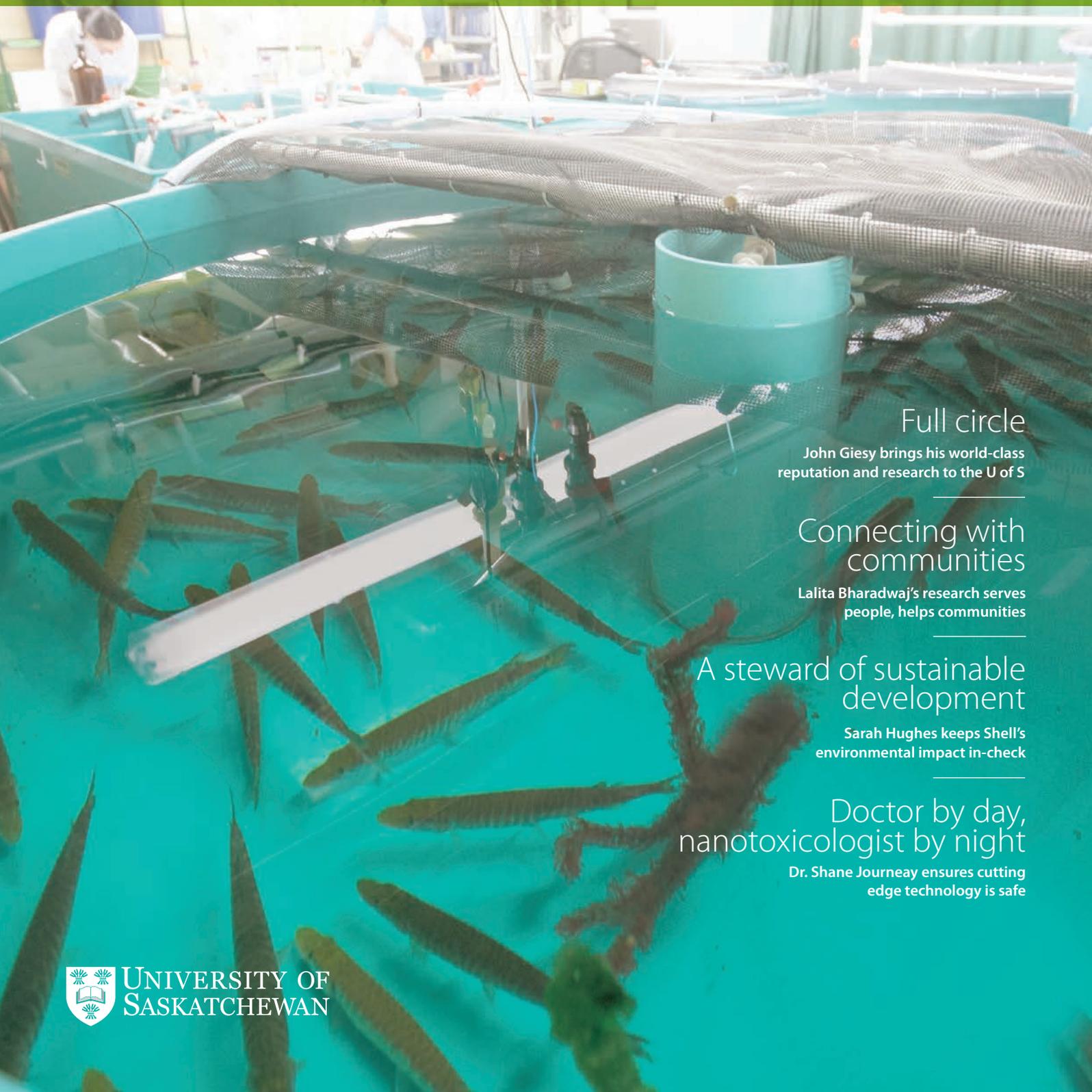


Recognizing Canada's Top Toxicology Centre

GREEN & WHITE

UNIVERSITY OF SASKATCHEWAN ■ ALUMNI MAGAZINE

SPRING 2013



Full circle

John Giesy brings his world-class reputation and research to the U of S

Connecting with communities

Lalita Bharadwaj's research serves people, helps communities

A steward of sustainable development

Sarah Hughes keeps Shell's environmental impact in-check

Doctor by day, nanotoxicologist by night

Dr. Shane Journeay ensures cutting edge technology is safe

GREEN&WHITE contents



The U of S Aquatic Toxicology Research Facility is the only one of its kind in Canada.

The self-sufficient facility can house almost any freshwater species of fish, including northern pike and sturgeon, and allows researchers to control experimental water conditions to help solve real-world water problems.

Take a tour at

alumni.usask.ca/ATRF

GREEN&WHITE
U OF S ALUMNI MAGAZINE

COVER PHOTO: DAVID STOBBE

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DAVID STOBBE

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DAVID STOBBE

President's message

As graduates, you are the university's ambassadors to the world, so I want to hear your thoughts on my current priorities and how we can best focus our efforts to achieve our goals.

How do our various initiatives contribute to knowledge creation and Aboriginal engagement? Are we edging closer to our goals related to innovative programs and services, and culture and community?

We know we are on the right path because the University of Saskatchewan is now a member of the U15, a group of the top research-intensive universities in Canada. Membership among the most distinguished universities increases our profile both within Canada and internationally. It also increases the value of a U of S degree for our students and alumni in Saskatchewan and around the world.

Positioning the U of S in this group is one of my priorities because membership means we will be compared to the best universities in Canada, and that comes with expectations.

There are, to this end, two very important areas which have and will continue to receive much of my focus: the College of Medicine and the financial situation we face.

Addressing the long-standing structural issues in the College of Medicine is key to the university's future success. We are working with our partners in government and the health region to realize a new vision for the college—a vision that will ensure we continue to deliver a quality

medical education to students and advance our research goals to serve the needs of the people of Saskatchewan.

Of course, something that is always top of mind for me is the university's financial situation. If we do nothing—business as usual—we will be facing a \$44.5-million budget deficit by 2016. Because of the great groundwork laid, we have time to address this potential deficit over the next four years to remain financially stable.

TransformUS, the process of program prioritization, and workforce planning are two steps we are currently taking. TransformUS will allow us to make decisions that reflect our goals, priorities and strategic directions. Workforce planning is necessary to ensure that everyone working at the U of S is efficient, effective and very clearly focused on our mandate to teach, learn and discover. Tough decisions will need to be made so that we can live within the reality of our operating grant and be financially sustainable.

To be certain, the U of S will look different in 2016 than it does today.

Another priority of mine is the engagement and scholarship of Aboriginal people. This is significant, not just for our university and province, but to all of Canada and beyond. By

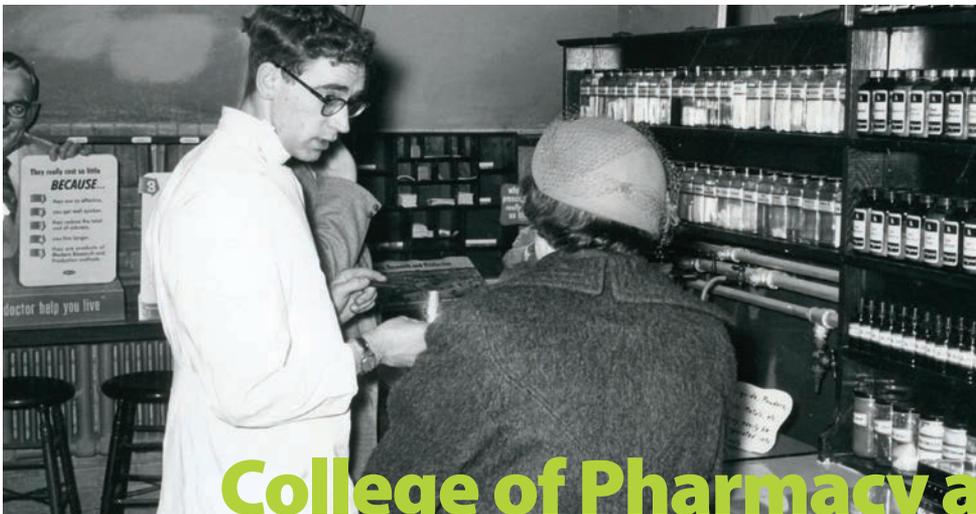
better understanding the issues, values, identities and experiences of Aboriginal people, we can help address social and economic disparities and gaps in health and well-being, and prepare a new generation of Aboriginal youth for the global knowledge economy. Saskatchewan has one of the highest populations of Aboriginal people in Canada, and it's fitting, for the sake of our shared future, that this is one of our signature areas.

When all of these pieces come together, the picture I see is becoming clear: the U of S is one of the most distinguished universities in Canada and the world. There is still work that needs to be done, and we will work hard to maintain and improve our position.

One way to measure our progress towards this goal is through hearing from our graduates. Many of you have strong connections to our university despite being separated by distance or years. That's why I encourage all of you to let us know how we are doing. Your ideas, comments and suggestions are not only appreciated, they are essential. ■

Ilene Busch-Vishniac

Ilene Busch-Vishniac
President, University of Saskatchewan
uofs.president@usask.ca



College of Pharmacy and Nutrition Centennial 2013-2014

Pharmacy: an Art, a Science, a Profession

BY DEAN EMERITUS BRUCE SCHNELL, BSP'60

In 1913, the same year the College Building was formally opened, the University Council approved President Walter Murray's proposal for a School of Pharmacy. Murray's original intention was for pharmacy to be a school within the College of Medicine, however, since a College of Medicine did not yet exist, the School of Pharmacy was established as a school within the College of Arts and Science.

The school offered a one-year program leading to a Certificate in Pharmacy. Alexander Campbell, a distinguished Saskatoon pharmacist, was appointed acting lecturer in November 1913. Twenty-two students were enrolled when the first pharmacy classes began in January 1914, in shared lecture rooms and the chemistry laboratory in the College Building.

Since these humble beginnings, over 4,400 pharmacists have graduated from the college.

📷 Displays at the Chemistry-Pharmacy Show, 1950s. Organized by the student associations in chemistry and pharmacy, a joint show was first presented as early as 1953.

An elaborate series of displays and demonstrations throughout the Chemistry Building were featured during this two- to three-day event every three years. There were even live theatre productions: a script survives for 1958's *Denatured Boy*, a half-hour musical partly based on re-written Gilbert and Sullivan tunes.

By 1964, organizers were reportedly expecting 3,500 visitors. Starting in 1967, the pharmacy show was presented independently. Ultimately dubbed "PharmaScene," this tradition lasted at least into the 1970s.

Here are a few highlights from the past 100 years:

- An optional four-year Bachelor of Science in Pharmacy (BSP) program was established in 1916.
- On November 7, 1918, during the Spanish Flu quarantine of the university, tragedy struck when two pharmacy students threw a party with methyl alcohol for refreshments. One died later that night, and the other was permanently blinded.
- The school became the College of Pharmacy in 1923, and Campbell became the first dean of pharmacy.
- In 1924, the college moved to the new Chemistry Building in space specifically designed for the teaching of the pharmacy program.
- The Saskatchewan Pharmaceutical Association mandated the recently revised four-year BSP degree for pharmacist licensure in 1945.
- Post-war enrollment "skyrockets" and pharmacy was given additional space in a relocated military "H" hut designated as the Chemistry Annex. This "temporary" space would serve pharmacy for the next 20 years.
- Pharmacy moved into a new wing of the Thorvaldson Building in 1966.
- During the 1970s, the emphasis in pharmacy practice shifted from the drug product to the impact of the drug on the patient. This new direction was called clinical pharmacy, and major revisions were made in the educational program to prepare pharmacists for their new role.
- In 1987, the College of Pharmacy became home for the Division of Nutrition and Dietetics, formerly part of the College of Home Economics.
- July 1, 1994, the College of Pharmacy and Nutrition was established, and Jim Blackburn became the first dean of the new college.
- The pharmacy program was granted full accreditation in 1995 by the recently established Canadian Council for Accreditation of Pharmacy Programs.
- Dean Dennis Gorecki, appointed in 1998, was instrumental in the establishment of The Council of Health Science Deans to co-ordinate planning for the proposed new Health Sciences facility. ■

📷 Photo information

- University of Saskatchewan Archives, Photograph Collection, A-3625
- University of Saskatchewan Archives, College of Pharmacy fonds

Living within our means

The University of Saskatchewan's multi-year budgeting process has identified a projected \$44.5 million operating deficit by 2016.

Revenue projections—specifically those based on historical operating grant increases from the Government of Saskatchewan—have been revised to a more modest two per cent annual increase. The province's spring budget confirmed about a two per cent increase in the operating grant. In 2012-13, the operating grant made up approximately 68 per cent of the university's overall operating budget. Other revenue sources for the operating budget include tuition and investment income.

Brett Fairbairn (BA'81), provost and vice-president academic, and Greg Fowler (BA'88, MBA'92), acting vice-president of finance and resources, have stressed there will not be across the board cuts to save money. Rather, the university has adopted a principled approach with targeted spending cuts.

With the goal of financial sustainability by 2016 in mind, the university is committed to ensuring expenses do not exceed revenues, making decisions now that reduce the likelihood of cyclical cuts, having the people and programs in place to become one of Canada's most distinguished universities, and focusing resources on priorities. Offering a high-quality educational experience for students remains a key focus.

Two major initiatives, workforce planning and TransformUS, are underway to ensure the university is well-positioned to achieve these goals.

Workforce planning will ensure the university has a sustainable workforce with the right people with the right knowledge, skills and experience in the right positions aligned with the university's priorities.

Salaries and benefits represent approximately 75 per cent of the university's total expenses. Saskatoon's second largest employer is faced with the reality of lay-offs. Over 150 employees have been laid off to date. A career transitioning firm has been contracted to help equip individuals to find new employment and to support them through the transition.

Program prioritization, entitled TransformUS, involves the simultaneous, systematic prioritization of all programs and functions of the university. Two comprehensive task forces—one for academic programs, the other for support services—have been assembled to determine the criteria, complete an evaluation and create a report that prioritizes all programs. Based on results, decisions will be made to invest resources, make no changes, or eliminate or

reduce programs or activities that are determined to have a lower priority.

Tuition fees will not be increased to bridge the funding gap. The same criteria to determine tuition fees that has been used for several years—accessibility and affordability for the majority of potential students, comparisons to other Canadian medical-doctoral U15 universities, and the quality of programs—has been used again this year, resulting in an average 4.5 per cent increase for 2013-14. Tuition increases were determined and made public before the provincial budget announcement.

Revenues from endowed funds, investment income and development of university owned land in the College Quarter district (south of College Drive, east of Cumberland Avenue) are expected to rise, but not enough in the short-term to offset the projected deficit.

