50 years a university
educators for 150
leaders for a better future
we are
the university
of guelph

president’s report • 2014
leadership

educators for 150 years a university
“Learning, discovery and engagement are equally valued at Guelph. That’s what makes this University different.”

The BetterPlanet Project has helped us accelerate solutions to global challenges in areas of research strength at the University of Guelph: food, health, environment and communities. And clearly we have struck a chord with the wider world. More than 64,000 individuals have contributed toward our $200-million fundraising campaign, and many more have voiced their support for our vision to improve life on this planet.

Through investments in teaching and learning, research, scholarships and facilities, the University will build upon its strengths to address some of the world’s most perplexing problems. We are poised to make a difference as an engaged and caring institution.

Learning, discovery and engagement have defined our approach since the campus was founded 150 years ago and since U of G was established 50 years ago. At the University of Guelph, we produce not just graduates but global citizens who can translate their skills to their workplace, their community and the world.

In my 11 years as president and vice-chancellor, I have seen our students, faculty, staff and alumni make the University stand out as a place with humane values – values that will help guide us for the next 50 and 150 years.
**50TH ANNIVERSARY**

The University of Guelph’s 50th-anniversary celebration includes a historical exhibit at the Guelph Civic Museum that runs until July 10; the U of G display was researched, designed and built by undergraduate students taking a museum project course offered by the College of Arts. U of G alumni are championing the construction of a new Stone Road entrance to the campus. The 1956 Ontario Veterinary College class kicked off the fundraising, and the University of Guelph Alumni Association is matching all donations up to $100,000. The installation will feature a large Gryphon statue designed by FASTWÜRMS. The artist duo of Kim Kozzi and Dai Skuse are U of G fine art faculty.

**GLOBAL CITIZENSHIP**

World University Service of Canada and the Centre for International Studies and Co-operation presented its inaugural award for global citizenship to the University of Guelph in November 2013. U of G was cited for its many global efforts, but especially for its participation in Leave for Change – a program in which employees volunteer their vacation time to work in a developing country. “It’s an honour to receive an award that recognizes making a difference around the world,” says Martha Harley, associate vice-president (human resources). “That’s exactly what our faculty, staff and students are doing: sharing their knowledge to help build a better planet.”

**BETTERPLANET PROJECT**

The BetterPlanet Project vision introduced in 2010 has captured the imagination of people throughout the U of G community and beyond. More than 64,000 people have contributed to a $200-million fundraising campaign supporting U of G strengths in teaching, research and outreach. “Each of us has unique and personal reasons for contributing to the University of Guelph,” says campaign chair and 1980 history graduate Tye Burt. “Individually and collectively, we are having an impact on student learning. We are advancing global citizenship, and we are accelerating research that will improve the quality of our food, health, environment and communities.”
ECONOMIC IMPACT
- $750 million returned each year to the Guelph region in direct and indirect spending.
- The University community has donated $3 million to the United Way in the last five years.
- U of G awards $15.3 million annually in merit- and needs-based scholar awards.

GUELPH BY THE NUMBERS
- 27,940 students, all campuses
- Distance education enrolment up 165% in 10 years
- 966 international students
- 2,000 students in co-op programs
- 25% of students join intramural sports
- 100,000 active alumni in 145 countries
- Last year, 14,000 donors gave more than $28.3 million to U of G

U OF G HONOURS AND AWARDS
- Former prime minister Paul Martin is the most recent recipient of the University’s Lincoln Alexander Outstanding Leader Award. He was recognized as a global diplomat and an advocate for aboriginal issues.
- For the third year in a row, U of G had the highest overall score in the International Student Barometer, a survey of international students studying in the province.
- English professor Thomas King won both the 2014 British Columbia National Award for Canadian Non-Fiction and the RBC Taylor Prize for his book *The Inconvenient Indian: A Curious Account of Native People in North America*.
- Geography professor Barry Smit received the 2013 Gold Medal from the Social Sciences and Humanities Research Council, recognizing him as one of the world’s leading authorities on climate change.
- Physicist Ralf Gellert received an Outstanding Public Leadership Medal from the National Aeronautics and Space Administration for his work on the Mars rover *Curiosity*.
- Provost and vice-president (academic) Maureen Mancuso was elected president and CEO of Teaching and Learning Canada, a volunteer role in which she will champion teaching innovations in post-secondary education.
- The Natural Sciences and Engineering Research Council presented a Synergy Award for Innovation to biology professor Nicholas Bernier and researchers from four other universities who increased salmon farming profits through the Yellow Island Aquaculture project.
- The University’s grounds department won a 2013 Green Star Award from the Professional Grounds Management Society of North America for exemplary management of the Guelph main campus.
- The Ontario legislature has designated Jan. 21 as Lincoln Alexander Day to honour the province’s former lieutenant-governor for his distinguished political career and volunteer service. Alexander was U of G’s longest-serving chancellor.
- Student volunteers with the Guelph First Response Team won the 2013 North American collegiate emergency services competition.
50 years a university

educators for 150 learning
“Teaching in a way that empowers students is a joyous experience. I am truly privileged to be a professor at a university that values deep learning.”

