folio
UNIVERSITY OF ALBERTA

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New dean takes the helm of the Faculty of Native Studies

Bev Betkowski

The University of Alberta welcomes a new dean to its Faculty of Native Studies, a scholar of international reputation in Indigenous studies.

The U of A Board of Governors is pleased to announce the appointment of Brendan Hokowhitu as dean of the faculty. His appointment commences July 1, 2012, for a five-year term of office.

> "[Hokowhitu] considers the faculty to be a leader in Indigenous studies and looks forward to helping further its goals."
>
> Carl Amrhein

Hokowhitu comes to the U of A from his present appointments as associate professor at Te Tumu, the School of Māori, Pacific and Indigenous Studies, and as inaugural associate dean (Māori) for the Division of Humanities, at the University of Otago, New Zealand.

"We are pleased to welcome Professor Hokowhitu as dean of the Faculty of Native Studies," said Carl Amrhein, provost and vice-president (academic) of the U of A. "He considers the faculty to be a leader in Indigenous studies and looks forward to helping further its goals. His commitment to promoting and supporting quality research in a collaborative and interdisciplinary manner will enhance the profile of Indigenous studies at the University of Alberta."

While his academic career is rooted in his own Māori people of New Zealand, Hokowhitu's focus is concerned with the broader

Continued on page 2

A U of A mountain high

Supplied

U of A mountaineers anticipate the Dec. 15 launch of the Canadian Mountain Studies Initiative. (L-R) Kerry Mummery, dean, John C. Spence, associate dean, research, and researcher Zac Robinson of the Faculty of Physical Education and Recreation display the U of A flag on Mt. Athabasca last August. See complete story on page 10.

Engineering lands six industrial research chairs

Jamie Hanlon

As major research announcements go, it's hard to top this: the University of Alberta's Faculty of Engineering announced six new Natural Sciences and Engineering Research Council industrial research chairs, bringing the total held by the faculty to 16.

"We searched our archives and I can confirm this is the biggest industrial chair announcement that we've ever made," said NSERC President Suzanne Fortier. "We're celebrating talent and a lot of hard work today."

The work of the researchers is varied, from focusing on reducing both water usage and the size of tailings containment ponds in the oilsands to contributing to efficiencies in the construction industry. Their work was presented to a gathering of peers and industry professionals. Fortier spoke of talent, knowledge and innovation as the key assets to successfully competing in a global, knowledge-based economy.

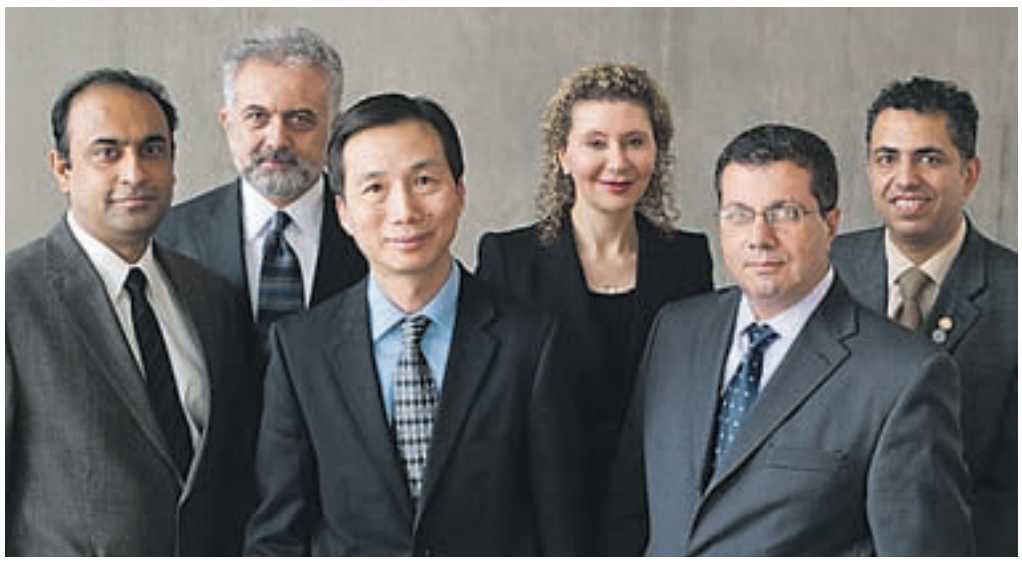
"The starting point for NSERC is our vision: to make our country a country of discoverers

Continued on page 2

and innovators for the benefit of all Canadians and our planet," she said. "The people we are celebrating today are the people we're thinking about—both discoverers and innovators."

Fortier noted the new chairs "are joining a select group of exceptional people" who have shown themselves to be leaders in their fields of research.

U of A President Indira Samarasekera said there is much to celebrate in the announcement, which gives the U of A more NSERC chairs than any other Canadian university.



Richard Siemens

The Faculty of Engineering has six new industrial research chairs: (L-R) Subir Bhattacharjee, Tayfun Babadagli, Biao Huang, Aminah Robinson Fayek, Mohamed Al-Hussein and Mohamed Gamal El-Din.

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UNIVERSITY OF ALBERTA

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TURN makes adapting to university a little easier

Bev Betkowski

Avneet Hayer doesn't mince words when it comes to describing how the University of Alberta's new TURN program has helped her.

"If I didn't have TURN, I'd be a total mess," she grins now, three months after arriving on campus as a wide-eyed freshman.

> "When I came here, it was a different environment than high school—so big, I didn't know where I fit in."
>
> Avneet Hayer

Hayer, who left her childhood home in Vancouver to study for a kinesiology degree in the Faculty of Physical Education and Recreation, is also the first generation of her immigrant family to attend university, which made the experience more daunting, since she had no older siblings, parents, aunts or uncles to answer her questions about what it was like to be an undergrad.

That's where the TURN program—which stands for Transition to University: Residence Network—helped Hayer, 18, get a handle on being a university student. "When I came here, it was a different environment than high school—so big, I didn't know where I fit in."

When she arrived on campus back in August, Hayer was one of 15 first-year students from across Canada and from India and China to take part in TURN. It began as a week-long course that put them in touch with one another and with crucial campus resources and continues throughout the year.

The U of A TURN program was created to help first-year, first-generation students, as well as other students experiencing anxiety, adjust to university life, says Neil Buddel, associate director of Residence Life.

"Some of these students feel they have no reference point, so they drop out because of a lack of fit. They just don't feel right about being at university; they feel it isn't for them," says Buddel, a first-generation student himself. Now taking a PhD, Buddel consulted with colleagues in University Student Services to develop and deliver the TURN program.

"We modelled it along the philosophy of building student community, capacity and confidence."

During their shared week in TURN, the students, who all live in residence, took part in workshops that focused on their resiliency, skills and strengths and did some team-building exercises. They also reviewed several case studies of student issues such as homesickness and lack of finances and then investigated on campus to find the resources that would address those problems.

"It really allowed us to be more aware of issues we will encounter and then to locate the resources. It's great to have that heads-up," Hayer says.

As well, a few faculty members have coffee with the students to share helpful tips in applying classroom concepts to research and volunteer work.

As she finishes her first term at the U of A and heads home for a Christmas break, Hayer feels more confident as a student, has better skills in time management and classroom writing and, as a result, feels she earns better marks.

"I'm also more aware of making time for a healthy balance of life and study."

In January, the TURN students come together again to create a community project for Lister Centre's 1,800 residents, Buddel says.

"The group wants to do something positive for the students who live on campus."

Though the group hasn't decided yet what the project will be, Hayer can't wait. "Our first semester was all about adapting. The second semester will be about application—taking some of what we learned and sharing that."

Bev Betkowski

Avneet Hayer was one of 15 students to take part in the TURN program for first-years and other students.

NSERC chairs represent federal investment of more than $5.7M

Continued from page 1

"It's your work and success that exemplifies the strength of the University of Alberta's Faculty of Engineering," said Samarasekera. "These chairs are a testament to this faculty's long-standing ability to collaborate with industry."

Samarasekera said faculty and industry have worked together successfully to create practical technologies and processes, which the faculty has developed and industry has adopted with much success.

"This is the only way we can solve challenging problems," she said. "It requires the intellectual leadership of top-quality researchers. But they only can apply that leadership when challenging problems are identified by their industrial partners that are truly worthy of rigorous academic, but also pragmatic, approaches."

Samarasekera said the union of the academic and the pragmatic produces solutions that are both economically and technologically viable.

The six recipients named in the announcement, which represents an NSERC investment of more than $5.7 million dollars, are:

- Mohamed Al-Hussein, Department of Civil and Environmental Engineering
- Tayfun Babadagli, Department of Civil and Environmental Engineering
- Subir Bhattacharjee, Department of Mechanical Engineering
- Mohamed Gamal El-Din, Department of Civil and Environmental Engineering
- Biao Huang, Department of Chemicals and Material Engineering
- Aminah Robinson Fayek, Department of Civil and Environmental Engineering

Hokowhitu plans to build on faculty's strength in Indigenous studies

Continued from page 1

scope of Indigenous studies, as he sees parallels in the histories of Indigenous peoples across the globe. Hokowhitu is committed to propelling Indigenous studies forward, and was drawn to the U of A for its established reputation as a leader in the field.

"The Faculty of Native Studies has an excellent reputation, with some of its staff producing critical work that is helping to shape Indigenous studies," he said, adding that the potential is rich for further developing the discipline.

"The field of Indigenous studies is extremely young, and scholars in this area in the next 10 to 20 years have the responsibility of determining where it goes. I see the U of A being at the forefront."

