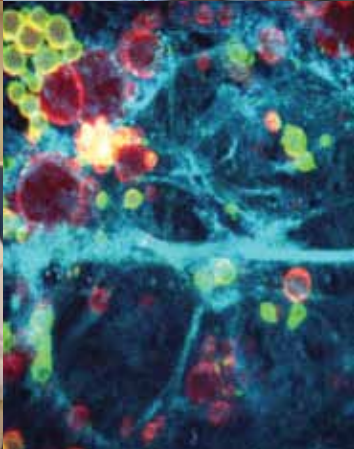
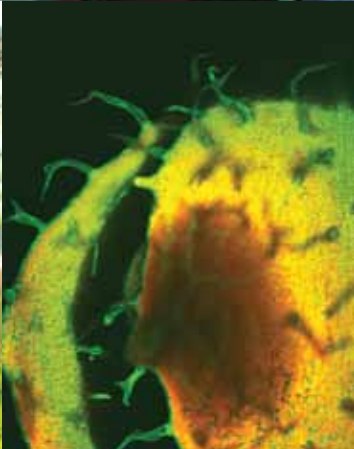
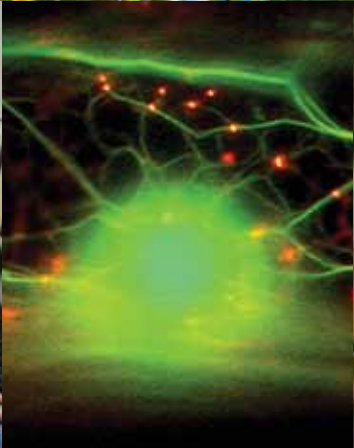
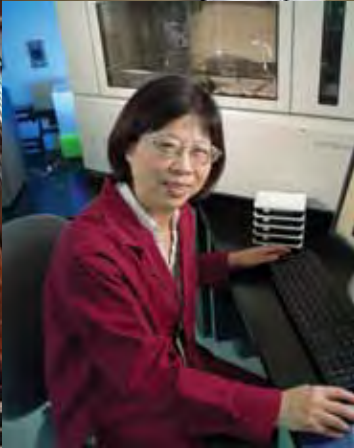
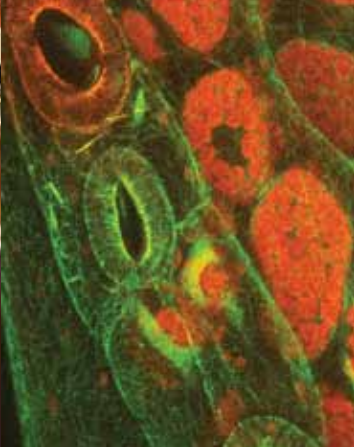
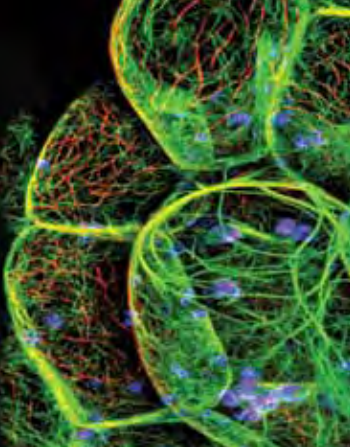