During her career as professor, dean and administrator, Jacqueline Murray has demonstrated the successful partnering of education with social consciousness. She works elbow to elbow with Guelph students in activities that fight poverty and hunger in the developing world. She spent two summers volunteering with the Non-Formal Education Division of the Ministry of Education in Ghana. “I see my work as an educator and my volunteer activities as being completely interlinked,” she says.

As director of Guelph’s first-year seminar program, Murray develops courses that challenge students to research the big issues facing our society, and she recruits instructors from across campus to grow the popular program.

“When we astonish our students by presenting new ideas and challenge them to look deep into the problems facing our society, they get hooked on intellectual accomplishment. They go on to get involved in other issues. They volunteer. They learn that being part of a community matters, and it’s important to take responsibility.”

Murray recently received Canada’s top teaching honour: a 3M National Teaching Fellowship. She says the award reminds her that the primary responsibility of universities is to teach the next generation of leaders.
GENEVIEVE NEWTON

Prof. Genevieve Newton is passionate about student learning. She teaches in U of G’s nutritional science program and in the University of Guelph-Humber’s kinesiology program. Her pedagogical research explores case-based learning, knowledge transfer, how teaching methods affect a student’s ability to perform, how new technologies can impact learning and how to measure impact. “The ultimate goal isn’t just about having students learn more effectively. I want my students to engage with what they’re learning so that they can carry with them problem-solving skills and critical-thinking skills when helping future clients.”

TRENT TUCKER

Prof. Trent Tucker brings a new focus on student learning to an introductory course in the College of Business and Economics. “It’s an exciting opportunity to bring transformational learning into a business management program,” he says, describing transformational learning as a non-traditional approach to academia. “I try to create a ‘real’ experience for students.” Tucker lent student teams $1 each and asked them to turn it into a profit in four weeks. The class made $8,000 and donated the money to a charity that offers micro loans to female entrepreneurs in developing countries. His innovations won a 2013 teaching award from Desire2Learn and the Society for Teaching and Learning in Higher Education.

CANADA’S NEXT TOP AD EXEC

Canada’s Next Top Ad Exec challenges business students across the country to create a marketing campaign for a new Chevrolet vehicle. The case competition is designed to transfer knowledge and expertise between universities and industry. Guelph’s College of Business and Economics encourages students to take advantage of the case competition and networking opportunity. And it certainly paid off for undergrads Kennedy Crawford and Alyssa de Hoop: they won the 2013 title of Canada’s Next Top Ad Exec and each received a new Chevrolet Cruze.
The University of Guelph-Humber welcomed its first students in 2002 and now has almost 5,000 alumni; 90 per cent of them are employed within six months of graduation. “I think that’s a stunning achievement,” says vice-provost John Walsh, “but it’s not only the success of the graduates; our faculty and the staff have all played a role.” He says combining the benefits of a diploma and a degree program gives students the best of both worlds: a practical and theoretical education. “We do only one thing at Guelph-Humber and that’s focus on student success. Everybody is an educator here.”

Technology is changing the way students learn, and it’s Melanie Parlette-Stewart’s job to guide them through an ever-changing technological landscape. As a blended learning librarian at U of G, she combines the skills of a traditional librarian with integrating new technologies into teaching and learning. “Technology is such a part of our everyday lives, and students need to be able to find good information. That’s not always quick or easy. Part of my role is to help people learn how to find it and use the good stuff.”

Guelph is the only Canadian university among 73 schools selected to participate in an American initiative on civic learning and democratic engagement. U of G will assist members of the National Association of Student Personnel Administrators who have committed to making civic learning and democratic engagement a priority in their undergraduate programs.
discovery

50 years a university

educators for 150
“Successfully cloning an American elm tree was a breakthrough moment for our research team. So was finding a generous donor who believes in supporting projects for the benefit of the environment.”

