violence Prevention

Monique Devreux
Ethics and Global Health Policy

Trevor Devriès
Dairy Cattle Behaviour and Welfare

Kari Dunfield
Environmental Microbiology of Agro-complexes

John Dutcher
Soft Matter and Biological Physics

James France
Biomathematics in Animal Nutrition

Evan Fraser
Global Food Security

Amy Greer
Population Disease Modelling

George Haran
Myelin Biology

Nina Jones
Enzymatic Glyco-Signalling

Allan King
Animal Reproductive Biotechnolgy

Remi Rinchard
Risk Management and Regulation

Joseph Lam
Cystic Fibrosis and Microbial Glycobiology

Alejandro Marangoni
Food, Health and Aging

Ed McBean
Water Supply Security

Barbara Marmont
Child and Youth Injury Prevention

Chris Whitfield
Lipids, Metabolism and Health

NSERC Industrial Research Chair

Both Parker, Groundwater Contamination in Fractured Media

Pierre Elliott Trudeau Foundation

Premier’s Research Chair

Amir Mohammadi, Biomaseter and Transportation

Scott Weller
Ontario Ministry of Agriculture, Food and Rural Affairs

Fellows of the Royal Society of Canada

Academy of the Arts and Humanities

Ric Knowles
John Lesiba
John McCarthy
Judith Thompson
Elizabeth Waterston

College of New Scholars, Artists and Scientists

Evan Frenay
Ryan Norris
Merrill Turetsky

Academy of Science

Derek Besley
Annal Bourm
Chris Gray
Paul Helt
Gabriel Karl
Ken Kish
Peter Rees

Jaciek Lipiński
Larry Milligan
Bernadette Nickel
Larry Peterson
Bruce Sells
John Simpson
Chris Whitefield

Premier’s Research Chair

Amir Mohammadi, Biomaseter and Transportation

Scott Weller
Ontario Ministry of Agriculture, Food and Rural Affairs
Grasslands are highly complex ecosystems that cover 30 per cent of Earth’s surface. Prof. Andrew MacDougall, College of Biological Science, studies how environmental changes such as drought affect plants and animals on grasslands. He works with landowners to improve environmental sustainability of these ecosystems across Ontario. MacDougall is a recipient of NSERC’S Discovery Grant Accelerator Supplements.