

SHOWING OUR PRIDE

University of Saskatchewan senior leaders and faculty, staff and students took part in the annual Saskatoon Pride Parade on June 23. Members of the campus community, including the U of S Students' Union Pride Centre, once again joined the annual event as part of the 26th year of the Saskatoon Pride Festival. The U of S is committed to an inclusive and positive working and learning environment for everyone, including those who identify as gay, lesbian, bisexual, transgender, queer or two-spirit.

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BRIGHT FUTURE **3**

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On Campus News aims to provide a forum for the sharing of timely news, information and opinions about events and issues of interest to the U of S community.

The views and opinions expressed by writers of letters to the editor and viewpoints do not necessarily reflect those of the U of S or *On Campus News*.

We acknowledge we are on Treaty 6 Territory and the Homeland of the Métis. We pay our respect to the First Nation and Métis ancestors of this place and reaffirm our relationship with one another.

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New Kaplan chair hits all the right notes

SEAN CONROY

Véronique Mathieu stepped in as the inaugural David L. Kaplan Chair in Music at the U of S on July 1.

In this new chair—made possible by a \$2-million donation from alumni Xiaoping (Bob) Xu and Ling Chen and named in honour of their former music professor—Mathieu will focus on training undergraduate and graduate violin students, deepen the Department of Music’s connection with the community, including the Saskatoon Symphony Orchestra, and enhance the international reach of the university’s musicians.

“I’m grateful and honoured for the opportunity to be the first to take up this special role,” said Mathieu. “Holding the David L. Kaplan Chair in Music is a rare opportunity to help guide the next generation of musicians and give them the type of experience their talent and dedication deserves. I look forward to working with my new colleagues and the Saskatoon community to continue building a strong strings program at U of S.”

Mathieu has performed as a soloist and chamber musician throughout Asia, Europe and South

America, as well as South Africa, the United States and Canada. She is a prize-winner of the Eckhardt-Gramatté Contemporary Music Competition (2012), the Krakow International Contemporary Music Competition (2010), and is a three-time winner of the Canada Council Bank of Instruments Competition.

Mathieu has extensive undergraduate and graduate teaching experience in Canada and in the United States. Most recently, she served as the director of the strings division at the University of Kansas School of Music. Other significant roles include visiting teacher at the Toronto School for Strings and artist-in-residence at the Festival International de Musica Erudita de Piracicaba in Brazil.

“Nurturing students’ passion for the performing arts and maximizing their learning potential is integral to the College of Arts and Science academic mission,” said Peta Bonham-Smith, dean of the College of Arts and Science. “Ms. Mathieu’s appointment will allow us to train and educate students specializing in violin and to enhance the strings corps both locally and nationally.”



Mathieu

“[David Kaplan] embraced us with profound love and care when we first came to Canada from China in the 1980s as graduate students,” said Xu. “His strength of character, warmth and unconditional devotion to his students serve as the model by which we—and countless others—live our lives. After graduation, Dr. Kaplan’s spirit stayed with me, it guided me to help more students in my homeland as I started my own career as a consultant for Chinese students who wanted to study overseas.”

“The establishment of this chair epitomizes the importance of collaboration and partnerships to our university,” said Peter Stoicheff, U of S president and vice-chancellor. “Thanks to Bob and Ling’s generous support, the possibilities for our music students to create, collaborate and build careers are greatly enhanced. The opportunity to continue our partnership with the Saskatoon Symphony Orchestra through Ms. Mathieu’s work will be rewarding for our university, the faculty in the Department of Music, and our students.”

Kaplan, head of the Department of Music for nearly 20 years, played several instruments, composed numerous pieces of music, and conducted orchestras and bands, including the Saskatoon Symphony Orchestra. In recognition of his influence, Kaplan was appointed a member of the Order of Canada in 2002 and was awarded the Saskatchewan Order of Merit in 2006. He passed away in 2015 at the age of 91. ■

Sean Conroy is a development communications specialist with University Relations.



IN CASE YOU MISSED IT

A lot happens at the U of S during the weeks when *On Campus News* isn’t published. Here are a few of the top stories from news.usask.ca:

Pickering on board

Ingrid Pickering, Canada Research Chair in molecular environmental science in the College of Arts and Science, has been appointed chair of the board of directors at the Canada Foundation for Innovation (CFI), an independent organization that invests in leading-edge infrastructure that researchers across Canada need to advance research and innovation. Pickering has served on the CFI board since 2013 and is the first woman to be appointed as chair.

In the Fast lane

The U of S launched its Fast License program on June 27, making it easier and faster for companies to commercialize technologies that university researchers develop. Depending on the technology and other factors, securing a licensing agreement can sometimes be a complicated and time-consuming process—taking months or even years to negotiate. A U of S Fast License, however, can be acquired in a fraction of the time.