Before Dutch elm disease took its toll in Canada, American elms were among the most recognizable trees in Ontario; now 97 per cent of them are gone. Prof. Praveen Saxena’s plant cell technology lab has been working for decades to develop cloning technologies to multiply and preserve plant species. Using in vitro culture technology, his team in the Department of Plant Agriculture has successfully cloned and cryopreserved American elm trees that survived devastation by Dutch elm disease.

The research was funded by the Gosling Foundation, a non-profit organization headed by Philip and Susan Gosling. They have donated a total of $5.4 million to help U of G establish the Gosling Research Institute for Plant Preservation (GRIPP) and a cryopreservation facility for storing shoots and seeds at extremely low temperatures.

With Saxena as scientific director, GRIPP is now developing cloning and cryopreservation technologies for other important tree species, including ash, sugar maple and chestnut. Saxena says: “This is a prime example of how world-class science can be used to protect biodiversity and the environment and improve life on this planet.”

Praveen Saxena

Guelph researchers have a long history of dedication to what matters most in our global society.
RALF GELLERT
Since NASA’s Curiosity landed on Mars in 2012, the rover has gathered data on the planet’s landscape and atmosphere. One of its key geology instruments is an alpha particle X-ray spectrometer (APXS) for analyzing rock and soil. It was designed by an international team of scientists led by Guelph physicist Ralf Gellert. This is his fourth rover expedition; the APXS device designed for Spirit detected the first evidence of water on Mars. Curiosity’s findings include a chunk of igneous rock with chemical elements more like those of Earth rocks than like formations found elsewhere on Mars.

ROBIN MILHAUSEN
Prof. Robin Milhausen, human sexuality and family relations, published a recent study on the double standard that exists between men and women. It hasn’t changed much in the last 20 years, she says. “Women who are single were judged negatively for engaging in sexual behaviour, and oftentimes men were not. It is more acceptable for women to engage sexually if they are in a relationship.” Milhausen’s research also confirmed the endurance of a gender misconception: that women have a more emotional connection to sex while men perceive sex as a purely physical act.

Among U of G’s 700 active researchers are 36 Canada Research Chairs, eight government- and industry-sponsored research chairs and 10 endowed faculty positions. Eighteen Guelph faculty are fellows of the Royal Society of Canada. The continuum of research expertise provides training for 1,800 graduate students and several hundred undergraduate research assistants.
**EVAN FRASER**

Feeding nine billion: “This is one of the defining challenges of the next 100 years,” says geography professor Evan Fraser. He’s discussing that challenge at every available opportunity: in his classroom, through his scholarly writing, at small public meetings, by talking to the media and through innovative social media projects. He says Guelph’s agribusiness cluster is the right place to talk about feeding the world’s hungry. “U of G is a hub of expertise in all aspects of the food system, including production, technology, nutrition, regulation, local food, international development and food science. The whole portfolio is here.”

**DOUG FUDGE**

Integrative biologist Doug Fudge leads a Guelph research group that has unravelled some of the inner workings of slime produced by the ocean’s bottom-dwelling hagfish. They’ve learned how the super-strong protein threads secreted by these eel-like animals are organized at the cellular level. The discovery advances Fudge’s quest to produce synthetic versions of hagfish threads for commercial use. He says the protein threads could be spun and woven into novel biomaterials – a sustainable alternative to synthetic fibres such as nylon, which are made from petroleum feedstocks. “What we are doing is biomimicry, imitating and getting inspiration from nature to help solve complex human problems.”

**ADRONE VERBRUGGHE**

“Obesity has become an epidemic problem in humans but also in pets,” says clinical studies professor Adronie Verbrugghe. She’s studying the caloric needs of dogs and cats based on whole-body composition and nutrition. Current weight-loss programs may work in the short term, but Verbrugghe says researchers need to understand the molecular mechanisms of the disease to develop effective long-term treatment and prevention strategies. She holds a new position at the Ontario Veterinary College in canine and feline nutrition. “It is an amazing opportunity to build a whole nutritional program from scratch.”
educators for 150
engagement
50 years a university
U of G discoveries increase in value when shared with students, government and the private sector.

“When we meet as a ministry with key stakeholders, it isn’t long until the conversation turns to agri-food research and how we communicate results.”

Deputy minister Deb Stark says the contract between U of G and Ontario’s Ministry of Agriculture and Food and the Ministry of Rural Affairs is designed to make knowledge translation and transfer a priority. “We are partnering more deliberately with academia and industry to deliver information quickly and achieve commercialization success.”

She points to information-sharing via smartphone apps, U of G’s Catalyst Centre and the new Gryphon LAAIR, which will provide development grants to researchers who successfully pitch their inventions to an industry panel.