CHANGING LIVES  
IMPROVING LIFE



**ROR**  
**RETURN ON RESEARCH**  
**ANNUAL REPORT 2011-2012**



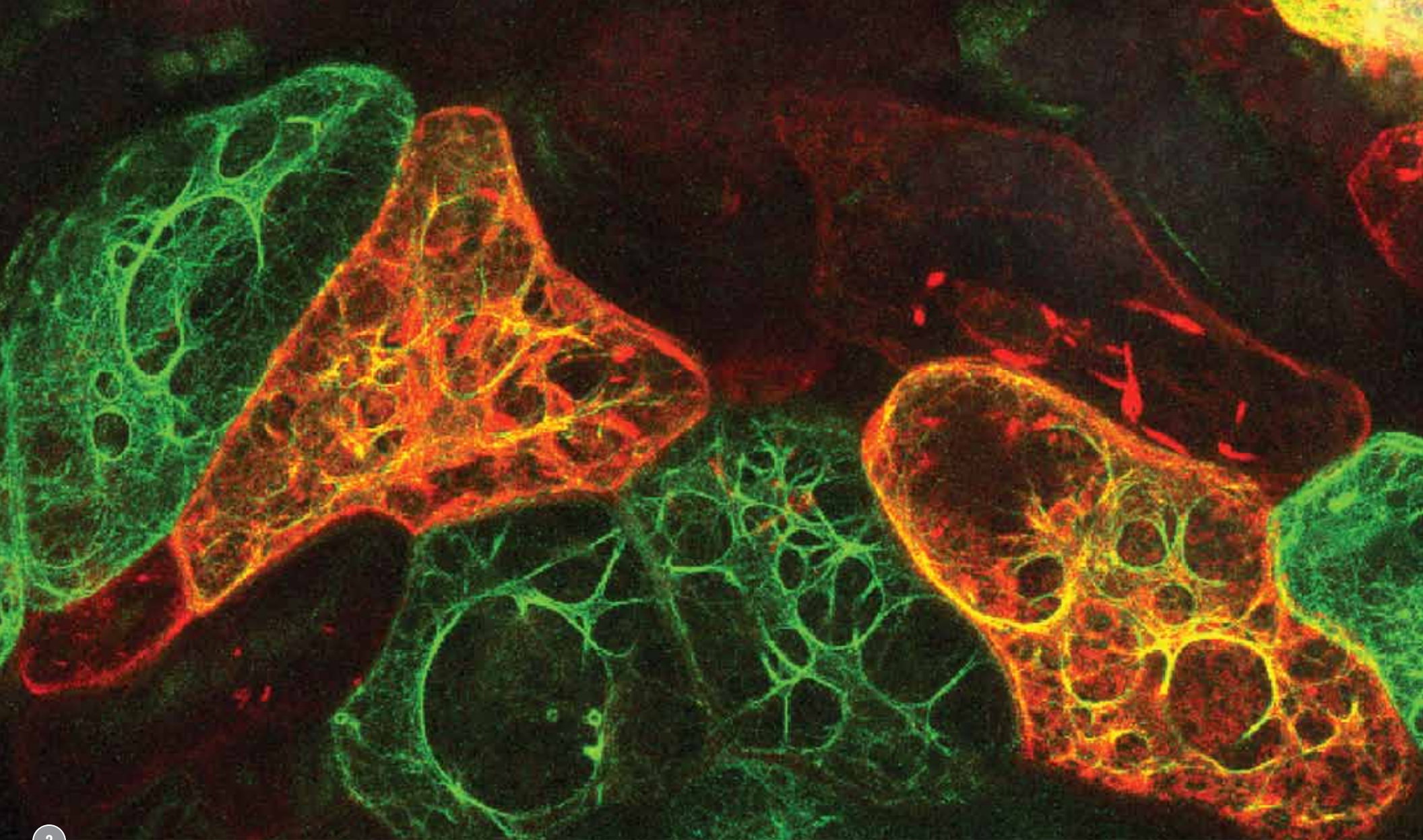




# CONTENTS

- 3 **WELCOME:** From Kevin Hall, Vice-President (Research)
- 5 **STRATEGY:** Advancing our research strengths
- 6 **SUCCESS:** Research revenue shows significant gains and record highs
- 8 **COMMITMENT:** Guelph dedicates more on-campus space to research than any other Ontario university
- 10 **SERVING STAKEHOLDERS:** The business end of Guelph research
- 12 **PERFORMANCE:** Guelph is the most inventive and efficient research university in Canada
- 14 **HEAD OF THE CLASS:** It's all about changing lives and improving life
- 16 **LEADERSHIP:** Guelph researchers top their academic fields







The University of Guelph offers our research partners and stakeholders an unparalleled return on research investment. That return is the foundation for this report, the first of what will become an annual publication.

Our research revenue jumped to more than \$157 million in 2011-2012, thanks mainly to increased federal, provincial and industry funding, and to the dedication and skills of our research community.

Our researchers' commitment, leadership and expertise have been recognized across Canada and around the world. In fact, their work has made Guelph Canada's most inventive and efficient research university. The University has three times more invention disclosures per faculty member than the national average, while spending one-quarter as much on each disclosure. That's a great return on investment.

As a comprehensive university, Guelph promotes individual and collaborative research, endeavouring to engage with

a wide range of communities. The investment in research from all sources enhances student teaching and discovery by involving students in research design and execution, and through knowledge mobilization, transfer and training.

Creativity in discovery generates innovations that benefit society and the economy. Through fundamental and applied research, we are addressing challenges, seizing opportunities, changing lives and improving life.

