

University of Alberta

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Nick Ashbolt named Translational Health Chair in Water

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# Farewell to Folio

Michael Brown

n Sept. 1, 1964, faculty and staff at the University of Alberta opened their mailboxes to find a four-page newsletter entitled *The Folio*.

A publication of what was then the U of A Information Office, *The Folio*'s first issue began with a simple list of appointments. There was an interview with the university's first architect, Cecil Burgess, with a rendering of the original campus plans and an aerial shot of campus on the facing page. The back page had a list of events and some faculty news.

That first issue also explained the upstart publication's name and rationale:

"By definition a folio is a sheet of paper once folded. Hence, the title of this new publication, which replaces the Staff Calendar. *The Folio* will be distributed twice monthly to the academic staff of the University of Alberta at Edmonton."

Thus began an impressive twice-monthly (or so) run of the faculty and staff newsletter of record that would last 50 years and more than 1,700 issues—with this issue being its last

Over the years, the title was shortened to just *Folio*, the page count tripled and the paper had numerous makeovers, breaking cutting-edge discovery stories and celebrating the university's achievements before entering its final role as a bridge between the rigidity of hard-copy news and the flexibility and timeliness of the many digital communications channels now at the university's disposal—channels that have led to a decline in readership for the printed publication.

Internal news about the U of A is now gathered in numerous locations, including the university's news web page, the president's Friday bulletins, the email FYI Digest and the Colloquy blog, as well as the U of A's social media accounts.

"The ways we communicate are changing," says Kiann McNeill, director of Marketing and Communications, "and with the wide variety of communication channels and opportunities available to us, it is time for us to reimagine how we communicate internally with the campus community and engage staff and faculty."

### First and 1,706th



Folio editor Michael Brown took a trip back in time when he dug up a copy of the U of A newsletter's first issue from Sept. 1, 1964.

# Former PM at helm of new leadership college

Bryan Alary

he first and only Canadian woman to lead the nation as prime minister will oversee the creation of the Peter Lougheed Leadership College at the University of Alberta

The Rt. Hon. Kim Campbell, Canada's 19th prime minister, has been appointed founding principal of the college, one of the two main elements of the Peter Lougheed Leadership Initiative, a collaboration with The Banff Centre aimed at creating one of the world's pre-eminent leadership development programs.

member of the Club of Madrid and taught a the Center for Public Leadership at Harvard Kennedy School.

As founding principal, Campbell will be active "diplomat" for the leadership college, building relationships with funders, faculty, alumni and other organizations that can hel

Campbell said it's an honour to join the U of A and have a role in cultivating the best skills of leaders in students from every discipline on campus. It's also a fitting way to pay tribute to the legacy of the late Alberta premier, one of the province's and country's greatest leaders.

"In Peter Lougheed, you have that wonderful figure on which one can rally, who is symbolic of this place but also symbolic of the very goals one wants to aspire to—that kind of imaginative, far-seeing, ethical, courageous leadership that the world needs."

Joining Campbell as a founding leader of the initiative is award-winning designer and leadership expert Dan Buchner, the inaugural vice-president of the Peter Lougheed Leadership Institute at The Banff Centre.

"These two highly qualified, experienced individuals truly define leadership," said John Ferguson, chair of the Peter Lougheed Leadership Initiative's advisory board. "Their talents will inspire creative collaboration and challenge both institutions to be innovative and exceptional in programs they develop."

In the two decades since her tenure as prime minister, Campbell has gained international renown as a sought-after speaker and authority on leadership, gender issues and democratization. She has served as chair of the Council of Women World Leaders and as president of the International Women's Forum, was a founding member of the Club of Madrid and taught at the Center for Public Leadership at Harvard Kennedy School.

As founding principal, Campbell will be an active "diplomat" for the leadership college, building relationships with funders, faculty, alumni and other organizations that can help build and enhance programming. Campbell, whose ties to the U of A include an honorary doctor of laws degree conferred in 2010 and participating in the Prime Ministers Conversation Series in 2008, said the university is well positioned to be on the leading edge of leadership development thanks to a willingness to dare, dream and look for big ideas.

"The U of A is not a university where people rest on their laurels. We are constantly looking to get the best scholars here, to get the best programs, to get the best students and to give them the best experience. I love that energy," she said. "There are many leaders on the campus and there's all sorts of leadership and energy in Edmonton and Alberta that one can tap into."

With the added collaboration with The Banff Centre and its tradition of excellence in executive leadership development, the initiative truly lives up to Lougheed's famous encouragement to "strive for the extraordinary."

"The synergy and the link between the U of A and The Banff Centre is really what makes this extraordinary and unique," she said.



Kim Campbell, Canada's first female prime minister, is the founding principal of the Peter Lougheed Leadership College.

Though post-secondary students possess many skills and have mastered their disciplines upon graduation, they face more challenges to-day and a more complex and competitive workforce than when Campbell was a student, she said. One of the aims of the leadership college is to give students insights, skills and understanding to be strong leaders—qualities employers are asking for, she added.

The leadership college will become a "centre of excellence that will resonate through campus," with resources and programs benefiting students across the university. The work that begins today will ultimately benefit all Albertans and Canadians, she added.

"If Canada is going to innovate, if Canada is going to move forward, we need people of the highest level of skills—and that includes the skills to lead new processes of change."

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### **Graphic Design**

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The editor reserves the right to limit, select, edit and position submitted copy and advertisements. Views expressed in folio do not necessarily reflect university policy. folio contents may be printed with acknowledgement.

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- □ Please keep my name, or
- □ Remove my name from the folio list.

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No response means the University of Alberta assumes an individual wishes to remain on the mailing list.

# New dean to lead Faculty of ALES through centenary

Michael Brown

tanford Blade, chief executive officer of Alberta Innovates - Bio Solutions, has been named as the new dean of the Faculty of Agricultural, Life and Environmental Sciences, effective Aug. 1, 2014.

'We have all these great people within the faculty addressing key issues of importance to



**Stanford Blade** 

Alberta and the world. For me, the role of dean will provide a great opportunity to position our work, to articulate the importance of generating new knowledge and the potential it has to solve not only some of the problems that

Alberta is facing, but also problems that exist across the globe," said Blade.

"It is the perfect fit for that curious farm kid who had a fascination with science."

Blade succeeds John Kennelly, who has been dean since 2004.

"Dr. Blade looks forward to celebrating the faculty's centenary in 2015," said Carl Amrhein, provost and vice-president (academic). "He plans to set the trajectory of the faculty by helping to develop a shared vision within the group and working to find the resources to ensure that the faculty is an integral part of both the provincial and global communities."

Growing up on the farm in the County of Leduc, Blade developed the early and deep appreciation for agriculture that only kids who grow up on farms truly understand, and took it a step further.

"I grew up in an agriculture community and have a real sense of that community, but my interests were much more on the science side of things, of thinking more about genetics and a research career," says Blade, who recalls making trips to the U of A as a youngster for university farm field days. "I remember they were monitoring temperature regulation in sheep and a whole array of things that started to pique my interest."

Later, Blade says, he watched as new crops and practices—some developed at the U of A improved economic returns and enhanced the sustainability of nearby farms. Those first encounters with the U of A helped nurture both his interest in science and his affinity for the U of A. In 1981, Blade graduated from the university with a bachelor of science degree.

Upon graduation, Blade embarked on a lifechanging opportunity—a two-year volunteer teaching position in the West African country of Cameroon. "It was there that all of a sudden this idea of the role of agriculture in international development—and not just agriculture as a driver of social development—all just came together

Blade returned to Canada, where he completed a master of science degree in plant science at the University of Saskatchewan, then went back to sub-Saharan Africa as a Commonwealth Scholar before earning his PhD at McGill University.

"Research is the perfect alignment of my interest in science, my understanding of agriculture and that real sense of growing up in a community where the agricultural endeavour is one that has so many connections—family, community and international. I was intrigued to see how science, agriculture and international development would come together in one fell swoop."

Blade made his way back to Alberta, where he took a job as a research scientist with the Ministry of Agriculture, Food and Rural Development. For the next decade, often in collaboration with U of A researchers, he explored his many research interests, including the breeding of new pulse crops—which resulted in the creation of a cultivar of field pea (Cutlass) that still serves as the benchmark for all new pea varieties being registered in Western Canada along with fibre and medicinal crops, spices and diversification beyond traditional commodity crops. During this time, he also served two terms on the U of A Senate.

Blade would add to his responsibilities as a researcher, becoming director of the province's Crop Diversification Division and as deputy director general (research) for the International Institute of Tropical Agriculture in Nigeria in 2004, before beginning work on the idea of a

provincial funding agency, which at that stage was just a thought in the minds of a few people."