A 1982 Guelph graduate in veterinary medicine, Stark has served as chief veterinarian for Ontario and assistant deputy minister for agriculture, food and the environment. “The co-operation we enjoy between government, the University of Guelph and industry is, in my opinion, one of the key reasons Ontario has become the country’s top agri-food economy,” she says.

“This relationship has been successful for over 100 years and is known around the world as a good model for mobilizing research to enhance training, spark commercial expansion and maximize societal impact.”

Deb Stark
Pathobiologist Bonnie Mallard and her U of G research team developed a technique for genetic selection in cattle – High Immune Response – that was named one of the top innovative products of 2013 by the World Dairy Expo. Licensed to Semex Alliance, the patented test evaluates several health markers to which animals have the most robust immune responses.

**MARIO MONTEIRO**

“How can I use my knowledge?” That’s a question chemistry professor Mario Monteiro continually asks himself. “There has to be a need for the solution you’re trying to conjure up.” Health practitioners need a new way to fight bacterial infections in the gut. Monteiro’s research team developed a sugar-based vaccine that can protect against *Clostridium difficile* infection. Their work led to a licensing deal – one of the biggest in U of G history – with Stellar Biotechnologies in California. The company is developing therapies against *C. diff* based on the chemist’s discovery.

**REBECCA HALLETT**

Environmental scientist Rebecca Hallett uses her discoveries to help ordinary people help themselves. A specialist in plant-insect interactions, she works to reduce the use of agricultural insecticides. Hallett developed a smartphone application that helps farmers decide quickly whether to spray to control soybean aphids. The app includes colour photographs of aphid predators such as lady beetles and parasitic wasps. Farmers count aphids and predators on a random selection of soybean leaves, punch in the numbers, and get a recommendation based on everything from the pest-predator ratio to the changing weather.
DAN GILLIS
Students in Prof. Dan Gillis’s third-year computer science class designed prototype websites to help connect donors with local food banks. A team of fourth-year students combined the best ideas to create the Farm to Fork site that asks users to state their grocery shopping day so they can receive an electronic reminder of items needed by the food bank. The student developers have already spread their message to more than 500,000 people through social media and are now designing a mobile app and a marketing plan to expand the program across Canada.

MIKE DIXON
Since the first tomato seeds travelled aboard a NASA space shuttle in 2000, U of G’s Tomatosphere project has helped 2.9 million Canadian students learn about space science. Created by environmental sciences professor Mike Dixon and former astronaut Robert Thirsk, the program allows students to compare the germination rate of seeds exposed to space conditions and those left on Earth. “Within our ongoing space science research program here at U of G, Tomatosphere has been one of the most rewarding outreach activities,” Dixon says. It has been recognized by both the Canadian Aeronautics and Space Institute and the Natural Sciences and Engineering Research Council.

BARBARA MORRONGIELLO
Publishing her research results wasn’t good enough for child studies professor Barbara Morrongiello; she held an awareness event in downtown Guelph to talk directly to parents and caregivers about hazards in the home that can cause children to fall and suffer injuries. Morrongiello holds a Canada Research Chair in Child and Youth Injury Prevention and says falls are the leading cause of child visits to the emergency department. Her awareness campaign gave parents easy-to-remember strategies for preventing falls that could cause serious head injuries.
Brenda Whiteside graduated from U of G with a degree in management economics in 1982 and says she uses her business skills every day in her role as associate vice-president (student affairs). Some days, her time is devoted to budgeting and problem-solving, but other days provide more tangible evidence of success in helping students become well-rounded people as well as scholars and citizens.

“We put a lot of emphasis on civic engagement. Orientation programs give students the opportunity to volunteer in the Guelph community, and our food-packing event actually brings the community to campus. Every residence takes on an off-campus volunteer activity; so do our varsity athletes and student organizations. U of G students have developed award-winning programs such as Meal Exchange and Trick or Eat.”

Guelph was one of the first universities in Canada to begin a peer helper program. Whiteside says empowering students to help others translates into later life; it’s a philosophy Guelph students take wherever they work after graduation.

“Here at U of G, we make community engagement and peer support part of everything we do. That’s who we are.”
BOARDING HOUSE
An artistic partnership between the University’s School of Fine Art and Music and the Macdonald Stewart Art Centre has created a new home for art in downtown Guelph. The Boarding House Gallery – named for its heritage building – exhibits work by practising professional artists and also shows the work of the University’s fine art students. An arts incubator program at the Boarding House provides studio space, mentors, equipment and other resources for emerging artists like Rachel Vanderzwet. “It’s a really great opportunity to be in a shared studio with a community of artists and also have mentorship to help launch my career.”