I've seen first-hand evidence that Guelph researchers are dedicated to cultivating the essentials for quality of life through basic and applied research. Our goal is to use knowledge and research to help people, here and around the world.

I hope you enjoy reading this first report on research, and I welcome your comments.

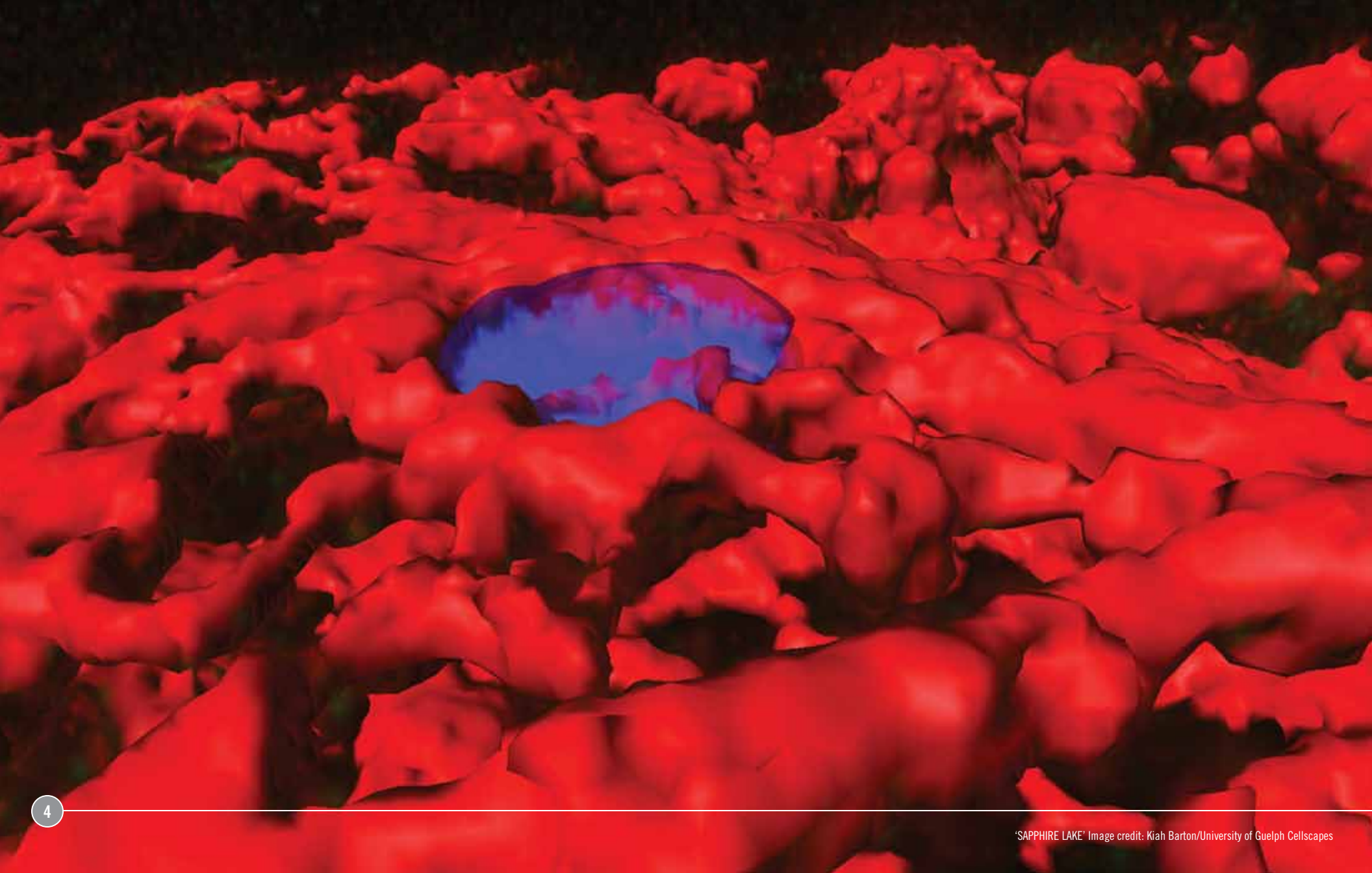


# WELCOME



Kevin Hall, Vice-President (Research)







# STRATEGY

## University of Guelph Strategic Research Plan

---

The University's Strategic Research Plan helps promote, encourage and advance research strengths **in these areas** in which the University has built its reputation for quality and innovation.