Room to breathe

Six U of S research teams were awarded Ideas That Inspire grants of \$25,000, jointly funded by the Saskatchewan Health Research Foundation and the Lung Association, Saskatchewan to improve respiratory health in the province. The expertise in the teams ranges from medicine and clinical practice to computer science and pharmacy and nutrition. The awards support the new U of S interdisciplinary Respiratory Research Centre in the College of Medicine.

Epilepsy research

U of S researchers have discovered that the incidence of epilepsy in the Canadian Indigenous population is twice that of non-Indigenous Canadians. The study, led by Dr. Jose Téllez-Zenteno and published in *Seizure: European Journal of Epilepsy*, has established for the first time a Canadian national incidence rate of 62 new cases of epilepsy per 100,000 people per year. For self-identified First Nations patients, the rate is 122 per 100,000.

FOR MORE UP-TO-THE-MINUTE NEWS, VISIT: news.usask.ca @usask

Future is bright for College of Medicine

Full accreditation granted to U of S medical school

The U of S College of Medicine, the only medical school in the province, has achieved full accreditation of its undergraduate program from the Committee on Accreditation of Canadian Medical Schools (CACMS).

“This successful outcome for our College of Medicine is an important component of the significant contributions our university makes to the province and people of Saskatchewan,” said Tony Vannelli, U of S provost and vice-president academic. “A strong medical school, housed within a leading research-intensive university like ours, benefits everyone.”

The results of a full-site accreditation visit, which took place Oct. 29 to Nov. 1, 2017, were shared

with university administration, including Dr. Preston Smith, dean of the college, on June 18, and then announced publicly the following day.

“The college has worked very hard on improvements in our medical doctor program and we are highly encouraged by this positive acknowledgement,” said Smith. “In particular, CACMS does not require a followup visit, which is a strong indication of confidence in our team and our program.”

Smith said not having a site visit for the full eight years is “the best possible outcome,” as the full site visits are “time consuming for my team and takes time away from the work we need to do every day to make sure our college is the best it

can be for our students, researchers, teachers and the people of Saskatchewan.”

Next steps for the college, Smith continued, include providing the accrediting body with written reports covering areas like the new curriculum, where recent changes meant it was too early to fully assess outcomes at the time of the visit. If these reports satisfy accreditation requirements, the College of Medicine could potentially not have another accreditation visit for the undergraduate program for a full eight years—the best possible timeframe outcome.

The college’s work in recent years to improve areas of student services and support, curriculum, faculty engagement and governance



Smith

were successful, with clean ratings from the accrediting body.

“We’ve worked across a continuum of change, starting with improvements in our admissions processes that also include a very effective Indigenous admissions approach, and a new Diversity and Social Accountability Admissions Program this year to support opportunities for those from socio-economically challenged backgrounds,” Smith said.

Other improvements include a four-year transition to a new undergraduate medical curriculum that was completed in 2017. As well, faculty engagement in teaching in the college has more than doubled in the past year. In medical research, recent successes include funding through the Canadian Institutes of Health Research that has more than doubled this year, and recruitment of key research positions including the Cameco Chair in Indigenous Health and the Saskatchewan Chair in Multiple Sclerosis Clinical Research.

Students, faculty and staff are benefiting from new, state-of-the-art facilities in the university’s Health Sciences Building, funded in large part by the province, and at the college’s Regina campus in the Regina General Hospital, where about 40 per cent of second through fourth-year medical students complete their undergraduate studies.

SEE RESEARCH, PAGE 4

Engaging parents in schools

SARATH PEIRIS

University of Saskatchewan curriculum studies professor Debbie Pushor of the College of Education aims to transform education in the province by making parent engage-

ment in teaching and learning an integral part of schools, something she said will enhance student outcomes, build community and help retain teachers.

“We have five decades of research that shows students do better academically, socially and behaviourally when parents are engaged in children’s learning,” said Pushor, who was recently awarded an Insight grant of \$184,500 by the Social Sciences and Humanities Research Council of Canada for her prototype project.

“Studies show parent engagement has a positive effect on student attendance and student performance on in-class tests and standardized tests,” she said. “Students also take higher level and more challenging courses, and both their on-time completion of courses and on-time graduation rates also go up.”

Children spend only 17 per cent of their time in school and 83

per cent of their time with parents, Pushor said. This out-of-school time is a huge opportunity to have parents collaborate to enhance the educational outcomes for their children.

Parent engagement is qualitatively different from parent involvement, where a parent helps with fundraising or a school trip, and the teacher sets the agenda and makes all the decisions, she said. Pushor added that parents have “parent knowledge” that’s specific to their child and family that they can contribute.

“When I engage with you as a parent, I ask for your knowledge to be laid alongside my own. Now, when we are making programming decisions or talking about your child’s schooling, you have a voice as a decision-maker,” Pushor said.