JAYASANKAR SUBRAMANIAN
Research by Prof. Jayasankar Subramanian earned praise and financial support from the federal government as a model of innovative science making a difference in developing countries. Known in Ontario for his work as a tree fruit breeder, Subramanian worked with international colleagues to create fruit cartons lined with nanoparticles from coconut husks and banana plants that prolong the freshness of mangoes, an important crop in India and Sri Lanka. “We welcome the opportunity to work with leading scientists in Asia to raise the income of poor farmers and make food more nutritious and secure.”

JANE NGOBIA
Jane Ngobia, director of diversity and human rights, is a consensus-builder who came to U of G in 2013 to lead its education efforts in the areas of discrimination, harassment, employment equity and accessibility. “The University of Guelph is one of the nation’s cutting-edge research and teaching institutions,” she says. “I was humbled by the opportunity to join this community of students, faculty and staff to advance the academic mission of the University, and to ensure that diversity, equity and inclusion remain indispensable components of academic excellence.”
Guelph’s world record event to fight hunger has drawn as many as 2,000 volunteers willing to spend a September morning preparing emergency relief meals of rice and beans. The event has drawn students, staff and faculty, alumni and off-campus Guelphites for three consecutive years; they’ve donated 6,000 volunteer hours and packed more than 1.13 million meals for shipment to Haiti and Mauritania.

GUELPH GRYPHONS
U of G is building new sports facilities and new partnerships to help put Guelph and Gryphon Athletics on the map as a centre of expertise in active living. One initiative is a multi-year agreement to support the boys’ and girls’ hockey associations in Guelph through player and coaching development programs. “This is a great opportunity to connect with our local minor sport community,” says athletics director Tom Kendall. “We want to help their young players develop, and we’re excited that they are wearing our logo and cheering on our Gryphon teams.”

CARA WEHKAMP
Ten years ago, 68 students at U of G identified themselves as aboriginal. Now the University has nearly 400 First Nation, Métis and Inuit students. The Aboriginal Resource Centre (ARC) has been their home away from home since 2003. “When I was a student, the centre provided me with support,” says current manager Cara Wehkamp. “Now it has come full circle for me. ARC is a place where aboriginal students can explore or maintain their cultures and find support for their educational journey; it’s also a place where the wider community can learn about aboriginal cultures and world views.”
students

educators for 150 years a university

students
Our campus promotes an international perspective, lifelong learning and far-reaching collaboration.

“Guelph faculty and staff genuinely care about students, and there is no shortage of opportunities to make a difference in the community.” – Anita Acai

“At U of G, I am not just another number; I am a person. There is a vibrancy within the Guelph community that is undeniable, and our passion for excellence makes me feel that I can be or do anything.” – Naythrah Thevathasan

Anita Acai and Naythrah Thevathasan are exceptional Guelph students who will graduate as part of the Class of 2014. They were recognized by the Society for Teaching and Learning in Higher Education and 3M Canada as student leaders who are enhancing undergraduate education at their schools.

Acai’s research on pedagogy, the relevance of post-secondary education and experiential learning has been featured at both national and international conferences. She is studying biochemistry and represents her peers on Senate and the Board of Undergraduate Studies. She edited Guelph’s undergraduate research publication and was a student writer for the Office of Research.

A biomedical science student, Thevathasan has led supported learning groups for science courses that many students find difficult. She also served on Senate and was a member of the Globe and Mail national student advisory board. She volunteers at a Guelph hospital, is a peer coach for the Special Olympics, and has worked in a rural mobile medical unit in Costa Rica and Nicaragua.
CHRIS BUDD
“The University of Guelph has very deep roots in rural Ontario. I have a lot of pride being at a school that was invested early on in agricultural research and learning.”
Chris Budd studies crop science in the Ontario Agricultural College (OAC). He competed with the livestock and crop judging club, the weed management team and the student chapter of the Canadian Agri-Marketing Association. He served on the Student Federation of OAC in several roles, including class president. He also co-founded a soil and crop club that will continue after he begins master’s research at U of G’s Ridgetown Campus. “It’s really the connections I’ve made here that have had the greatest influence on me.”