The plan reflects the University's mission and its objectives, such as research intensity, internationalism and collaboration.

The University is proud of its heritage in agriculture and veterinary medicine, and of its accomplishments and programs in science and engineering, social and applied human sciences, liberal arts, humanities, fine and performing arts, and economics and business.

Investment in research enhances student teaching and learning through incorporating research techniques and discovery into the curriculum, through involving students in research design and execution, and through knowledge mobilization and transfer.

- **Agriculture, food and the bioeconomy**
- **Health and well-being in humans and animals**
- **Economic management, governance and public policy**
- **Biodiversity, environment and ecology**
- **Human behaviour, cultural evolution, creative communities**
- **Technology and applied sciences**
- **Foundations of science**

For more on Guelph's Strategic Research Plan, visit [www.uoguelph.ca/research/strategic-plan](http://www.uoguelph.ca/research/strategic-plan)



# SUCCESS

Research revenue shows significant gains and record highs

\$157.5 MILLION



2009-10

# HIGHLIGHTS

2011-12

**\$56.9** MILLION

The research agreement with the Ontario Ministry of Agriculture and Food and the Ministry of Rural Affairs provides a vital base

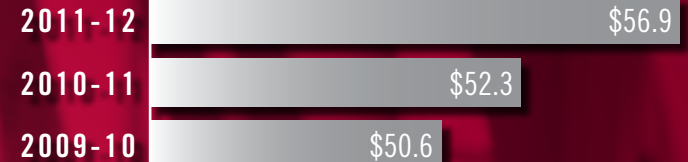
2010-11

**\$27.3** MILLION

Guelph continues to garner federal funding support from sources such as Canada Research Chairs and Canada Foundation for Innovation

**\$22.2** MILLION

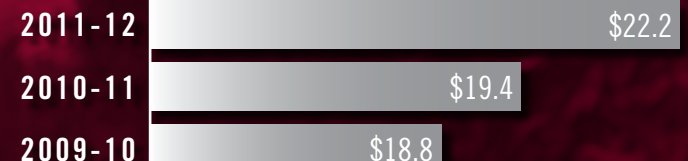
Leveraged government programs helped lead to more business and industry support for Guelph research



\$MILLIONS



\$MILLIONS



\$MILLIONS

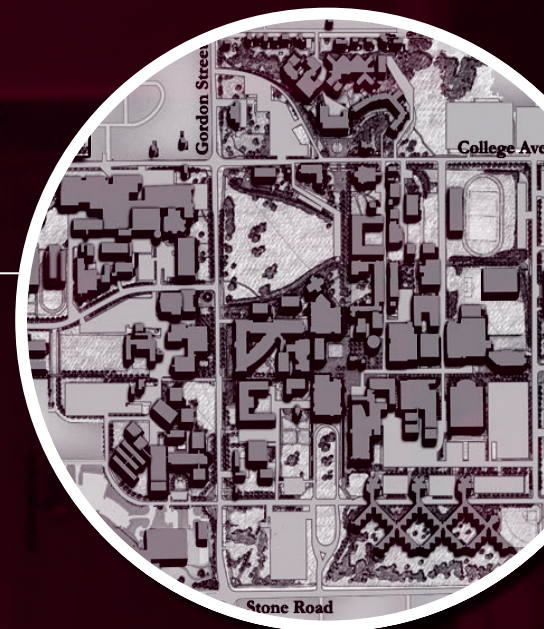


# COMMITMENT

Guelph dedicates more space to research than any other Ontario university

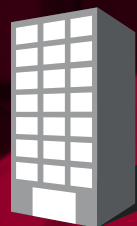
# 25%

Since 2001, the space dedicated to research has jumped from 45,000 square metres to 58,600 square metres. This represents 25% of the space on campus, compared to the Ontario average of 15%.