Hokowhitu holds a PhD in Māori studies/physical education, a master of arts and two bachelor's degrees. During the course of his academic career, he has earned a research reputation that is highly respected nationally and internationally. His scholarly focus is on Indigenous studies in the areas of health, culture and theory, sport and physical education, film and media, and masculinity.

Among his achievements, Hokowhitu is a leader in innovative teaching, having developed the world's first completely online Master of Indigenous Studies program, reaching well beyond New Zealand to Indigenous peoples and other scholars across the globe.

As a researcher, Hokowhitu aims to help in continuing to define the field of Indigenous studies. He was a principal investigator in a study about prospective outcomes of injury, funded by a $1.7-million grant from the Health Research Council of New Zealand. As well, he is an inaugural elected officer of the Native American and Indigenous Studies Association, a key group in this developing field.

Hokowhitu envisions the U of A Faculty of Native Studies as contributing to the education of students across the campus, and as dean, he plans to build on the faculty's strength and capacity as an innovative leader in Indigenous studies.

"Along with an accomplished faculty and impressive students and alumni, I'd like to play a part in furthering our goals, including increasing recruitment and collaboration, further defining indigeneity, and broadening the plurality of Indigenous studies."

Supplied

Brendan Hokowhitu

Professor Nathalie Kermoal is serving as interim dean of the faculty until Hokowhitu arrives to begin his term in 2012. He will succeed Ellen Bielawski, who was dean from 2003 to 2011.

Comp. literature celebrates outstanding scholars

Michael Davies-Venn

Three University of Alberta researchers were celebrated recently by the university's comparative literature program. Their works are as compelling as they are wide-ranging. Asma Sayed entertains, educates and fills a gap in Canadian children's literature, Sheena Wilson uncovers lesser-known works by one of Canada's most important literary figures and Jonathan Hart muses on experience and love.

Sayed rediscovers folktales

When people migrate, they take with them the artifacts of culture, both tangible and unseen. Sayed's work brings some of the unseen—the stories—to life in a new way. She has co-edited *World on a Maple Leaf: A Treasury of Canadian Multicultural Folktales*, which showcases stories from 25 cultures written mostly by immigrants to Canada.

"What we wanted was for writers to tell the folktales they have brought with them in a way that those stories are accessible to Canadian children," Sayed says. "The book provides a resource for Canadian children who can look at the stories and think about Canada as a multicultural nation."

With people from more than 200 different cultural backgrounds in Canada, she says the country is a microcosm of the world. But this level of diversity creates a need, identified by United Cultures of Canada—a non-profit group working to promote integration of immigrant communities in Canada. That group, along with the City of Edmonton, funded her work. The book is published by the Edmonton Public School board, which is considering it as an educational resource.

"The book fills a niche area because it brings together the variety and diversity that we have in this country," she says. "We did not have books that show the diversity; we had isolated collections. What we've done is bring all these folktales from different cultures together within a single text."

Wilson uncovers an icon

Joy Kogawa: Essays on Her Works is editor Sheena Wilson's effort to introduce readers to the deep cannon of Kogawa's work. The new book is a collection of writings on Kogawa's popular and lesser-known works. Wilson says that Kogawa is an important Canadian literary figure, but that she's known only for her novel Obasan, which was published 30 years ago this year. That novel narrates the internment of Japanese Canadians during the Second World War and discusses the consequences of the post-war era. Obasan became popular and is the seventh most commonly taught Canadian novel in English literature courses, Wilson says.

"When all the literary criticism focuses only on Obasan, it detracts from the other accomplishments Joy has had and also from the many other versions of that story," she says, noting that Obasan has come to represent all minority voices, sometime eclipsing other Canadian narratives.

Wilson's book talks about Kogawa's entire corpus of work, well beyond the success of Obasan, which has overshadowed much of the novelist's other literary and activist works. Wilson hopes to correct that with Joy Kogawa: Essays on Her Works, published by Guernica Editions.

Hart tells of love

Teasing out Canada's diverse stories, Jonathan Hart says, has been one of the distinguishing features of the university's comparative literature program, which he calls unrivalled in the country.

"It's the only comparative literature program in English Canada that offers bachelor, master's and PhD degrees," Hart says. He says his colleagues' books reflect a tradition of openness, of understanding the stories of minorities and trying to get them out to the community. "Unity is not uniformity; people in a multicultural society can be themselves, yet we can come together in a community."

Hart's *Musing*, published by Athabasca University Press, is a marriage of form and content, he says. The more than 100 poems in the book continue a 400-year-old style of poetry, the sonnet, that he has used to talk about his own experiences and, more broadly, about a human passion that fades with age.

"Sonnets are about a number of things but traditionally, they're about love. And it seems to me that a lot of people don't want to talk about love," Hart says. "In a sense this is a poet talking to other human beings. *Musing* is a kind of outreach of one person talking to another on something that's very important but that sometimes we get so sophisticated about—we think maybe it's a bit naive and sentimental."

He adds, "We shouldn't be ashamed to be able to love and talk about the richness of love, be it romantic love, or love for friends, family, country or place."

Michael Davies-Venn

Comp. lit. scholars explore a range of literature, from folktales to the deep cannon of Joy Kogawa.

Exploring the tiniest details

Richard Cairney

Research funding awarded to a materials engineering professor will help shed light on adhesion, friction and erosion at the nanoscale—and could lead to new developments in areas as diverse as pipelines, ship building and health care.

Hongbo Zeng, a professor in the U of A's Department of Chemical and Materials Engineering, will use $100,000 in new funding from the Canada Foundation for Innovation to help equip his lab with a new model atomic force microscope that will allow him to understand the surface interactions at the smallest level possible.

"It will allow us to do a few very critical things," he said of the powerful microscope. In Zeng's lab, researchers will be able to closely study the surfaces of different materials, creating nano-indentations to measure a material's adhesive and elastic properties and to understand how some materials wear out—at the atomic level.

Understanding these phenomena can help develop new materials for virtually any purpose.

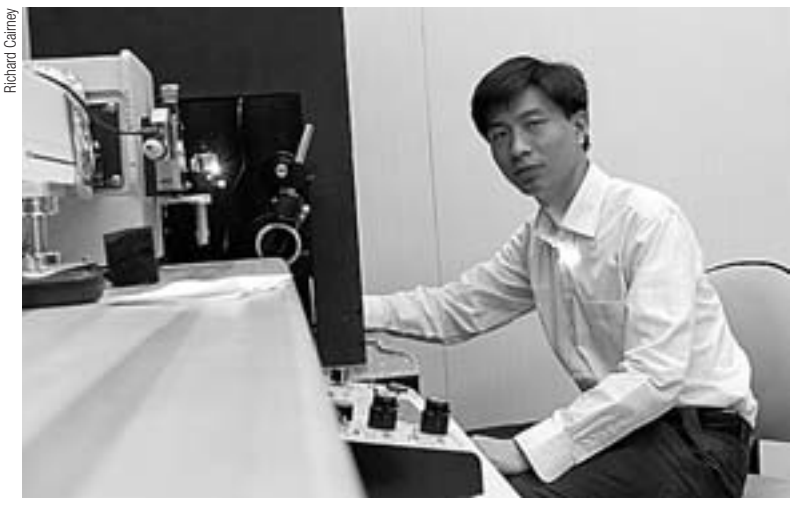
"One thing we are proposing is to understand the corroding behaviour in pipelines in the oil industry," he said.

At present, pipelines fail in a number of ways. They become eroded through friction as oil is transported through the pipes; and they become clogged as oil sticks to the walls of pipes, slowing the flow.

"We want to understand the mechanisms behind these problems and see if there is a polymer lining that can be put inside the pipe to prevent or reduce erosion and fouling," said Zeng.

Another application could be the development of adhesives that work underwater, and in medical applications. Dentists could benefit from the use of glues and adhesives for oral surgeries, and doctors could use new types of glues foe wound repais, says Zeng.

In shipbuilding, Zeng says ship hulls could last longer and ships could run more efficiently if the hulls were protected by a polymer that could resiss organisms that cause corrosion and prevent ma rine life from sticking to the hull and increasing drag.



Richard Cairney

Hongbo Zeng will use $100,000 in new funding from the Canada Foundation for Innovation to buy a model atomic force microscope.

Study takes stock of the intangible benefits of Olympic success

Jane Hurly

At the Vancouver 2010 Winter Olympic Games, when Canadians roared with delight at a medal haul that placed the country at an "all-time, all-nation Winter Olympics record of 14 gold medals," athletes did more than win gold—they fired up exuberant displays of national pride and unity across the country.

New research involving the U of A suggests Canadians are willing to pay to get those medals. In fact, the research pegs the intangible benefits generated by the Canadian government's Own the Podium program at between three and five times its cost: between $215 million and $3.4 billion.

> "[Canadians'] experience with the 2010 Winter Olympics caused them to reassess and conclude that the benefits were even higher that they'd previously expected."
>
> Dan Mason

U of A economist Brad Humphreys and sport management professor Dan Mason worked with economists Bruce Johnson of Centre College, Kentucky, and John Whitehead of Appalachian State University, North Carolina, to determine Canadians' willingness to pay for Team Canada's success at the 2010 Winter Olympics. Using nationally representative surveys of Canadians, they sought to understand how people saw and valued the Own the Podium program, which supported elite athletes to the tune of $110 million in hopes of putting more Canadian athletes on the podium in 2010 than ever before.

The researchers used the contingent valuation method (CVM), commonly used by economists to measure the value of public goods, in a unique way. About 2,000 Canadians were surveyed before and after the Games about their willingness to pay extra taxes to support elite athletes and enhance medal success. No previous study has analyzed outcomes of sports mega-events using the CVM method, according to the authors.