JOLÈNE LABBÉ
“Coming to university opened a world of possibilities I never knew existed. I had planned to study science and go to medical school. Now I want to pursue graduate school and study the intersection of the environment and health.”
Throughout her undergraduate studies in the arts and science program, Jolène Labbé has spent her time off doing fieldwork at a primary school in rural Kenya for a Guelph-based NGO, and studying health and vulnerability of indigenous populations in Uganda. On campus, she helped to facilitate the first-year seminar course “Challenging Cultural Dilemmas,” published articles on teaching and learning, and spoke about sustainable living. She also volunteered as a peer helper and as a student co-chair for U of G’s United Way campaign.

FATIMA CHLEILAT
“I love the people and opportunities available at U of G. The staff, faculty and students have been amazing. And both inside and outside the classroom, there’s a chance to discover and work on the things you’re passionate about.”
Student leadership has been a focus for Fatima Chleilat throughout her undergraduate studies in microbiology and neuroscience. She worked in a peer helper program, led workshops, co-ordinated a conference on student leadership and spoke to a national audience about becoming an effective leader. She widened her own skills as president of the College of Biological Science Student Council and as a member of several U of G committees.
THOMAS BECKETT
“My academic studies have allowed me to get a strong business education, which opens up many different career paths. And hearing the many opportunities our alumni have had makes me confident I made the right choice.”
Sleeping outdoors in cold weather to raise awareness of homelessness was a highlight of Thomas Beckett’s first year in U of G’s commerce program. In later years, he organized the five-day fundraiser while serving on the College of Business and Economics Students’ Association. He co-ordinated several other charitable events, volunteered with Habitat for Humanity in Alabama, worked as an undergraduate teaching assistant and co-chaired the student senate caucus.

SAMUEL MOSONYI
“I took a first-year seminar course called “Politics, Science and the Culture of Hunger” where I learned how to become a more engaged world citizen and how to conduct research independently. I learned how to lead but, more importantly, how to listen.”
While completing a double major in political science and criminal justice and public policy, Samuel Mosonyi has been deeply involved in student life. As a student senator, he helped formulate academic policy and adjudicate cases of student misconduct. He has organized research forums, published in peer-reviewed and undergraduate research journals, and authored more than 40 newspaper opinion pieces. He will pursue graduate work at the University of Cambridge with an international scholarship funded by the Bill and Melinda Gates Foundation.

Four U of G graduate students have won prestigious doctoral awards. Warren Dodd, studying epidemiology, and Lisa Ohberg, local food systems, received Vanier Canada Graduate Scholarships. Chiara Camponeschi received a Trudeau Scholarship to complete studies in urban governance and environment. And Gavin Armstrong, biomedical science, won a Canada-U.S. Fulbright Fellowship.
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educators for 150

innovation
“Using our new genomics tools, we’ll be able for the first time to show the consequences of environmental change in a given environment in real time. This is a powerful shift from prediction of biodiversity changes, and it will help us set environmental targets.”

Mehrdad Hajibabaei’s new tools are next-generation sequencers that are making DNA barcoding technology faster and cheaper. The integrative biology professor is a principal investigator at the Biodiversity Institute of Ontario, where researchers are building a growing reference library of DNA barcodes and associated genomics and informatics tools. These are key to a global DNA-based species identification system first proposed by Guelph biologist Paul Hebert.

The development of protocols based on next-generation sequencing allows researchers to analyze millions of samples of DNA sequences at once and identify species from bulk specimens taken from soil and water. “This is a technological advancement over producing DNA barcodes from single specimens,” says Hajibabaei. “It allows us to get a more complete picture of the biodiversity of the less visible yet critically important groups of micro-organisms.”

His research team has used the new technology in Alberta’s remote Wood Buffalo National Park. Scientists from numerous fields will use the information gathered there. “Our project has set the stage for the application of genomics in biomonitoring at national and international levels.”
Alejandro Marangoni

Food scientist Alejandro Marangoni came to U of G in 1987 to do a PhD and says he realized early on that “Guelph is a place where creative people can flourish.” His own creativity has led to the development of healthier fats, including zero-trans, low-saturate substances for use in baking and meat products. He’s also creating oils for heat-resistant chocolate, petroleum-free cosmetics and biolubricants for small engines. Marangoni holds a Tier I Canada Research Chair in Food, Health and Aging. He has been honoured by the American Oil Chemists’ Society and the Institute of Food Technologists for his research in the field of lipids.

Alicia Viloria-Petit

Biomedical sciences professor Alicia Viloria-Petit is affiliated with U of G’s Institute for Comparative Cancer Investigation, where she studies how tumour cells change to allow cancer to spread throughout the body. “Most patients don’t die of the primary tumour but die after the tumour migrates to distant organs and becomes resistant to treatment.” Last year she was part of a team that discovered that microvesicles made and secreted by normal cells near a tumour affect cancer’s ability to spread to other body tissues. She’s looking for ways to target proteins in these microvesicles to halt cancer spread.