First as executive director of the Alberta Agricultural Research Institute, and then as CEO, Blade participated in the creation of Alberta Innovates - Bio Solutions, an agency of the Alberta government focused on research and innovation to support the profitability of the agriculture, food and forestry sectors. Blade had been responsible for the startup of the organization—developing strategic and business plans, recruiting great staff, empowering an engaged executive team and creating a culture of innovation resulting in a \$85-million portfolio with a total project value of \$250 million.

The position has meant strong ties with the U of A and the centres, chairs, programs, projects, international collaborations and technology conferences within the Faculty of ALES that he has championed investment in.

Blade, who is an adjunct professor in the faculty, says his vision for building on its success is focused on three key areas: strengthening engagement with the Government of Alberta, forging deeper partnerships with non-government agencies, and creating and executing a thoughtful and intentional communications strategy.

"My job is to figure out where we want to go on the horizon, and begin talking about it," he said. "Pretty soon it doesn't seem like words on a page, and people begin to grasp that this is where we're going, these are the kinds of things we might be able to do together. And then all of a sudden, people are keen to join in the effort."

The end result, Blade says, is the faculty playing a larger role in solving some of the world's biggest issues—food security, nutrition, energy, the idea of sustainability and climate change, to name a few.

What I have always liked about the university, and certainly what I hope to help facilitate, is this idea of the academy working together, of an increased focus on integration of skills, certainly within our department and across our faculty, but also reaching out to groups across the university. The U of A has a huge capacity for creating new knowledge and producing the kinds of ideas that are going to change the way the world works."

# Helmet research top of mind for CFI funding

Michael Brown

elmets are the leading injury-prevention device for head and brain injury. However, despite 30 years of research and development to build better helmets that are very effective at protecting against severe head and brain injury, concussion (a form a helmet-clad metal head form, to of mild brain injury) is still a widespread injury in sports like hockey and football.

"We have all these amazing helmets, yet people are still getting concussed for some reason," said mechanical engineering professor Christopher Dennison. "If we can understand why that is, we might be able to improve helmets or change our thinking about how helmets need to be designed to prevent injuries in the mild spectrum including concussion."

To aid in this quest, Dennison received \$60,000 in funding for a high-speed camera system for imaging the mechanics of impact, one of eight University of Alberta proposals receiving a total of \$946,000 in infrastructure grants from the Canada Foundation for Innovation's John R. Evans Leaders Fund.

The camera system will allow Dennison and his research team

to better study the mechanical interaction between the helmet and the head to come up with better research questions about head protection.

He says the current industry standards for helmet testing involve a linear drop from heights usually ranging from one to two metres of measure the linear acceleration associated with the head coming to a stop during that impact.

"With a few rare exceptions, linear acceleration is the one metric we use today to certify all helmets on the planet," said Dennison, who also receives funding from the Natural Sciences and Engineering Council as well as the Faculty of Engineering and Department of



Christopher Dennison (middle) with graduate students Robert Butz and

Mechanical Engineering. "One of the limitations of that approach is most impacts to the head are not straight-on linear impacts, but involve different amounts of head rotation."

He said another limitation of strictly using linear acceleration as a pass or fail criterion is it doesn't take

into consideration what researchers and physicians know about head and brain injury—a consideration that is not lost on Dennison.

"As a mechanical engineer I'm not an expert in the brain or diagnosing concussions, so I have people that I collaborate with at the U of A who work, for instance, with youth athletes to develop concussion screening processes. I also work with people in industry who have been active on helmet certification bodies, and physicians who are involved with local sports teams that have a vested interest in our work," he said. "This funding will enable the long-term goals of our collaborations and is therefore timely, appreciated and central to our success."

### Other CFI grant recipients and projects

David Eisenstat (Medical Genetics)—Establishment of a Pediatric Nervous System Cancer and Development Laboratory \$172,000

Hassan Dehghanpour (Civil and Environmental Engineering)—Measurement and Modelling of Three-Phase Relative Permeability and Residual Oil Saturation in a SAGD

Mustafa Gul (Civil and Environmental Engineering)— An Integrated Experimental System for Structural Health Monitoring of Critical Civil Infrastructure \$80,000

Rylan Lundgren (Chemistry)—Infrastructure for the Discovery of New Catalysts and Chemical Reactivity \$114,000

Patricio Mendez (Chemical and Materials Engineering)— Development of Laser Processing Facility for Wear and Corrosion Protection Materials \$200,000

Japan Trivedi (Civil and Environmental Engineering)— Infrastructure for cEOR Polymer Characterization and ASP Design Research \$80,000

Benjamin Willing (Agricultural, Food and Nutritional Science)—Molecular Study of Host Microbial Interactions \$160,000

# Eleven remarkable HDs to inspire graduates at spring convocation

Michael Brown and Sean Townsend

The University of Alberta is poised to award 11 individuals with honorary degrees for a vast array of achievements that hold at least one thing in common—they continue to make the world a better place.

"Our spring convocation honorary degree recipients remind all of us of the importance of talent, integrity, passion and wisdom," said U of A chancellor Ralph Young. "It is my hope that these outstanding individuals will inspire our graduates to consider leadership roles in the many local, national and international communities our university serves."

Alexander Frederick McCalla, alumnus and former president of the U of A's Students' Union, has made extraordinary contributions to feeding the world and improving conditions for the poorest among us through innovative agricultural teaching programs as well as path-breaking research on the economics of public policy related to agriculture, international trade, economic development and food security. McCalla, former two-time dean and agricultural economics professor at the UC Davis, elected early retirement and joined the World Bank as director of agriculture and natural resources. One of his challenges was to reverse a disturbing trend that saw the bank's agricultural lending drop by more than half in less than a decade beginning in the late '80s. He was co-author of the bank's new rural development strategy, which contributed to turning the trend around before the century was out and continues to guide the bank's essential activity in reducing poverty worldwide. In 2004, he was awarded a Distinguished Alumni Award from the U of A. Honorary doctor of science degree – June 3 at 3 p.m.

While standing at the forefront of local television for 30 years starting in 1965, Bruce Hogle set a journalistic standard that established Edmonton as one of the most competitive new markets in the country, and he used this powerful medium to challenge, provoke and inspire, always with an eye to righting injustice and improving our community. Hogle's editorial efforts resulted in the formation of community-first entities such as the Alberta Crimes Compensation Board, a group that provides financial support for victims, and Alberta's Block Parent Program, as well as changes to Alberta's adoption laws, rent controls and improvements in how society treats people with learning disabilities. Hogle's commitment to pushing back the margins also led to "Wednesday's Child," the long-running CTV Edmonton feature that helps find permanent homes for difficult-to-adopt children. Always ahead of his time, Hogle also hired Edmonton's first female news anchor. He received the Order of Canada in 1998. Honorary doctor of laws degree - June 4 at 10 a.m.

By the time she retired from nearly two decades of competitive cross-country skiing in 2006, Beckie Scott had rewritten the Canadian cross-country record books. The three-time Olympian won gold at the 2002 Olympics in Salt Lake City and silver at the 2006 Olympics in Torino. Her tireless advocacy for drug-free sport landed her a role as Canada's representative on the World Anti-Doping Agency's Athlete Committee in 2005. She was one of only two international athletes elected by her peers to the International Olympic Committee Athletes' Commission for an eight-year term during the 2006 Olympics. A firm believer in charitable endeavours, the Alberta-born and raised Scott is active in Right to Play, an organization that uses the power of sport to transform the lives of children in the most disadvantaged parts of the world, and Ski Fit North, a crosscountry ski initiative directed at impoverished First Nations youngsters. She was inducted into Canada's Sports Hall of Fame in 2007. Honorary doctor of laws degree – June 4 at 3 p.m.

In turning the Ledcor Group of Companies into one of Canada's largest construction companies, alumnus Dave Lede has instilled



an award-winning corporate culture that values safety, family and community above all else. Lede is known as the visionary behind not only thousands of kilometres of roadways but also iconic structures like the Art Gallery of Alberta in Edmonton and The Bow in Calgary, but his biggest accomplishment might be the zest for generosity his employees bring to their communities. Over the years, the Dave Lede Family Foundation has contributed millions to charities in Alberta and British Columbia. Making responsible and ethical business decisions has transformed Ledcor into a pioneer in integrity, accountability, innovation and sustainability as the construction giant has driven positive change within the industries in which it operates. Earlier this year, Lede received the Canadian Business Leader of the Year award from the Alberta School of Business. Honorary doctor of laws degree - June 5 at 10 a.m.

**L** It is my hope that these outstanding individuals will inspire our graduates to consider leadership roles in the many local, national and international communities our university serves."