Her three-year project involves pre-kindergarten to Grade 8 classes at Howard Coad School in Saskatoon’s diverse Mount Royal neighbourhood, where Indigenous families, newcomers and other Canadians each make up about a third of the population. Family median annual income is low at less than \$30,000 (in 2015), even though most adults are employed.

The provincial education, social services and immigration ministries, the Saskatchewan School Boards Association, and Saskatoon Public Schools are collaborating on the project because they are interested in increasing opportunities for parents, assisting with

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College of Education curriculum studies professor Debbie Pushor.

SUBMITTED

The past and present of mental health care

CHRIS MORIN

When it comes to talking about the issues surrounding mental health care today, Erika Dyck looks to the past.

Stories about the issues surrounding mental health care are seeing a greater prominence in the media as policy-makers, politicians and activists raise questions about the quality of care and treatment being delivered in the province and across the country.

At the same time, campaigns such as Bell Let's Talk—an initiative to promote mental health education, research and awareness—are attempting to normalize what it means to struggle with mental illness.

However, Dyck, a University of Saskatchewan history professor and medical historian, said all too often there is a disconnect between the actual conversations and the overall stigma of mental health.

“So often mental health issues get into the news because of some disaster—some horrific violence. So, there is a focus on fearing mental illness, and there is a long history of the notion that mental illness somehow makes people unpredictable and violent,” said Dyck. “With how we talk about these issues, we often say that we need to be tolerant and accepting, yet we are still nervous about what it means when someone has a serious mental illness and how to deal with the potential for a crisis.”

A Canada Research Chair and expert in the early days of LSD testing, much Dyck's research focuses on how Saskatchewan's history of psychiatry and mental health has changed, particularly since the 1950s. At that time, Saskatchewan was the epicenter of research into psychedelic drug testing, which was used to treat addictions such as alcoholism, she said. And while she points out that views in today's society may have changed enough to consider retesting LSD as a potential therapy—partic-



“I'm encouraged by what I am seeing in the media, drawing further attention for the need to link things like anti-poverty campaigns and mental health care.”

— Erika Dyck

Erika Dyck is a Canada Research Chair, a history professor and medical historian at the University of Saskatchewan.

SUBMITTED

ularly in light of increasingly lax laws towards marijuana—there are a number of different sets of mental health issues.

Public perception of drug therapies isn't the only thing that has changed, she continued.

“The technologies have changed, the access and reliance on pharmaceuticals has changed since Medicare was introduced, and I don't think we've engaged with the idea of Medicare to allow it to evolve,” said Dyck. “Looking at it historically allows us to appreciate just how much nuance went into the creation and where it ended up stopping instead of continuing that conversation.”

The stigmas have also seen a drastic evolution—a subject she explores in her book *Managing Madness: Weyburn Mental Hospital and the Transformation of Psychiatric Care in Canada*, which traces the history of the Saskatchewan institution from a large Victorian-styled asylum to its focus on care in the community.

Written with U of S alumnus Alex Deighton, by examining the past the book aims to promote that

it is the collective's responsibility to challenge present discrimination when it comes to mental illness.

“We looked at the different ways in which people articulated their experiences and where they found ways to dig in and challenge the system,” said Dyck. “And by giving voices to those individuals and organizations, we are able to put a face on some of that discrimination, so it's not just discussing

policies in an abstract way. We look at how difficult it is for someone to get housing if they carry those stigmas or if they are being discriminated against for how they may or may not behave.”

And as to how the current conversations have changed, Dyck points to the growing number of advocates discussing issues such as income insecurity.

“There's been a lot of talk

about raising the minimum wage in Saskatchewan recently, so talking about having some basic income structures in place. Of course, this isn't exactly a mental health issue, but it also is a mental health issue.

“I'm encouraged by what I am seeing in the media,” she continued, “which is drawing further attention for the need to link things like anti-poverty campaigns and mental health care.” ■

Research drives medical school

FROM PAGE 3

“Our students, faculty and staff have been exceptionally engaged and done an incredible amount of work across all areas of our college to support change and to achieve a successful accreditation result,” Smith said.

“We must be committed to continuous quality improvement and we must understand that the moment we stop changing we will

stop being a winning team.”

Smith said that research success will be key to the college's continued rise as one of the top medical schools in Canada.

“Research success is what will ultimately drive our reputation and will do the most to improve the health of the people of Saskatchewan and the world,” Smith said. “Research success will provide the return on investment needed by our university and our province,

and ultimately the future financial stability of our college. Research success will enhance recruitment of the brightest and best students and faculty. And research success will be the ultimate reward for our clinical researchers and our biomedical and population health scientists.”

“Our vision for the future aligns well with that of the province and today's positive news about accreditation shows that the future is very bright indeed,” Vannelli said. ■

pride in our community

✍ KRIS FOSTER

Campus was awash in a rainbow of colours during Pride Month this past June, something Jory McKay would like to see continue during the other 11 months of the year.