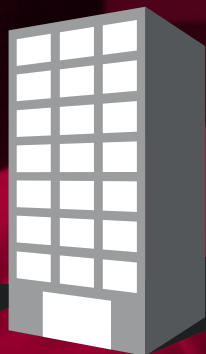


45,000  
SQ. METRES



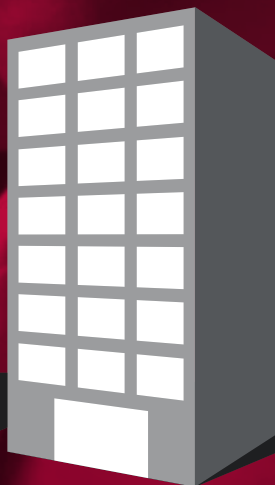
2001-02

47,100  
SQ. METRES



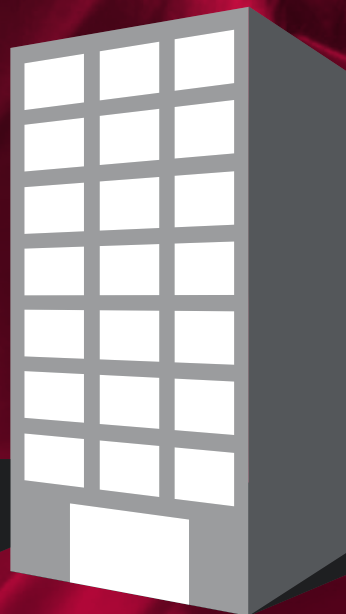
2004-05

52,300  
SQ. METRES



2007-08

55,100  
SQ. METRES



2010-11

58,600  
SQ. METRES



2011-12



# SERVING STAKEHOLDERS

Guelph research discoveries move out of the lab and into business, industry and society

**130**  
*technology disclosures*

**40**  
*licence agreements with industry*

**33**  
*patents filed*

*More than \$2 million generated in licence revenue*

*Through the partnership with the Ontario Ministry of Agriculture and Food and the Ministry of Rural Affairs:*

- *More than \$850,000 commercial revenue reinvested in research*
- *Royalty revenue generated since 1971 from plant variety development reached \$10 million*





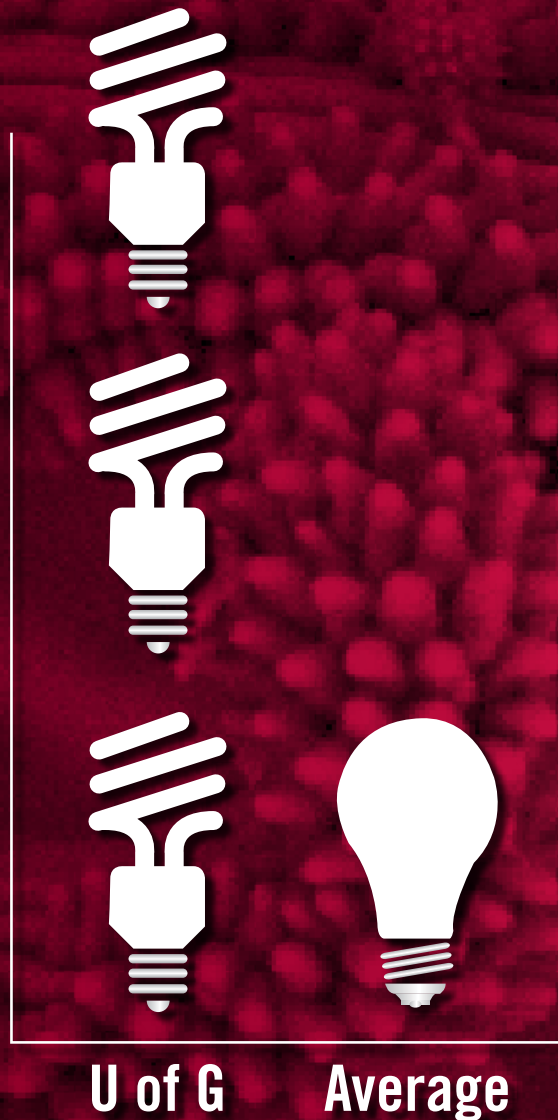
# Guelph is the most efficient and inventive research university in Canada

# 1/4

**Guelph is Canada's most efficient university for disclosure costs, spending about one-quarter as much as the national average**



Invention disclosures



# 3X

The University of Guelph leads the country by far in invention disclosures per faculty member, recording three times as many as the national average



# HEAD OF THE CLASS

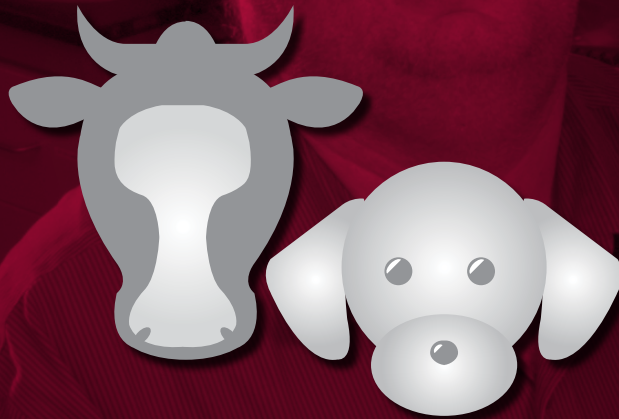
Guelph researchers earn top marks, changing lives and improving life for people at home and abroad