Regular and ongoing town hall meetings serve as a forum to keep faculty, students, and staff informed, to answer questions and to receive feedback. The next town hall is schedule for June 13. Alumni are welcome to attend.

For detailed information, regular updates and to voice your opinion, visit usask.ca/finances.



Brett Fairbairn addresses the U of S community at one of the Town Hall Meetings in Convocation Hall.

Global Institute for Food Security gets a \$50 million start

A private-public partnership the U of S has struck with the Province of Saskatchewan and Potash Corporation of Saskatchewan Inc. (PotashCorp) launched the Global Institute for Food Security (GIFS) in December 2012.

With initial commitments of up to \$35 million from PotashCorp—one of the largest corporate donations for university research in Canada—and \$15 million from the province over the next seven years, the institute at the U of S will apply Saskatchewan's unique resources, innovation and expertise to address the increasing global demand for safe, reliable food.

"Food security is clearly an enormous global challenge and much too big a problem for any single university, government or corporation to tackle on its own. And unlike some existing food security institutes that focus on a piece of

the problem, we are determined to find solutions across the entire food system; from field to fork," said Ilene Busch-Vishniac, U of S president. "This will mean developing not just new and urgently needed science and technologies to improve crop production, but also new policies to ensure that food gets to those who need it efficiently and without waste."

The institute's founding executive director and CEO, Roger Beachy, started in January. Beachy is an internationally recognized scholar with over 40 years of experience conducting groundbreaking research in food crops, production agriculture and the applications of biotechnology in agriculture, nutrition, and human health.

"To have a tangible impact on food security, the institute requires strong, respected leadership," said Bill Doyle, president and CEO of PotashCorp. "Roger brings immediate credibility to this initiative and is the best person to lay the groundwork that will help the institute achieve its long-term goals."



With a bachelor's degree in biology from Goshen College in Goshen, Indiana and a PhD in plant pathology from Michigan State University, Beachy is a fellow of a number of scientific societies, has won several international awards, has had close to 300 articles published, and his research has led to several scientific patents.

In February, the institute's founding board was announced. The three directors are: Dallas Howe (BA'65, MA'68), chair of the board of PotashCorp; Alanna Koch, deputy minister of Saskatchewan Agriculture; and Peter MacKinnon (LLM'76), former U of S president. Ernie Barber, acting dean for the College of Engineering, was also appointed deputy executive director and chief operating officer.

More details and up-to-date news are available at globalinstituteforfoodsecurity.org. ■

New University Secretary

Elizabeth Williamson (BComm'87) has been appointed university secretary effective April 8, replacing Lea Pennock, who retired after eight years in the position.

Trained as a lawyer, Williamson was director of legal services in governance for Cameco Corporation before joining the U of S. She has a long and varied background in governance, legal services and policy development.

Duties of the university secretary include:

- Governance: supporting the governance of the university, including the Board of Governors, Senate, General Academic Assembly and University Council;
- Appeals and discipline: administering procedures for hearings related to student academic conduct, student non-academic conduct, and faculty promotion and tenure;
- Protocol and ceremonies: university protocol and ceremonies such as convocation;
- Policy: Administration and interpretation of university policies and matters of jurisdiction and governance related to policies; and
- Administrative oversight of the university's internal audit function. ■

Changes for College of Medicine

Unanimous support from members of University Council on December 20, 2012, paves the way for the College of Medicine to implement changes that will address the critical issues of accreditation, teaching and research.

A *New Vision for the College of Medicine* was approved in principle and outlines changes to the college intended to address three long-standing issues—accreditation of the medical education program, low research performance and the complexities of providing clinical service.

According to Lou Qualtiere (BSPE'86), acting dean of medicine, the vision document calls for college faculty to include physicians from across the province as community-based faculty who will help deliver medical education.

A new structure for the college was proposed in April 2012. After much consultation, which included a General Academic Assembly called by President Ilene Busch-Vishniac, a revised

proposal was presented and approved at the December 20 meeting.

A Dean's Advisory Committee and several working groups have been established to gather input from faculty and develop an implementation plan. The plan must be presented to Council's Planning and Priorities Committee by August 15.

In March 2013, a national team visited the college to review its accreditation. A decision on whether enough progress has been made to avoid probation is expected this summer.

More detail and ongoing updates are available online at medicine.usask.ca/renewal. ■



Exotic instrument collection

Professor Emeritus David L. Kaplan donated a collection of exotic, historical and Indigenous instruments to the Department of Music.

During the past year, Kaplan has assembled part of his collection—which includes drums, zithers, crumhorns, shawms and rackets—as a gift to the College of Arts and Science Department of Music to be used for research, exhibition and to be played by student and faculty musicians.

On March 9, a display of the instruments from all over the world was opened in the Education Building.

Kaplan came to the U of S in the 1960s to establish a program in music education. He has served as head of the music department and music director of the Saskatoon Symphony Orchestra. He officially retired in 1990 but continued to teach as a sessional lecturer until 2005. In 2002, he was made a Member of the Order of Canada for his contributions to music. ■

The search for College Quarter hotel begins

The university is proceeding with plans to find a hotel company interested in building in College Quarter.

A request for proposals went out in January after the City of Saskatoon approved the university's zoning application, and selection of the winning proposal is expected to be made this spring.

The site identified for the hotel is across College Drive from the main campus, where the seed barn and beach volleyball courts are currently located. Judy Yungwirth (BComm'83, MBA'92), director of corporate administration, said a hotel is one component of a larger development of services in College Quarter that could eventually include retail, residential and commercial space, as well as a new ice rink.

The size of hotel will be determined by whatever is financially feasible for the company that builds it. The value of the long-term lease of land will be determined by market research and current lease arrangements the university has at Preston Crossing, the retail area northeast of the main campus.

Unlike the Preston Crossing development where lease proceeds are directed to student scholarships, lease revenue from the hotel will be directed to further development of College Quarter, where enhancing the student experience is the primary focus. ■



Undergraduate student residences, College Quarter.

DAVID STOBBE
(ABOVE PHOTO AS WELL)



Onion Lake First Nation Chief Wallace Fox presented a Treaty No. 6 flag to the university March 12. The flag will be placed in Convocation Hall and will appear at official functions along with the flags of the university, Saskatchewan and Canada.

Celebrating Aboriginal Achievement

Identified as a commitment in the University of Saskatchewan's third integrated plan, Taking Stock, the first of a two-part Aboriginal Symposium, was held on campus March 15.

Taking Stock was a celebration of the concrete achievements related to Aboriginal engagement over the past few years. Events including a poster expo, feast and round dance were conducted to also raise awareness of current Aboriginal initiatives across campus and connect with the community.

The symposium coincided with Aboriginal Achievement Week. Four major events—a pipe ceremony, flag ceremony, feast and round dance—that are deeply rooted in Aboriginal tradition and custom were conducted throughout the week.

The second part of the symposium scheduled for June will be a one-day, invitation-only discussion called Moving Forward. It will involve university officials, international Indigenous scholars and leaders from First Nations and Métis communities. The goal is to rework an existing foundational document on Aboriginal engagement to provide a more focused and refined vision for Aboriginal engagement and success for the university. ■

\$773,000 in cash and in-kind contributions from the research teams and partner organizations, bringing the total value of the research projects to over \$1.2 million. ■

New appointments for Board of Governors



Susan Milburn

Greg Smith

At the March 5 board meeting, Susan Milburn (BComm'78, MBA'80) was appointed chair of the University of Saskatchewan Board of Governors. Milburn, vice-president at Raymond James Ltd. in Saskatoon, has served on the board since 2006.

Greg Smith (BComm'79), a partner in the chartered accounting firm Stark & Marsh in Swift Current, was appointed vice-chair. He was initially appointed to the board in 2007.

Earlier in the year, four new board members were appointed by the Government of Saskatchewan, effective Jan. 17, for three-year terms. The new members are Lee Ahenakew (BComm'97), David Dubé (BA'85), Kathryn J. Ford (BA'71), and Grant Isaac (BA'94, MA'97).

The U of S Board of Governors is responsible for overseeing and directing all matters respecting the management, administration and control of the university's property, revenues and financial affairs. The board consists of five members appointed by the Government of Saskatchewan, one student member, one faculty member, two members appointed by University Senate, and two ex-officio members—the president and chancellor. ■

Centre for Nuclear Innovation announces project funding

The Sylvia Fedoruk Canadian Centre for Nuclear Innovation—named in honour of the late Sylvia Fedoruk (BA'49, MA'50, LLD'06), renowned medical physicist, outstanding athlete and the province's first female lieutenant governor—announced new funding for five research projects in January.

Projects to receive funding include research on using medical isotopes to better assess kidney function, developing new sensors for applications ranging from medical instruments to cargo scanners, and gauging Saskatchewan people's attitude towards nuclear issues.

The initiatives—four from the U of S and one from the University of Regina—will receive \$485,000 from the Fedoruk Centre over the next two years. This funding leveraged an additional



The unveiling of Sylvia Fedoruk's portrait (L-R) John Root, interim executive director of the Fedoruk Centre; Sharon Sobkow, cousin of Fedoruk; Anne Romaniuk, Fedoruk's aunt; Rob Norris, legislative secretary to the premier for First Nations engagement.

Alumni perception response

The U of S is an institution I can trust:

90%

The U of S is an institution I admire and respect:

89%

The U of S is known for its excellent reputation:

85%

I would recommend the U of S as one of the top institutions to pursue post-secondary education:

80%

The U of S has relevance to my current values and interests:

75%

A lasting alumni impression

U of S alumni provided their feedback in an online alumni perception survey and the results highlight a favourable view of the University of Saskatchewan.

Over 6,000 alumni completed the online perception survey conducted in December 2012 that measured impressions in four areas: reputation, values and interests, willingness to recommend, and engagement.

Results show 90 per cent of alumni agree the university is an institution they trust, and 85 per cent agree the U of S has an excellent reputation. A majority of responses also indicate that 80 per cent of alumni would recommend the U of S as one of the top institutions to pursue post-secondary education.

“Alumni are proud of their university and its role and reputation in providing quality education and research,” said Judy MacMillan (BSA’79), president of the U of S Alumni Association. In terms of values and interests, 75 per cent of alumni believe the U of S has relevance to their current values and interests.

Scores varied slightly by geographic location and age but remained favourable in overall perception results. “There are now over 138,000 alumni spread throughout the world with the majority in Western Canada,” said MacMillan. “The fact alumni consistently have a favourable impression speaks to their experience at the U of S and how it has shaped their successes.”

The survey also looked at alumni preferences for methods of engagement. Responses will help the university create and maintain opportunities that are appealing and valuable to alumni seeking ways to remain personally connected to campus life and the university as a whole.

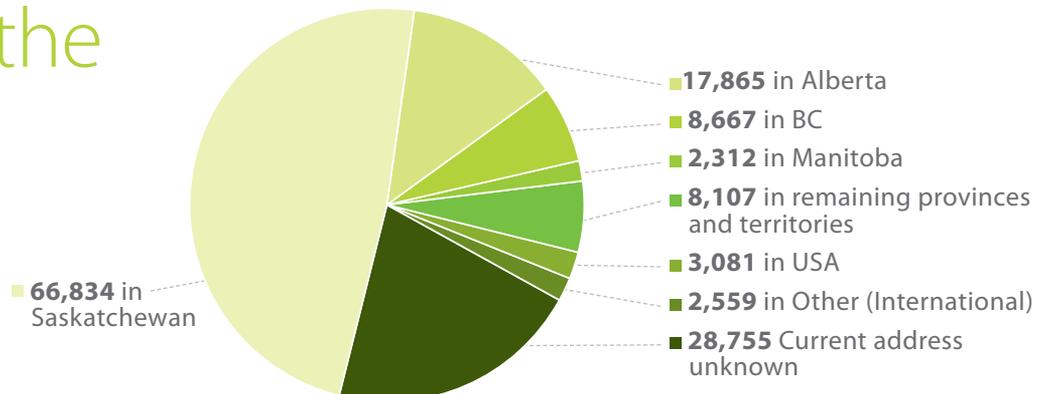
Branch events, professional development opportunities and alumni receptions are some examples of engagement activities offered to alumni. Over 65 per cent indicated that all engagement opportunities should include time to visit with former classmates and friends, affirming alumni are looking for more ways to stay connected. MacMillan added, “We also see increased demand for sharing of alumni successes with both university and fellow alumni. To meet this demand, we are exploring the development of an online ‘class notes’ similar to the *Green & White* pages where alumni can submit and share their stories but without the limitations of print.”

Providing opportunities to share time through volunteering is another popular method of engagement. Results show that, of the alumni who choose to volunteer, 62 per cent give their time so they can make a difference and impact others positively. “Alumni want to share their knowledge and experience, and volunteering can be incredibly rewarding,” said MacMillan, “Volunteering can take many forms from mentoring of recent graduates to leading a branch activity.”

Survey results are being used to help shape alumni programming. MacMillan stated, “Alumni have a special relationship with their alma mater, and we want to foster that relationship as best we can. I encourage all alumni to keep their contact information up-to-date and take advantage of the benefits and services available.” ■

Alumni by the numbers

138,000 total alumni





DAVID STOBBE

Rui Guo

A “smart” switch for clean water

Deep in the recesses of the Thorvaldson Building, chemists are developing materials that could soon be used to improve water quality worldwide.

BY KIRK SIBBALD

Alongside her supervisors, Lee Wilson (PhD’98) and Lalita Bharadwaj (BSc’89, MSc’93, PhD’97), PhD student Rui Guo (BSc’07) has developed biopolymer materials with enhanced adsorbent properties. Referred to in scientific circles as smart materials, Wilson said Guo’s synthetically-engineered biopolymers hold enormous potential in various applications, with water remediation being the most notable.

While contaminants such as oil are relatively easy to remove from water, soluble contaminants—such as dyes, nitrates and detergents—are considerably more challenging, said Wilson. The materials engineered by Guo, however, have exhibited remarkable uptake of soluble contaminants in recent experiments.

Guo moved to Saskatoon from China, finishing her undergraduate education at the U of S in 2007. She has been here ever since, and is now in the final stages of writing her thesis.

“Some of my dad’s friends graduated from the University of Saskatchewan, and they said it was a very good academic environment here,” said Guo, explaining her motivation for coming to Saskatoon.

“I’m not going to say it’s because of the nice weather,” she added with a laugh on a particularly frigid afternoon.

With Guo’s laboratory experiments showing considerable promise, large-scale applications are already in the works. Wilson and Guo will soon be working with a professor in Guyana on an international project looking to capture contaminants in surface water bodies.

Closer to home, Wilson said Guo’s smart materials could also be used to remove arsenic from both surface and ground water in Saskatchewan.