Ralph Young

Darren Entwistle, Telus president and CEO, has changed corporate Canada's philanthropic mindset with a leadership style based on the belief that corporate social responsibility supports and enhances fiscal responsibility. Among Entwistle's charitable innovations was creating the Telus Community Boards, based on the notion that communities are more capable of making charitable decisions than larger corporations are. To date, this program has delivered \$30 million to 2,300 charities. Entwistle was also the driving force behind the Telus motto, "We give where we live," which sees the company match each employee gift of money or time. This program has resulted in an amazing 4.2 million hours of voluntary services and \$260 million in donations. In 2010, Entwistle received the Canadian Business Leader of the Year award from the Alberta School of Business. Honorary doctor of laws degree - June 5 at 3 p.m.

A leading global specialist and medical pioneer in the development of palliative care programs, Helen Hays is considered a modern saint for her compassion and identification of ways to enhance quality of life and reduce chronic pain for people facing terminal illness. A graduate of the Faculty of Medicine & Dentistry, Hays was medical director of the first inpatient palliative care unit at the Edmonton General Hospital, where she developed her own pioneering approaches to this new specialization. Today, palliative care programs across North America are the result of her innovation, her deep

understanding of patients' needs and her mentorship to fellow health-care providers. In 1994, Hays co-founded Pilgrims Hospice Society in Edmonton to provide a voluntary, free-standing hospice offering supportive care to enhance the quality and dignity of life for those diagnosed with progressive, life-limiting illness. *Honorary* doctor of science degree - June 6 at 10 a.m.

**John Poon** is a distinguished alumnus whose achievements in the business world in Asia—particularly in finance and corporate governance and whose commitment to public service serve as an inspiration to U of A students and alumni. Soon after graduating with a U of A law degree in 1984, Poon jettisoned his promising career as a practising lawyer to join the corporate arena in Hong Kong. As CFO and then as deputy chairman of the multinational firm Esprit, Poon led the fashion giant and oversaw its market capitalization expansion from US\$1 billion to over US\$20 billion between 1999 and 2008. Poon's successful business career has been accompanied by a relentless commitment to public service. Since the 1990s, Poon has served on many community organizations and professional bodies in Hong Kong including his role as governor of the Canadian Chamber of Commerce, nonexecutive director of the Canadian International School and a government-appointed council member of the Hong Kong Institute of Certified Public Accountants. In 2012, Poon was appointed chairman of the Financial Reporting Council responsible for ensuring the quality of financial reporting of Hong Kong listed entities and safeguarding the interests of the investing public. In 2003, he received an Alumni Award of Excellence from the U of A. Honorary doctor of laws degree - June 9 at 3 p.m.

One of the world's foremost conservationists, Kamaljit Bawa has redefined our understanding of the evolution, ecology and sustainable use of endangered tropical forests. He is Distinguished Professor of Biology at the University of Massachusetts Boston, and founder and president of the Ashoka Trust for Research in Ecology and the Environment in Bangalore, India, which ranks among the world's top 20 non-governmental organizations. Along with his groundbreaking research in population biology of trees, he is highly regarded for his work to drive wide-scale change in our thinking about sustainability by engaging academics, policymakers, practitioners, activists, students and broader public audiences on a platform of social justice. His contributions to public discourse and public policy on sustainability have earned him the highest awards in his field, including fellowship in the prestigious American Academy of Arts and Sciences. In 2012, he was the inaugural recipient of the Gunnerus Sustainability Award, the world's premier international award in sustainability. *Honorary doctor of science degree* - June 10 at 10 a.m.

U of A professor emeritus **David Schindler** is considered one of the best-informed and strongest voices guiding science and policy to address one of Canada's most pressing issues ensuring water safety and sustainability. Early in his career, Schindler was made the founding director of the Experimental Lakes Area in northwestern Ontario, where he spent two decades running ecosystem-scale experiments. In 1989, Schindler joined the U of A to take up the role as Killam Memorial Chair, where he would spend the next quarter century assessing and relaying the often uncomfortable environmental implications of industry until his retirement in 2013. For his patience and persistence in advancing scientific evidence to influence policy, Schindler has earned numerous national and international awards, including the Gerhard Herzberg Gold Medal, the first Stockholm Water Prize, the Volvo Environmental Prize and the Tyler Prize for Environmental Achievement. He was made an officer of the Order of Canada in 2004. Honorary doctor of science degree – June 10 at 3 p.m.

A fourth-generation Métis elder, Elsie Yanik has been described as "an angel" of Wood Buffalo for her tireless work to preserve Aboriginal heritage and to promote health and education for all in her community. From the time she was a nurse's aide in Fort Smith at age 17, she has spent eight decades offering encouragement and hope as a minister, mentor and volunteer. She served as president of the Voice of Alberta Native Women board, was a 10-year member of the Young Offenders Board and works with the Nunee Health Authority in Fort Chipewyan. For her lifetime of compassionate service and spiritual guidance, she has received a Governor General's Commemorative Medal, the Stars of Alberta Volunteer Award, an honorary diploma from Keyano College, an Esquao Award recognizing excellence by Aboriginal women, and a blessing from Pope John Paul II for her work within the Catholic Church. She was chosen to bear the Olympic torch when it passed through the region on the way to the 2010 Winter Games. Honorary doctor of laws degree – June 11 at 10 a.m.

Sandra Woitas has devoted her career as an educator to helping disadvantaged children across Alberta get the high-quality education they deserve. As principal of Norwood School and director of the City Centre Education Project, she built a network of support agencies that would become Partners for Kids, a program that now serves 3,700 students in 13 Edmonton schools. During a secondment to Alberta Education, she worked with parents, schools and communities on the cross-ministry Family Violence and Anti-Bullying Initiative. Most recently, as director of the Edmonton Public Schools Foundation, she has championed successful campaigns to support full-day kindergarten programs for kids in socially vulnerable communities. Her volunteer activities include serving as a board member with Big Brothers Big Sisters, a campaign speaker for the United Way, a member of the Edmonton Police Commission and a member of the Edmonton Journal Advisory Board. In 2004, she was named one of the 100 Edmontonians of the Century. Honorary doctor of laws degree - June 11 at 3 p.m. **■** 

# 'Lab on a chip' malaria test one step closer to real-world use

Kate Toogood

University of Alberta professor has come one step closer to bringing diagnostic testing for malaria out of the lab and into the field.

New funding means Stephanie Yanow, a researcher in the School of Public Health, can further develop a technology, called Accutas, which will allow technicians in the field to test for malaria—and potentially many other infectious diseases.

With her partner, the U of A spinoff company Aquila Diagnostic Systems, Yanow was recently awarded a Proof of Principle Program – Phase II grant worth \$143,000 from the Canadian Institutes of Health Research.

"This grant will support us with the engineering and software development needed to make a device that will be easy for a village health worker to use and that can withstand harsh testing environments, such as sub-Saharan Africa," says Yanow.

As part of the grant, Yanow and Aquila Diagnostics have



The Accutas "lab on a chip" technology, developed by an international team led by Stepanie Yanow (above) will allow technicians in the field to test for malaria, and potentially many other infectious diseases.

joined forces with the Switzerland-based Foundation for Innovative New Diagnostics (FIND) and the Ugandan Ministry of Health to bring the device to a clinic in Uganda for testing. There, local staff will use the device to test samples for malaria. The diagnosis will then be confirmed using traditional lab methods.

"The device will be at the clinic for several months so local staff can test it and provide us with data on how to improve it for the clinic setting. By the end of this year, we hope to have a machine that anyone can use and have the data to see what we need to do next to make its application universal."

Making the lab-on-a-chip application universal is one of the major goals of the research. Although this particular grant will focus on testing for malaria, the partners hope the technology will have a broad array of

applications to diagnose other infectious diseases.

"The beauty of the device is that it's designed to support diagnostic testing for a variety of targets, whether it's a virus, bacteria or even human DNA, in clinics all over the world," Yanow says.

"This research, which is truly a global effort, is helping us

develop a technology that can be used around the world. It's showing how academia and industry can work together to better global health."

The researchers wish to acknowledge their partners Mark Perkins with FIND and Anthony Mbonye with the Ministry of Health in Uganda.

# U of A makes green employer grade for sixth straight year

Michael Brown

or a remarkable sixth year in a row, the University of Alberta has been named one of Canada's greenest employers.

The U of A was one of just 55 Canadian organizations, including eight post-secondary institutions, to get the nod.

The award was announced April 22 by Mediacorp Canada Inc., a specialty publisher of employment-related periodicals that sponsors other employer awards such as Canada's Top 100 Employers.

The green award recognizes employers that lead the nation in creating a culture of environmental awareness in their organization.

In this year's submission, the U of A's Office of Sustainability high-lighted its Eco Move Out and One Simple Act on Campus programs as just a few of the many initiatives undertaken on campus.

"As the University of Alberta builds a culture of sustainability on campus, it's really about the systems and all of the people who are working together to green our operations," said Trina Innes, the office's director. "Being recognized as the greenest employer for the sixth year in a row demonstrates the U of A's ongoing commitment to excellence and sustainability."