"The heart of the survey revolved around hypothetical scenarios and questions eliciting willingness to pay for Olympic success," says Humphreys. Before the Games, the survey asked Canadians how satisfied they were with Canada's third-place ranking at the 2006 Olympic Games. After the Games, the survey told them the Canadian government was spending $120 million to support athletes at Summer and Winter Olympics—about $10 per household—and asked whether they supported that. Survey respondents were told that Own the Podium cost $3 of spending per annual Canadian household and were asked if they thought more money for the program would result in more medals than in 2010. "This allowed us to estimate willingness to pay for success in the Vancouver Games and conduct a simple cost-benefit analysis of the Own the Podium program."

Next, respondents were presented with a hypothetical scenario about expanded funding of Own the Podium for the 2014 Winter Olympic Games. They were told that the extended program would be financed by an annual income tax surcharge for three years of amounts ranging from $10 to $65. They were asked whether they thought this would increase Canada's gold medal count at the Games, how many more it might result in and their level of satisfaction with such an increase.

Supplied

Dan Mason

Respondents were also asked whether they would vote in a referendum on a tax increase to support Own the Podium and how high or low they'd be prepared to go to support such a proposal.

Mason says the results show that "not only are Canadians proud of their Olympic performance, they also think it is important and that, post-Games, Canadians support Own the Podium going forward."

Before the Games, 54.3 per cent of those surveyed said they would support continuing to pay additional taxes to fund Own the Podium; after the Games, that was significantly increased, to 80.9 per cent.

"Our results suggest that Canadians believed, even before the 2010 Vancouver Olympics, that the intangible benefits generated by the Own the Podium program far exceeded the costs of operating the program," Mason says. "Their experience with the 2010 Winter Olympics caused them to reassess and conclude that the benefits were even higher that they'd previously expected."

Said Humphreys: "Seeing the national team succeed...clearly has the potential to generate significant intangible benefits relative to winning the rights to host a mega-event and then seeing it take place."

President wins award for promoting vision of growth and sustainability

Folio Staff

U of A President Indira Samarasekera has won a major leadership award from an organization representing post-secondary institutions across North America. She is the 2012 recipient of the Council for the Advancement and Support of Education (CASE) District VIII Leadership Award.

The CASE District VIII board, which represents public and private post-secondary education institutions across Western Canada and the northwestern United States, presents the award annually. The award recognizes a president, chancellor or other leader of a district member institution for outstanding efforts to promote understanding and support of higher education.

Samarasekera wins the award for her visionary leadership in launching reforms that are repositioning the University of Alberta for growth and sustainability. She benchmarked the university against global peers and she inspired faculty, students and staff to aim for a place among the top public universities in the world, a challenge the university community has embraced with enthusiasm.

The recognition program "celebrates exemplary achievement in the field of advancement by member institutions," said Cheryl Nations, chairwoman of the CASE VIII Board of Directors.

"On behalf of the board, I'd like to congratulate Dr. Samarasekera for her outstanding leadership. She's a model to what our program stands for," Nations said.

Richard Siemens

President Indira Samarasekera

"Her accomplishments exemplify standards by which we compare our work, and educate and inspire us to greater success."

"President Samarasekera's vision for the University of Alberta has taken this institution to new heights of achievement," said Gordon Clanachan, acting chair of the U of A Board of Governors. "Her energy and leadership continue to power our success as one of the world's top universities."

Nominator O'Neil Outar, chief advancement officer for the U of A, praised Samarasekera for her "ability to build consensus with a deft touch," aligning the university's 18 faculties and schools. Letters of support from then-premier of Alberta Ed Stelmach, mayor of Edmonton Stephen Mandel, president of Canada's Natural Sciences and Engineering Research Council Suzanne Fortier and other distinguished supporters also recognized her as a leading Canadian voice for innovation and mission-driven science as she successfully advocates for government investment during uncertain economic times.

The board of governors appointed Samarasekera president of the U of A in 2005. Since then, she has spearheaded the *Dare to Discover* strategic plan and the *Dare to Deliver* academic plan, which have served as blueprints for the university's next phase of growth.

Under her dynamic leadership, the university strives to fulfill its promise of "uplifting the whole people," drawn from the words of its founding president, who noted that knowledge would be used for the benefit of all people, not just scholars. During her tenure, the U of A has established funds, institutes and programs that are evidence of her capacity to inspire human and capital investment in teaching, learning and research.

Samarasekera receives her award at the 2012 CASE District VIII Conference in Seattle, Wash., in February 2012.

Solar compactor takes a huge bite out of energy consumption

Geoff McMaster

It's the latest innovation in green waste management, and the U of A has the distinction of being the first in Canada to purchase it: a solar-powered trash compactor.

Using a combination of solar power to run the electronics and electricity to power the compactor itself, the new green machine reduces energy consumption by between 50 and 70 per cent. Manufactured by Waste Management, the SmartEnergy compactor also has a sensor that alerts the company when the charge box is full, reducing the number of pickups by 40 per cent.

"When the compactor reaches a certain level, it phones our dispatcher and we'll send a driver out to pick it up. The university never has to worry about it," said Ray Dumouchel, associate director, Buildings and Grounds Services for the U of A. "It saves us money every time there is a pickup."

Geoff McMaster

New solar compactors can cut energy consumption by up to 70 per cent.

Four solar compactors were purchased last March and installed in August and September, two in the loading dock behind the Biological Sciences building and two at the southwest corner of Edmonton Clinic. At each location, one is used for landfill wet waste and the other for paper and cardboard.

The university currently has 10 to 15 compactors on campus that could all be replaced with solar compactors if they turn out to perform as promised, said Dumouchel. "It represents our constant efforts to be proactive, and ways to be more efficient, effective and sustainable."

When the university was looking to sign a new waste management contract back in 2006, he said, "we decided whoever the successful company was, they would have to look outside the box and continue to look for new, innovative ways of diverting waste."

The company Waste Management came forward with by far the best proposal, Dumouchel said, and so the university signed a new contract for 10 years, "which is unheard of at a university, but Waste Management actually turned out to be the most proactive company."

Innovations in recycling have been advancing rapidly, said Dumouchel. In 2008, for example, the U of A diverted just over 400 tonnes of waste from landfill. This year, it's on target to divert slightly more than 1,000 tonnes: "We're continually finding new methods and new processes, and the solar compactor is just part of that."

University 101

Embrace the risk, minimize the harm

Geoff McMaster

There is no daring without risk, and no discovery. That's the bottom-line position that Philip Stack, associate vice-president of Risk Management Services, would like to stress. Risk moves us forward, and we would all do well to embrace it.

"Risk is a good thing, particularly given that we're a research-intensive university," says Stack. "It gets to the core of who we are and what we do. We want our researchers and our graduate students and so on to take on risk and look towards new discoveries."

But the higher the risk, the more it has to be carefully managed, he says, and that is a shared responsibility that starts locally, on the ground, with every member of the university community. "It's really important that people know what their responsibilities are—how they can manage risk in their particular area."

Stack's portfolio, which includes Protective Services, Insurance and Risk Assessment, Environmental Health and Safety, Resource Planning and the Policy Standards Office, is responsible for the range of risks to which an organization the U of A's size exposes itself every day. It covers everything from personal safety and IT infrastructure to economic conditions, research stewardship and the university's emergency alarm system.

It all boils down to two broad categories of management. First, there is the institutional level, affecting the university's overall goals and reputation. "We look at it in terms of our vision and mission document, *Dare to Discover*, and our academic plan, Dare to Deliver," says Stack. "What are those things in terms of our objectives and strategies that we're trying to reach as an organization, and what are some of the risks that might impact our ability to carry them out?"

Along with the U of A's vision comes managing its reputation effectively, says Stack, "especially since we're trying to compete not only nationally, but internationally. We need to be able to demonstrate to international students, for example, that we have a very safe campus."

The other level of risk management, he says, involves the day-to-day operations of the university: the routine functioning of labs and workshops, the handling of biomaterials, security while working alone at night—anywhere personal safety is an issue. "This is where people on the front lines need to understand their roles in managing risk," Stack says.

"And unfortunately with the LRT running right through our campus, we have the risk of people who have nothing to do with this campus at all coming here and taking advantage of our students in terms of theft of personal property, particularly in areas like HUB mall."

Risk management doesn't stop at the campus borders. International travel and field research are a big part Stack's portfolio. Student and faculty researchers often travel to remote locations where they are vulnerable.

> "What are those things in terms of our objectives and strategies that we're trying to reach as an organization, and what are some of the risks that might affect our ability to carry them out?"
>
> Philip Stack

"It might just be northern Alberta, but some are highly isolated. You can be affected by weather and natural disasters—the fire at Cold Lake last summer is a good example; in a matter of minutes it consumed the town."

When a disaster of that scale occurs, Stack's unit has to leap to action to assist U of A community members who may be trapped. "We had students in Japan when the earthquake and tsunami struck, and we needed to have the capacity to be able to track those students down, identify them and try to remove them from harm's way."

Many of these protocols are reflected in the U of A's new travel policy, says Stack, which requires university travellers to provide emergency contact information. "It's also important, if they are in certain locations, that they have access to transportation. If they are in isolated areas, we can provide satellite phones and first aid gear. All these things vary, depending on the area they are going to, who is going and what activity they are undertaking."

Should something go awry overseas, such as a natural disaster or a political uprising threatening violence, Stack says there is an integrated emergency master plan that allows for an emergency response team to come together, co-ordinating, if necessary, with the Foreign Department of Foreign and International Trade.