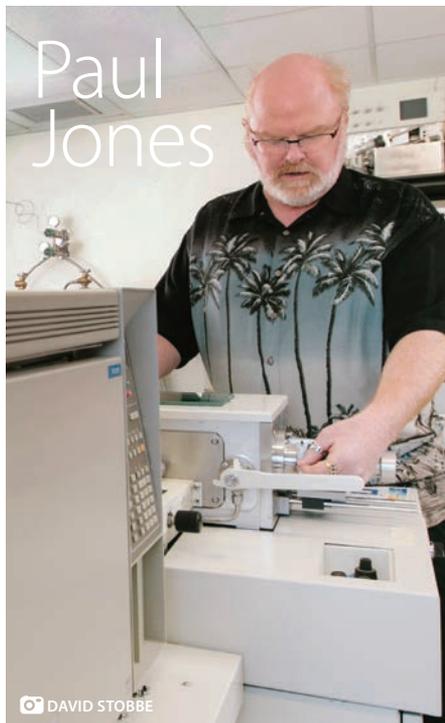
“Wherever you find gold or uranium you will also find arsenic. So Saskatchewan has an

arsenic problem, and we can potentially use Rui’s materials to address this.”

Smart materials, like the ones developed by Guo, are novel in their ability to essentially turn on and off in response to external stimuli, such as changes in temperature or pH balance. While filtration methods like reverse osmosis require pressure to remove molecules or ions, minimal energy inputs are required for smart materials to function.

For example, Wilson said desalination of ocean water and producing certain biofuels is currently cost prohibitive and requires exorbitant energy inputs. Smart materials could soon streamline such processes, making them both economically and environmentally viable.

“We are running out of fresh water. It’s not a question of if, but when,” he said. “So the ability to, for example, desalinate water using little-to-no energy would be huge. This could address water quality issues around the world.” ■



Paul Jones

DAVID STOBBE

Jones at the mass spectrometer that measures environmental contaminants in samples

Building trust, helping people

Paul Jones knew he needed more than altruism and a research grant to help people in northern communities.

BY DERRICK KUNZ



DAVID STOBBE

Samples ready for testing in the mass spectrometer

Good intentions don't get you very far. When Paul Jones, associate professor with both the University of Saskatchewan's School of Environment and Sustainability and the Toxicology Centre, was preparing to do his research along the Slave River to investigate reports of fish deformities, he knew he needed more than altruism and a research grant to help people in northern communities.

Fishers along the river that runs through the Northwest Territories and northern Alberta—including Fort Chipewyan, Fort Smith and Fort Resolution First Nations reserves—who rely on the river system for their food, as well as their economic and cultural well-being, had concerns about what was ending up in their nets and eventually on their plates. "There were accounts of deformed or unhealthy fish, fish with lesions or tumors," said Jones. Health concerns, particularly cancer rates, in these communities had people pointing to the river, the fish, and impacts of upstream activities like dams and oil sands development as the culprits.

"Anytime there is a chance of a contaminated food supply it warrants study. So we looked at things like length, weight and reproductive status to try and determine if it's a population of healthy fish." Jones explained doing community-based research is all about trust. "There are 'parachute scientists' that come in, get their samples, and are never seen again. Trusting relationships take time. We didn't have the relationships when we first started, so we worked closely with territorial agencies and other local partners that did have strong relationships with the communities."

Two years and half-a-dozen trips later, almost 2,000 fish have been sampled. "People

in these communities have a huge economic and cultural connection to these waters, so it's important that we work in collaboration with them." Local fishers catch the fish, Jones gathers data and samples for his research and the fish are then returned to those in the community who want them.

Observations to date show a relatively low incidence of deformity spread relatively evenly over the river. "One deformed fish makes front page headlines, especially in the oil sands area, but 10,000 normal fish don't make headlines," said Jones. Research is now focussing on blood samples to get more detailed information.

Jones's relationship goes deeper than a partnership to gather data. Part of preserving the environment, people's health and their way of life is education. "I give seminars, speak at community meetings and build useful partnerships. Samples are from their backyard, so I share results with the community before we make them public or publish them. They trust I'm going to be around and be there to help them."

Working with partners such as the Northwest Territories government and the Slave River and Delta Partnership, Jones and colleagues at the U of S have recently been awarded funding from the Canadian Water Network to establish a long-term monitoring system that the communities will ultimately manage. Plans are to further investigate a whole range of wildlife such as aquatic insects, fish, water birds, muskrat and moose "that may be indicative of environmental change in the area. I'm excited to see the community-based monitoring program that will give insights into how we can manage the environment with community involvement." ■



ANDREW MILLER

Jones and the U of S team demonstrating fish dissection techniques in Fort Resolution, NWT



Whiting holds 10 teaspoons of sugar, the amount in a 355 ml can of pop. The vintage seven oz (approx. 207 ml) 7UP bottle doesn't stack up against a 55 oz (approx 1.6 L) Double Gulp that contains about 40 teaspoons of sugar.

You are what you eat

It may be a bit of an exaggeration but to deny the fact that what you eat affects your overall health is not only naïve, it can be dangerous.

BY DERRICK KUNZ

Susan Whiting, professor of nutrition and dietetics in the College of Pharmacy and Nutrition, has spent over 25 years at the U of S studying human nutrition—what is good for the body, and what isn't.

Some of Whiting's earlier research focused on bone health—the relationship among vitamins and minerals such as vitamin D and calcium, physical activity, and bone health and strength. It seems reasonable to conclude the more vitamins and minerals your body gets, the better. However, Whiting explained, “There is an upper level of what we can safely consume. We know almost every nutrient is essential in the amount of the recommended daily allowance, but if you take a lot more you can get into toxicity.”

In 2011, Whiting and an Ottawa-based journalist successfully lobbied to have Coca-Cola Ltd. reduce the amount of vitamin A in its FUZE brand drink from the tolerable upper intake level for adults to the recommended daily dose. Too much vitamin A can cause liver damage in adults

and may result in birth defects if women over-consume during pregnancy.

Whiting's current research examines the consumption patterns and effects of sugar-sweetened beverages (SSB) such as soft drinks and fruit drinks—fruit-flavoured drinks that contain little to no real fruit juice. “Canada's diet is slipping into sugary beverages. We are about 10 years behind the United States and their childhood obesity problem, but the evidence is quite good we are headed there. There's a natural experiment we can observe in their overweight and obesity rates.”

If looking to our southern neighbours isn't enough to convince you there's a link between SSB consumption and health, look further south. “Mexico has the highest rate of childhood obesity and the highest rate of [sugary beverage] consumption,” Whiting said. “We used to feel guilty adding a teaspoon of sugar to our coffee, but a can of pop has 10 teaspoons.”

The negative effects are twofold. “The Pepsi generation gave us a feeling [soft drinks] are a natural part of our diet,” but the extra calories don't satisfy your body's needs. Plus, the more SSBs we consume, the less often we drink healthier beverages, like milk.

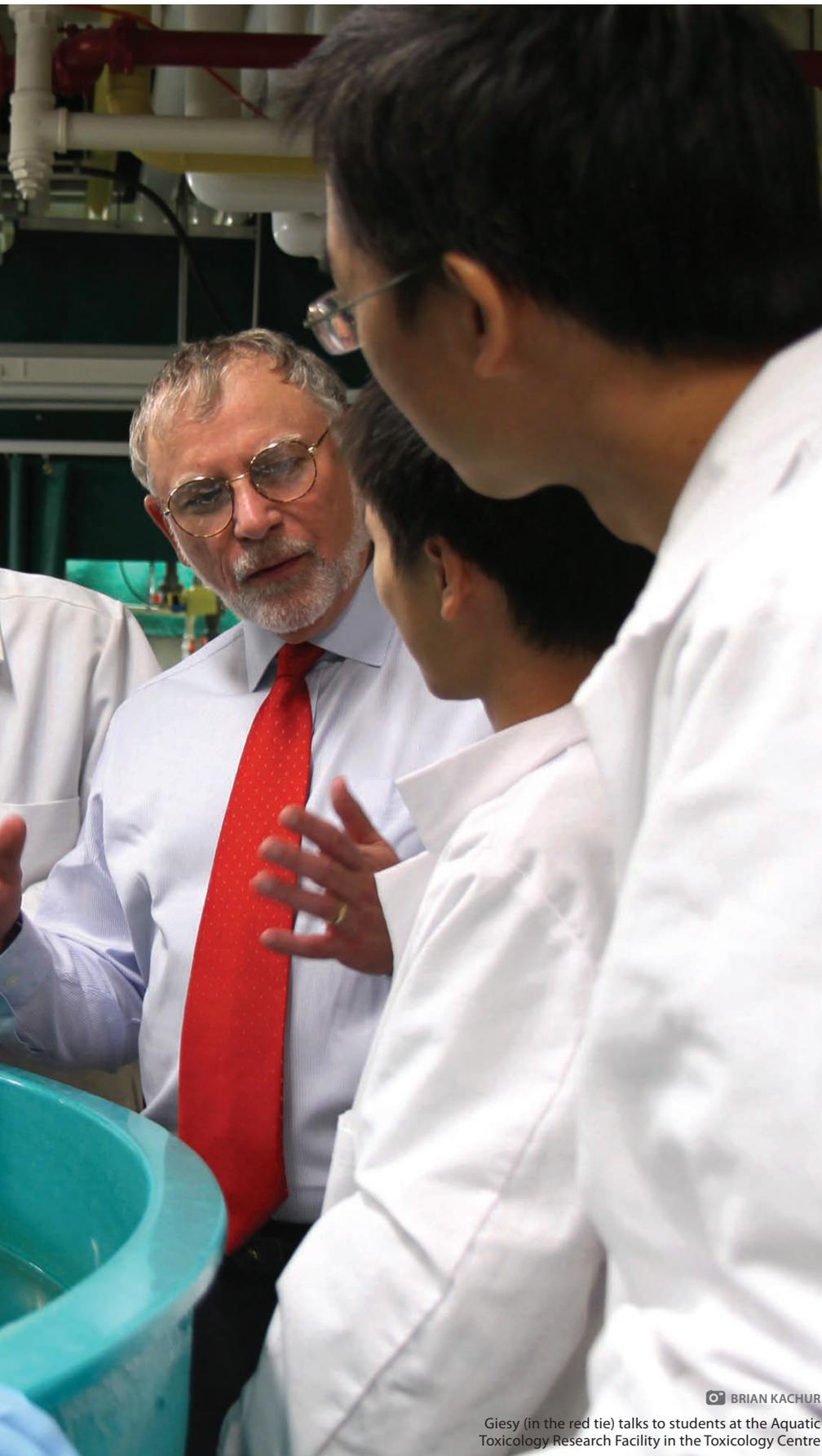
There is mounting evidence the health implications—such as poor bone health and the risk of obesity—are particularly acute for children and women. Whiting is somewhat optimistic awareness is increasing thanks in part to high-profile occurrences like the proposed supersize soda ban in New York City. “It doesn't pass the logic test, but at least it's raising awareness that the supersize mentality of more-for-less isn't a healthy choice,” she said.

Admittedly, it can be confusing to know what to eat and drink, and how much of a good thing is too much. Whiting points to Canada's Food Guide as the best source for information. “It's been formulated to ensure you get the recommended daily allowances of nutrients. I use it personally and in my teaching.” ■



**FULL CIRCLE:
IT IS A PRETTY
SAFE BET NO
ONE GROWING
UP IN THE 1950S
DECLARED "I
WANT TO BE A
TOXICOLOGIST
WHEN I
GROW UP."**

BY DERRICK KUNZ



BRIAN KACHUR

Giesy (in the red tie) talks to students at the Aquatic Toxicology Research Facility in the Toxicology Centre

John Giesy, world-renowned toxicologist, professor and Canada Research Chair in Environmental Toxicology in the Department of Veterinary Biomedical Sciences and the Toxicology Centre at the University of Saskatchewan, is no exception.

“My mom would always answer ‘doctor’ for me when others asked, ‘What do you want to do,’” said Giesy. However, his lifelong interest in biology and his father’s influence shaped his career path more than his mother’s not-so-subtle preference. “We needed to hunt and fish for food. I grew up playing in ponds and fishing with my dad. He used it as vehicle to teach, and we had many discussions in the boat.”

The Michigan-native was fast-tracked through primary and secondary school after United States government testing—prompted by the perceived “science gap” when the Russians launched Sputnik into space—identified Giesy had a genius-level IQ.

Giesy earned his undergraduate degree at Alma College, funded by academic and athletic scholarships. He planned on heading to medical school, no doubt making his mother very proud, but a summer spent doing research with the National Science Foundation looking at the effects of local industries on the Flint River prompted a change in direction. “I love the outdoors, so to see the contamination was sickening. You could almost walk across the river it was so polluted.”

Turning down a full medical school scholarship from the University of Michigan, Giesy turned his attention to the environment. “Being an advocate and criticizing wouldn’t help. Presenting data, including to people in the board room, and educating people would help. People generally just don’t know they are polluting. If you present solid data people respond appropriately.”

After considering his many options to study limnology—the study of fresh, inland water—Giesy found himself close to home at Michigan State University for his graduate work. “I wanted to go somewhere exotic, not to the school down the road, but everyone I interviewed said, ‘Why don’t you go to Michigan State? They are the best in the world at what you want to do.’ So I did, and I studied the effects of phosphorous on ecosystems.”

Giesy found himself at a crossroads when the Vietnam War broke out and the United States was conscribing military service. “I wanted to be a patriot but not kill anyone.” After weighing his options, which included heading north into Canada or applying for conscientious objector status, Giesy started working at a national defence site. “I studied radio isotopes and the impacts of things like plutonium on the environment. I became the investigator of environmental effects. Whenever the U.S. lost a nuke, which happened, I would be sent to the site to study it,” explained Giesy.

When Australia stopped supplying uranium to the U.S., Giesy headed Down Under and worked with the Australian Atomic Energy Commission, where he branched-out into studying cadmium and other metal contaminants in rivers.

A faculty position at the University of Georgia and a post at a national defence site brought Giesy back to his homeland. After the oil embargo of the early-1970s, the U.S. sought to eliminate its reliance on foreign oil. Giesy's assignment with the government shifted to study organic contaminants related to oil shale extraction.



Fast forward to an international conference in Hamburg, Germany in 2003. Karsten Liber, director of the U of S Toxicology Centre was seeking a candidate for a tier two Canada Research Chair position. Having known each other for several years, Liber set-up a meeting with Giesy, who was a distinguished professor at MSU. Liber said, "I wanted to talk to John to see who the new up-and-comers for the research chair could be—rising stars in the field of toxicology, especially in the USA. So I offered to buy him a beer to see if we could scoop a great American researcher to come [to the U of S]."