# Canada's Greenest Employers recognition highlights

- The Office of Sustainability oversees and creates awareness about the university's many environmental initiatives, and manages the ecoREPs program to reach out to employees, faculty and students to become sustainability champions across the university.
- The recently introduced Eco Move Out program gives departing students
  the opportunity to reduce waste by donating or recycling their electronics, non-perishable food items, personal care products, and clothing and
  household items. More than 8,500 kilograms of goods were donated or
  recycled last year.
- From an energy management plan first established in the 1970s, the
  university has more recently developed its next-generation Energy
  Management Program, which includes numerous initiatives to be
  implemented over the next decade. Through this program the university is
  investing about \$5 million each year.
- The two-acre Green and Gold Community Garden, run entirely by volunteers, raises funds for a non-profit organization that supports marginalized women in Rwanda. Since 2009, the garden has raised more than \$100,000 in donations.
- The U of A was one the first schools to introduce the One Simple Act on Campus initiative, which encourages employees, faculty and students to commit to undertaking one of 20 possible actions related to waste reduction, energy efficiency, sustainable living or water management.

### Funding equips researchers to tackle obesity drivers

Andrea Lauder

besity is recognized as a major health concern with implications for increasing cancer and chronic disease rates. According to professors Kim Raine and Candace Nykiforuk, both with the School of Public Health, effective policies can address the underlying influences of obesity.

The researchers were recently awarded \$2.4 million from the Coalitions Linking Action & Science for Prevention (CLASP) program of the Canadian Partnership Against Cancer to assess the success of current policies and develop new policies. They will look at various factors, such as the underlying social and economic drivers of unhealthy eating and physical inactivity.

The goal of the research is to provide leadership and support to develop, implement and evaluate obesity-related policy (including healthy eating and physical activity) for chronic disease prevention. The CLASP project, known as POWER-UP!—which is short for Policy Opportunity Windows: Enhancing Research Uptake in Practice—involves collaboration between researchers in Alberta, practitioners in Quebec and policy-makers in the Northwest Territories.

The collaborative team hopes that, by sharing success stories of policy development and implementation, they can engage other communities in a dialogue about how to combat obesity.



Candace Nykiforuk (left) and Kim Raine

"Policy may get on the agenda, but there are challenges involved with implementing policy," said Raine. "We want to build on the evidence base so that decision-makers and community members can use it to make choices about policy."

In addition to creating and sharing tools to support policy development, Nykiforuk and Raine will contribute to the evidence base by searching and compiling a list of which obesity-relevant policies have been successful. They will synthesize the successful policies and share them through the Prevention Policies Directory of the Canadian Partnership Against Cancer.

# Researchers bring gecko-inspired adhesives closer to commercialization

Richard Cairney

University of Alberta research team has moved technology to manufacture high-quality dry adhesives that mimic the stickiness of a gecko's feet to the threshold of commercial production.

The team, led by mechanical engineering professor Dan Sameoto, turned to unorthodox materials and an improvised heat press to prove that it's possible to mass-produce new adhesives that are strong, reusable and recyclable.

"If you can operate a panini press, you can manufacture adhesives using this process," said Sameoto.

It's an apt comparison. During a demonstration at his lab in the campus-based National Institute for Nanotechnology, Sameoto places a microscope slide on a hot plate. He then stacks a mould, a single layer of rubbery-looking material (thermoplastic elastomer), and another hard slide on top of one another—like building up ingredients in a sandwich. He then applies pressure from the top so the rubbery elastomer takes on the shape of the mould.

The mould shapes tiny "hairs" that are inspired by the feet of geckos—tiny reptiles capable of walking up walls and even

upside down. The bottoms of the lizard's feet are covered with millions of tiny hairs, each with a triangular tip. Like a gecko's feet, the adhesives Sameoto has been researching have tiny hairs that stick to a variety of surfaces and can be used over and over. More recently researchers have discovered that by adjusting the hairs so



Walid Khaled (left), with research supervisor Dan Sameoto, shows dry adhesive produced in Sameoto's lab.

they have an overhanging tip, resembling a mushroom cap, they can increase the material's sticking power.

Applications for dry adhesives reach far beyond traditional adhesives. For example, in the production of microelectronics, tiny chips are handled in high-tech

clean rooms by workers who wear "bunny suits" and use tweezers to handle the chips. But robotics could get the same job done in a vacuumed environment instead of a clean room, using the dry adhesive instead of tweezers. The adhesive could also replace alternative fasteners used in other situations—including work in outer space, where suction cups are ineffective and materials may not be magnetic.

Sameoto and graduate student Walid Khaled published findings last November proving they could create directional adhesives. In this most recent study, they examined ways to mass-produce the adhesives.

With the new study, the team became the first to use thermoplastic elastomers, discovering that it removes the step of curing—which could take anywhere from minutes to hours—and replaces it with a rapid thermal cycle of less than a minute. It also results in an improved product that leaves no trace residue behind, and is recyclable.

"With these thermoplastic elastomers, it's less likely for individual molecules to break off. It's the best way we've found to avoid contamination."

# Study show pharmacists can help patients improve health after stroke

Amy Hewko

new study from the University of Alberta shows that pharmacists can make a healthy difference for patients recovering from stroke.

Medical researchers from the Faculty of Medicine & Dentistry are looking at nurse- and pharmacistled interventions to improve the standard of care for patients who have suffered minor stroke or transient ischemic attack, also known as "mini-stroke."

"What we were finding was that six months or 12 months after their stroke, a lot of patients still had uncontrolled blood pressure and uncontrolled cholesterol," said Finlay McAlister, lead author of the

study. "This puts the patients at an increased risk of recurrent events, including strokes, heart attacks, amputation from peripheral vascular disease, and death."

To improve outcomes for these patients, McAlister and his group studied 279 patients who had recovered well or fully after a stroke or ministroke and were included in either nurse- or pharmacist-led interventions to improve blood pressure and cholesterol levels. Following an initial assessment at one of the three stroke prevention clinics in Edmonton, each patient had one appointment each month for six months with a nurse or pharmacist. Compared with statistics under the current standard of care, nurse-led care saw a 30 per cent improvement in blood pressure and

cholesterol levels, and pharmacist-led care saw a 43 per cent improvement.

McAlister, a professor in the Division of General Internal Medicine, says each appointment consisted of the nurse or pharmacist measuring the patient's blood pressure and cholesterol levels, sending the results to the patient's primary care physician, and offering lifestyle advice.

In the nurse-led intervention, the nurses recommended to patients with blood pressure or cholesterol levels still above Canadian guideline-recommended levels that they should schedule an appointment with their primary care physician.

The pharmacists, however, had the ability to prescribe medication to reduce blood pressure or



Finlay McAlister (left) and Miriam Fradette, a pharmacist who took part in the study of interventions for stroke patients.

cholesterol, using treatment algorithms based on current Canadian guidelines for those patients whose blood pressure or cholesterol levels were still above target.

"[The treatment algorithm] doesn't name a specific drug; it just says start with this class, add a drug from this second class if still

uncontrolled, and then add a drug from a third class if needed for achieving target levels," said McAlister. "The pharmacist had the option to choose the best drug within the class based on patient side-effect profile, whether the patient had drug coverage, and so on.

"Most of the blood pressures and cholesterols were dealt with and controlled fairly well by the pharmacist prescribing the medications."

The study was funded by the Heart & Stroke Foundation of Canada, Alberta Innovates - Health Solutions, Knowledge Translation Canada, and the Capital Health/ University of Alberta Chair in Cardiovascular Outcomes Research. The findings were published in the Canadian Medical Association Journal.

# Maternal health care for newcomers exceeds expectations

Kate Toogood

efying all expectations, new research from the University of Alberta shows that newcomer women are very satisfied with the maternal care they receive in Canada's Prairie

A study led by Zubia Mumtaz, assistant professor in the School of Public Health, revealed that newcomer women were just as able to navigate the health-care system and received the same information regarding what to expect during pregnancy and childbirth as Canadian-born women. In addition, they were equally likely to have timely prenatal visits and contact with public health nurses following birth. The research was published in BMC Pregnancy and Childbirth.

"We expected that cultural differences and language barriers would present far more challenges to the ability of newcomers to receive adequate care. Overall, that is simply not the case," said Mumtaz.

Despite the good news, Mumtaz says there's still room for improvement. The research also revealed that newcomer women were significantly more likely to have a caesarean section or an assisted birth.

"[Differences in C-section rates] could be because of language issues where a physician wasn't able to adequately communicate regarding options, so they made an executive decision. It is also possible that newcomers are more reticent to challenge provider opinions or practices."

Newcomer women were also less satisfied with information provided about infant feeding and emotional and physical changes during pregnancy.

"In many cultures. friends and family are important and trusted sources of information, but are less likely to be easily available to newcomer women," she says. "It's



also possible that what we're seeing isn't a lack of information—it's a lack of willingness or a reluctance to accept practices that don't fit in with their cultural beliefs."