U of G ranks among Canada’s most inventive universities. Guelph placed No. 1 for the lowest cost per invention and No. 2 for the number of inventions per faculty in a 2013 survey by The Impact Group, an independent consulting firm. U of G researchers produce 1.28 invention disclosures for every million dollars of research funding.
JOHN DUTCHER
A start-up company called Mirexus Biotechnologies Inc. will guide the marketing and production of tiny sugar polymers discovered in a U of G physics lab that could be used to produce eco-friendly paints, age-defying super-moisturizers and non-toxic drug treatments. “The way the sugars are arranged gives them unique physical and chemical properties,” says project leader Prof. John Dutcher, “yet enzymes within the body and the environment can naturally break down the particles, so they won’t build up in the environment.” Pilot trials have advanced the manufacturing process from lab to industry scale.

AJAY HEBLE
English professor Ajay Heble says musical improvisation just might hold the key to building successful communities, here and around the globe. The Social Sciences and Humanities Research Council of Canada seems to agree. The federal agency recently awarded Heble’s team a $2.5-million grant to launch the International Institute for Critical Studies in Improvisation. The new institute follows years of work by Heble, who established the Guelph Jazz Festival and used it as a springboard for teaching, research and outreach centred on musical improvisation as a model for collaboration and social improvement.

AHREN BRUNOW / MELANIE LANG
A new business incubator program established at U of G turns commerce grad Ahren Brunow green with envy. “I’m an entrepreneur myself, and I would have loved this,” says Brunow, who’s helping to manage the “Hub” incubator. “They get mentorship, guidance and funding to launch their business, which is an incredible opportunity for students with limited resources and networks.” The Hub aims to create start-ups that will eventually support entrepreneurial careers. “We want to see them succeed,” adds marketing professor Melanie Lang. “We want more successful start-ups coming out of the University of Guelph.”
accountability

educators for 150

50 years a university
“There is a great need in post-secondary education to demonstrate and co-ordinate information about student knowledge and achievement beyond traditional grades.”

Of G provost and vice-president (academic) Maureen Mancuso leads an Ontario initiative to improve student assessment in post-secondary education. U of G and four other schools received $5.4 million from the Ministry of Training, Colleges and Universities to launch the program. The goal is to enable schools to track and report on learning outcomes over time and across programs.

Mancuso says U of G was the natural choice to head the initiative. “We’ve long been a leader in outcome-based pedagogy.” Guelph was the first Canadian university to establish across-the-board learning outcomes for all degree programs and specializations in 2012, and was among the first to establish formal learning objectives in 1987.

Over the last decade, Mancuso led the re-examination of undergraduate learning at U of G, introduced the first-year seminar program, chaired a presidential task force on accessibility and led the Integrated Planning Process, now a permanent part of strategic decision-making at Guelph. She has also served on provincial committees to improve educational quality, productivity and equity. “My role as a university administrator is to bring about change that will make a difference in education, now and in the future.”
FIVE-STAR RATING
The University of Guelph has achieved a five-star rating from Quacquarelli Symonds (QS), publishers of the annual World University Rankings. More than 130 universities in 30 countries participate in the QS Stars audit, which rates institutions on a number of performance indicators. U of G achieved the top rating in all eight categories: teaching, employability, research, internationalization, facilities, innovation, access and specialist (agriculture). Guelph also received a five-star overall rating. To qualify for that ranking, a university must be world-class in a broad range of areas, and have an excellent reputation, internationally known faculty and researchers, and state-of-the-art facilities.

BUSINESS COLLEGE
U of G’s Macdonald Hall residence – built in 1904 to house women enrolled in the former Macdonald Institute – will undergo a $10-million renovation to remake the residence into offices and learning space for the College of Business and Economics. Dean Julia Christensen Hughes draws a line from a pioneering Macdonald Institute to the college’s collaborative management programs. “It’s these roots that have been credited in part with Guelph’s unique approach to business education, which emphasizes hands-on learning, social responsibility and community engagement.” The restoration will provide space for a centre for business and social entrepreneurship.