Liber's impassioned speech conveying the vision to make the U of S Toxicology Centre a global leader piqued Giesy's curiosity. Liber shared, "John thought what we were doing was fascinating. He said if he was younger he'd want to do this. It was the best five Euros I ever spent."

Quick thinking, a lot of behind the scenes work with senior U of S administrators and a new proposal to elevate the research chair to a tier one position paved the way for Liber to seal the deal and bring Giesy north.

"There are only a handful of people in any discipline that are household names. John Giesy is one in our field," Liber said. "We were already known as a top centre in Canada, and recruiting John was transformative. It was a great way for us to quickly become known worldwide."

Reflecting on his decision to come to the U of S, Giesy sees an almost natural fit between his experience and opportunities in Saskatchewan. "Things have come full circle. I started-out studying phosphorous and effects on phytoplankton, and we do that now in Lake Diefenbaker and around the world. I had a background in radio-ecology, so we apply that now to the uranium industry and our nuclear program the university is starting up. I led a big project on the Columbia River relative to metals and fish, so I used all my metals background there. All the work I did on oil shale, I apply now in the oil sands." And being a lifetime fan of the Detroit Red Wings, he jibed, "Any place with a statue of Gordie Howe can't be that bad."

Adopting the theme of economic empowerment without environmental degradation for his research chair, Giesy made it clear the role of a toxicologist is to encourage responsible progress. "Both natural and synthetic chemicals can have adverse effects on people and wildlife. Our job includes doing assessments looking at both exposure and how hazardous a chemical is." Working with governments, regulators and industry, toxicologists seek to "answer socially relevant questions" and mitigate risks to people and the environment.

Determining and limiting risk isn't the end, though. A self-described "green chemist," Giesy works to replace harmful chemicals, not just limit exposure or remove them. A grant from 3M led to the creation of a new chemical to replace toxic perfluorocarbons, a substance that was used in Scotchgard, microwave popcorn bags, microchips and many other household items.

Since coming to the U of S, Giesy has been impressed with level of commitment the university has demonstrated. "Everything promised has been delivered. I like the frontier mentality here. We have to do it together and be self-sufficient, and that affects how we work together."

The results of that work are paying off for the centre. "We had the goal of building the best centre in the world, and we have," said Giesy. "No one in North America comes close. We dominate international meetings, presenting more papers than any university in each of the last six years."

External reviews back-up Giesy's claim. A review panel in late 2012 noted "the program and the Toxicology Centre easily rank within the top five toxicology programs at the international level" and that its graduates are "world-class toxicologists (...) who are sought after by potential employers."

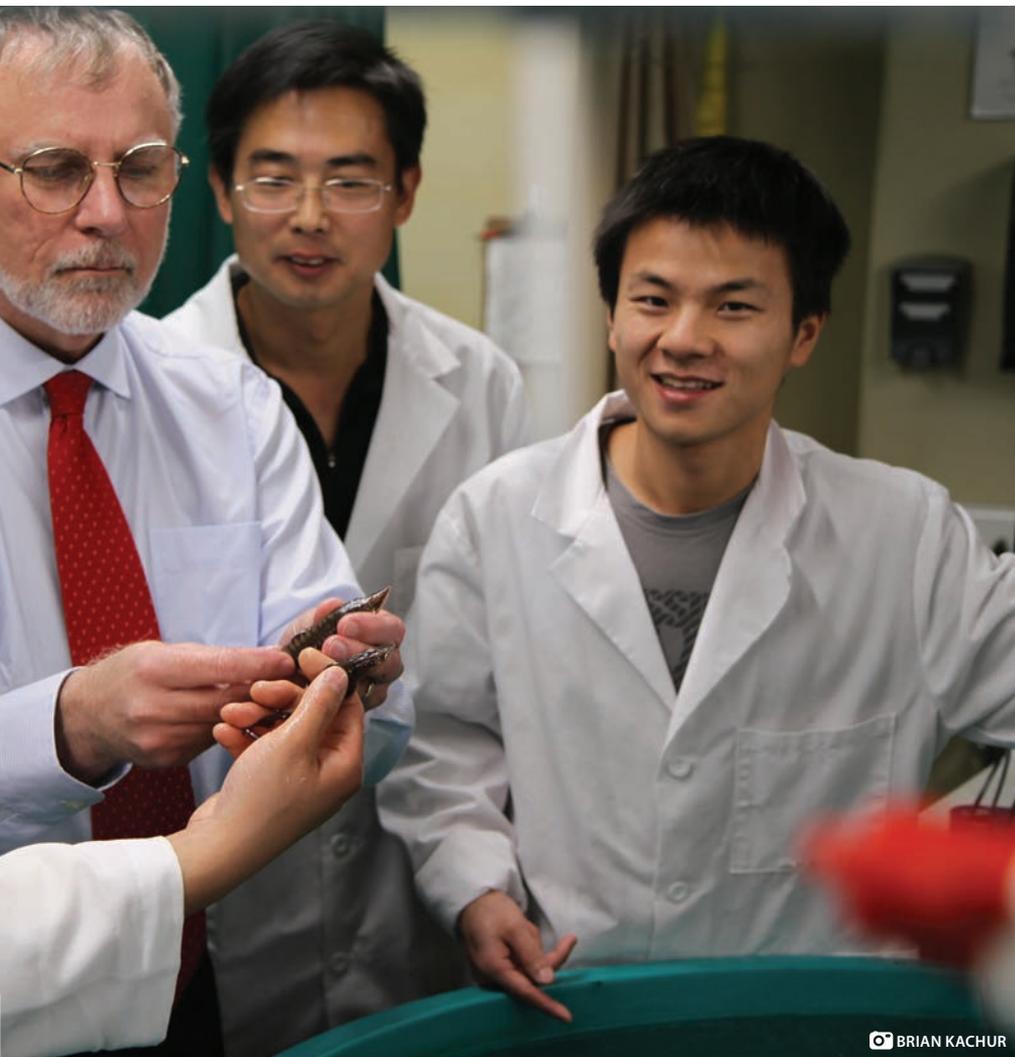
A world-class reputation is because of, and enhances, international partnerships. Liber explained, "We started with partnerships in



Europe because, at the time, they were well ahead of us in terms of legislation and international student exchange programs. Many of us also had personal and professional connections in Europe, so that provided good opportunities for our students." Being a university, providing opportunities for students to learn new techniques and build their own network of professional contacts is of utmost importance.

China has become arguably the centre's most important international partner. Although the country doesn't have the best reputation on environmental issues, Giesy points out the obvious—we can't ignore what's happening in one of the largest, most populated economies in the world because "pollution doesn't respect borders; it spills into other parts of the world, including the Arctic."

Liber added, "The air there is often horrible; in places you can feel the acid in your throat." At the same time, there's a real opportunity for U of S experts to help them help themselves, and it enhances the "international profile for the university and the centre."



BRIAN KACHUR

The business of toxicology

Canada Ecotoxicity Testing & Screening (CETES) endocrine disruptor screening and assessment

U of S toxicologists John Giesy, Markus Hecker and Xiaowei Zhang have developed a screening test in response to growing concern contaminants, particularly in water, may inhibit normal function of the human endocrine system—the system that produces hormones related to metabolism, growth and reproduction to name just a few.

Karsten Liber, director of the centre, explained that contrary to what is seen on television, each class of contaminant must be tested separately—which is costly, time consuming and does not guarantee “results of concern.”

CETES is a live cell line that identifies chemicals affecting the estrogen, androgen and thyroid hormone systems by exposing cells to samples (extracts) and monitoring reactions that may indicate the need for further testing. Both private industry and government agencies, including the United States Environmental Protection Agency, are using the innovation.

Highlighting the importance of relations with China, many U of S faculty hold positions at Chinese universities, including both Liber, with one appointment, and Giesy with four. Giesy was also named an Einstein Professor of the Chinese Academy of Sciences, the highest honour a non-Chinese scientist can be given. “We are able to recruit some of their best and brightest students and provide exchange opportunities for our students and faculty,” said Liber.

With a curriculum vitae long enough to burn-out a household printer and enough awards and accolades to fill a trophy room—including a Lifetime Achievement Award from the Paris-based Scientific Committee on Problems of the Environment and a Founders Award from the Society of Environmental Toxicology and Chemistry—Giesy says he’s most proud of being named a fellow of the Royal Society of Canada. “[My wife and I] adopted Canada and they’ve adopted us. I was elected my first year of eligibility on the first ballot. That’s pretty cool.” ■

The Toxicology Centre: a brief history

1958.

The Saskatchewan Research Council (SRC) builds a facility for research in water supply, mineral resources, agriculture, secondary industry and transportation.

1971.

A Toxicology Centre was first proposed to the National Research Council. Funding was denied.

1979-80.

An agreement between the U of S and the provincial government is reached to establish the centre.

1982.

The Toxicology Centre is formed. Plans to construct a \$6.5-million facility were curtailed due to lack of funding.

1984.

SRC moves to Innovation Place and sells the building to the U of S for \$1. Federal funding of \$2 million is approved for renovations.

December 8, 1986.

The Toxicology Research Centre (TRC) moves to its current home.

1996.

The TRC, the Toxicology Group, and the Toxicology Graduate Program are amalgamated into the Toxicology Centre.

2006.

An \$11.8-million expansion sees the addition of new research laboratories and the Aquatic Toxicology Research Facility, the only facility of its type in Canada and one of only a few in the world.

CONNECTING WITH COMMUNITIES



Engaging and educating through research

BY ASHLEIGH MATTERN

Of all the work Lalita Bharadwaj (BSc'89, MSc'93, PhD'97) has done over the past 10 years, she says developing a participatory approach to research that benefits communities by addressing specific issues is one of the most exciting aspects.

"When I look back at my own research, a lot of it was bench science focused," she said, "and although I was looking at mechanisms of disease that could inform decisions around therapy and treatment for cardiovascular ailments, it wasn't really connecting to the people most affected by these particular diseases or these environmental situations."

Bharadwaj says her path to becoming a toxicologist researching environmental contaminants in water supplies was "rather convoluted." She has a bachelor of science in physiology, a master of science in pathology, a doctorate in toxicology, and postdoctoral training in respiratory medicine and molecular cell biology.

Her areas of research changed as different subjects piqued her interest. She started her academic career researching the causes and effects of heart disease, later changing her focus to the effect of free radicals on the vascular system, which led to an interest in the toxicity of free radicals.

So far, studying the adverse effects of chemicals has stuck, although she now studies water systems rather than human bodies.

Bharadwaj's first position at the University of Saskatchewan was with the Canadian Centre for Health and Safety in Agriculture, and this was where she had her first introduction to participatory research.

She had the opportunity to work with a hydrogeologist from the Saskatchewan Research Council who was developing partnerships with First Nations communities, looking at waste disposal practices and potential exposures to contaminants through water supplies. She interviewed the chief, council elders, and community members about waste disposal issues in their community.

"I had an epiphany or a paradigm shift in my own thoughts about how research should be conducted," she said.

While she believes there's nothing wrong with pure inquiry-based science, she feels that a research question developed by an expert can benefit from the insight of the populations affected by the issue. Not only does their input help develop research questions and objectives

and shape future research, it also helps generate research that benefits the community.

"So it's really applied and meaningful to them, as opposed to research that might just be published in a journal and left in that journal without public access."

Bharadwaj thinks participatory research is an important aspect of any study that affects the larger population, such as the shale gas industry.

"I feel that it's an obligation—morally, ethically, but also in terms of research—to ask people in those communities who might be affected by environmental problems, or decisions around water resources, or even just extractive resources. [It's a researcher's role] to consult with the public to understand those issues and direct the research to answer the questions that are important to the community."



Bharadwaj examines water samples in Peru.

Research done in this way not only improves the quality of the research, it also benefits the community, said Bharadwaj, because there's a reciprocal sharing of information.

In all of her work, she tries to implement community education into the research. She and her students have several research projects involving First Nations communities in Saskatchewan. They are studying the impact of water regulations on First Nations health, the impacts of water crisis in First Nations communities, and studying the links between drinking water and health on First Nations reserves, looking at groundwater quality and potential sources of contamination.

In working with the Muskoday First Nation, just south of Prince Albert, Sask., she had a graduate student go above and beyond the research requirements by working with the school to develop a curriculum about water, specifically as it relates to the community.

The curriculum includes creating awareness of sustainable water resources, some of the issues around contamination and water stewardship, examples of good water quality and bad water

quality, and using hands-on lab experiments where the students grow plants from water with different types of metals in it to see the effects. "I always like connecting with youth," she said.

As a result of her work with First Nations communities in Saskatchewan, the Federation of Saskatchewan Indian Nations has created an environmental working group whose members now meet four times a year to discuss environmental issues, including water.

Perhaps due in part to the participatory style, Bharadwaj's work often has impacts beyond her research. In 2009, she and Peggy MacLeod (BSN'89, MN'91) from the College of Nursing went to the Amazonas region of Peru to conduct situational analysis and a needs assessment for water security in the region, meeting with representatives from the government and members of the community.

As part of their research, they worked with the Peruvians to develop some strategies to help them mitigate issues that arose during workshops. They also discovered that the region had no capacity to measure microbes in their drinking water.

"Microbial contamination is always considered a primary concern in terms of water quality, and this whole region in Peru did not have the capacity to measure *E. coli* in their water samples."

Through the Rotary Club of Saskatoon, they found funding to provide the region with the equipment needed to better monitor their water.

She went back to Peru in 2011 with Robert Patrick from the Department of Geography and Planning to conduct a study in the Ancash region, looking at the capacity for integrated water resource management at the local level.

Earlier this year, she went with Karsten Liber, director of the Toxicology Centre, to discuss a biomonitoring project and to assist in building a research and knowledge exchange in the area of aquatic toxicology. She plans to return again this spring.

Bharadwaj is currently working on five research projects in addition to her work as an associate professor with the university's School of Public Health. She admits that she's busy but said it's a good kind of busy.

Including students in her research may add some work, but it's an important part of the process. "It just creates another avenue to learn more. I always say my students are smarter than me—they teach me." ■



**A STEWARD OF
SUSTAINABLE
DEVELOPMENT**

Her friends took lunch to school in paper bags. Sarah Hughes used Tupperware. They cleaned their homes with commercial detergent. Sarah's mom, Anne, stuck with vinegar.

BY BOB FLORENCE



It's not like we were hippies, but I did grow up on a wooded acreage, more of a natural setting," said Hughes, who is from Newmarket, Ont.

"My mother is aware of the environment. My grandmother taught me about different birds and wildflowers. In my high school yearbook, for my probable job I said I think I'll be an environmental scientist."