The news is encouraging for maternal health-care providers, but Mumtaz says there are still important lessons to be learned.

"If we are to provide a new home for these women, we must acknowledge their cultural and traditional beliefs, while treating them as we would any other Canadian."

The research was part of a larger study led by Gina Higginbottom, a researcher in the Faculty of Nursing and Canada Research Chair in Ethnicity and Health. The study, called "Optimizing Hospital and Community-Based Maternity Care for Immigrant and Newcomer Women in Alberta," is funded by the Faculty of Medicine & Dentistry, an Alberta Health Services Emerging Team Grant, and the Women and Children's Health Research Institute.

### Another piece of prion puzzle uncovered

Amy Hewko

esearchers with the Faculty of Medicine & Dentistry have identified a component that may hold a clue to unlocking the mystery behind a range of neurodegenerative diseases.

David Westaway, director of the Centre for Prions and Protein Folding Diseases, and Jack Jhamandas, professor in the Department of Medicine's neurology division, led a research team that identified a molecule that interacts with prion proteins to alter the behaviour of potassium channels.

Prions are misfolded proteins that cause bovine spongiform encephalopathy, or mad cow disease, and Creutzfeld-Jakob disease. Potassium channels are multicomponent cells that slow down the electrical signals used by brain cells to communicate with each other.

The researchers examined the potassium channel that determines whether a brain cell will send a signal. They discovered that when prions are in close proximity to this type of potassium channel, the strength and speed of the signal increases rather than decreases, effectively reversing the natural behaviour of potassium channels.

To understand this phenomenon, Jhamandas and Westaway genetically engineered channels to lack different components.

Prions were then introduced to the genetically engineered potassium channels. When a molecule called DPP6 was absent, nearby prions did not cause the electrical signals to speed through the potassium channel as they would in naturally formed cells.

In the future, Westaway and Jhamandas hope to use a similar technique to analyze amyloid proteins, which are involved in the development of Alzheimer's disease. Amyloid proteins interact with both prions and potassium channels, though Jhamandas says the mechanism that causes the interaction is unknown.

"It's very difficult to understand the operation of membrane channels, which serve as a conduit for all communication in the brain," says Jhamandas. "They're not just a slit in the cell. They're made of different proteins and each one contributes to how the cell functions. Understanding these molecular gateways will give us new options for treatments."

The study was published in the Journal of Biological Chemistry.

# Are You a ?

Congratulations to Darren Kelly, who won a Butterdome butter dish as part of folio's April 4 "Are You a Winner?" contest. Kelly was able to identify the photo was of the Mineralogy and Petrology Collection housed in the Earth Sciences Building. Up for grabs this week is another Butterdome butter dish. To win it, simply name the object in the photo and email your answer to folio@ ualberta.ca by noon on Monday, May 5, and you will be entered into the draw.



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# \$4.2M research chair to find better ways of making water safer

Donna Richardson

University of Alberta researcher has been awarded a new provincial research chair to improve the way water supplies are used, reused and managed.

Nicholas Ashbolt, a professor in the School of Public Health, was named the Translational Health Chair in Water by Alberta Innovates—Health Solutions. Ashbolt will receive about \$4.2 million for the seven-year research program.

According to Ashbolt, Alberta has some of the best water and water safety controls in North America. "Alberta is the first jurisdiction in North America to introduce drinking water safety plans," he says. To ensure Alberta maintains its high level of water standards, Ashbolt and his team will introduce better and more efficient ways of testing and managing urban and rural water supplies.

"We want to use microbial risk assessment to set general limits and identify specific targets for the various types of pathogens in water intended for different purposes," explains Ashbolt. "This will mean that Albertans can continue to develop sustainable municipal and agricultural practices and infrastructure that provide good quality water well into the future."

He adds that these new approaches not only help operators to



Nicholas Ashbolt is the new Translational Health Chair in Water.

better know their systems, but also greatly enhance the effectiveness of water management.

Ashbolt's arrival strengthens the U of A's Water Initiative, which brings together the interdisciplinary capacity of more than 100 researchers whose work spans resource economics, water treatment, toxicology and microbiology, northern and cold weather research, ecosystem biology, energy and the environment, water policy, nanotechnology and sensors.

"We are pleased to have recruited Nicholas Ashbolt to the University of Alberta," says Kue Young, dean of the School of Public Health. "His presence will elevate the area of water research and benefit not just Albertans, but people throughout North America."

Through the work Ashbolt will conduct, the U of A will be able to collaborate with the University of Calgary in a provincial waterborne disease reporting and surveillance system.

at where water can be reused in people's homes."

I'm here to change the way we manage water, not only from a public health perspective, but more broadly."

Nicholas Ashbolt

"Water is our most valued global resource and is intrinsically tied to the health of populations. There is urgency in creating and using knowledge to manage our use and reuse of water for all citizens. Alberta is an ideal place for Dr. Ashbolt to work, share his expertise and mentor others so that our province is a leading centre for best water management research and practice," says Cy Frank, CEO of Alberta Innovates - Health Solutions. "We're confident that his work will result in safer water for all Albertans."

Before coming to the U of A, Ashbolt was a senior research microbiologist with the U.S. Environmental Protection Agency and professor in civil and environmental engineering at the University of New South Wales, Sydney, where he led a number of regulatory changes based on microbial risk assessment.

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"What excites me about coming

to the University of Alberta is the

wonderful opportunity we have

to work directly with regulatory

agencies and relatively quickly yield

significant changes," says Ashbolt.

"I'm here to change the way

we manage water, not only from a

public health perspective, but also

more broadly," he explains. "We'll

be looking at how we engineer the

whole system, from water recovery

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### University takes lead with updated portfolio of renewable energy generation systems

Trevor Chow-Fraser

orld-class sustainability researchers at the University of Alberta deserve a campus that models leading-edge sustainability practices. The university will soon do just that when it unveils the largest portfolio of renewable energy generation in Canada's post-secondary sector.

"Instead of using fossil fuels for power and heat, we will generate clean energy with solar-electric and solar-thermal panels," said Michael Versteege, manager of Energy Management and Sustainable Operations and one of the principal champions for renewable energy on campus.

Solar-electric installations are already completed or under construction on four buildings, including a record-breaking solar array on Augustana Campus. As part of the university's Envision energy-saving initiative, another half-dozen renewable energy projects will be built over the next three years.

The Camrose Performing Arts Centre on Augustana Campus is the current jewel in the U of A's renewable energy portfolio. Incorporating 488 modules, it is the largest solar-electric system of its kind in Canada. It is projected to produce up to 150 megawatthours of electricity per year—enough power for about 5,000 laptop computers—saving as much as \$10,000 in annual utility bills when the centre opens this fall.

The centre's designers gave it another distinctive feature by putting solar panels on all four sides of the theatre's 70-foot-tall fly tower. This presents a research opportunity for faculty and students interested in renewable energy. "There was no added cost, and



we don't really know how much energy can be produced by north-facing solar panels in an Alberta winter," said Versteege.

As a leading research university, the U of A should incorporate these kinds of groundbreaking elements into its renewable energy infrastructure, Versteege says. "We know there will be sunlight reflecting off the snow. So we'll get to experiment to see just how much electricity really can be generated with our north-facing panels."

The Physical Activity and Wellness Centre—currently under construction—will place a host of green technologies on display right at the heart of campus life. The new fitness facility is pursuing top green-building certification under Green Globes, based partly on its renewable energy generation.

In addition to solar-electric generation, the PAW Centre's purpose allows it to use the sun's energy in a simple and effective way. A solar-thermal system will capture the sun's rays to preheat the recreational complex's hot water supply.

"Residential buildings generally need most of their hot water at night, when the sun is already down," said Versteege. But recreational facilities, like the PAW Centre, have the opposite need.

"The gym complex has huge shower demand during the day. Plus we've got a couple of heated swimming pools in there. It's really an ideal location for solar-thermal."

This push for renewables began in 2013, when the Medical Isotope and Cyclotron Facility opened with the university's first solar-electric array. Like the one in the Performing Arts Centre, this was a building-integrated solar array, one of the very first to be installed in Canada.

"It was a custom-manufactured design, which made it a really exciting project for everyone involved. I think it really helped spur on development for more renewables on campus," said Versteege.

As a measure of the importance of renewables, signature buildings aren't the only ones being considered. The R.E. Phillips



(Left) the Medical Isotope and Cyclotron Facility; (above) Michael Versteege

building is a service depot tucked away behind the Lister residence, but it will soon have a 12-kilowatt solar installation feeding into the campus grid.

"Renewable energy is something everyone can support because it's an investment in the university's long-term self-sufficiency. Plus, by reducing the need to rely on fossil fuels, renewables shrink our contribution to climate change," said Versteege.