“It’s more than flying the rainbow flag,” said McKay, the co-ordinator of the USSU Pride Centre. “If you support LGBTQ2S+, it needs to be all year; it requires a change in ideals and the way we treat each other.”

While the number of activities, celebrations and learning opportunities was definitely a welcome sight for McKay, he said more can be done for those who are part of the LGBTQ2S+ community at the U of S.

“We (the Pride Centre) work to have safe and inclusive spaces,” said McKay, who began volunteering with the centre last year during his first year as an undergrad in the College of Arts and Science. “Not just safe places, but also positive spaces where we listen to what is around us and adjust to what people need.”

Creating this positive space is one of McKay’s main priorities for the year ahead, and it is something he found himself at the U of S, and values a great deal. Growing up in Swift Current, he said he was one of only a “few openly queer people” in high school.

“I never thought I could be a successful queer person,” said McKay. “This centre changed that. I know I

can be a successful queer person.”

McKay and about 30 volunteers work to create a diverse, inclusive and supportive community in which “everyone is safe to voice their opinions and viewpoints.”

It’s something the centre has been working towards since opening in 1997 as the USSU Lesbian, Gay and Bisexual Centre. After changing its name twice, first in 2002 to the

LBGTA Centre and again in 2007 to its current name, McKay sees the centre now being inclusive of everyone’s orientation and gender identity.

“Every day about 30 to 35 people stop by the centre, either to talk, hang out or looking for answers,” he said. “We still need to work on getting first-year students involved, so we are going to have a few events



McKay



University of Saskatchewan President Peter Stoicheff wearing the U of S Pride T-shirt.

that are specifically for them.”

The annual events that the Pride Centre holds, like Queer-apalooza in September and Sex Week in February, get most of the attention, McKay said, but the smaller events, like Queer Nights and Positive Spaces 101, are the ones that create meaningful connections and change.

“Positive Spaces is open to

anyone, students, faculty and staff, and is for beginners to learn about gender and sexual diversity,” McKay explained. “It helps people learn how to create positive spaces for lesbian, gay, bisexual, transgender, two-spirit and queer people.”

Positive space training, completed in 90-minute and 150-minute courses, also gives tools to those who are allies with LGBTQ2S+.

“It gives advice on how to be an ally; how to listen, speak up and empower those around you,” said McKay. “How to use your privilege to lift up people around you, not take their power.”

Queer Nights, he continued, are more informal gatherings held throughout the year intended to be fun, create discussion and build community. Another program is Peer Support, an ongoing service provided by trained volunteers “to help anyone during difficult times or contemplating suicide.”

McKay said he knows first-hand how difficult and lonely it can be not to have a community that understands your perspective.

“When I was growing up, I didn’t have a gay male I could talk to. It is so important to talk with people who have similar experiences,” he said. “There are so many separate identities underneath identifying as queer, and the Pride Centre tries to reflect that.” ■



The U of S launched a number of events and initiatives as part of its Pride Month activities. All month Pride colours appeared on campus, most noticeably on the walkway between the Murray Library and the Arts Tower, and at night when a rainbow of light washed over the Peter MacKinnon Building and the President’s Residence. Shop usask also launched a U of S Pride T-shirt with proceeds donated to the USSU Pride Centre.

Here is a list of some of the events, celebrations and learning opportunities that the U of S hosted in June as part of its commitment to Pride.

JUNE 11: A Pride flag-raising ceremony was held outside of the Thorvaldson Building to kick off Pride Month.

JUNE 15 AND 18: An interactive introduction to LGBTQ+ terminology and issues was hosted, called Creating Positive Space.

JUNE 16: A two-spirit powwow, the first such public event in Saskatoon, was held in the Bowl to create a safe space for all