Hughes reaches for the sky.

She is an ecotoxicologist studying the effects of chemicals in the air we breathe, in the water we drink and in the soil where our food grows. She does environmental hazard and risk assessment for Shell. The energy and petrochemical company hired her after she completed the toxicology graduate program at the University of Saskatchewan.

Hughes (MSc'05, PhD'08) is one of Shell's three ecotoxicologists in Houston, Texas. The other six are in England. Together they support Shell's activities in more than 70 countries, reviewing company research and testing new materials and planned projects. Their motto is "scrub clean," making sure business follows the environmental rules governments set for industry.

"On any given day I might work on five different projects," said Hughes. "Every chemical is different. Every environment is different."

"Hazard and risk is what we look at. We evaluate the inherent hazardous properties of a chemical and estimate the expected exposures to fish, insects and plants. Together these components allow us to derive the expected environmental risk of a Shell project, operation or business. Based on the environmental risks we find, our team then makes suggestions to make design changes to remove the environmental risks to acceptable levels.

"Sometimes what I do is like a puzzle, a little

CSI." Hughes watches *CSI*. On the TV crime series cases are solved in an hour. "If grad school was that easy I'd be done in a year," she said.

Raised in Ontario and now living in Texas, she keeps connected to Saskatchewan. Hughes is an adjunct professor in the Department of Soil Sciences at the U of S. She also advises a toxicology student in Saskatoon doing a master's thesis on oil sands development. In her own PhD thesis, Hughes looked at how wetland plants deal with naphthenic acids, a by-product of making petroleum in the oil sands.

Then there is Estevan, Sask.

The power station at Boundary Dam near Estevan is being retooled. The goal is to capture 90 per cent of the carbon dioxide the plant belches. The captured gas will be stored and used to recover oil in nearby oil fields in Canada and the United States.

Cansolv Technologies of Montreal landed a contract with SaskPower to deliver the carbon capture know-how. Because Shell owns Cansolv, Hughes is part of the package. For the last two years she has steamed ahead in testing the Boundary Dam plan.

"This is getting a lot of global attention," Hughes said. "It's the world's first and largest integrated carbon capture project, combining post-combustion capture of CO₂ with coal-fired power generation. I help Cansolv ensure its technology is safe [to the environment]."

She looks at offshore oil work as well. Shell is into more than oil and gas, though. It is a petrochemical company. The products Shell makes and the job she does affect all of us, from the lubricant a barley farmer in Hafford uses in his tractor to the laundry detergent for a family in Calgary to the polymer in soccer jerseys worn around the world.

As Hughes develops her expertise in the field, we deal with the practical everyday implications. Her challenge is to find a way for a company to be both cost-efficient and environmentally friendly with products we use.

"I'm practical," said Hughes, who bought her first car when she moved to Houston. "I understand in the world we live in we can't go back to the stone-age. But we can do things more sustainably, more intelligently.

"Coming out of school I had technical knowledge. That is academia. This is the real world. I learn new things and gain new wisdom. My message to toxicology graduate students and faculty is continue to try new projects. Be sure to keep the real world in perspective with science. Don't be afraid to jump outside your area of expertise and add to your knowledge.

"To a general audience I'd say don't take things blindly. Give some critical thought to both sides of any story, particularly on environmental issues. Be an educated consumer."

Think of Paracelsus, said Hughes. He was a German-Swiss physician and alchemist in the 1500s. A line he said 500 years ago applies today. He said all substances are toxic; the dose is what makes the poison.

Hughes knows Paracelsus. She remembers Saskatchewan.

"There is a subtle beauty to the prairie," she said. "I bike a lot, and when I was in Saskatchewan we would call biking into the wind a Saskatchewan hill.

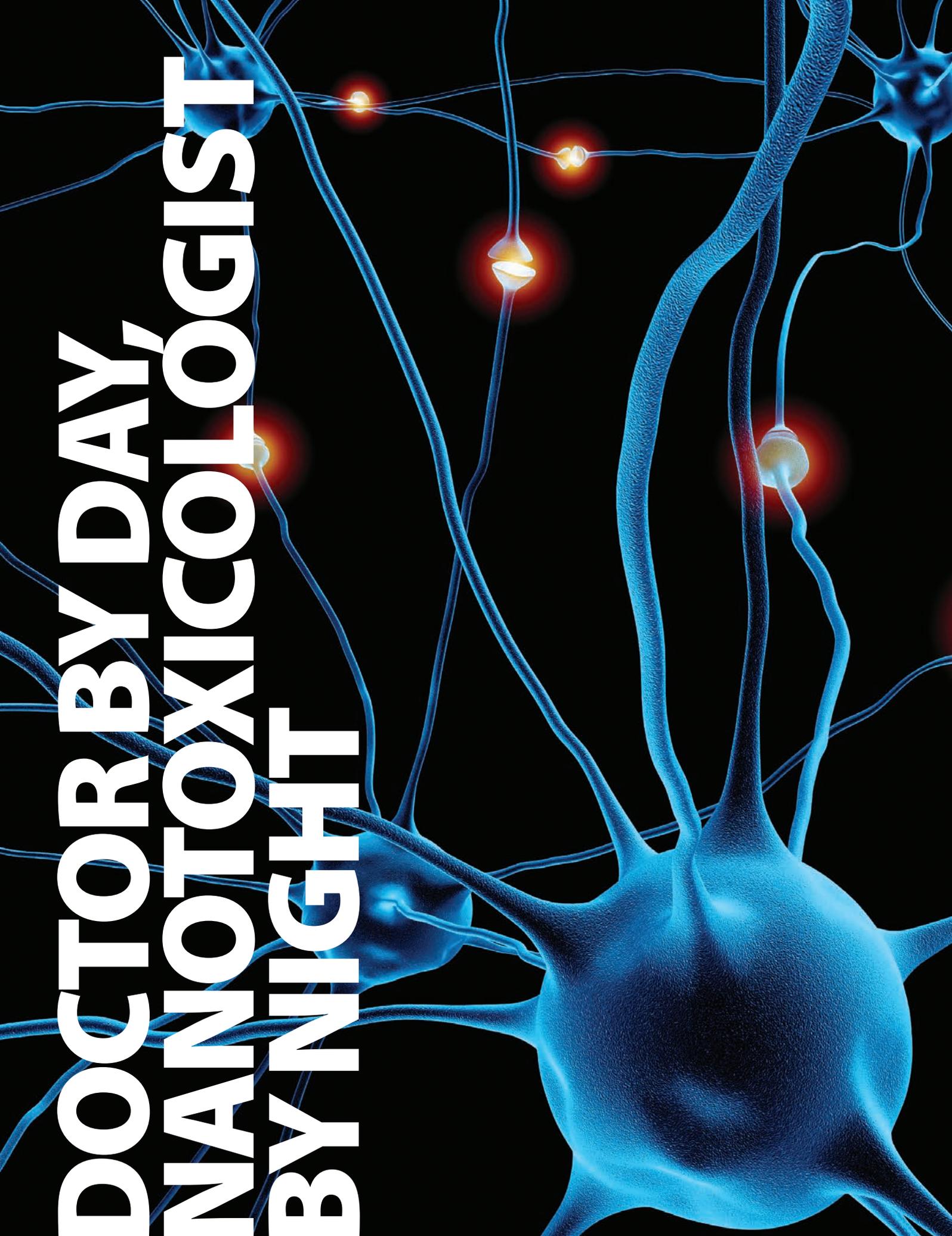
"The neatest thing about my experience at the U of S was interacting with people and the good friendships formed. In grad school we called ourselves the urban family because we spent so much time together.

"I wish I had crazy tales of what has taken me from point A to point B. Being aware of the environment is what I grew up with. I read [American conservationist] Rachel Carson in high school. [That] was formative for me.

"I told my guidance counsellor in high school I was interested in an environment job. I didn't know what toxicology was."

Now she most definitely knows. ■

DOCTOR BY DAY, MANIACOLOGIST BY NIGHT



Dr. Shane Journey balances a full life as a medical resident and nanotoxicology researcher.

BY SUZANNE BOWNESS



Talking to Dr. Shane Journey (PhD'08) makes you realize he probably spends a lot of his time explaining the complex things he does with his life.

Currently, he works by day at Toronto Western Hospital, where he's about halfway through a five-year residency in his specialty of physical medicine and rehabilitation, a broad discipline involving internal medicine and surgery focused on disorders of the neuro-musculoskeletal system such as spinal cord injuries, stroke and traumatic brain injuries.

And if you think that sounds like a complex field, wait until he explains nanotoxicology.

If you imagine the sort of person for whom being a medical resident is a day job, and who still has the energy to be an entrepreneur in the off hours, you're getting a clearer picture of Dr. Journey.

Originally from Nova Scotia, Dr. Journey completed his undergraduate and master's degrees at the University of Ottawa. He was attracted to the nanotoxicology program at the U of S for its reputation as well as its proximity to the National Institute for Nanotechnology in Edmonton. While he was a graduate student, he played hockey at the university and in the city, and since his lab was in the veterinary college, he made lasting friendships with students there as well as in his own community.

Four days after defending his federally-funded PhD thesis to complete his studies at the University of Saskatchewan's Toxicology Centre, he was off to get his medical degree at Dalhousie University in Nova Scotia.

While he'd always planned to go to medical school, his interest in research remained strong, so he also started a consultancy called Nanotechnology Toxicology Consulting & Training.

What's nanotechnology and nanotoxicology? Again, it's a question Dr. Journey has had

significant practice handling thanks to his experience in giving media interviews for the likes of *The Huffington Post* and radio stations all across the United States.

"Nanotechnology is the science and application of small levels of matter," explained Dr. Journey. "Scientists have found that when you manipulate properties at the nano scale, those products change, giving new and exciting products. But from a toxicology standpoint, when we make tiny particles, we don't know how they behave in the environment or in the human body, whether there's a potential downfall."

Our lack of knowledge is made even more serious by the fact that nanotechnology—while very new and very small (a nanometre is a billionth of a metre)—is already in so many products, including cosmetics, drugs, industrial processes and paint.

Dr. Journey expanded on this last example to illustrate. Many paints now contain nanoparticles designed to help it stick to wood better and last longer than ever before. The trouble is, that while the benefits are apparent, the risks are less so. What consequences will these artificial particles have on the people who handle them or on the environment in the long-term? Like some genetically modified foods, we don't yet comprehend the full effect.

Another comparison makes the point even more strongly. "To take it way back, we know from air pollution that ultra-fine particles in cities like L.A. and Toronto are associated with adverse health effects. Well, now we're creating brand new particles at that size which change everything we know about how much we're being exposed to," said Dr. Journey.

While he wants to promote awareness, Dr. Journey said he also wants to avoid being alarmist, emphasizing that some particles could be just fine, while others may have risks. The important point is that more research and expert consultation is needed in order to figure out which particles fall into which category.

Even though Dr. Journey is good at explaining what he does, he doesn't have as

ready an answer as to how he fits it all in. His days generally begin at 6 am, and his workday at the hospital doesn't end until 6 pm. And yet he manages to incorporate consulting work for clients like Health Canada and industry, regular speaking engagements and academic conferences, as well as a role on the editorial board of the *Journal of Occupational Medicine and Toxicology*.

Perhaps his ease with these multiple commitments stems from the fact that he's always been successful at fitting things into his life, from the consulting projects he took on while still a grad student at the U of S, to a stint spent as a representative for Canada at the International Space University in Strasbourg, France working on a project on nanotechnology in space.

In that same realm last fall, he won a scholarship and spent a month at NASA. He's even had dinner with that other guy with an interest in space. "Chris Hadfield carries an intensity and focus, yet is so nice and personable, that it doesn't surprise me that he's where he's at today," recalled Dr. Journey of his meeting with the Canadian astronaut who is now commander of the International Space Station.

While his life has moved forward rapidly since his time at the University of Saskatchewan, Dr. Journey recalls his time at the university clearly. He describes a very positive relationship with his supervisor Dr. Baljit Singh, professor and associate dean at the Western College of Veterinary Medicine, as well as support from toxicology graduate co-ordinator Dr. Barry Blakely, professor and head of veterinary biomedical sciences at the U of S, who played a big role in his choosing the school.

So what's ahead for Dr. Journey? "Nanotechnology is so exciting I never want to leave it, but at the same time I also have commitments as a physician," he mused. The two-and-a-half years left in his medical residency will keep him in Toronto for now, but he said he's open to continuing to try new places and challenges down the road, from applied research at an academic institution to further medical work. ■

Alumni Association President's Message



Shortly after this issue of the *Green & White* shows up in your mailbox, we will celebrate with and welcome thousands of new members into the Alumni Association at spring convocation. It's a moment that sometimes goes unnoticed as

graduates tend to focus on ending their careers as student and transition to working professionals.

Helping these graduates realize their new bond with the U of S as alumni is part of what the Alumni Association does. We connect with upper-year students at graduation banquets, introducing them to the concept of a changed relationship with the university.

Representatives of the Alumni Association also officially welcome new alumni at each convocation ceremony, and a package of information, including their inaugural issue of the *Green & White*, is given to them. They are informed of the many benefits and services they have access to as alumni, that they join a special group of accomplished and well-respected individuals, and they are encouraged to carry-on the tradition of excellence U of S alumni exhibit around the world.

All of this is done by volunteers—alumni just like you and me take the time to introduce newcomers into our club, no, our alumni family.

We will be recognizing the contributions of these, and all U of S volunteers, at the U of S Alumni Association's Annual General Meeting on June 19 at Convocation Hall in the Peter MacKinnon Building.

I invite you to attend the meeting, learn more about what your Alumni Association does, and help celebrate the contributions of our valuable volunteers. Hopefully next year we will celebrate your contribution too.

All the best,

Judy MacMillan

Judy MacMillan, BSA'79

Notice of Alumni Association's Annual General Meeting

Date. June 19

Time. 6:30 pm

Place. Convocation Hall

Volunteer recognition and reception to follow the meeting

Reports and agenda will be made available online at alumni.usask.ca/association/agm

RSVP online at alumni.usask.ca/events/registration or call 1-800-699-1907.

Achievement Awards

Nominate a U of S alumnus for an Alumni Association Achievement Award.

The awards celebrate our outstanding graduates for professional, social and community contributions and achievements.

Alumni will be recognized for their contributions to fields such as Aboriginal initiatives, agriculture, the arts, athletics, sport and wellness, business and industry, community leadership, education, innovation, occupations or professions, philanthropy, research and volunteer service.

Recipients will be honoured at a reception on October 24 at TCU Place in Saskatoon.

Nomination deadline is June 28.