It's a huge job managing all the risks a university takes on. But Stack says they can be broken down into 10 key categories:

- enrolment growth and complexity
- human resources process and leadership esources process and leaders
- IT infrastructure (hardware and software)
- research growth, complexity and stewardship
- safety and security
- reputation
- relationships with key supporters
- progressive faculty renewal
- physical infrastructure
- economic conditions and funding

Richard Siemens

The U of A Golden Bears hockey team prepares to face the Danish national junior team in back-to-back games at the Clare Drake Arena Dec. 15 and 16.

IT plan imagines a day in the life circa 2017

Geoff McMaster

Jonathan Schaeffer delights in telling a self-effacing story to demonstrate the rapid advance of information technology. The vice-provost, information technology, recalls a student excited about a cool new social networking service called Twitter.

"I thought it was pretty stupid," admits Schaeffer. "I mean, what are you supposed to do with 140-character messages? But of course, three years later, I look pretty stupid."

Schaeffer now makes sure students, 63 per cent of whom carry smartphones, sit at the table whenever he considers the U of A's IT future. Advances happen so quickly, he says, that when a student tells him about something today, he had better do his best to make room for it on the university's platform a year from now.

"Students are driving the IT agenda on this campus," he says. "They are my window on the future.

"We don't need to be 'bleeding' edge, where we're absorbing all the body blows and assuming all the risks [of untested technology], but if we're going to be a top university, we need to be leading edge," said Schaeffer. "That means there have to be fundamental changes in the university to make us more nimble to meet change."

Schaeffer presented his IT plan for the university—covering the five-year window between 2012 and 2017—at three campus town hall meetings this week. He says he knows that the very suggestion of IT puts some people to sleep, while the technical jargon has others running for cover. He also expressed frustration at the resistance among faculty to train on new platforms, such as Google, where response to training sessions has so far been "negligible."

So to help make his vision for the future more relevant, he is drawing up a series of day-in-the-life narratives, outlining hypothetical scenarios of students, faculty and staff five years from now as they go about their daily routines.

Richard Siemens

"The point is to show how the life of a student, say, in 2017 might be fundamentally different because of the IT changes we've made," he says. "So even if people don't care about the recommendations themselves, they might care about what those recommendations have enabled."

These stories are far from written in stone, he says. They are like a series of flexible storyboards that must be constantly updated, shifting with the technological currents of the day.

"If you look even at one day-in-the-life scenario we wrote two years ago for the academic plan, it doesn't look so visionary any more. So we need to be nimble."

With the U of A's switch to Google and Moodle scheduled for completion in 2012, Schaeffer and his team are now in the midst of updating the university's wireless network, making it more powerful and seamless.

"Looking at the statistics a year ago, it was pretty obvious that in about a year we would run out of wireless capacity. But if you wait until people complain, it creates negative impressions in people's minds, so we made a decision to be proactive, rather than reactive.

"The vision for wireless is complete coverage over all of campus, so I could be sitting in the middle of Quad doing my work if that's what I wanted to do."

He also wants to increase the number of iPhone apps and improve the U of A's web presence for mobile devices.

"I want to build a reputation here that we are the most visionary, insightful, willing-to-take-a-risk university when it comes to this kind of technology."

Details of the U of A's IT plan for 2012 to 2017 can be found at http://www.vpit.ualberta.ca/itplan/.

the open door

Season's Greetings and Happy New Year!

Indira Samarasekera

Another year and term are ending, and it's time to take a few moments to relax and reflect on the events and accomplishments of the past year. From day-to-day work in classrooms, offices, labs and libraries to ceremonial openings of new buildings, 2011 has been an eventful and productive year.

A few highlights that come to my mind include the approval of *Dare to Deliver* 2011–2015, the official opening of the Centennial Centre for Interdisciplinary Science, the successful launch of the Undergraduate Research Initiative, the establishment of six new NSERC Industrial Research Chairs and a record-breaking year for fundraising.

When I travel, I see and hear that the U of A is increasingly attracting attention. It's not a surprise to me. Through the Helmholtz Alberta Initiative, we're linking our German partners to those from China; U of A art exhibitions are touring New York and Canada; faculty members and graduate students are collaborating with the MS Swaminathan Foundation in India; undergraduate students are devising and carrying out humanitarian projects through student-led organizations such as International House and Engineers without Borders. Doors are opening, exciting new opportunities for partnership are increasing and international faculty and students are paying attention.

Closer to home, changes in provincial leadership have opened new conversations with government. In several recent meetings, I have powerfully reaffirmed the value of education and research, and the social and economic benefits the U of A brings to the province. This is an important opportunity for us to shape the agenda for the next several years, and in the coming months, I will be listening carefully, planning strategically and advocating strongly for reinvestment in the university.

I need only point to the two faculties that will celebrate their centenaries in 2012—the faculties of extension and law—to illustrate the impact the U of A has on the social and cultural development of the province. The progenitor of such renowned provincial institutions as the Banff Centre, CKUA and the University of Calgary, our Faculty of Extension's legacy is truly impressive. Over the last century, our Faculty of Law has been the bedrock on which Alberta's legal profession stands and has also had a tremendous impact on the civil service, politics, arts and culture, business and voluntary sectors in both Alberta and Canada. Although the details will differ, the same can be said for every faculty and school at the U of A.

Through hard work, energy and dedication to our core mission and values, the students, faculty and staff of the U of A continue to sustain and strengthen this vital and important institution. January promises an exciting start to 2012 with the official opening of the Edmonton Clinic Health Academy on the 18th, and with it, the launch of a new, groundbreaking interdisciplinary approach to health sciences education.

My best wishes to you and yours in the New Year.

Are You a Winner?

Congratulations to Dr. S. Barton of the Department of Physiology for correctly identifying a bust of Czeslawe Milosz, poet and winner of the 1980 Nobel Prize for Literature. The bust is located in the lobby of Rutherford Library South. For his correct identification, Barton has won *At the Interface of Culture and Medicine,* edited by Earle Waugh, Olga Szafran and Rodney Crutcher.

This week's prize is a silver mug and $5 gift certificate to Tim Horton's. To win, simply identify where the object pictured is located and email your answer to folio@exr.ualberta.ca by noon on Tuesday, Jan. 3, to be entered in the draw.

Supplied

Handling art and archives is one man's campus dream job

Geoff McMaster

staff spotlight

Tom Hunter was working in a General Electric warehouse in 1993 when he heard about an intriguing opportunity at the University of Alberta. His wife, who worked for the Métis Nation, told him there was a new practicum program for aboriginals called Libraries, Archives and Museums (LAM), launched by the extension faculty.

Apart from some art classes he'd taken as a child in Cold Lake, Hunter admits he knew next to nothing about caring for art, books and historical artifacts, and his LAM instructors were brutally honest up front about his prospects once he finished the course.

"They didn't let you look at the world through rose-coloured glasses," says Hunter. "They said, 'You're training in a field where there's hardly any jobs for someone with your credentials.'"

> "Once I started doing it, I realized this is what I want to do. I've never aspired to become a curator."
>
> Tom Hunter

But he threw himself into the intense, 50-week training course and finished with flying colours. He landed a short-term, casual placement with Cameron Library, searching the titles of book donations to see if they were already in the library system. It paid about half what he had been making in the warehouse, and for a brief period, it had him wondering if he'd made the right career move.

Museums and Collections soon acquired enough money to make Hunter a contract offer in 1995, which turned into a permanent job, and he's never looked back. For the past 15 years, he has been the man responsible for the overall care and preservation of the university's art collection as well as a good portion of its historical artifacts.

"Once I started doing it, I realized this is what I want to do. I've never aspired to become a curator," says Hunter, whose official title is collections assistant. He has also done a stint as president of the Alberta Museums Association.

"I like the hands-on part of my job. I get to interact with people and handle art and the artifacts. And I know people all over campus, from [Provost] Carl Amrhein to the B-Clean cleaners staff. And if I don't know the answer to something, there is always someone on campus who does."

Hunter's work is varied, interesting and challenging. He keeps up on the best ways to handle, move and store all sorts of artifacts and has moved the main art collection three times. He also does condition reports on pieces donated to the university and determines the best way to care for them.

The key, he says, is moving slowly and methodically, treating everything with the same care and respect. "I handle artwork that's worth millions of dollars, and also work that's produced my master-of-arts students. Just because it's a $200 piece of art doesn't mean I treat it any differently than the million-dollar piece. They both need the same care, regardless of the value."

On certain days you might also find Hunter where perhaps you'd least expect, crawling around in the ceiling of the Telus Centre or Tory building. That's because he's also responsible for making sure hyper-sensitive climate systems are working properly in areas that house some of the U of A's more valuable collections.

Geoff McMaster

For 15 years, Tom Hunter has been responsible for the care and preservation of the U of A's art collection and many of its artifacts.

Last year, Hunter had a chance to explain his job to elementary students at U School, a senate-sponsored program that brings inner-city kids to campus for a week of immersion in university-related activities. For him, it was a moment of pride.

"They brought in aboriginal students," said Hunter. "To show them an aboriginal person can do this job is important. But I also tell them it's not all white gloves and glory. Sometimes I need to mop up water or climb up into ceilings to look after air-conditioning units.

"I tell them, 'Look at all this stuff I get to touch every day.'"

Medical researchers at U of A and in the U.S. discover hidden side of prion diseases

Raquel Maurier

U of A researchers have discovered that fatal prion diseases such as BSE, or "mad cow disease," have a hidden signature.

Up to seven months before an animal shows physical signs of having a prion infection, a particular prion protein in the brain known as the shadoo protein was eradicated, according to findings published recently in the peer-reviewed journal *Public Library of Science (PLoS) Pathogens*. The research also involved other researchers from Canada, the United States and Germany.