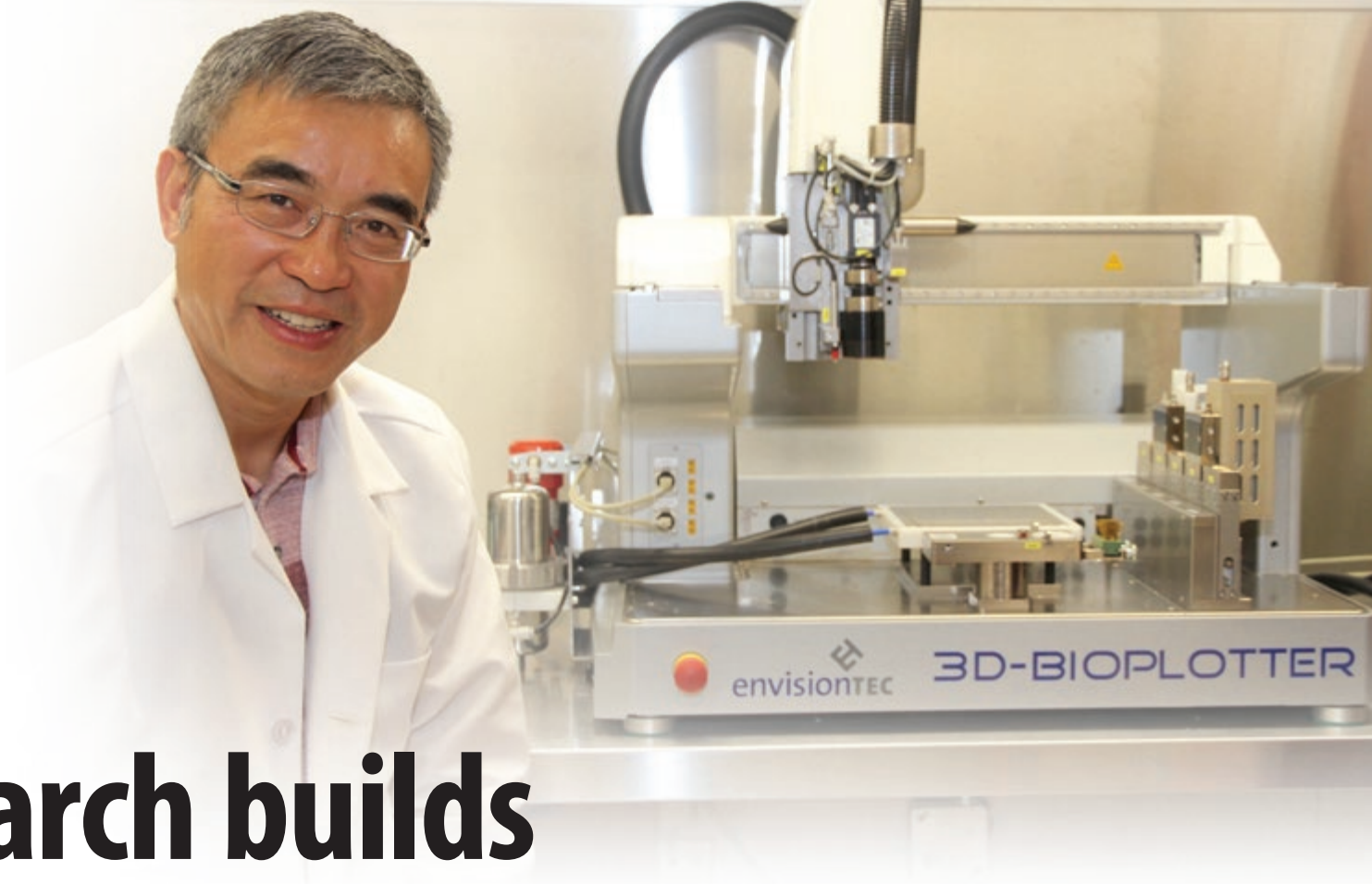
people, especially two-spirit peoples, to take part in cultural celebrations in gender-affirming spaces.

JUNE 20: A Trans Ally Training workshop was held to define and explore how everyone can be an ally to transgender communities.

JUNE 23: U of S students, faculty and staff, and their families, walked in the Saskatoon Pride Parade.

“ I come from an engineer’s point of view, to design and build, and then I need to collaborate with researchers in life sciences and veterinary medicine, because this kind of research requires an interdisciplinary approach.

— Daniel Chen



U of S research builds bones with 3D printer

Professor Daniel Chen of the College of Engineering, with the 3D-Bioplotter in the U of S Bio-fabrication Laboratory.

JAMES SHEWAGA

JAMES SHEWAGA

Strand by strand, and layer by layer, Daniel Chen’s research team is inching closer to repairing and rebuilding bones with the use of 3D printing technology.

A leader in the exciting and emerging field of tissue engineering, Chen’s interdisciplinary research team is working with the 3D-Bioplotter (printer) in the University of Saskatchewan’s Bio-fabrication Laboratory to develop new ways to help restore bone function in individuals who have suffered serious trauma, infection, disease or defects.

“I am always excited about this kind of research,” said Chen, a professor of mechanical engineering and leader of the Tissue Engineering Research Group at the U of S. “Before this we did research to repair peripheral nerves and spinal cords and cartilage as well as treat heart attacks. So, we have done some research in those applications and achieved

some success and we have found that we have strengths in this area in this university. So, we are confident going ahead with this kind of research.”

Chen was one of 12 U of S researchers who were awarded Collaborative Innovation Development grants in March from the Saskatchewan Health Research Foundation, receiving \$50,000 in funding over the next 18 months for his new project. Chen’s team is bioengineering bone substitutes (known as scaffolds) and employing the world-class imaging technology of Canada’s only synchrotron in the Canadian Light Source facility on the U of S campus to track the effectiveness of their new bone regeneration strategies.

Previous efforts in this pioneering field of research haven’t been successful in providing long-term or permanent stable solutions to restoring bone function, particularly for large bone defects

and damage, since bone tissue has a limited capacity to repair itself. Chen’s team is looking to bioengineer artificial bone structures to be implanted into the body to essentially serving as a template or framework to help bone regeneration.