Nomination forms and terms of reference are available at alumni.usask.ca/awards



DAVID STOBBE

Introducing the 14th chancellor of the University of Saskatchewan

Blaine Favel (BEd'87, LLD'12), president and CEO of Calgary-based One Earth Oil and Gas Inc. and influential First Nations leader, has been appointed the 14th chancellor of the University of Saskatchewan.

Favel's three-year term begins July 1, replacing Vera Pezer (BA'62, MA'64, PhD'77) who was first elected in 2007 and served two full terms. His appointment was confirmed at a meeting of University Senate April 20 based on the recommendation of a joint nomination committee.

Favel earned two other degrees—a law degree from Queen's University and a master of business administration from the Harvard Graduate School of Business—and was given an honorary doctor of laws from the U of S in 2012.

He was Chief of the Poundmaker Cree Nation and served as Grand Chief of the

Federation of Saskatchewan Indian Nations from 1994-98. During that time, he led the development of the First Nations Bank of Canada and the Saskatchewan Indian Gaming Authority. Favel was also a senior diplomat as the Canadian Department of Foreign Affairs and International Trade Counsellor on International Indigenous Issues, served as a special advisor to the Assembly of First Nations National Chief Phil Fontaine, and was a panellist on the Indian Residential Schools Truth and Reconciliation Commission.

As chancellor, Favel will preside at university convocation ceremonies, confer degrees, chair University Senate and take a seat as an ex-officio member of the Board of Governors. ■

Celebrating alumni excellence



Congratulations to Shannon Lindsay (BComm'08, MPAcc'10), the 2013 recipient of the USSU Engaged Alumni Excellence Award.

Lindsay served on student executives as an undergraduate at the Edwards School of Business and with the Master of Accounting program, spearheading fundraising initiatives, where she set records for charitable giving.

Professionally, Lindsay worked as a senior accountant at KPMG where she served on the charity and sustainability committees and received the KPMG CEO Community

Excellence Award. She is currently manager of financial reporting and budgeting at Federated Co-operatives Limited.

On top of participating in the MPAcc mentorship program and acting as a reviewer for undergraduates that help prepare tax returns for low income individuals, Lindsay is an active volunteer with Saskatoon Road Runners Association, The Princess Shop, the Children's Hospital Foundation of Saskatchewan and Students in Free Enterprise advisory board. ■



MPAcc Reunion

Nearly 70 accounting alumni gathered in Toronto for their first ever reunion in October 2012. At the reception, Edwards School of Business Dean Daphne Taras introduced the keynote speaker, Shelley Brown (BComm'78), incoming Canadian Institute of Chartered Accountants chair and senior partner at Deloitte. ■

Did you get it?

Don't be the last in your class to find out about U of S alumni news.

Update your contact information with the U of S alumni office to ensure you get the latest alumni information and news. Visit alumni.usask.ca/update or call 1-800-699-1907.

You can also connect with classmates through our Facebook page or LinkedIn group.





AbdulRazaq Sokoro



Behind the scenes

After you have a blood sample drawn, a whole lot needs to happen between the time your bandage gets put on and your doctor's office calls to share results.

Enter AbdulRazaq Sokoro (PhD'07), a clinical biochemist, and his team of technologists. "I oversee hospital lab tests, ensure quality of the tests and provide an interpretation of results to physicians. The physician then uses that information to treat the patient," Sokoro said. "Sometimes physicians are faced with a disease they don't know how to tackle, and I will advise them on what tests to order. So, I act as a consultant to physicians as well." He added there is a section of the laboratory that does toxic screening, but "the CSI aspect of forensic toxicology in Canada is mainly done by the RCMP."

In 1999, Sokoro came to Canada from Kenya, joining his wife and children who previously immigrated to Canada. He was accepted in the post-graduate diploma program at the University of Saskatchewan's Toxicology Centre two years later. Despite challenges finding a supervisor for his graduate studies, his persistence paid off. "Dr. Blakely [a veterinary

toxicologist] didn't hesitate to offer me a position in the toxicology program, and I'm very grateful for the opportunity he gave me." Sokoro was successfully paired with a supervisor in the Saskatchewan Disease Control Laboratory, and he was able to transfer to the centre's master of science program and subsequently into the PhD program.

Conducting his research in Regina, Sokoro's thesis offered valuable new insights into fetal alcohol syndrome disorder (FASD). "We all know alcohol, specifically ethanol, affects fetal brain development causing abnormal changes in brain chemistry that affects brain growth and development," explained Sokoro. "Methanol, which is in every alcoholic beverage, is actually more toxic than ethanol."

Sokoro investigated how folic acid—a vitamin B anti-oxidant found in green leafy vegetables, red meat and many fortified foods such as cereal—effectively assists in

the metabolism of methanol. "If your body is deficient in folic acid, you won't be able to detoxify effectively." Binge drinkers build-up a particularly high level of methanol, so they need a high level of folic acid to metabolize the toxic substance. Sokoro purported folic acid could help protect developing fetuses against harmful effects "to a certain degree. The best protection is abstinence from alcohol."

Post-doctoral training directed Sokoro east to Manitoba, and he currently serves as a clinical biochemist for Diagnostic Services of Manitoba—a provincial crown corporation that provides over 10 million tests annually for hospitals in Manitoba—and is an assistant professor for both internal medicine and pathology with the Faculty of Medicine at the University of Manitoba.

Reflecting on his career so far, Sokoro stated, "All you need is one break. After that, the sky is the limit for your ambitions." ■



Donald Bobiash, BA'80

Donald Bobiash, one of the university's 100 Alumni of Influence, was appointed ambassador to the Republic of Indonesia, with concurrent accreditation to the Democratic Republic of Timor-Leste, and ambassador to the Association of Southeast Asian Nations in Jakarta.

Class notes

The following alumni were awarded the Queen Elizabeth II Diamond Jubilee Medal:

- Mrs. Gladys R. Rose, BA'46, PGD'69
- Mr. Duncan F. Robertson, BA'48, MA'76
- Chancellor Emeritus Edward K. (Ted) Turner, D/Agric'48, LLD'89
- Mr. Gordon A. Wilson, BSA'48
- Mr. Merlis M. R. Belsler, BComm'57, LLB'63
- Mr. Steve Harasymuk, BA'57, BEd'59
- Prof. Emeritus Murray P. Scharf, BA'59, Cert/Ed'60, BEd'61, MEd'64
- Prof. Emeritus Delwyn G. (Del) Fredlund, BE'62
- Mr. Kurt G. Tischler, BA'64, BEd'65, MA'79
- Hon. Donald G. (Grant) Devine, BSA'67
- Mrs. Beverley A. Tosh, BA'68
- Mr. Dennis K. Paddock, BE'68
- Mr. Howard L. Love, Admin'68
- Mr. Syed M. S. (Shakeel) Akhtar, PhD'68
- Mr. John T. William Dubets, BA'69
- Mr. Dennis R. Akins, BE'70, MSc'72
- Mr. Dennis A. Beerling, BEd'70
- Ms. Evelyn T. Nesdole, BAPE'70, BEd'71, PGD'84
- Ms. Rita G. Smysnuik, BEd'71, PGD'87
- Mr. Guy C. Vanderhaeghe, BA'71, Arts'72, MA'75, DLitt'97
- Mr. Ernest G. (Ernie) Walker, BEd'71, BA'72, Arts'73, MA'78
- Mr. Alexander L. (Alex) Hillyard, BA'72, MEd'75
- Mr. Brian D. Carduner, BEd'73, BSPE'79
- Ms. Marguerite A. Gallaway, BEd'73, LLD'89
- Mr. Duncan L. Campbell, BEd'74
- Ms. Jo-Anne E. Bannatyne-Cugnet, BSN'74
- Ms. Wendelin A. Fraser, BA'75
- Mr. Eric J. Vincent, BEd'76, BSc'77
- Ms. Caroline M. A. Melis, BA'77
- Mr. Garnet Garven, MBA'80
- Ms. Susan C. Amrud, BA'80, LLB'80
- Ms. Bev Dubois, BusAdm'81
- Mr. Richard I. T. (Rick) Hardy, LLB'81
- Mr. Douglas C. (Doug) Hodson, BComm'81, LLB'84
- Mr. John-Paul Ellson, LLB'87
- Mr. Timothy S. (Tim) Gitzel, BA'89, LLB'90
- Dr. Connie L. Ellis, MD'91
- Mr. Richard (Rich) Gabruch, BA'91, LLB'94
- Ms. Patricia L. Dubets, BEd'92
- Ms. Susan G. Anholt, BA'94
- Mr. Jason J. Warick, BA'96
- Dr. Cory C. Toth, MD'97
- Mr. Gerrid D. Gust, D/Agric'98

- Ms. Lenita R. Knudsen, BE'98
- Ms. Josephine M. Angelopoulos, HosAdm'00
- Mr. Bradley S. Sylvester, BusAdm'06
- Ms. Ainsley K. Robertson, BComm'09
- Mr. Douglas Cardinal, DLet'12

■ 1940

Ms. Mary I. Houston, BA'47, BEd'50, of Saskatoon, SK, received the 2013 Alumni of Influence award from the U of S College of Arts and Science.

■ 1960

Hon. Roy J. Romanow, BA'60, LLB'64, LLD'07 of Saskatoon, SK, received the 2012 Modern Makers Award from the Institute on Governance.

Ms. Sharon A. Butala, BEd'62, BA'63, PGD'73, DLitt'04, of Calgary, AB, received the 2012 Cheryl and Henry Kloppenburg Award for Literary Excellence by the Saskatchewan Writer's Guild. She also delivered the inaugural lecture to the new Master of Fine Arts in Writing program at the U of S in November 2012.

Mr. Mitchell H. Gropper, BA'64, LLB'65, of Vancouver, BC, received the 2012 Lexpert Zenith Award which honours lawyers who have been change agents for forty or more years.

Ms. Olga C. (Cecilia) Kachkowski, BEd'64, BA'74, of Saskatoon, SK, compiled *Cooking with Cherries... from the Prairies*, a cookbook published by the U of S Plant Science Department. It was awarded Best in Canada in the Fund Raising, Charity and Community Cookbooks category by the Gourmand World Cookbook Awards 2012. All proceeds from the sale of the cookbook go to scholarship support for students developing better fruit crops in Saskatchewan.

Chancellor Emeritus William T. (Tom) Molloy, LLB'64, BA'64, LLD'09, of Saskatoon, SK, received the Saskatchewan Order of Merit and the 2012 Lexpert Zenith Award which honours lawyers who have been change agents for forty or more years.

Mr. Harold M. J. Mueller, BA'64, Cert/Ed'64, BEd'79, of Cudworth, SK, has been re-elected mayor for the Town of Cudworth.

Mr. Lawrence L. (Larry) Herman, BA'66, of Toronto, ON, received the 2012 Lexpert Zenith Award which honours lawyers who have been change agents for forty or more years.

Mr. Leonard J. (Len) Edwards, BA'67, MA'69, of Saskatoon, SK, received the 2013 Alumni of Influence award from the U of S College of Arts and Science.

Ms. Shirley E. Haines, BA'67, BEd'71, MEd'87, of Saskatoon, SK, has been inducted into the Saskatoon Women's Hall of Fame by the Saskatoon Council of Women.

Prof. Emeritus Lorne A. B. Babiuk, BSA'67, MSc'69, DSc'87, of Saskatoon, SK, has been inducted to the Saskatchewan Agricultural Hall of Fame.

Dr. Bruce M. McManus, BAPE'67, MD'77, of Vancouver, BC, received the Aubrey J. Tingle Prize in October 2012, recognizing the significant impact of his work on improving health and the health system.

Sr. Rosaleen M. Zdunich, BEd'68, of Edmonton, AB, received the Alberta Order of Excellence.

Mr. George W. Patterson, BA'69, LLB'86, of Moose Jaw, SK, has been appointed Queen's Counsel by the Government of Saskatchewan.

Ms. Ruth P. N. Warick, BA'69, of Vancouver, BC, received the President's Staff Award for Advancing Diversity and Inclusion at the University of British Columbia.

Sr. Teresita Kambeitz, BA'69, BEd'69, of Saskatoon, SK, received the St. Thomas More College Distinguished Alumna Award.

■ 1970

Mr. Larry J. McDaid, BEd'70, MA'71, MEd'83, of Edam, SK, has been re-elected mayor for the Town of Edam.

Mr. Ronald B. Toles, BEd'70, of Swift Current, SK, has been elected city councillor for the City of Swift Current.

Mr. Bryan L. Wilson, BEd'70, of Weyburn, SK, has been re-elected to the Board of Trustees for the South East Cornerstone School Division No. 209.

Mr. Gordon A. Gendur, BEd'71, BA'72, of Saskatoon, SK, was appointed a member of the board for the Sunrise Health Region in eastern Saskatchewan.

Ms. Kathryn J. Ford, BA'71, of Saskatoon, SK, was appointed to the University of Saskatchewan Board of Governors.

Mr. W. David B. (Dave) King, BAPE'71, BEd'72, of Glendale, AZ, USA, was named a Distinguished Honoree of the Order of Hockey in Canada by Hockey Canada.

Mr. Theodore J. (Ted) Nieman, BA'71, LLB'73, of Saskatoon, SK, has been appointed Queen's Counsel by the Government of Saskatchewan.

Mr. David A. Thauberger, BFA'71, of Regina, SK, received the Saskatchewan Order of Merit.

Ms. Deborah K. Allyn, BSc'72, of Saskatoon, SK, was awarded a Saskatchewan Protective Services Medal for exemplary service.

Ms. Marguerite A. Gallaway, BEd'73, LLD'89, of Estevan, SK, has been named to the Alumni Wall of Honour for the U of S College of Education.

Ms. Elaine A. Yaychuk, BA'73, BEd'75, of Meadow Lake, SK, was re-elected city councillor for the City of Meadow Lake and has been appointed deputy mayor.

Ms. Heather A. Sinclair, BA'74, LLB'82, of Regina, SK, has been appointed Queen's Counsel by the Government of Saskatchewan.

Mr. Zenneth K. Faye, BE'74, of Saskatoon, SK, has been inducted into the Saskatchewan Agricultural Hall of Fame.

Ms. Joan B. Crockett, BA'77, of Calgary, AB, has been elected a member of Parliament for Calgary Centre.

Mr. Barry W. Bashutski, BEd'78, BA'82, MEd'90, of Buena Vista, SK, has been elected to the Board of Trustees for the Prairie Valley School Division No. 208.

Ms. Shelley A. Brown, BComm'78, of Vancouver, BC, received a Canada's Most Powerful Women: Top 100 Award for 2012 from the Women's Executive Network.

Mr. Ching Kong Kong (Don) Poon, BE'79, of Saskatoon, SK, received the Lieutenant Governor of Saskatchewan Meritorious Achievement Award.