---



---

One of the world's top  
300 universities



---

Canada's top university for  
agricultural and veterinary  
science publications



---

More publications in  
biochemistry and  
molecular biology than any  
other Canadian university  
without a medical school



---

More than \$3 million invested in nearly 70 knowledge translation and transfer research projects, through our partnership with the Ontario Ministry of Agriculture and Food and the Ministry of Rural Affairs



---

University of Guelph research revenues have consistently outperformed domestic spending on research and development



---

First in research opportunities at medium-size Canadian universities



# LEADERSHIP

University of Guelph researchers are recognized nationally and globally for their expertise and leadership

## Canada Research Chairs

Aaron Berg  
Dorothee Bienzle  
Milena Corredig  
Myrna Dawson  
Monique Deveaux  
Kari Dunfield  
John Dutcher  
Hermann Eberl  
James France  
Evan Fraser  
Chris Hall  
George Harauz  
Paul Hebert  
Nina Jones  
Smaro Kamboureli  
Allan King  
René Kirkegaard  
Vladimir Ladizhansky

Joseph Lam  
Jacek Lipkowski  
Alejandro Marangoni  
Georgia Mason  
Ed McBean  
Kevin McCann  
Barbara Morrongiello  
Linda Parker  
Kathryn Preuss  
Carla Rice  
Frances Sharom  
Barry Smit  
Carl Svensson  
Merritt Turetsky  
Scott Weese  
Chris Whitfield  
David Wright  
Rickey Yada

## University Research Chairs

Madhur Anand  
Dionne Brand  
Robert Enright  
Elizabeth Ewan

Daniel Fischlin  
Sky Gilbert  
Marion Joppe  
Paul McNicholas

Robert Mullen  
Ryan Norris  
Steven Rothstein

## NSERC Industrial Research Chairs

**Milena Corredig**, Dairy Technology  
*Ontario Dairy Council*

**Mansel Griffiths**, Dairy Science Microbiology  
*Dairy Farmers of Ontario*

**Beth Parker**, Groundwater Contamination in Fractured Media  
*Boeing, Syngenta*

**Hongde Zhou**, Advanced Wastewater Technologies  
*Zenon Environmental Inc.*





## Industry-sponsored research positions

**Valerie Davidson**, NSERC Chair for Women in Science and Engineering  
*Hewlett-Packard (Canada) Ltd., BlackBerry*

**Warren Stiver**, NSERC Chair in Environmental Design Engineering

**Koushik Seetharaman**, Research and Development in Cereal Science  
and Technology Chair  
*Ontario Cereal Industry Research Council*

**John Srbely**, Canadian Chiropractic Research Foundation Professorship in  
Neurophysiology and Spine Mechanics

**Yoshinori Mine**, Ontario Egg Marketing Board Industrial Research Chair in Egg  
Material Science

## Premier's Research Chairs

**Amar Mohanty**, Biomaterials and Transportation  
*Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs*

## Endowed research chairs

**Jason Coe**, Nestlé Purina PetCare Canada Chair in Communications

**Ian Duncan**, Emeritus Chair of Animal Welfare

**George Greene**, Chair in Environmental Governance  
*Kinross Gold Corp.*

**Chris Hall**, Surgeoner Chair in Life Sciences

**Donna Lero**, Jarislowsky Chair in Families and Work

**Ralph Martin**, Loblaw Chair in Sustainable Food Production

**Graeme Morton**, Scottish Studies Chair

**Lee Niel**, Col. K. L. Campbell Chair in Companion Animal Welfare

**Adronie Verbrugghe**, Royal Canin Veterinary Diet Endowed Chair in  
Canine and Feline Clinical Nutrition

**Tina Widowski**, Col. K. L. Campbell University Chair in Animal Welfare;  
Egg Farmers of Canada Chair in Poultry Welfare

Rebanks Family Chair in Pollinator Conservation  
*W. Garfield Weston Foundation*



# CHANGING LIVES IMPROVING LIFE

University of Guelph  
50 Stone Road East  
Guelph, Ontario, N1G 2W1  
Canada