"What we discovered is that, as the early prion disease process unfolds in an infected brain, the shadoo protein is simultaneously disappearing," said lead author and co-principal investigator, David Westaway, a researcher in the Faculty of Medicine and Dentistry at the University of Alberta.

"This is telling us there is a process within the disease that we were previously unaware of, a process that is happening before the infected animals are getting sick. It's telling us that the brain cells are more active in defending themselves than we thought. The brain cells are, in fact, trying to get rid of the prion protein, and as a consequence, this bystander shadoo protein is being destroyed unintentionally.

> "This is telling us there is a process within the disease that we were previously unaware of, a process that is happening before the infected animals are getting sick."
>
> David Westaway

"This finding suggests that prion diseases are dynamic and not necessarily unstoppable, that there could be a cellular process trying to destroy the infectious prions as they appear. And if we could help that process a little bit more, that might be an avenue to attenuate the disease."

Westaway, who works in both the Division of Neurology of the Faculty of Medicine and Dentistry and the Centre for Prions and Protein Folding Diseases at the U of A, collaborated with a team of researchers from Ontario, the University of California, the Institute for Systems Biology in Washington, the McLaughlin Research Institute in Montana and a researcher in Germany on this discovery.

The same day this paper was published, very similar findings were published by a team of researchers from the University of California, which demonstrates "these new chemical changes are a concrete and reproducible hallmark of prion disease," says Westaway.

Co-principal investigator George Carlson, from the McLaughlin Research Institute, added that "given shadoo may be destroyed by a process that actually targets infectious prions, it was surprising that when we increased the amount of shadoo in laboratory models, the course of disease was not changed. We need to understand why."

Raquel Maurier

David Westaway

The next step for Westaway's research team is to determine why this shadoo protein is disappearing. The finding opens up a new avenue of research opportunities.

"We need to better understand this. We want to solve this mystery," he says.

The research was funded by the Canadian Institutes of Health Research, Alberta Innovates – Health Solutions, the Alberta Prion Research Institute, the National Institutes of Health and the United States Public Health Service.

Popular supplement shows no enhancements for athletes at rest

Jane Hurly

An amino acid supplement that is popular with young athletes looking to boost performance shows no lasting enhancements for fit young men at rest, says U of A doctoral student Scott Forbes.

L-arginine is a naturally occurring amino acid available over the counter at health stores. It's often prescribed for older adults with cardiovascular disease, hypertension or endothelial dysfunction for its effects as a vasodilator. This is the first study to look at its impacts on young, vigorous men.

> "There's a lot of money in nutritional supplements... The industry might not be too happy when they see the results for athletes at rest, but who knows? It may be different with exercise."
>
> Scott Forbes

Forbes, a doctoral student in exercise physiology, says there are two reasons for L-arginine's popularity.

"First, L-arginine is a precursor for nitric oxide that is known to improve blood flow, which in turn may aid the delivery of important nutrients to working muscles and assist with metabolic waste product removal. Secondly, L-arginine has been shown to increase growth hormone levels in the blood."

The benefits of growth hormone are diverse, including increasing the use of fat as a fuel as well as insulin and insulin-growth factor-1 (IGF-1) levels. However, most of the research conducted on L-arginine has been in a clinical setting, and the benefits for physically active individuals are not as established. In some cases, they are conflicting.

"One of the reasons for this is that the amount an individual has to consume has not been clearly established and this information is rarely provided by the manufacturers of such products," explains Forbes.

For Forbes it was a theory worth testing. He wanted to test two different L-arginine doses on healthy, athletic men, the group most likely to purchase this readily available supplement.

"L-arginine is interesting for a few reasons," says Forbes. "It can increase growth hormone response, and so can increase muscle mass. Also, it has an impact on insulin, which is another anabolic hormone. A recent hot topic has been about nitric oxide as a vasodilator. The theory is that if you can vasodilate your arteries, you can potentially enhance blood flow to the muscles and enhance nutrient delivery and waste product removal."

For this study, Forbes examined the effects of a low and high dose of oral L-arginine on blood L-arginine, markers of nitric oxide, growth hormone, insulin and insulin-like growth factor-1. The double-blind, randomized, placebo-controlled study recruited 14 healthy, young, physically active males who didn't use nutritional supplements. They were prescreened, completing a one-day food record that was analyzed for carbohydrates, protein and fat consumption, and caloric intake. Then they were required to follow a modified diet to regulate intake of food and water prior to being dosed with L-arginine.

After a 10-hour overnight fast, and no breakfast, they were given a dose of L-arginine either .075 g per kilogram of body mass, .15 g per kg of body mass for the high dose or a placebo" says Forbes.

Blood samples were drawn, with the athlete at rest, every half hour for three hours after the L-arginine or placebo dose. The reason, explains Forbes, is that "previous studies show that two hours after consumption, L-arginine tends to reach baseline again.

Forbes found that the two different doses did significantly elevate L-arginine concentrations in the blood at rest, and both a low dose and a high dose were equally effective in doing so, but neither dose promoted a significant increase in nitric oxide, growth hormone, insulin or insulin-like growth factor-1.

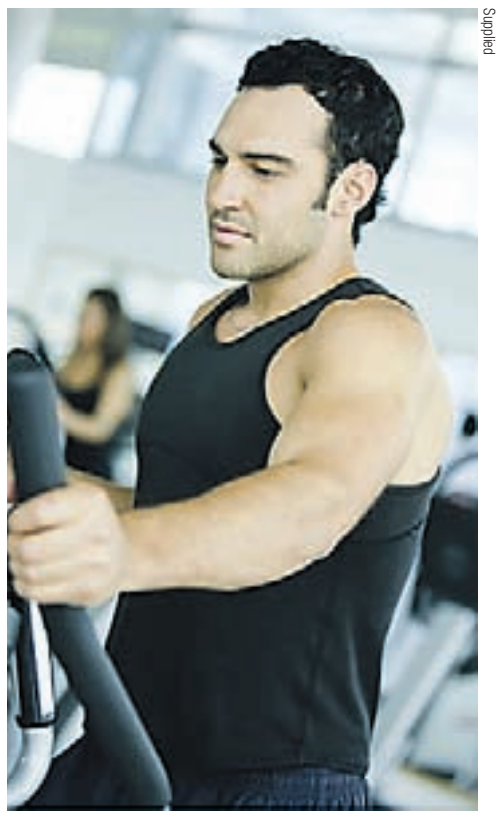
Forbes has now embarked on two studies to see the effects of L-arginine on fit young bodies during exercise: one is working with strength-trained athletes and the other with aerobically trained athletes cyclists in this case.

"This time we're looking at the effects of supplements under two extremes: aerobic and strength exercise.

"There's a lot of money in nutritional supplements," he adds. "The industry might not be too happy when they see the results for athletes at rest, but who knows? It may be different with exercise."

Forbes has completed both of the exercise studies and hopes to publish the results in the near future.

His paper was published recently in *Applied Physiology, Nutrition and Metabolism*.



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A U of A study is the first to look at the impact of L-arginine on fit young men.

Med student a rare breed: a top-flight swimmer with stellar academic record

Quinn Phillips

Considering the dedication needed for both medical school and competitive swimming, you'd be hard-pressed to find someone who can excel at both. But the Faculty of Medicine and Dentistry is boasting this rare find—an emerging top-level athlete and star student.

His name is Jeremy Kubik, a second-year med student. Recently the 22-year-old Calgarian anchored the University of Alberta's men's medley relay to victory—putting the U of A men's swim team in top spot at the University Challenge Cup, a swim meet only attended by the top schools in Canada. The relay was the deciding race at the competition and the Golden Bears' last chance to surge to the top. They ended up beating two swimming powerhouses, the University of Toronto and the defending national champion, the University of Calgary.

"It was a great meet, not only for me but for the team," said Kubik.

Away from the pool, Kubik is a dedicated student. He was accepted to medical school after just three years of his undergraduate degree at University of Calgary, whereas most students are not accepted before they finish their bachelor's degree.

Quinn Phillips

Jeremy Kubik helped put the U of A men's swim team in the top spot at the University Challenge Cup.

"He's such a great student; he works so hard," says Kent Stobart, associate dean, undergraduate medical education. "We're very proud of what Jeremy's accomplished and we've tried to be as flexible as possible to accommodate his national-calibre swimming."

Kubik is expected to train nine times during the week, typically for about two hours. His medical school schedule isn't nearly as flexible as those of his teammates, who are doing their undergraduate degrees. Often, Kubik has class from 8 a.m. until 5 p.m. This means that a lot of the time he trains during recreational swim times.

"I'll come in right as the team is finishing and I'll talk to the coach and ask, 'What did we do for practice today?'" says Kubik. "Then I do my practice during recreation times.

"It's very frustrating swimming during rec times, not only because the team isn't there to joke around with. There's no coach to motivate you."

"It's hard to train fast, because you're the guy getting in the way when you're too good," says Bill Humby, head coach of the Golden Bear and Panda swim teams. "The nicest thing about being on a team is even after a long day of school it's kind of like going to hang out with your friends. But instead of being reinforced and getting to go swim with your friends, you've gotta deal with [less-than-ideal training conditions]."

Even so, Kubik is doing something not many would expect. He's improving. During three years of swimming with the U of C, he never made his Canadian Interuniversity Sport (CIS) championship qualifying time. Last year with the U of A team, he made the qualifying time and finished sixth at the CIS championships after coming into the competition ranked 85th. This year, he's ranked second in the nation in the 50-metre freestyle, and the Golden Bears are ranked first in the nation for the first time in the program's history.