These four solar-electric projects are all scheduled for completion by the end of 2014, and the university has many more projects in the design stage. Under these plans, the new Innovation Centre for Engineering and its existing neighbours will soon receive up to 250 kilowatts of solar power capacity.

"For 30 years we've focused successfully on energy efficiency. I'm really excited that we're now pushing further and getting more creative by incorporating renewable energy into the mix," said Versteege.

"This is what makes it so exciting to be working for sustainability on campus."

# Making water safer for Albertans



### **Alberta Innovates – Health Solutions** names Translational Health Chair in Water

Alberta has some of the best water in North America, but only a fraction is used for drinking. Homes, agriculture, industry and recreation are bigger users, each with different safety requirements.

Ensuring Albertans have the best water safety in the world is the priority for Dr. Nicholas Ashbolt, newly appointed Alberta Innovates – Health Solutions (AIHS) Translational Health Chair. Working with government agencies, industry, communities and researchers, University of Alberta-based Dr. Ashbolt and his team will introduce innovative and cost effective ways to manage urban and rural water supplies. This will improve regulations and policies to ensure safe water in Alberta now and in the future.

The AIHS Translational Health Chair program is a partnership between Alberta's research Universities, Alberta Health, Alberta Health Services, and AIHS. Top researchers are recruited to Alberta in priority research and innovation areas to translate research into real-world solutions.

To learn more, visit aihealthsolutions.ca









### New MSc in dental hygiene is first of its kind in Canada

Cheryl Deslaurier

n the heels of a successful accreditation review, the University of Alberta's dental hygiene program is leading the way in education with a new master of science degree.

The master's program—the first of its kind in Canada—gives U of A students even more options in addition to the diploma and degree programs already offered in the dental hygiene program.

The dental hygiene program recently underwent an accreditation review by the Commission on Dental Accreditation of Canada. The commission is responsible for accrediting dental, dental specialty, dental residency, dental hygiene and dental assisting education programs in Canada.

Accreditation is the public recognition awarded to universities and academic programs that meet established criteria and educational standards, and it occurs every seven years. In simple terms, it is a peer review of the dental hygiene program.

"The news of the approved MSc degree program couldn't have come at a better time," said Sharon Compton, director of the dental hygiene program. "Our accreditation review went very well, and now this—my entire faculty are elated over what we've been able to achieve."

The thesis-based master's program has no prescribed courses, but will give students flexibility in deciding on the area they want to pursue and choosing courses accordingly. Providing flexibility for individualizing the master's degree can help broaden students' academic and professional career scope.

Before students are accepted into the master's program, they need to secure a research supervisor from within the School of Dentistry. The supervisor will then work with the student to select courses. Course work is interdisciplinary, and students have access to courses from other faculties and departments such as rehabilitation medicine, interdisciplinary studies and public health sciences.

"I am very proud of Sharon and her team," said Paul Major, chair of the School of Dentistry. "They run an exceptional academic program, which continues to lead the evolution of dental hygiene education in Canada."

"For over 50 years, the dental hygiene program has had a reputation for excellence,"



Paul Major, chair of the School of Dentistry; Sharon Compton, director of the Dental Hygiene Program; and D. Douglas Miller, dean of the Faculty of Medicine & Dentistry, announced Canada's first master's degree program in dental hygiene.

said D. Douglas Miller, dean of the Faculty of Medicine & Dentistry. "Additional programs, such as the establishment of the MSc program, will serve to enhance our teaching mission."

### Helping HIV-positive Albertans control their health

Andrea Lauder

t the end of 2011, an estimated 34 million people worldwide were living with HIV/AIDS. In Alberta, the total was 1,532. Thanks to scientific improvements in antiretroviral therapy, many of these Albertans are living long and full lives. The key to living longer with HIV is sticking with the antiretroviral therapy prescribed.

Megan Lefebvre, a PhD candidate with the School of Public Health, is intrigued by the factors that make people successful at adhering to antiretroviral therapy.



Megan Lefebvre

working with the Northern Alberta HIV Program, Lefebvre noted that patients who identified themselves as having chaotic lives—those experiencing unstable housing, substance use and incarceration—still managed to adhere to their antiretroviral

therapy.

"A lot of studies had been directed toward the barriers and the failures of

HIV adherence," says Lefebvre. "Nobody had asked patients why they were successful with adhering, or how they'd been doing it. That's what I wanted to learn more about."

Using a research method called focused ethnography, Lefebvre purposely chose and interviewed 14 HIV-positive patients receiving care at the Northern Alberta program. These patients were very knowledgeable about their health and their antiretroviral treatment, and could share details about their experiences as patients.

Lefebvre learned that, although the patients had chaotic lives, the one area they felt they could control was taking their antiretroviral medication.

"When I asked them about their day from start to finish, they were all motivated to take their pills as part of their routine," she says. "When I asked them why they took their pill, they stated, 'Because I don't want to die."

She noticed that patients appeared to compartmentalize the chaos in their lives, but taking their antiretroviral medication signified control over one thing in the midst of chaos. Lefebvre noted that this small measure of control enabled patients to take other positive steps in their lives.

For instance, one interviewee indicated that the benefits of taking his medication included getting positive feedback from the health-care team, feeling better and reconnecting with family.

The most important outcome of this research for Lefebvre was the ability to share the information generated by the patients in her study with other HIV patients. Six patients participated in a video that is being used at HIV Edmonton and shown by the video participants themselves—the peer educators—to other HIV-positive individuals. The video and peer educators have created a space for people living with HIV to have conversations about being HIV-positive and about taking their medications.

Lefebvre would like to continue this project and follow up with HIV-positive patients to see whether their adherence behaviour changes. She also envisions using the video and working with clinicians to create more opportunities for other HIV-positive patients to talk about medication adherence.

"I've learned a lot from the participants, and I've learned the value of partnering with communities to conduct research," says Lefebvre. "Working together, we've created valuable tools that will help translate research knowledge into practice and support marginalized populations."

# Math professor's service went beyond the classroom

Folio Staff

he University of Alberta is mourning the death of Ron Bercov, a long-serving math professor known for service to the university and the community beyond the classroom walls.

Bercov graduated from the U of A in 1959 with a bachelor of science degree before undertaking graduate studies, graduating with a



Ron Bercov

PhD from Caltech in 1962. That same year he returned to his alma mater, where he started on a career in the Department of Mathematical and Statistical Sciences that ran for an astonishing 41 years.

Along the way, he served as department chair for four years, sat as acting dean of science for one year, was the associate vice-president (academic) for five years and served a term on the U of A Board of Governors.

A passionate teacher, Bercov put in time as the president of the Canadian Association of University Teachers, vice-president of the Canadian Mathematics Society and editor of the Canadian Mathematical Bulletin. He also served on the staff association for many years and was chair of the Alberta Universities Pension Board.

In 2004, Bercov received the U of A Alumni Association's Honour Award.

Away from academia, Bercov was a basketball official for university, college, high school and wheelchair leagues. He refereed three national championship tournaments and four wheelchair basketball nationals. In 2002, he received the Canadian Association of Basketball Officials Wink Willox Award for improving officiating in Alberta. He was also an honorary life member of the Edmonton Basketball Officials Association and the Alberta Basketball Officials Association.

He was also active in the Edmonton Hebrew Association and the Jewish Senior Citizens Centre.

"Ron was a wonderful colleague whose wise counsel was always generously at our disposal," remembered Arturo Pianzola, chair of the Department of Mathematical and Statistical Sciences. "He was a vigorous champion of our discipline at all levels in the university.

"We will miss him." **F**1

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# news [shorts]

folio presents a sample of some of the stories that recently appeared on the ualberta.ca news page. To read more, go to www.news.ualberta.ca.

### U of A tops in China Scholarship Council scholars

The University of Alberta's strong connections to China have produced a new distinction for the university. According to the China Scholarship Council, the U of A now receives more CSC-sponsored students and scholars than any other institution in the world.

"This is quite an accomplishment for our institution and builds upon our university's global profile," says Britta Baron, vice-provost and associate vice-president (international). "We appreciate and cherish our long-standing relationship with the China Scholarship Council and look forward to exploring new areas and dimensions of collaboration in both teaching and

The U of A works with CSC to provide opportunities for undergraduate research interns, fully funded graduate students and post-doctoral researchers, and leadership training for university leaders and administrators.

The news of the U of A's top ranking comes as 38 CSC-sponsored university leaders are taking part in University of Alberta International's Global Academic Leadership Development (GALD) program. This is the third—and largest—cohort of CSC-sponsored scholars to participate in the program. Participants include several deans and senior-level administrators from some of China's highest-ranking institutions.

In 2013, the U of A received more than 250 students and scholars funded by the China Scholarship Council, including 36 undergraduate interns, 54 full and joint PhD students, and 161 visiting scholars.