“What we are going to do is unique in bone tissue engineering, using 3D printing and nano-bio-technology to develop new scaffold types for bone repair,” said Chen. “The other research goal is to show that we can successfully use synchrotron imaging as a new non-invasive method to monitor the bone regeneration. Since our research goal is to eventually use this for a human being, we need a non-invasive method. And with the synchrotron, we can view it in great detail, so we don’t need to take this sample out of the body to see how it is regenerating.”

Chen said the U of S is perfectly positioned to conduct this type of leading-edge research, combining

one-of-a-kind facilities like the Canadian Light Source with the university’s proven track record of success in interdisciplinary collaborative research endeavours.

“I come from an engineer’s point of view, to design and build, and then I need to collaborate with researchers in life sciences and veterinary medicine, because this kind of research requires an interdisciplinary approach,” said Chen, who earned his PhD in 2002 at the U of S and began his teaching and research career here a year later in the College of Engineering. “In this project we tried to combine the strengths of this university together, which includes strengths in 3D printing and strengths in life sciences and veterinary medicine, as well as strengths in imaging technology by using the synchrotron facilities. And that is the strength of this university.”

Chen’s team is at the forefront of this fascinating field of research,

focused on improving the quality of life for people in this province and beyond, who need to restore bone function. If the pilot project proves promising with animal subjects, Chen will look to replicate the success with human patients at some point.

How soon could that happen?

“That is a good question,” said Chen, who earlier this year was named a Fellow of the Engineering Institute of Canada, for his exceptional contributions to engineering in this country. “When we talk about tissue engineering, the first question is when it can be translated into a human being? But it’s a research process that takes time to follow the proper steps and it will very much depend on how the research is going. So, we are going to do this preliminary study and if the results are meaningful, then we will look to take the next steps toward comprehensive studies on bone tissue engineering.” ■

Low oxygen therapy has high potential for spinal cord patients

LYNNE GUNVILLE

Expose patient to low oxygen levels intermittently for short time periods. Combine with rehabilitative training. Repeat. They're simple instructions for treating people and animals with spinal cord injuries, but the results have proven to be breathtaking.

It's called acute intermittent hypoxia (AIH) therapy, and based on research studies conducted at the University of Saskatchewan, scientists are excited about its promise as a therapy for partial spinal cord injuries.

AIH therapy involves repeated exposure to low oxygen (hypoxic) levels for brief periods. This action triggers a chain of events in the nerve cells or neurons as they react to the mild stress.

"The AIH alerts the cells that they're under stress," explained Valerie Verge, a professor of anatomy and cell biology in the College of Medicine. "The cell adapts by turning on specific genes and creating specific proteins that help the cell to survive the stress. They induce a strengthening of the existing neuronal connections which is referred to as plasticity."

As director of the Cameco MS Neuroscience Research Center, Verge has a keen interest in neurological research. She shares her passion with Dr. Gillian Muir, a professor at the Western College of Veterinary Medicine (WCVM) and the co-principal investigator in a recent study published in PLOS ONE.

While Verge's focus is on the cellular level, Muir is an expert in behavioural recovery after injury. She has collaborated on studies with professor Gordon Mitchell, a noted neuroscientist at the University of Florida, and she has been involved in multiple studies monitoring the

functional recovery that occurs when AIH therapy is combined with rehabilitative training in patients with spinal cord injuries.

With funding from the Saskatchewan Health Research Foundation, the Canadian Institutes of Health Research and the United States Department of Defense, the scientists combined their expertise in an investigation of AIH therapy. Other members of their research team included Atiq Hassan and Breanna Arnold, both graduate students, and research associates Sally Caine and Behzad Toosi.

"The focus of this recent study was to look at what was changing in the cells of these animals in response to both the hypoxia exposure and the rehabilitative training," Muir explained. "We looked for hypoxia-associated proteins, evidence that the cells were responding to the low oxygen, and we also looked for proteins associated with the plasticity—the proteins involved in strengthening connections between neurons."

The researchers studied two groups of laboratory rats with partial spinal cord injuries. While both groups received seven days of rehabilitative motor therapy, only one group received daily AIH treatments along with

SEE COMBINATION, PAGE 15

Drs. Gillian Muir (left) and Valerie Verge.

DEBRA MARSHALL FOR SHRF

U of S experts weigh in on cannabis legalization

JAMES SHEWAGA

As Canada prepares to become one of the few countries in the world to legalize recreational cannabis use, the question remains: Are we ready?

We asked University of Saskatchewan experts to offer their perspective from four different areas of study. While there is general support for legalization overall, there is also consensus that there are still issues that need to be addressed in the coming months and years, with the new landmark legislation scheduled to become law on October 17 after working its way through the House of Commons and the Senate.