ENGINEERING COMPLEX
U of G’s School of Engineering recently completed a multi-year expansion and renovation project to accommodate its seven engineering programs: biological, biomedical, computer, engineering systems and computing, environmental, mechanical and water resources. “The reputation of Guelph in engineering is expanding both among prospective students and in the industry,” says director Hussein Abdullah. The school worked with industry experts to design modern facilities with the latest industry-standard equipment. “This new space will allow the culture of engineering at Guelph to stay relevant, hands-on and focused on applied learning.”
The economic impact of Guelph’s partnership with the Ontario ministries of agriculture and food and rural affairs exceeds $1 billion annually. SOURCE: DELOITE AND TOUCH LLP

**Total University Revenue 2012 / 2013**
- Total Revenue — $717.8 million
- Operating Revenue — $504.6 million
- Ancillary and Restricted Revenue — $213.2 million

**Sponsored Research Revenue 2012 / 2013**
- Total Revenue — $125.4 million

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**Research Intensity**
(Research revenue as percentage of operating revenue)
- Guelph: 41%
- National: 35%

**Instruction and Research Expenditures**
(Percentage of institutional expenditures)
- Guelph: 65.8%
- National: 55.6%

**SSHRC Grant Dollars per Faculty**
- Guelph: $6,430
- National: $5,750

**CFI Award Dollars per Faculty**
- Guelph: $140,100
- National: $64,500

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**Source:**
- Deloitte and Touche LLP
- CAUBO
- Maclean's 2013
- Resource Planning and Analysis
**BOARD OF GOVERNORS**

**Chair:** Dick Freeborough, *Corporate director*
**Vice-chair:** Virginia McLaughlin, *President, Helmhorst Investments Ltd.*
**Chancellor:** David Mirvish, *President, Mirvish Productions*

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- Graham Badun, *Consultant*
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- Shauneen Bruder, *EVP operations, Canadian banking, RBC Financial Group*
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- Nancy Croitoru, *President and CEO, Food and Consumer Products of Canada*
- Earl Ellis, *Vice-president finance, U.S. retail, Campbell Soup Company*
- Paul Gallagher, *CFO, Wittington Investments Ltd.*
- Effie Gatsinos, *Assistant registrar (student recruitment), University of Guelph*
- Kevin Golding, *Retired president, Rothsay (Member of Maple Leaf Foods Inc.)*
- Richard Jordan, *Manager, University of Guelph Arboretum*
- John Kissick, *Director, School of Fine Art and Music, University of Guelph*
- Peter MacGowan, *Partner, Financial Services Group, Blake, Cassels & Graydon LLP*
- Andrew Marsh, *President and CEO, Richardson GMP Ltd.*

**Administration Expenditures**
(Percentage of institutional expenditures)

<table>
<thead>
<tr>
<th></th>
<th>All Universities — Ontario</th>
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</thead>
<tbody>
<tr>
<td>Guelph</td>
<td>1.7%</td>
</tr>
<tr>
<td>Ontario</td>
<td>3.0%</td>
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</tbody>
</table>

*Source: COFO-UO Financial Reports*

**Student Services**
(Percentage of operating expenditures)

<table>
<thead>
<tr>
<th></th>
<th>All Universities — Canada</th>
</tr>
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<tbody>
<tr>
<td>Guelph</td>
<td>6.0%</td>
</tr>
<tr>
<td>National</td>
<td>5.1%</td>
</tr>
</tbody>
</table>

*Source: Maclean's 2013*

**Scholarships and Bursaries**
(Percentage of operating expenditures)

<table>
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<th></th>
<th>All Universities — Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guelph</td>
<td>8.6%</td>
</tr>
<tr>
<td>National</td>
<td>7.4%</td>
</tr>
</tbody>
</table>

*Source: Maclean's 2013*

**FINANCIAL REPORTS**

See audited financial statements for 2012-2013 at www.fin.uoguelph.ca.
To monitor the University's ongoing budget challenges and decisions, visit www.uoguelph.ca/president/budget.
UNIVERSITY OF GUELPH ADMINISTRATION

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Alastair J.S. Summerlee, President and vice-chancellor, University of Guelph
F. Michael Walsh, Retired executive

PRESIDENTIAL LINEAGE

Alastair Summerlee, U of G’s longest-serving president, completes his 11-year term at the end of June 2014. He will be succeeded in August by Franco Vaccarino, who is currently principal of the University of Toronto Scarborough and vice-president at the University of Toronto.

Board of Governors chair Dick Freeborough led U of G’s presidential search committee: “We had an outstanding slate of candidates from Canada and abroad.”

He applauded Vaccarino’s track record in scholarship and administration, and said his entrepreneurial spirit and commitment to community engagement will advance the University of Guelph’s greatest strengths.