### U of A undergrad research certificate a first

The U of A approved the first Canadian undergraduate research certificate from its Faculty of Science in late March.

Developed by biological sciences professor Cynthia Paszkowski and undergraduate co-ordinator Maggie Haag (retired), the Research Certificate in Science (biological sciences) will be officially recognized on students' transcripts. Certificate students will complete three research experiences, two technical skills and data analysis courses, and a presentation of their work at a conference.

"The certificate directs students through a series of project-based courses where they will work in an authentic environment within a research university, alongside graduate students, post-docs and professors,"

The program will help prepare students for continuing studies in professional and graduate schools, or for employment in industry or government. Currently, the only other research certificate embedded in an undergraduate degree program in North America is offered by the University of Pittsburgh in Life Sciences.

The certificate will encourage BSc students to recognize research opportunities early in their undergraduate studies. "Modern science is research. Students will be mentored by scientists and have a genuine appreciation of the connection between teaching and research at the University of Alberta," says Paszkowski.

### Golden Bears swimmer named to Team Canada

Following his performance at the Canadian Swimming Trials in Victoria, Golden Bears swimmer Joe Byram was named to Swimming Canada's national team for the Pan Pacific Championships Aug. 21-24 in

Byram, originally from Vernon, B.C., finished third in the 100-metre backstroke at the Canadian trials to earn his place on Team Canada. He is coming off a season in which he captured Canada West silver medals in the 50-, 100- and 200-metre backstroke events this year, as well as bronze medals in the 4 x 200-metre freestyle relay and the 4 x 100 medley relay. He also helped the Golden Bears to the CIS bronze medal this season in the 4 x 100 medley relay. He then performed well enough at the Saanich Commonwealth pool in Victoria to be named to the Pan Pacific team.

### Remembering Joseph Kandler

Joseph Kandler, who turned to the U of A to help forge links between Canada and Austria, passed away at the end of March. He was 93.

Kandler was born in Vienna in 1921, and studied at the University of Vienna and at Vienna's Hochschule für Welthandel, where he received a doctorate in commerce.

A chartered accountant, Kandler moved to Canada in 1952. In Alberta and B.C., Kandler remained committed to his vision of creating lasting links between Canada and his country of birth. He was founding president of the Johann Strauss Foundations of Edmonton (est. 1975) and Victoria (est. 1985), which fund scholarships for advanced study of music in Austria. Kandler would go on to serve on the U of A Board of Governors.

He received the Alberta government's Achievement Award for service to the community (1975), the Austrian Knight's Cross of Honour, First Class (1990) and the Golden Emblems of Honour of both the City of Vienna (1991) and Vienna's Wirtschaftsuniversität (1995).

In 1988, Joseph and Melitta Kandler initiated and endowed the international student and staff exchange between the Alberta School of Business and the Wirtschaftsuniversität of Vienna. In 1999, he and his wife endowed the Joseph and Melitta Kandler Graduate Fellowship of the Wirth Institute for Austrian and Central European Studies.

# Baker, Guthrie named U of A's top athletes

**Matt Gutsch** 

ordan Baker, of Golden Bears basketball, was named the winner of the Wilson Challenge Trophy as the University of Alberta's 2013-14 Male Athlete of the Year, and Pandas rugby star Chelsea Guthrie won the Bakewell Trophy as the U of A's Female Athlete of the Year for the 2013-14 season. The honours were bestowed at the annual Green and Gold Athletic Awards held April 10 at the Shaw Conference Centre.

Other Green and Gold winners included Mariah Walsh (Pandas volleyball) as the Female Rookie of the Year, and Nick Kostiuk (Golden Bears swimming) as the Male Rookie of the Year. Garry Coderre (Pandas curling) and Mike Noble (Pandas volleyball) were winners of the R.G. Glassford Award in coaching, and Matt McCreary (Golden Bears volleyball), Jarron Mueller (Golden Bears volleyball), Sean Ringrose (Golden Bears hockey), Scott Stewart (Golden Bears swimming) and Courtney Wilkes (Pandas track and field) were each presented with a Block A ring.

The Wilson Challenge Trophy, which has been awarded to the top male student-athlete at the U of A since 1934-35, went to fifth-year Golden Bears basketball star Baker. While working towards a master's degree, the Edmonton-born Baker had a spectacular



Jordan Baker

campaign in 2013-14, leading the Golden Bears to the Canada West championship as well as a CIS bronze medal. He led Alberta in points and rebounds, and was named the Canada West MVP, a CIS First Team All-Canadian and a CIS national championship tournament all-star. He also broke the Golden Bears basketball all-time

conference scoring record this past season—one of 10 team records he holds—and finished third in Canada West rebounds and sixth in scoring.

He is the 14th member of the Golden Bears basketball program to win the trophy, but the first since Stephen Parker won in 2002.

Since its inception in 1948, the Bakewell Trophy has been awarded to the top female student-athlete who exhibits athletic prowess, leadership, character and academic ability at the University of Alberta. Guthrie, who is from Edmonton, took home the award for her great 2013-14 season, which included leading the Pandas to their second consecutive Canada West championship, as well as the CIS championship trophy. Alberta was dominant this season, winning all seven regular season or playoff games they played, and Guthrie was at the forefront of that dominance. She was named a Canada West All-Star this season, as well as a CIS All-Canadian and a CIS championship tournament all-star and MVP. The fourth-year physical education and recreation student scored the second-most tries in Canada West

this season, and also helped Team Canada to a bronze medal at the 2013 Summer Universiade in Russia, where she was Canada's leading scorer.

She is just the third member of Pandas rugby to win the Bakewell Trophy, following Maria Gallo (2003) and Heather Denkhaus (2001).

Mariah Walsh, setter for the Pandas volleyball team, was selected as the Outstanding Female Rookie of the Year. Originally from Calgary, the arts student was named to the Canada West All-Rookie team this year, despite missing half of the season with an injury sustained before the regular season began. When she returned to the Pandas lineup, she recorded



9.72 assists per set and helped the Pandas to the Canada West playoffs.

The Outstanding Male Rookie of the Year award went to Golden Bears swimmer Nick Kostiuk. A former member of the Edmonton Keyano swim club, Kostiuk swam to a CIS silver medal in the 100-metre breaststroke and a bronze in the 400-metre medley relay. He also picked up two gold medals at the Canada West championship meet, as well as one silver and one bronze. He also broke four individual U of A Golden Bears swimming records this year and helped the 400-metre medley relay team break the U of A record as well.

Matt McCreary, Jarron Mueller, Sean Ringrose, Scott Stewart and Courtney Wilkes all received a Block A ring for demonstrating an exceptional contribution to interuniversity sport in the areas of athletics, academics, community support and leadership.

The R.G. Glassford Award went to a pair of longtime assistant coaches in Garry Coderre of Pandas curling and Mike Noble of Pandas volleyball. The award, former dean of the Faculty of Physical Education and Recreation, is given annually to a coach who has demonstrated long-standing coaching excellence in teaching ability, knowledge of sport and the ability to motivate athletes.

Coderre has been coaching with the U of A curling program for the past eight years. In that time, he has coached the Pandas to two CIS/CCA silver medals in 2013 and 2014, as well as a CIS/ CCA Western Canadian championship in 2013. He served as Canada's coach at the 2014 World Junior Championship in Switzerland, which Canada won for the first time in 11 years.

Noble has been the Pandas volleyball video and statistics coach since 1999. His dedication and technological expertise has provided the Pandas volleyball program with a significant advantage, as his video work is used to break down the play of the Pandas—as well as that of their opponents. Since 1999, the Pandas have won two national championships and six Canada West championships.

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### ACCOMMODATIONS FOR RENT

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# Football team trades helmets for hard hats to help Habitat for Humanity

Matt Gutsch

he University of Alberta Golden Bears football team traded in their shoulder pads and helmets for tool belts and hard hats to help Habitat for Humanity Edmonton.

On April 5, more than 70 student-athletes from the Golden Bears gridiron squad picked up hammers and used saws to help build a new housing development in Neufeld Landing, which is Habitat for Humanity Edmonton's largest build to date—and the largest Habitat development in Canadian history.

The build is located in South Edmonton's Rutherford community and will be home to 64 families when completed.

The football team was organized into action by team captains Tyler Greenslade, who is now trying out for the



More than 70 student-athletes from the Golden Bears football team turned out to help Habitat for Humanity Edmonton build the largest housing development in the organization's Canadian history.

Saskatchewan Roughriders of the Canadian Football League, and Brandon Foster, a third-year defensive back and student in the Alberta School of Business.

"It was an absolutely great day, and as a program representing the University of Alberta we were honoured to help Habitat for Humanity Edmonton build this great housing development. This was a great opportunity for us to grow as a team, while at the same time allowing us to give back to the community," said Golden Bears head coach Chris Morris.