"He's a really dedicated and determined kind of guy," says Humby. "He just knows that to get somewhere you've got to keep on working, you can't take it for granted. He was really appreciative of getting an opportunity to be on the team and, heck, he's going to make the most of it."

"To be honest my only goal was to still be on the team [by the end of the year] and maybe qualify for CIS," says Kubik. "I'm so happy with the school here because the school is so accommodating with my swimming, and swimming is so accommodating with school. Really, I couldn't ask for anything more."

Killam Professorship recipient advocates for sexual-minority youth in classroom

Geoff McMaster

How dramatically things can change. When André Grace first joined the education faculty in 1999 and focused his attention on sexual and gender minorities, he had to ask city schools if he could make 10-minute presentations on inclusiveness in the classroom.

Supplied

André Grace researches how sexual- and gender-minority youth "grow into resilience."

"Today, it's totally reversed," says the recipient of a 2011 Killam Professorship, a distinction that recognizes scholarship, teaching and community service. The professor of education policy studies and director of the U of A's Institute of Sexual Minority Studies and Services says that today "we're almost overwhelmed with requests from schools to do workshops." The institute now has 10 very busy full- and part-time employees.

This year, Grace's institute started a Safe Spaces initiative on the U of A campus to improve the climate for lesbian, gay, bisexual and transgendered members of the community. The initiative is already growing "in leaps and bounds," says the professor of education policy studies. More than 2,000 undergraduates have responded online to its Queer Climate Campus Survey.

Then there is the successful summer camp Grace co-founded called Camp Firefly, Canada's only leadership camp for sexual-minority youth. Grace also sits on the Sexual Orientation and Gender Identity Sub-Committee of the Alberta Teachers' Association Diversity, Equity and Human Rights Committee.

So, as you may have guessed by now, community engagement and advocacy lie at the heart of everything Grace does. Even in his teaching, he insists that if his students want to participate in his research program, they must roll up their sleeves and work with city youth.

"Every graduate or undergraduate student who comes with me to do research, I expect them to spend a portion of their time doing work with youth in the community," he says.

Grace taught high school for years in St. John's, Newfoundland, before turning to an academic career in the '90s. He loved the teaching, he says, but soon realized that what was missing in teacher training was basic social and cultural sensitivity.

"Someone can be a fantastic math or science teacher, but my concern was when students are sitting in front of them in a classroom, which students do they see? Teachers are always very comfortable with people like themselves...but I wanted teachers to acquire skills to work with different kinds of students."

Until recently, the idea of teachers talking openly with lesbian and gay students about issues concerning sexuality was just too difficult to accept, he says. "There was, in the general public, a certain ignorance and fear around working with those students."

So Grace turned his attention to adult education, researching the best ways to train teachers to support diversity and inclusion in the classroom. He's had four consecutive three-year grants from the Social Sciences and Humanities Research Council to build his research program, which focuses primarily on how sexual- and gender-minority youth "grow into resilience."

Lately, he has added other categories to the mix. "They may be a two-spirit youth—aboriginal and gay—or they may come from a different ethnocultural background or have a lower socio-economic status. What I'm trying to do is, within those groups of youth, find the ones that are thriving and try to figure out, 'How did this work for them?'"

> "Teachers are always very comfortable with people like themselves…but I wanted teachers to acquire skills to work with different kinds of students."
>
> André Grace

His institute has recommended to Edmonton Public Schools that every school should have a "safe teacher," a go-to person for support on issues of sexual identity. "The biggest thing in any youth's life is having a caring adult, whether it's a parent or guardian, or it could be an adult in the community with a youth agency—whatever."

Grace is now putting the finishing touches on a national handbook of educational and community resources for sexuality and gender, outlining resources in every province and territory. He says he couldn't have done any of it without crucial support from the U of A.

"I don't know of many other universities where I could do this work to the degree I do it at the U of A. That the climate at the U of A is so inclusive makes my life a whole lot easier."

"Dr. Grace's pioneering research, and his belief in the importance of turning research into community-based action, lives out the University of Alberta's *Dare to Discover* and *Dare to Deliver* vision of connecting the university with the communities it serves," says Murray Billett, education officer for the United Nurses of Alberta.

Joint medical discovery opens genetic window on blindness

Raquel Maurier

Research teams in Canada and the United States made a medical discovery recently that could one day lead to treatments for conditions that cause blindness.

Tsutomu Kume from Northwestern University in the U.S. collaborated with Ordan Lehmann, a researcher in the Faculty of Medicine and Dentistry at the University of Alberta. Working with lab models, Kume discovered that if a gene called FoxC1 is missing, blood vessels grow on the cornea, the so-called window at the front of the eye. He contacted Lehmann, a researcher appointed jointly to the departments of ophthalmology and medical genetics at the U of A, to determine if similar results could be seen in patients. Lehmann discovered this was indeed the case—that patients with congenital glaucoma due to a mutated FoxC1 gene had abnormal blood vessel growth in their eyes.

> "We believe we've discovered a master regulator gene that prevents the formation of blood vessels in the eye and protects the clarity of the cornea."
>
> Tsutomu Kume

The growth of blood vessels in the cornea, known as corneal vascularization, is one of the top 10 causes of blindness in the world. Lehmann's and Kume's findings were published in the peer-reviewed journal *Proceedings of the National Academy of Sciences* (PNAS).

"We believe we've discovered a master regulator gene that prevents the formation of blood vessels in the eye and protects the clarity of the cornea," says Kume, associate professor of medicine at the Feinberg School of Medicine, Northwestern University and a researcher at Feinberg Cardiovascular Research Institute.

Lehmann is equally enthused about the possibilities the discovery brings. "Since there are numerous vision disorders that share this central problem, it may become possible to one day treat a range of blinding disorders because of this finding," he says. "We next want to see if these results can be applied therapeutically and whether boosting the levels of FoxC1 prevents blood vessel growth on the cornea."

The potential applications are many. For example, in corneal transplantation, the growth of new blood vessels plays a major role in the body rejecting the new cornea. This discovery may one day be applied to enhance the success rate for corneal transplantation.

Lehmann notes that he's building on a discovery made by a close colleague: Michael Walters, the chair of the Department of Medical Genetics for the Faculty of Medicine and Dentistry at the U of A, discovered FoxC1 in 1998. His research team and collaborators, which included Kume as a co-author, showed this gene caused inherited eye disease and juvenile-onset glaucoma. (Edward Stone's research group in Iowa also made this discovery at the same time.) Walters is currently investigating the role of FoxC1 in breast cancer.

As Walter's new research indicates, there are intriguing clues suggesting that FoxC1 may have comparable roles elsewhere in the body, with the same gene implicated in determining prognosis in certain forms of cancer, says Lehmann. If the formation of new blood vessels also plays a role in such disorders, this discovery could have broad implications for a range of diseases, he says.

Kume and Lehmann are continuing their research, which was funded by the National Institutes of Health, the Canadian Institutes of Health Research and the Canada Research Chair Program.

surf city

http://ca.yearinreview.yahoo.com/

Since it's the end of another year, a good site for retrospection is Yahoo's 2011 Year In Review. It has a number of top-10 lists taking stock of the year's top stories in the news, as well as lists in more imaginative categories like the most astounding and most inspiring moments on video, the worst trends and top obsessions, the most active Internet searches and extreme weather events. One category called "Caught?" reminds us of all the scandalous figures of 2011, from Dominique Strauss-Kahn to Arnold Schwarzenegger to Silvio Berlusconi. There are even links for global coverage that reviews the biggest stories in Brazil, Argentina, Europe, India and the U.K.

Designing malls for greater strip appeal

Michael Davies-Venn

Urban planners of the mid-20th century thought strip malls were the solution. The problem was the economic growth after the Second World War, which helped created the suburb. Fifty years on, rundown strip malls that dot suburban landscapes in many cities are considered blights, says Rob Shields, a researcher with the University of Alberta's City-Region Studies Centre.

Shields says these structures sprawling along major motorways in North America are unsustainable. "After more than 50 years of this single-use zone, people are starting to rebel. They're saying, 'That's really boring, I want to be able to walk to get a cup of coffee. I don't want to have to commute.'"

To help address the problems associated with strip malls, Shields and colleague Merle Patchett asked people worldwide to submit plans that re-imagine strip malls. An exhibition at the Enterprise Square atrium features 20 of the more than 90 submissions by students, community leagues and architectural firms from as far away as Iran, Germany and Brazil. "Strip Appeal: Reinventing the Strip Mall" runs until Jan. 18.

Patchett says the exhibition is part of an unusual approach to their project, funded by the Social Sciences and Humanities Research Council of Canada. "It's a different way of conducting a study, by engaging with public for research. Normally, in research like this, one would go out and ask questions. But in this case, we've asked the public to produce artistic works, re-imagining the strip mall to change the functionality of these spaces," she says.

The two says many strip malls across the continent are now unloved, overlooked and unsustainable because they were built for vehicles and are used mostly for retail. Many are failing or derelict. "On the scale of the continent, it's a huge issue," Shields says.

The researchers hope to turn the tide by working with communities to develop ideas that re-imagine strip malls as sustainable structures that meet needs beyond just commerce.

"Vast areas of North American cities are suburbs, and we hear over and over again that they're not sustainable," Shields says. "So we need to rethink how we use these spaces to encourage people to shop more locally, for them to be able to walk to these malls and to create a sense of community. One of the big criticisms of the suburbs is that they lack a sense of community."

Shields says lifestyles are changing, so strip malls are no longer the place people drop in, grab a gallon of milk and drive home. Part of the reason is that the people for whom they were built no longer use them, the researchers say.