Mr. Brian P. Sawatzky, BSA'79, BEd'82, of Saskatoon, SK, received the Saskatchewan Chamber of Commerce's 2012 ABEX Environment Award.

Mr. W. Brett Wilson, BE'79, of Calgary, AB, received the Saskatchewan Order of Merit.

■ 1980

Mr. Wilmer J. Lengyel, BEd'80, of Rose Valley, SK, has been elected to the Board of Trustees for the Horizon School Division No. 205.

Mr. Michael J. Webb, BE'80, of Calgary, AB, has been appointed president and CEO of OMERS Energy Inc.

Ms. Brenda L. Baker, BFA'81, of Saskatoon, SK, has been inducted into the Saskatoon Women's Hall of Fame by the Saskatoon Council of Women.

Ms. Miriam E. M. Vos-Guenter, BEd'81, of Victoria, BC, received a Prime Minister's Award for Teaching Excellence, Certificate of Achievement.

Mr. Brian M. Banilevic, LLB'82, of Regina, SK, has been appointed Queen's Counsel by the Government of Saskatchewan.

Mr. Thomas J. F. Eremondi, BA'82, of Saskatoon, SK, was recently appointed communications director for the Saskatoon City Hospital Foundation.

Mr. Antony V. Leeson, BEd'82, of St. Walburg, SK, has been re-elected mayor of the Town of St. Walburg.

Mr. Beaty F. Beaubier, BComm'83, of Saskatoon, SK, has been appointed Queen's Counsel by the Government of Saskatchewan.

Ms. Trudy M. Curran, BA'83, LLB'86, of Saskatoon, SK, received a Canada's Most Powerful Women: Top 100 Award for 2012 from the Women's Executive Network.

Mr. Mark R. Mullins, BA'84, of Saskatoon, SK, received the 2013 Alumni of Influence Award from the U of S College of Arts and Science.

Ms. Nancy F. Dilts, BA'85, LLB'88, of Calgary, AB, has been appointed Queen's Counsel. She was also elected to serve a three-year term as a benchler for the Alberta College of Lawyers.

Mr. Myron M. J. Stadnyk, BE'85, Saskatoon, SK, has been appointed president and CEO of ARC Resources Ltd.

Ms. Sheila M. Mann, BA'85, LLB'88, of Clarence Creek, ON, now serves as general counsel for Magmic Inc.

Dr. Derek A. Rogers, DMD'85, of Red Deer, AB, was the Gold Winner – Dentist in the *Red Deer Express* Best of Red Deer 2012 Readers Choice Awards.

Mr. Norman L. (Lee) Cutforth, LLB'86, of Lethbridge, AB, has been appointed property rights advocate by the Government of Alberta.

Ms. Linda M. Mattock, BEd'86, PGD'01, MEd'05, of Humboldt, SK, has been elected a city councillor for the City of Humboldt.

Mr. Frederick N. (Fred) Wesolowski, BA'86, of Saskatoon, SK, has been re-elected to the Board of Education for the Greater Saskatoon Catholic Schools.

Ms. Sara E. Williams, BSA'87, MSc'97, of Saskatoon, SK, has been inducted into the Saskatchewan Agricultural Hall of Fame. She is the author of several books on prairie gardening, including the recently revised *Creating the Prairie Xeriscape*.

Ms. Susan B. Barber, LLB'87, of Regina, SK, received a Canada's Most Powerful Women: Top 100 Award for 2012 from the Women's Executive Network.

Mr. James D. Carriere, BusAdm'87, of Saskatoon, SK, has been re-elected to the Board of Education for the Greater Saskatoon Catholic Schools.

Ms. Linnea C. Goodhand, LLB'87, of Lloydminster, SK, has been elected city councillor for the City of Lloydminster.

Mr. Gary R. Philipchuk, BEd'87, PGD'96, MEd'98, of Warman, SK, has been elected city councillor for the City of Warman.

Mr. Lee A. Elliott, BA'88, Arts'90, of White City, SK, has been appointed vice-chair for the University of Regina Board of Governors and has been elected to the Board of Trustees for the Prairie Valley School Division No. 208.

Ms. Laura M. Small, MBA'88, of Casa Rio, SK, was the recipient of a World of Difference Award from The International Alliance for Women.

Mr. Donald A. Buglas, BEd'89, MEd'00, of North Battleford, SK, has been re-elected a city councillor for the City of North Battleford.

Dr. Caroline G. Krivozoff-Sanderson, DMD'89, of Red Deer, AB, has been named a fellow of the Academy of General Dentistry in Philadelphia, PA, USA.

■ 1990

Mr. Richard E. Florzone, BE'90, MSc'92, of Saskatoon, SK, has been appointed president-elect of Dalhousie University.

Ms. Heather J. Laing, BA'90, LLB'93, of Saskatoon, SK, has been appointed Queen's Counsel by the Government of Saskatchewan.

Mr. Kelly M. Lewis, BEd'90, of Hanna, AB, received the Wildlife, In-Trust, Safekeeping, Education (WISE) Foundation Volunteer Instructor Conservation Award for 2012. This award is presented for outstanding contributions in the field of conservation education.

Mr. Louis A. O'Reilly, BA'90, of Saskatoon, SK, was the recipient of the Industry Builder Award at the Western Canadian Music Awards.

Mr. Terrence D. Shields, BComm'90, of Shaunavon, SK, was the winner of the 2012 Brandes Institute's Manager Challenge for Investment Professionals.

Ms. Georgina S. Jolibois, BA'91, of La Loche, SK, has been re-elected as mayor for the Town of La Loche.

Mr. Brian J. Rolifes, LLB'91, of Toronto, ON, was appointed to the Ontario Rhodes Scholar Selection Committee. He also has been given the Future Leader to be Proud Of Award by Out on Bay Street.

Ms. Dawn M. Lunning, BComm'93, of Moose Jaw, SK, has been re-elected a city councillor for the City of Moose Jaw.

Mr. Travis L. Jorgenson, BE'94, of Humboldt, SK, has been elected a city councillor for the City of Humboldt.

Ms. Sherie D. Lucas, BComm'94, of Regina, SK, received a Canada's Most Powerful Women: Top 100 Award for 2012 from the Women's Executive Network.

Mr. John D. Lagimodiere, BA'96, of Saskatoon, SK, received the 2012 Wiichihwayshinawn Journalism Award.

Ms. Heather D. MacMillan-Brown, LLB'96, of Saskatoon, SK, has been appointed Queen's Counsel by the Government of Saskatchewan.

Mr. Lee G. Ahenakew, BComm'97, of Saskatoon, SK, has been appointed to the Board of Governors at the University of Saskatchewan.

Mr. Scott R. Moe, BSA'97, of Saskatoon, SK, has been appointed the legislative secretary to the minister of agriculture by the Honourable Brad Wall, premier of Saskatchewan.

Mr. Kent J. Muench, BSc'98, BEd'00, MEd'10, of Martensville, SK, has been elected mayor for the City of Martensville.

Mr. Darryl D. Hickie, BA'99, Saskatoon, SK, has been appointed legislative secretary to the minister of Saskatchewan Government Insurance (traffic safety) by the Honourable Brad Wall, premier of Saskatchewan.

Mr. Douglas A. Harrington, BMus'99, Saskatoon, SK, received the 2013 Alumni of Influence award from the U of S College of Arts and Science.

Mr. Troy D. Davies, HosAdm'99, of Saskatoon, SK, has been elected a city councillor for the City of Saskatoon, Ward 4.

Mr. Jerrod M. Schafer, BComm'99, of Swift Current, SK, has been acclaimed mayor for the City of Swift Current. He is also co-chairman of the Saskatchewan Hockey Hall of Fame and vice-chairman of the Saskatchewan City Mayors' Caucus.

■ 2000

Mr. Cory B. Niefer, BSKin'01, MSc'07, of Saskatoon, SK, participated in the 2012 Summer Olympic Games in London, UK as an athlete in the men's 10 metre air rifle event.

Ms. Cara L. Haaf, LLB'02, Saskatoon, SK, has been named a partner at Scharfstein Gibbings Walen Fisher LLP.

Mr. Collin S. Adams, BComm'02, of Lloydminster, SK, has earned his professional designation as a certified general accountant from the Certified General Accountants Association of Saskatchewan.

Mr. Xiongbiao Chen (Daniel), PhD'02, of Saskatoon, SK, received the New Researcher Award from the University of Saskatchewan.

Ms. Shannon G. Whyley, BComm'03, LLB'04, of Saskatoon, SK, has been appointed a partner with MacPherson Leslie & Tyerman LLP in Saskatoon.

Ms. Monique C. Haakensen, BSc'04, PhD'09, of Saskatoon, SK, received the Saskatchewan Chamber of Commerce 2012 ABEX New Venture Award for her company Contango Strategies Ltd.

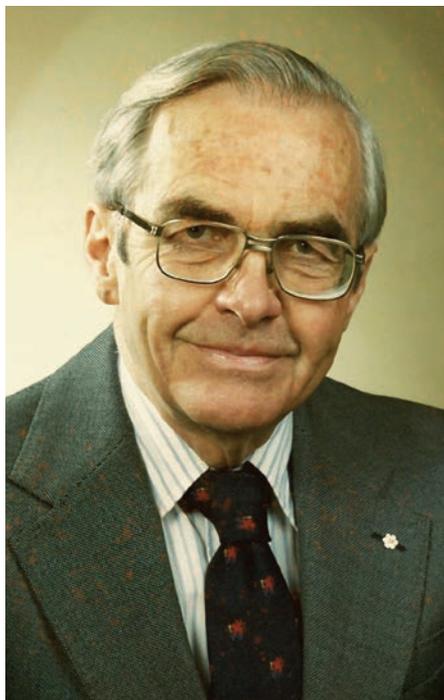
Mr. Matthew Rosenberg BFA'04, of Casa Rio, SK, was awarded second place in the 2012 Land Art Generator Initiative Competition, a New York City architectural design competition.

Mr. Rajendra K. Sharma, DSc'04, of Saskatoon, SK, has been appointed the U of S Distinguished Research Chair in the Department of Pathology and Laboratory Medicine.

Dr. Regan N. Schmidt, MPAcc'04, of Saskatoon, SK, received the Outstanding Dissertation Award by the American Accounting Association, Auditing Section.

Gordon Robertson (BA'37, LLD'59)

Distinguished public servant, U of S alumnus remembered



Born in Davidson, Sask., Robertson studied at the University of Oxford as a Rhodes Scholar, as well as at the U of S and University of Toronto. He began his career in 1941 with the Department of External Affairs. In 1945, he accepted a post in the Prime Minister's Office and was appointed deputy minister of the newly established Department of Northern Affairs and National Resources in 1953. In July of 1963, Prime Minister Lester B. Pearson appointed him to the position of clerk of the Privy Council and secretary to the cabinet, the most esteemed position in the Canadian Public Service. He held this position until January of 1975.

In a statement, Prime Minister Stephen Harper said Robertson "was one of the most influential public servants of his day" who will "be remembered as a great Canadian."

Robertson's wide-ranging contributions were recognized with an array of honours and awards. He received the Vanier Medal in 1970, was named a Fellow of the Royal Society of Canada in 1974 and was inducted as a Companion of the Order of Canada in 1976.

After retiring in 1979, Robertson went on to become president of the Institute for Research on Public Policy, served as a chancellor of Carleton University from 1980 to 1990, and recounted his experiences in a memoir, *Memoirs of a Very Civil Servant*, which was published in 2000. ■

Gordon Robertson (BA'37, LLD'59)—distinguished public servant, Alumni Achievement Award recipient in 1988, and one of the College of Arts and Science's inaugural Alumni of Influence in 2009—passed away on Jan. 15, 2013 at the age of 95.

Ms. Andrea J. Eccleston, BSc'05, of Saskatoon, SK, has been appointed the programs and student recruitment coordinator in the College of Arts and Science at the U of S.

Dr. Reuben J. Mapletoft, DSc'05, of Saskatoon, SK, has been appointed the 2012 U of S Distinguished Research Chair in the Department of Large Animal Clinical Sciences at the Western College of Veterinary Medicine.

Mr. Trevor R. Poulin, CIBA'05, BComm'08, of Saskatoon, SK, has earned his professional designation as a certified general accountant from the Certified General Accountants Association of Saskatchewan.

Ms. Laurel M. (Lori) Hanson, PhD'07, of Saskatoon, SK, received the Global Citizen Award by the Saskatchewan Council for International Cooperation.

Ms. Stefanie M. Jelinski, BComm'07, MPAcc'09, of Saskatoon, SK, earned her professional designation as a chartered accountant from the Institute of Chartered Accountants of Saskatchewan in 2009 and her chartered business valuation (CBV) designation in 2012. After working for five years in the Calgary office of Ernst & Young Accounting, she transferred to the Transaction Advisory Support Department in Manhattan, NY in December 2012.

Ms. Nicole L. Sarauer, LLB'09, of Saskatoon, SK, has been elected to the Board of Trustees for the Regina Catholic School Division.

Mr. Tyson G. Kennett, BComm'09, of Saskatoon, SK, has earned his professional designation as a chartered accountant from the Institute of Chartered Accountants of Saskatchewan.

Ms. Yun Wang, BComm'09, of Saskatoon, SK, has earned her designation as a certified general accountant from the Certified General Accountant Association of Saskatchewan.

■ 2010

Ms. Ashlee M. Strelieff, BComm'10, of Saskatoon, SK, has earned her designation as a certified management accountant from the Certified Management Accountants of Saskatchewan.

Mr. Christopher R. McCarthy, BComm'10, MPAcc'12, of Saskatoon, SK, has earned his professional designation as a chartered accountant from the Institute of Chartered Accountants of Saskatchewan.

Ms. Melissa V. Klebeck, BComm'10 MPAcc'12, of Saskatoon, SK, has earned her professional designation as a chartered accountant from the Institute of Chartered Accountants of Saskatchewan.

Mr. Michael A. Thompson, BComm'10, of Saskatoon, SK, has earned his professional designation as a chartered accountant from the Institute of Chartered Accountants of Saskatchewan.

Mr. Michael C. Campbell, BComm'10 of Saskatoon, SK, has earned his professional designation as a chartered accountant from the Institute of Chartered Accountants of Saskatchewan.

Mr. Shayne M. Dueck, BComm'10, MPAcc'12, of Saskatoon, SK, has earned his professional designation as a chartered accountant from the Institute of Chartered Accountants of Saskatchewan.

Mr. Tavish O. Russell, BE'12, of Saskatoon, SK, has been hired by Sikumiut Environmental Management Ltd. in St. John's, NL.