"It represents a continuation of our program's commitment to community service," Morris added. "The Golden Bears football players have volunteered at inner-city schools to serve Christmas supper, hosted at Ronald McDonald House, participated fully in Read in Week, served as volunteer tutors at two Edmonton high schools, worked with a Special Olympics wheelchair hockey team and worked with Geomeer, which is a charitable organization that provides hampers to needy families at Christmas time.

"The young men who make up the Golden Bears football program at the U of A have made it a high priority to give back to our community."

# Research project gives engineering student a shot at improving cancer treatment

**Richard Cairney** 

n undergraduate engineering student at the University of Alberta is taking part in leading-edge medical research that could have a profound effect on the type of treatment some cancer patients receive.



**Matthew Nickel** 

Under the supervision of renowned biomedical engineer

Robert Burrell, Matthew Nickel is working on a new device that could give surgeons important information about the type of cancer a patient has, and help them decide what type of surgery to perform.

At present, thyroid cancer patients undergoing surgery are treated as though the cancer has spread when in 40 per cent of cases, it hasn't. That means some patients undergo a surgical procedure that's more aggressive than need be, and it means they receive a potent chemotherapy treatment after the surgery.

But the device Nickel and Burrell are working on would tell surgeons in the operating room whether or not the cancer has spread, allowing the surgeon to tailor the operation to match the patient's needs. "Right now, this test takes three days," said Burrell, who holds the Canada Research Chair in Nanostructured Biomaterials and is the chair of the Department of Biomedical Engineering.

"It will significantly help the 40 per cent of patients who currently get the same treatment, which is for the worst-case scenario," said Nickel.

The diagnostic tool the two are working on will act like a litmus test. Surgeons will smear cancerous tissue onto a glass chip. The cancer cells will react with antigens on the surface of the glass and change colour, which tells the surgeon which type of cancer the patient has.

Nickel's role is to anodize and conduct materials characterization tests on the chips using X-ray diffraction and a scanning electron

microscope. He's performing the work under the Dean's Research Award program in the Faculty of Engineering, which gets undergraduate students involved with leadingedge research. The awards are available to all full-time engineering students, beginning in their second year of studies, who have a previous-year minimum GPA of 3.2.

Nickel says the experience reinforces what he's learning in the classroom because he's applying it in real-life situations.

"I'm finding that it really makes me go back and review my materials and notes to make sure I understand how to characterize materials," he said. "When you get to review information and then apply it, that makes it solid."

Nickel is in his third year of materials engineering studies,

with a biomedical engineering specialization. He's also the recipient of the Trudy Sorensen Memorial Scholarship in Biomedical Engineering. The \$5,000 scholarship is awarded annually to a student with superior academic achievement entering the second, third or fourth year of study in the biomedical option of materials engineering.

The scholarship was established by Jim Sorensen, '63
BSc(ChemEng), and his wife
Marlene, '70 MEd, in memory of
their daughter Trudy, who lost her
life to cancer.

"Receiving this scholarship is interesting because the work I'm doing with Dr. Burrell is related to cancer," said Nickel. "It allows me to pay it forward by doing research into cancer diagnostics."

# talks & events

Talks & Events listings do not accept submissions via fax, mail, email or phone. Please enter events you'd like to appear in folio and at www.news.ualberta.ca/events. A more comprehensive list of events is available online at www.events.ualberta.ca. Deadline: noon one week prior to publication. Entries will be edited for style and length.

### **UNTIL JUNE 6**

"Wow, Open This!" Have you ever wondered about the history of pop-up books? A fascinating new exhibition showcases pop-up books from the 16th century to modern day. The exhibition explores the mechanics of paper-engineered books and has broad appeal to adults and children alike. Most of the books on display have been selected from the University of Alberta Libraries' collections. Bruce Peel Special Collections Library.

### APRIL 25

Why is it so difficult to make and sustain change in hospital care? Jack Needleman, professor of health policy and management, UCLA Fielding School of Public Health, will be on hand to give this talk. Noon–1:30 p.m. L1-490 ECHA.

Blended Learning: Creating New Opportunities for Learning. The Centre for Teaching & Learning invites you to attend this panel discussion. In this session, participants will explore models of blended learning and best practices. Panel members Christine Hughes (Pharmacy & Pharmaceutical Sciences), Rachel Milner (Biochemistry), Peter Sankoff (Law) & Sheree Kwong See (Psychology) will share experiences with blended learning in undergraduate and professional development courses, from first steps to full implementation. Participants will have the opportunity to engage with panel members to discuss the opportunities and challenges with implementation of blended learning strategies. 1–2 p.m. 1-190 ECHA. For information go to ctl.ualberta.ca.

International Update Session: International Competitiveness – A Presentation by Daniel Guhr. Join international education consultant Daniel Guhr, managing director of the Illuminate Consulting Group, for a talk focused on international student recruitment. This seminar will discuss four key issues that touch directly and indirectly on the U of A's international

competitiveness: the role of admissions as a competitive recruitment and retention enabler; student intake diversification and sustainability; the total cost of degree acquisition; and the role of student work rights and post-study employment and immigration options. 3:15–4:30 p.m. 134 Telus Centre.

### APRIL 26

In My Lifetime: A global story of hope, change and possibility. Come listen to stories of progress and possibility, and dispel common misconceptions about international development. It's time to celebrate how women and a change in perspective is key to solving global poverty. Aga Khan Foundation Canada invites you to take a personal journey through Canada's role in international development, exploring what it means to improve the health of mothers and children in parts of Africa and Asia. 9:30–11:30 p.m. Maple Leaf Room, Lister Centre.

Law Day Edmonton 2014. Law Day is a free family-friendly event that will give you an inside peek at the Canadian Judicial System. The Faculty of Law's Centre for Constitutional Studies will be hosting a mock trial: "Smartphones, Tablets, and the Expectation of Privacy," at 1:30 p.m. 9:45 a.m.—3:30 p.m. Edmonton Law Courts Building.

### APRIL 27

The Augustana Choir Spring Concert. The Augustana Choir is honoured to have been selected by a jury of the Association of Canadian Choral Communities to perform at the biennial Podium conference for choral conductors in Halifax, N.S. Nova Scotia tour repertoire will be performed, composed mainly of Canadian choral music inspired by the Old World as well as the New World. Tickets (available only at the door): \$18 (adults); \$14 (students/seniors); \$45 (family). R.A.R.E. 7–9 p.m. Faith & Life Chapel, Augustana Campus.

### APRIL 30

Oral Cancer Screening: What to Look For. Alexandra Sheppard, associate clinical professor of the Dental Hygiene Program, will show participants what to look for, explain the potential risk factors for oral cancer, detail life choices that may reduce risk and how to do a self-exam. Noon–1 p.m. 255 Education South.

Clandestine Drug Labs. RCMP Sergeant Rick Goldstein will talk about large- and small-scale illicit drug production in Alberta. The talk will address hazards to drug producers and to others who may inadvertently encounter such chemical production. Dangers to civilians and neighbourhoods from the products, byproducts, solvents and toxic gaseous emissions will be covered, along with the effects of popular street drugs and how they are designed to cause addiction in the human brain. 4–6 p.m. L1-140 CCIS.

### **UNTIL JULY 22**

Colour Catch: A West African Textiles and Nature Exhibit Opening. This display showcases an array of West African textiles and natural artifacts. Human Ecology Building.

### MAY '

**FoT Spots, 5-Minute Talks by Innovative Teachers.** Spend a fun evening discovering innovative ways to reinvigorate your classroom. Eight award-winning instructors will have five minutes each to show you how they put the spark into their teaching. 7–9 p.m. 2-490 ECHA. Register at bit.ly/1gErKzZ.

### MAY 3

Bad Astronomer Phil Plait Presents: Where has our Curiosity taken us? Phil Plait, author and "The Bad Astronomer," will be on hand to give this lecture about Curiosity, the Mars rover, and where it has taken us. Register for free tickets at philplait.eventbrite.ca. 3–4 p.m. 1-430 CCIS.

# laurels

Museum technologist Shirley Harpham has been inducted into the U of A Museums Hall of Fame. Harpham has served as the technologist for the Bryan/Gruhn Archaeology Collection since 1994, and was the technologist for the Zooarchaelogy Reference Collection between 1985 and 2009. She has designed outreach programs for the collections, fostered a volunteer program and shepherded collections through two relocations and five databases.

The U of A's pilot program to train international physical therapists has received national recognition less than a year after its inception. The Alberta Internationally Educated Physiotherapists Bridging Program received Citizenship and Immigration Canada's 2013 Special Merit Award in March, for helping international professionals integrate and be part of Canada's economy. The bridging program, a partnership between the U of A and Physiotherapy Alberta, helps physiotherapists from abroad meet the requirements to practice in Alberta.





























PHOTOS | RICHARD SIEMENS | MARKETING & COMMUNICATIONS