“I think from a research perspective, there are a lot of questions that need to be answered,” said Robert Laprairie, an assistant professor in the College of Pharmacy and Nutrition at the U of S and the GSK-CIHR Research Chair in Drug Discovery and Development. “It’s been very difficult to conduct research in this area in the past because of the legal framework that has been put around it. So, while I don’t necessarily think we are ready, I don’t know when we would be. This will be an evolution that happens in our culture and it will be a cultural shift that might take five years.”

Researchers in the Johnson Shoyama Graduate School of Public Policy (JSGS) at the U of S and the University of Regina campuses recently examined the topic in a policy paper entitled, *Legalizing and Regulating Cannabis in Saskatchewan*.

“There is not a simple answer to this question,” said Jerome Konecni, one of the co-authors of the November paper and the JSGS executive-in-residence at the U of S. “I always like to begin by going

back to the policy objectives of the legislation: public safety, reduce criminal activity and reduce youth consumption. Considering how well prepared we are to meet these objectives, my answer is no, the country and the province are not as ready as it should be.”

Michael Szafron, an assistant professor in the U of S School of Public Health, recently led a research project to explore risk factors, demographics and patterns of cannabis usage and presented his findings at a lecture and panel discussion on campus in January.

“I think we don’t know enough about the impact of its use with individuals to actually go ahead and do carte blanche legalization of recreational use,” said Szafron. “What I would have liked to have seen would have been to continue with legalization for medicinal use and that would have allowed us as researchers to more easily study the effects that it has, in a controlled environment.”

While there are still areas to be addressed, College of Law lecturer and local lawyer Mark Baerg argues that we are well prepared to move forward, even if some aspects remain a work in progress.

“We are ready,” said Baerg, a U of S alumnus who has handled a number of cannabis court cases. “In spite of the worry that is often expressed when legalization is discussed, very little of what will occur post-legalization is new. Canada has had one of the highest cannabis usage rates in the world for a long time, and criminalization of

cannabis has done seemingly little to change that.

“Prohibition has been an over-reaction to cannabis, analogous to swatting a fly with a sledgehammer, and legalization will scale back that reaction to a more appropriate level,” Baerg added. “Even if Canada and the provinces don’t get all the details right immediately, adjustments will be made as difficulties arise. Based on the experiences of other jurisdictions, whatever unanticipated downsides result from the changes will be outweighed by the net benefits.”

“I think from a research perspective, there are a lot of questions that need to be answered.”

— Robert Laprairie

Studies cited by proponents of de-criminalization point to benefits that will include creating business opportunities in manufacturing and distribution, generating new streams of revenue for government through taxation, and perhaps most importantly, reducing stress on the justice system, from police resources to court backlogs to prison overcrowding.

“Without a doubt, it will cause significant savings in public resources in all three of these aspects of the justice system, because the number of cannabis-related drug charges exceeds the number of charges for all other illegal drugs combined,” Baerg said. “Beyond public savings, people who use



Konecni



Laprairie

cannabis will no longer be jailed or receive a criminal record for doing so. This means that the exclusion from employment, education, and community that goes hand-in-hand with cannabis convictions will no longer happen and that’s a good thing both for cannabis users and for society at large.”

Introduced on Nov. 27, 2017 and initially targeted for implementation on July 1 this year, the new federal legislation—officially Bill C-45 (The Cannabis Act)—has cleared its last legal hurdles. Provinces and territories are currently finalizing their own specific guidelines, with Saskatchewan setting 19 as the legal age for recreational cannabis use (the same age as for alcohol use) and including a ban on smoking in public places and zero tolerance for driving while under the influence of cannabis.

Police forces across the country are working towards implementing standardized road-side screening tests to detect tetrahydrocannabinol (THC)—the primary intoxicant in cannabis—but not all jurisdictions are there yet.

“Our police forces and judicial system does not have adequate training or resources to effectively measure impairment, define impairment, and deal with the consequences of enforcement strategies,” said Konecni.

However, Baerg said an overhaul of impaired driving laws—Bill C-46 (An Act to amend the Criminal Code)—will help address concerns, with that new legislation slated to go into effect Dec. 18. In the

meantime, Baerg said current legislation does cover key issues.

“People who drive high have been getting convicted of impaired driving for years, and they will continue to do so post-legalization,” said Baerg. “Police and Crown prosecutors need only prove beyond a reasonable doubt that a driver was intoxicated by a drug, and that the intoxication impaired—even to the slightest degree—their ability to drive.”

For U of S researchers, a major concern remains the lack of sufficient analysis to determine the effects of cannabis use, particularly for individuals dealing with mental health issues and those under the age of 25.

“There are two primary groups that are at higher risk for negative side-effects,” Szafron said. “In people who are cognitively developing, there is evidence suggesting that usage can impede your cognitive development. And the group that is most likely to experiment are those who are teens to the early twenties and that is the very group that is still cognitively developing, up until about age 24 or 25. There is also compelling evidence, but not the controlled rigorous clinical trials that you would hope there would be, that suggests that people who have mental health issues could also be at risk.”