"Strip malls had 20 good years, 20 declining years, and then derelict for another 10 years," Shields says. "The demographic of neighbourhoods and the needs of people are changing. For older people, a strip mall is not very useful because they can't walk to it."

But from disuse arises potential, says Patchett. "Take, for example, the parking lots in front of these malls. There's often a great big sea of parking that could be used quite differently, because there are not a lot of people going to those malls to fill up the parking lot by half," she said. Some of the designs submitted pictured strip malls as community gardens, social spaces and playgrounds.

By re-imagining strip malls, researchers may be changing the lifestyles of those living in neighbourhoods with the malls, though Shields says the project is not a form of social engineering. He says making suburbs sustainable would require more than re-imagining strip malls.

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Researchers invited people from around the world to help re-imagine strip malls to meet needs beyond commerce.

"If we're talking about sustainability, we want to encourage people to use public transport, to walk to places. These re-imagined malls are places where someone can have social encounters," Shields said. "We're re-imagining something that's more relevant to community life."

The top three submissions in the exhibition will receive prizes. The public is encouraged to vote at the gallery for a favourite design. The researchers will begin a nationwide tour of the exhibition starting early next year.

"We're looking for those diamonds glinting in the sand," Shields says. "We're prospecting for new kinds of ideas to re-imagine the strip mall."

Don Hickey reappointed to head facilities, operations

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Geoff McMaster

Don Hickey has been reappointed by the University of Alberta's board of governors for a third five-year term as vice-president, facilities and operations.

Since joining the U of A in January 2003, Hickey has successfully led the university through a period of unprecedented growth, with $1.4 billion in renovations and additions on campus, including the addition of Enterprise Square, the new CCIS (Centennial Centre for Interdisciplinary Science), the Health Innovation Research Facility and the Edmonton Clinic Health Academy. He was also instrumental in establishing the Office of Sustainability and the Energy Management Program.

"Through his leadership, the U of A has become recognized as one of Canada's greenest employers," says President Indira Samarasekera. "I am excited to work with Don as we continue to develop our world-class campus facilities and infrastructure in a socially, environmentally and economically responsible manner for the people who live, work and learn here."

Hickey is a graduate of the U of A, earning an electrical engineering degree in 1971. He worked in Edmonton as an engineer for a number of years, contributing to high-profile projects such as Commonwealth Stadium, the Kinsmen Aquatic Centre and Edmonton Centre before moving to the United States to work on major projects in New York, Philadelphia, Chicago and Nashville.

In 1989, Hickey returned to Edmonton, working as a consultant for a short time before joining the Stanley Organization, later Stantec, as vice-president and chief practice officer. From there he joined the U of A.

Looking back over the past 10 years, Hickey says there is much to be proud of but admits it hasn't all been a smooth ride. "On the Health Research Innovation Facility project, for example, we hit contaminated soil during excavation, even though there had been testing done, and it cost a shutdown of the project for a while," he says.

Another big challenge was inflation. Between 2003 and 2008, the cost of construction materials skyrocketed by as much as 22 per cent: "It was extremely difficult to keep projects on budget."

Going forward, Hickey says it's important to remember the maintenance side of campus buildings. "Everybody likes capital projects and they get a lot of press," he says. "But I think we should also be proud of ongoing operations and how we've been able to maintain aging infrastructure."

One big project on the horizon is the renovation of the Pharmacy building, probably starting next summer, says Hickey, by which time the current occupants will all have vacated to either the Katz Building or the Edmonton Clinic.

Hickey's biggest challenge in the coming years, he says, is maintaining the current atmosphere of the campus while continuing to grow. "The north campus is a fairly dense campus now, but we don't want to lose that feel and become more like a downtown centre."

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.*

International law expert a hugely prolific scholar

Leslie C. Green, professor emeritus of political science and honorary professor of law at the University of Alberta, passed away on Nov. 27 in Edmonton.

Green taught courses at the Faculty of Law for close to three decades, from the 1960s through the 1990s. These included courses on international law and armed conflict and human rights.

He was the author of numerous works on legal issues related to war, armed conflict, terrorism and crimes against humanity, all of which influenced the development of Canadian policy in these fields. Amongst his major published works were *Essays on the Modern Law of War*, adopted for use by numerous military academies, and *The Contemporary Law of Armed Conflict*, based on the *Manual of Armed Conflict Law* that he wrote for the Canadian Department of Defence.

He lived a full and interesting life filled with numerous achievements. Before coming to the U of A in 1965, he served as the director of the Institute of Advanced Legal Studies and the dean of the Faculty of Law, National University of Singapore. His work at the U of A was recognized with the J. Gordon Kaplin Award in 1982, an honorary LL.D. in 1994 and the rank of University Professor. He was also a Fellow of the Royal Society of Canada.

Apart from the university, Green was a consultant to the Canadian and American governments and the Canadian Forces' Office of the Judge Advocate General. He was in demand as a visiting speaker and lecturer around the world, being the first non-American appointed to the Stockton Chair of International Law at the United States Naval War College. For his life's work in international law, he was awarded the John E. Read Medal by the Canadian Council on International Law.

Physicist John Beamish named APS Fellow

U of A physicist John Beamish has been made a Fellow of the American Physical Society (APS), an honour limited to no more than one-half of one percent of the membership in a given year.

"It's very nice to know that your colleagues respect your work and are willing to put the effort into the nomination," Beamish said. "It's certainly also great to get the recognition from the APS Division of Condensed Matter Physics, since that's always been the organization with which I've identified my own research."

Beamish joins four other U of A professors who have also been named fellows: Massimo Boninsegni, Aksel Hallin, Wojciech Rozmus and Eric Pinnington.

Beamish rejoined the U of A's Department of Physics in 1991 after postdoctoral work at Brown University and an assistant/associate professorship at the University of Delaware. From 2004 to 2009, he was chair of the department.Beamish published his first paper on the properties of solid helium at low temperatures in 2007. "On the other hand," he said "this work (although inspired by the experiments of Moses Chan in 2004) in some ways was a natural continuation of an interest in the elastic properties of solid helium which began during my PhD research with the late Jurgen Franck in our department in the 1970s—albeit with a hiatus of about 25 years while I worked on other topics in low-temperature physics.""I even did the 2007 experiments on solid helium in the same room in the old physics building where I had worked as a graduate student, and used some of the same helium gas bought by Jurgen Franck."

To come full circle, Beamish led his own team of graduate students and a post-doctoral student in experiments on solid helium. "They were great and I really enjoyed working with them as colleagues and friends." Among them were post-doc Alex Syshchenko and grad student James Day, who won a graduate thesis award for this work.

"It is a nice recognition, but there are many other colleagues in our department who deserve it at least as much," said Beamish, who is currently in France on sabbatical, working with one of his nominators, Sebastien Balibar.

When Beamish got the news about the APS Fellow honour, a previously arranged pre-concert dinner with Balibar was converted to a makeshift celebration, followed by a glass of champagne at intermission. "but that was probably obligatory in Paris," Beamish quipped. "I will be happy to buy people a celebratory drink when I get back next summer."

Optics expert longest-serving department member

On Dec. 6, the Department of Electrical and Computer Engineering lost a dear friend and colleague in Jim McMullin.

McMullin was the department's longest-serving faculty member, joining in 1974 as a post-doctoral fellow and sessional lecturer. He accepted a position as associate professor in September 1983. During his career, he served as associate chair (undergraduate), associate chair (graduate) and was currently the director of the electrical engineering program.

He received his BSc in honours physics from McGill University in 1968 and was awarded the Horace Watson Gold Medal for top standing in his class. In 1975, he obtained his PhD in theoretical astrophysics from the Department of Physics and Astronomy at the University of Rochester. During his time at the U of A, McMullin published dozens of papers, most of them focused on integrated optics. He received the Faculty of Engineering's Undergraduate Teaching Award in 1995, a testament to his strong relationship with his students.

Interdisciplinary Mountain Studies Initiative a first for U of A and Canada

Jane Hurly

The University of Alberta launched one of the most innovative research and learning opportunities for students and scholars from around the world Dec. 15—but in many ways it's as old as the hills.

The Canadian Mountain Studies Initiative brings together 25 scholars from four faculties—Arts; Agriculture, Life and Environmental Sciences; Physical Education and Recreation; and Science—whose research, in whole or in part, attempts to understand mountain places, peoples or practices.

"Our mission is to make the University of Alberta the epicentre for mountain studies," says Zac Robinson, an alpine historian in the Faculty of Physical Education and Recreation. "This interdisciplinary initiative we've launched—which we hope soon to make an institute—aims to conduct and promote mountain studies research and learning across all disciplines. Our hope is to offer a rich and deeply nuanced experiential learning for students, both on campus and in the mountains, and to attract mountain scholars from around the world."

Community partners include Parks Canada, B.C. Parks, the Alpine Club of Canada, the Banff Centre and the Alberta Wilderness Association, among others.

Robinson said community partnerships will grow well beyond Canada's borders as connections are forged with other organizations, institutions and universities around the globe.

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The initiative germinated in 2009. "A few of us met informally, and within minutes we'd begun to suspect that the university already housed almost world-class strengths in interdisciplinary mountain studies from across the human, social and the applied sciences," says Faculty of Arts professor Stephen Slemon, an expert on mountaineering literature and culture.

"We discovered U of A people working across an incredible spectrum of mountain studies," says Slemon. "Visitor behaviour in the national parks, glacier and climate behaviour in the Himalayas, empire and mountaineering, mountaineering literature, history, women and art history, ecology and tourism, altitude physiology, mountain exploration. This university already had it all.