Submit your
class note online at
usask.ca/greenandwhite/classnotes

Editor's note

In response to a frequent and long-standing request, we have listed all the names of deceased alumni for this issue on the following page.

Two changes are required to accommodate this change: degrees, date of death and city of residence will be listed online only; and the In Print section listing recently published books written by U of S alumni will be published online only.

Please visit
usask.ca/greenandwhite

The Alumni Association has noted, with sorrow, the passing of the following **graduates:**

- Allan, Frank R.
- Allen, Beverly E. (Bev)
- Arnold, Darlene C.
- Ball, Walter H.
- Bannerman, George A.
- Baran, Andrew
- Barber, Gerald A.
- Bardwell, Millicent
- Barkwell, Donald D.
- Barry, MacDonald L. (Mac)
- Barthakur, Nayana N.
- Bear, Jason B.
- Beatty, William L.
- Beck, Harry
- Beckett, Thomas V. (Tom)
- Bedford, Joseph E.
- Benson, Dennis K.
- Berezowski, Michael
- Bernard, Jerome U.
- Biggs, Donald B.
- Bishoff, Adam A.
- Boehm, Benedict J.
- Bourque, Christopher G. (Chris)
- Bowman, Muriel D.
- Brander, Mary S. (Sue)
- Bremner, Lois I.
- Brennian, Wanda D.
- Breslin, William J.
- Brophy, Walter E.
- Brunelle, Robert E.
- Bryson, Neil A.
- Buckle, Marion I.
- Burchill, Charles E. (Gene)
- Burke, Lorne P.
- Campbell, Morris W.
- Carlson, Barry J.
- Carnine, Bryce L.
- Carr, Kathleen R.
- Carson, Douglas W.
- Chalmer, Thomas E. (Tom)
- Chan, Wai-Kin
- Charlebois, George B.
- Chesney, Charles M. (Moray)
- Chicoine, Lucien A.
- Ciocia, Joan H.
- Clark, John F.
- Clews, Hetty J.
- Cody, Wilfred L.
- Cooke, Robert L.
- Costello, John J. (Jack)
- Coulson, Verna G. (Gail)
- Cowley, Arthur V.
- Crabtree, Elizabeth
- Crane, Aliciae D.
- Crawley, Mitzi L.
- Crooks, Sara A.
- Dantzer, Mary C.
- Davidson, Margaret M.
- Davis, Bruce A.
- Dewar, John M.
- Domres, Warren J.
- Dore, Lila G.
- Douglas, Jessie L.
- Downey, Gale T.
- Duquette, Joseph C.
- Dutli, Margaret C.
- Edwards, Natalie
- Ellis, Merry J.
- Evoy, Herbert E.
- Ewing, Edward P. (Ted)
- Faber, George O.
- Falk, Mervin L.
- Feader, William G.
- Feldman, Mottie
- Finley, James V.
- Fladeland, Dennis L.
- Foster, Shawn B.
- Fraser, Margaret L.
- Friesen, Henry
- Fritsch, Edward J.
- Froc, Audrey D.
- Fuller, Robert A. (Bob)
- Gallaway, Ronald J. (Ron)
- Galon, Kenneth L.
- Gardiner, Myles W.
- Gendron, James B.
- George, Calvin C.
- Ghadially, James A.
- Gheysen, Gary E.
- Goeres, Andrew
- Gordon, Lois G.
- Gordon, Stuart T.
- Grabarczyk, Roderick A.
- Greenhorn, Lynne G.
- Gryba, William
- Hage, Ernest O.
- Halabura, Kelly S.
- Harbicht, Mildred I.
- Hardy, Charlotte L. (Lois)
- Harrison, William (Bill)
- Hawryluk, Paul
- Hedlin, Alan F.
- Heide, Patricia B.
- Henshaw, Alfred J. (Jack)
- Heron, Maureen C.
- Hillbom, David A.
- Holm, Lena M.
- Horsman, Helen H.
- Hutton, David A.
- Irvine, Phyllis M.
- Jack, June A.
- Janzen, Murray W.
- Jealous, Aubrey G.
- Johns, Jean W.
- Jonat, Lorne V.
- Joyner, Walter E.
- Kaeding, Roger W.
- Kanuka, Joseph W. (Joe)
- Kauffhold, Edmund
- Kavanagh, Florence E. (Betty)
- Kerrich, Robert W.
- Khan, Shirley E.
- King, Margaret A. (Anita)
- Kinsman, Velma M.
- Klass, William A.
- Knowles, Norman D.
- Knowles, Rea C.
- Koczka, Wesley J. (Wes)
- Kowaluk, Morris P.
- Krawchuk, Stanley
- Kunkel, Melvin G.
- Kyba, Lawrence J.
- Labossiere, James L.
- Laking, Robert T.
- Lasiuk, Kenneth G. (Ken)
- Laycock, Richard M.
- Lazarowich, Nicholas M.
- Lendvoy, John R.
- Lenz, Erna A.
- Lessa, Armando S.
- Lockert, Roy J.
- Logan, Marjorie L.
- Luchsinger, Donald R.
- Lukowich, Michael A.
- MacLachlan, Gordon A.
- MacLean, Walter M.
- Mahoney, Noreen E.
- Mainil, Maureen R.
- Manz, Else K.
- Marshall, Colin M.
- Mason, Deanna R.
- Matheson, Katherine P.
- Matkowski, Melvin J.
- Mayoh, James J.
- McCaw, Samuel K.
- McGourlick, Donald F.
- McHarg, David W.
- McIntosh, Audrey E.
- McIntyre, Donald H.
- Mclvor, Clair W.
- McKendry, Mary Alice
- McLeod, Dorothy A.
- McMurchie, Garfield J.
- McMurdo, Arthur C.
- McNeil, Roderick N. (Rod)
- McQuarrie, Karen D.
- Meilicke, Arthur E.
- Merrett, Kenneth N.
- Milavsky, Harold P.
- Miller, Percy H.
- Mills-Harrower, Daisy B.
- Moffatt, Gerald H.
- Montgomery, Robert D. (Don)
- Mooney, Patrick G.
- Morgan, John B.
- Morris, Randell G.
- Moskal, Allan
- Most, Sharon P.
- Mullock, John E.
- Muth, Rodney B.
- Nelson, Denis W.
- Nelson, Robert F.
- Newton, John L.
- Norheim, Harold L. (Dale)
- Nykiforuk, Andrew O.
- Oberle, Danielle L.
- O'Hagan, Helen E.
- Oliver, Howard T.
- Olson, Margaret A.
- Opsal, James O.
- Osbaldeston, Vernon W.
- Ostapovich, Eugene M.
- Pavlis, Patricia M.
- Pensom, Croombe F.
- Peterson, Duaine R.
- Pizey, Victor H.
- Price, Pamela C.
- Prokoptez, Darrell D.
- Prystupa, Mervin N.
- Pulak, Robert J.
- Ragush, Michael
- Rakochy, Ronald W.
- Rawlake, Lester G. (Gordon)
- Rempel, Averno M.
- Ridgway, Marilyn A.
- Roach, Charles C.
- Robertson, Gerald B.
- Robertson, Robert G. (Gordon)
- Robertson, William L.
- Robinson, Philip J.
- Rouatt, James W.
- Rudrick, Brian F.
- Rui, Glenn O.
- Savage, Donald F.
- Sayer, James R.
- Schell, Philip P.
- Schuett, Freda
- Semenchuk, Lynne E.
- Shaw, Kenneth D.
- Shaw, Michael
- Shemansky, Edward L.
- Shpyth, Rudolph W.
- Sjoding, Jennings D. (Donald)
- Sojonky, Frank
- Speers, Phyllis A.
- Sproule, Lloyd H.
- Stachniak, Ann E.
- Steele, Robert F.
- Steffen, Marvin J.
- Strautman, Phyllis M.
- Stroshein, Robert W.
- Suidan, Ramzi M.
- Svetkov, Andrew S.
- Sweeney, James B.
- Tarasoff, Harold W.
- Taylor, Hugh J.
- Tenold, Gordon A.
- Thomson Barks, Cheryle D.
- Thorseth, Edison B.
- Tinson, Benton M.
- Toner, Carmelle E.
- Topham, William R.
- Vallis, William
- Van-Meter, Melvin D.
- Vickaryous, Ralph E.
- Vockeroth, John R. (Richard)
- Waddell, William H.
- Wakelin, Carleen T.
- Waldman, Gerald H.
- Webb, John K.
- Weber, Irvin W.
- Webster, James F.
- Weinstein, Phyllis
- Welgan, Ronald P.
- Welter, Anton P.
- White, Meta E.
- Whiteside, Joan E.
- Wilde, Shirley M.
- Willes, Edwin W.
- Willis, David L. (Dave)
- Willms, John
- Willson, Margaret M.
- Wilmot, Cheryl A.
- Wilson, Cory S.
- Wilson, Lorne S.
- Wishlow, Samuel (Sam)
- Wurm, Linda G.
- Wyshynski, Christopher M. (Chris)
- Young, David G.
- Young, James E.
- Zurowski, Rudolph L.

The Alumni Association has noted, with sorrow, the passing of the following **faculty and friends:**

- Brewster, Elizabeth W.
- Fung, Ka-iu
- Gerrard, John W.
- Green, Maria A.
- Horlick, Louis
- Scott, Robert I.
- Wilkinson, Alexander A.



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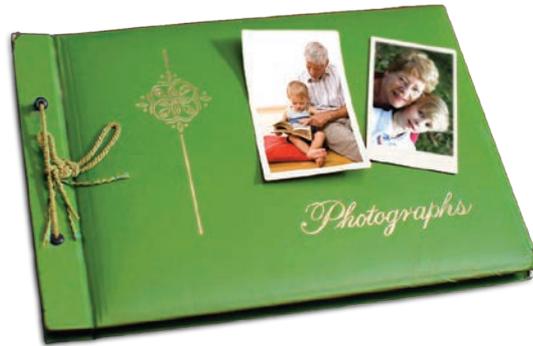
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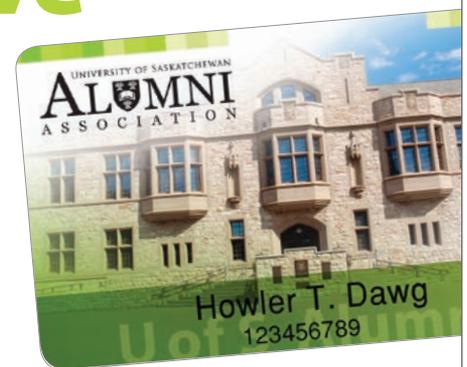
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Senate Election 2013

Voting open from May 6 to June 28, 2013 at 4 pm

All members of Convocation are eligible to vote for member at large candidates. For senate district elections, only alumni who reside in those districts are eligible to vote.

Candidates for Members at Large (four positions available):

- Becky Hoehn
- Albert Chambers
- Brenda Canitz
- Eileen Hartman
- Sandra Finley
- Mary Jean Hande
- Larry Wagner
- Evan Cole
- Judy Buzowetsky
- Autumn Carlson
- Kevin Moore
- Joseph Wickenhauser
- Dale Szakacs
- Robert Huck
- Frederick Wesolowski
- Brian Peters

Candidates for District 2: Chaplin, Moose Jaw, Rockglen area

- Michael Klein
- Tenielle McLeod

Candidates for District 11: Prince Albert, Stony Rapids area

- Jerri D. Hoback
- Laura F. Burnouf
- Johnny Walker
- Carol Ann Lafond
- Kona Guest

Candidates for District 12: Blaine Lake, Uranium City area

- Richard W. Michalenko
- Patricia Grayston

Candidates for District 14: Regina area

- June Schultz
- Steve Kemp
- Lynde McKinley
- Keith D Kilback
- Albert Yakichuk
- David L. Kelly
- Bruce Dawson
- Jim Nicol
- Malinda Meegoda
- Catherine Benning
- Leigha Hubick
- Dean Elliott
- Karen Frank

Senators in districts **3, 4, 7, 8 and 9** were elected by acclamation.

How to vote

1. Using your web browser, go to paws.usask.ca
2. Log in using your **NSID and password**
3. Click on the **"Vote" tab** and follow the instructions provided. You may vote for up to four candidates for members at large and one candidate for the Saskatchewan district elections (if you reside in that district).
4. Once you have submitted your ballot you **will not** be able to go back in to change your vote.

▪ To vote you will need a U of S Network Service Identifier Number (NSID) and a password. All graduates have NSIDs and passwords; if you do not know your NSID number or password, please contact the Customer Service Centre, University Advancement at **(306) 966-5186 or 1-800-699-1907 or by e-mail at alumni.office@usask.ca**.

▪ If you are **not able to vote electronically**, a paper ballot will be available from the Customer Service Centre. Returned ballots must be received by **June 28, 2013**.

Biographical information for the candidates nominated is available at the University Secretary website at usask.ca/university_secretary/senate/senate_elections.php



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The Rossnagels Take to the Court as Team Players

They may not have the fanciest footwork or the most slam dunks of the season, but Brian and Laurel Rossnagel are invaluable players on the U of S team. Supporting many areas on campus, including Huskie Athletics and the College of Agriculture and Bioresources, the Rossnagels are helping the U of S rise to the top of its game by supporting student scholarships and research. In addition to their current support, the Rossnagels have also set up bequests to the U of S through their Wills, ensuring that their support will continue well on into the future.

Please contact us for more information on how you can join the U of S team with hundreds of alumni and friends, like the Rossnagels, by setting up a gift through your Will.

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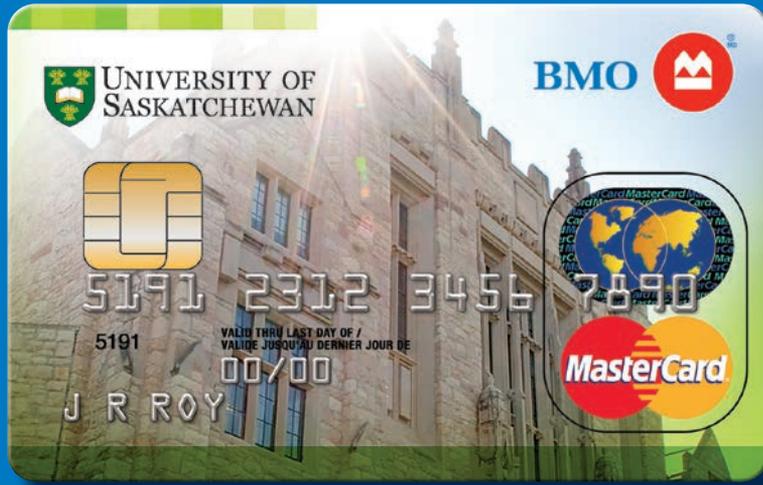
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