"And then we discovered something even more wonderful and unexpected. The natural scientists really wanted to talk to humanities researchers, and vice versa. Everyone said the same thing: they wanted their students to have access to these other kinds of knowledge."

The fledgling group showcased its research strength with the successful "Summit Series" of public lectures in September 2009. There was huge appeal, which signalled an immediate call to action.

The group found a champion in Kerry Mummery, dean of the Faculty of Physical Education and Recreation, whose dream was to develop just such an institute. Mummery says the U of A is perfectly positioned to steward the initiative.

"To me, this is the realization of a dream," says Mummery. "With our proximity to the Canadian Rockies, and a large, established cohort of interdisciplinary scholars dedicated to understanding mountains in a range of contexts spanning the arts and sciences and in relation to each other, we are superbly positioned to bring students, faculty members and the community together in a very exciting emerging discipline that promises to vastly enrich the global understanding of mountain practices, places and peoples.

"The Mountain Studies Initiative represents an extraordinary 'first' for the University of Alberta."

Plans are already sweeping ahead. The Faculty of Physical Education and Recreation is in the planning stages of a new certificate in interdisciplinary mountain studies. New undergraduate courses are under development. And the Canadian Mountain Studies Initiative cohort is rapidly evolving plans to establish a site in the mountains for experiential learning and a research base in the Canadian Rockies.

In 2012, on the 10th anniversary of the International Year of Mountains, the group will host a Thinking Mountains Conference to examine progress towards meeting the original objectives set out in 2002 and to celebrate International Mountain Day, but also to place on view the best scholarship on mountains from the sciences and arts.

Visit the iniative's new website at www.mountains.ualberta.ca

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MISCELLANEOUS

University of Alberta Researcher is seeking participants who have had a memorable nature experience in the last six months. The online survey can be found at www.surveymonkey.com/s/specialnature. Questions? Researcher: Lara Fenton, lfenton@ualbert.ca.

Canada Research Chair looks for ways to improve high school science

D.C. Brandon

When Stephen Norris speaks, his passion for science education is obvious. The U of A professor and Canada Research Chair has been working over the past few years on improving science instruction in high school classrooms.

"The puzzle is, how do you build a science education that has two very different goals:–one, to recruit the next generation of scientists, and two, to foster a citizenry that has a knowledge of science, knows how it works and can take a critical stance with respect to science," says Norris, who works in the Department of Educational Policy Studies.

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Stephen Norris is director of the Centre for Research in Youth, Science, Teaching and Learning.

> "How do we give students a more accurate image of science? The approach I am looking at is using published scientific literature and adapting it for use in the classroom."
>
> Stephen Norris

He believes the clue to solving this puzzle is in how science is taught.

"[I think] learning scientific language is important, but currently students are expected to learn over 1,000 scientific words—more words than you would need to know to converse in a second language...[This] is a distorted image of what science is. I am interested in teaching scientific language, without having students memorize all of these terms," she explains.

Norris's goal is to link language with science in a way that inspires critical thinking in the classroom

"Teaching students how scientists write, and how they use the language to argue for a particular conclusion to support it with evidence, to argue why their interpretation of their data is a better interpretation than another, and, most importantly, how they convey through their language the tentativeness of science—is important," says Norris.

His hope is that students who learn science in this way will be more engaged, particularly those who may not see themselves as future scientists. He believes learning science can, and should, be exciting and thought-provoking.

Norris's research has implications for high school students in Alberta and across Canada. "We are planning on developing a whole array of material that will be available for high schools. How do we give students a more accurate image of science? The approach I am looking at is using published scientific literature and adapting it for use in the classroom," he explains.

The adapted literature looks and feels like the real thing, largely because it is. The theoretical framework presented to students is unchanged, only the level at which the information is presented is changed. Using real-world and often very current research, students are encouraged to use critical thinking to navigate their way through the documents. Ultimately, they leave the classroom with not only an understanding of the scientific equations, but also with a critical understanding of the thought behind the science.

PhD student Augusto Riveros has worked with Norris and has a great regard for him. "[He has] given me a wealth of opportunities for academic growth. His critical and attentive eye is always there to spot the gaps in my thought and guide my research. He always asks me the type of questions that send me back to the library. His warm and open attitude towards knowledge always invites dialogue and sincere discussion."

Supporting students daring to discover

Michael Davies-Venn

Ukraine is at a crossroads, says Bohdan Klid, assistant director of the Canadian Institute of Ukrainian Studies (CIUS) at the University of Alberta. Half the country is looking towards the past, while the other half is facing the future. This makes it an ideal place for U of A students to study a range of subjects, says Klid, from culture to politics.

"Ukraine is in transition, but we don't know exactly where it's going," Klid said. "So a student who's going there had better understand and study the changes, some of which are taking place very rapidly."

To enable U of A students to study in this evolving country, the CIUS is offering financial support to students through its newly created University of Alberta – Ukraine Student Exchange Endowment Fund. The fund supports students to study at Ivan Franko National University of Lviv, Ukraine, for up to two semesters; the CIUS is now accepting applications.

Klid says the scholarship strengthens the university's relationship with the Ukrainian university, which—founded in 1661 is one of the oldest in Eastern Europe. The new fund provides students the opportunity to study the evolution of a geopolitically strategic country. And it satisfies one of the key objectives set forth by U of A President Indira Samarasekera in her vision document *Dare to Discover*: to welcome the rest of the world to the university, while bringing the university to the world.

"We live in a globalized world. This fund gives students who study Ukraine opportunities to gain more in-depth knowledge, to experience a country that they would like to know more about, whether it's politics, language, culture, religion or sociology," Klid said.

> "Ukraine is in transition, but we don't know exactly where it's going. So a student who's going there had better understand and study the changes, some of which are taking place very rapidly."
>
> Bohdan Klid

"We're trying to open doors so students can [*Dare to Discover*] Ukraine—*Dare to Discover* what's taking place in that country and also learn about a different part of the world," Klid said. "Ukraine occupies a strategic position in the world; it straddles Europe and Asia. The direction in which Ukraine goes is important. Will it become more of a central European kind of country or revert back to authoritarian traditions that it inherited from the Soviet Union?"

Students from the U of A who go to Ukraine would find themselves in a country that is facing these and other questions, many of which are far different from questions Canada faces.

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Bohdan Klid

For example, Ukraine has a large population with strong ties to its rural communities, Klid says, but the country also has a highly developed urban culture. "Ukraine was part of the Soviet Union and was submerged under Russian culture, so that Ukrainian culture is now trying to find a space for itself," he said. "Ukraine has a strong rural culture and that is coming apart. That rural culture used to be the foundation. So this might be interesting for a sociologist, a folklorist or anthropologist to study."

Students from Ivan Franko National University of Lviv will also be eligible to apply for support to study at the U of A. "It's important that students have the opportunity see what others are facing, so they're able to gain a better understanding of the world," Klid said.

"To gain a better understanding of what we're facing as human beings."

For more information about the University of Alberta – Ukraine Student Exchange Endowment Fund, contact the CIUS at 780-492-2972.

A fresh view on conservation

Bev Betkowski

The work of a U of A graduate student exploring synergies among such scavengers as bears, wolves and ravens may help conservationists determine which species are most at risk of local extinction and why.

Kim Ives, who just earned a master's degree from the Department of Renewable Resources, explored regional patterns and causes of local extinctions—in which a species disappears from a region—for North American mammals and birds that depend on scavenging their meals.

Her findings indicate that co-operative relationships among the animals is an important contributing factor to patterns of extinction. The findings provide an additional tool to help conservationists determine which species are at risk of being lost from the ecosystem, she says.

While human impact and ecological traits are already accepted as contributing factors to extinction risk, the idea that behavioural interactions among species, in which the actions of one species can influence the survival of others, has rarely been considered. "Yet, it is fundamental to predicting risk of species, such as scavengers who rely on other members of the community—particularly predators—for providing food," Ives says.

The research, supervised by Scott Nielsen, professor of renewable resources, was conducted under the auspices of the Applied Conservation Ecology Lab at the U of A.

Ives's findings are among the first to touch on animal behavioural interactions as they relate to conservation risk. Ives believes a more holistic approach will better gauge that risk.

"By not accounting for these interactions in our analyses of conservation risk, it could be a major hole to leave open," says Ives, who studied just how much the animals rely on one anothers' scavenging habits to survive.

Loss of behavioural interactions among species may be a contributing factor to why some are more vulnerable to extinction than others, she says: "Scavengers have indirect but critical links."

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Findings are among the first to examine animal behavioural interactions and conservation risk.

For instance, otters pull fish from the river to shore, allowing other scavengers to find them. Ravens follow wolves to their kills, and because the birds eat a lot of the carcass, wolves kill more.

Using statistical modelling, Ives determined that ravens had the highest number of connections—to 20 other species—followed by the black bear and the otter.

If any of the species suffer population loss, the survival of connected scavengers could also be threatened, Ives says.

She hopes her findings will lead to richer approaches in conservation measures, including a closer look at dependencies among different animals. "Successful reintroduction of an extirpated species may be more effective if other interacting species are included at the same time."

Ives's work was supported by funding from the Natural Sciences and Engineering Research Council of Canada, TD Friends of the Environment Foundation and the University of Alberta's Queen Elizabeth II Graduate Scholarship.

Reinventing the strip mall

To help breathe life back into that ugly and ubiquitous legacy of the 1950s—the strip mall—researchers at the U of A's City-Region Studies Centre sought submissions from around the world to re-imagine this staple of 20th-century suburban life.
The resulting exhibition, featuring 20 of the more than 90 submissions by students, community leagues and architectural firms, is now on display at Enterprise Square.

STRIP APPEAL

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