Laprairie’s research focuses primarily on the therapeutic benefits of medicinal marijuana, but he also believes we need to further examine negative side-effects when cannabis is taken in combination with



Szafron

prescription medication or alcohol.

“As a researcher, I really think that cannabis is a drug and we should treat it as such,” Laprairie said. “But legalization will allow us to conduct research that in the past we simply haven’t been able to. So, this should allow for health-care practitioners to consult with their patients and understand what drugs they are using, including cannabis, and how it impacts them. You have medications that you are told to not drink alcohol with, and it will be the same with cannabis. It will be an education that the public will have to undergo.”

While there are research questions still to be answered, as well as public policy and provincial aspects to finalize, each of the U of S experts would like to see more public education about the new legislation and a wide-ranging public health campaign to promote responsible use. The government has pledged \$46 million over five years for education and advertising, mainly targeted for youth.

“There needs to be an effective public health campaign centered around it being used safely,” said Szafron, who is joined by Konecni and Laprairie as members of the Cannabinoid Research Initiative of Saskatchewan, the only interdisciplinary research group of its kind in Canada.

“I do think that overall (legalization) will eventually be positive, but it will not be a snap your finger, everything is fine, sort of deal,” Laprairie added. “This is going to be a generational shift.” ■

Edwards Business School graduate granted cannabis retail licence

JAMES SHEWAGA

Cierra Sieben-Chuback was already busy preparing to open her first business before she even began writing her final exams this spring at the University of Saskatchewan.

A week before graduating from the Edwards School of Business, the 23-year-old U of S student was awarded one of seven licences in Saskatoon—and one of only 51 permits granted in the province from 1,502 applications—to establish a retail cannabis store. For Sieben-Chuback, it was the culmination of a whirlwind week of completing her business plan and filing her request for proposal (RFP) before the province’s April 10 deadline, all while studying for her final exams.

“The application was due on April 10 right at the beginning of university finals, so I got the application in right before I was writing my first final two days after that,” said Sieben-Chuback. “I actually drove to Regina the day that the RFP was due, just to get it in on time. I don’t know how I got it all done before finals, but I did.”

Now just one month after celebrating convocation, Sieben-Chuback is preparing to put her commerce degree to use by establishing her first business, getting in on the ground floor of the potentially lucrative recreational cannabis market, once legalization goes into effect on October 17. For Sieben-Chuback, it’s not only business, but personal.

“The fact that I got my name selected, I was obviously extremely excited,” she said. “But I also did feel like this was meant to be, to a certain point. I actually began working on this long before the RFP came out. I knew this was an industry that I wanted to be



Cierra Sieben-Chuback graduated from the University of Saskatchewan's Edwards School of Business in June.

TOM WALDRON

involved in, due to the fact that I have rheumatoid arthritis. I just saw this as an opportunity to provide me with the best quality of life, and other people as well. So that was my inspiration moving forward in this industry.”

Sieben-Chuback said her Edwards business courses well prepared her for this opportunity, particularly the business plan outline that she studied in associate

professor Lee Swanson’s class Commerce 447: Entrepreneurship and Venture Development.

“The business plan that I wrote in that class was originally for a medical marijuana dispensary, but once these RFPs came out, I pivoted my original business plan to suit the needs of the recreational dispensary in the application,” she said. “I actually used the financial template that Lee provided us in

that class, and I used that to do my financial projections for the RFP, so that in itself was so helpful. So, taking that course and walking me through the steps of what it takes to open a business, really helped me.”

Swanson said it is satisfying to know that the course curriculum has proven real-world application.

“I am very proud of Cierra, and of the excellent business plan she wrote in our Comm 447 class,” Swanson said. “She is the latest in a long line of past students who have developed, or are developing, businesses based on the work they did in that class. I’m confident she too will use her entrepreneurial skills to benefit our society by creating jobs, providing a valued product, and helping make our community an even better place in which to live.”

Sieben-Chuback is now busy turning her plan into action. She has trademarked her business name, Living Skies Cannabis, drawing on the Saskatchewan licence plate slogan, and is now working on opening her store before the end of the year, backed by her father and local business owner Glenn Chuback.

“There are a number of steps, the same as for any new business, from finding a location to getting suppliers,” she said. “There is new information coming out every day and I am just taking it all in and going from there. Growing up with a dad who is an entrepreneur, I have always been like-minded, so I do feel prepared. But that being said, I don’t think anyone is really truly prepared to start their first business, especially in a brand-new industry where a lot of the things that I am doing have never been done before. But it is so exciting.” ■



Professor Karen Lawson was recently awarded an \$87,000 Insight Grant for her new research project.

 SUBMITTED

Probing reasons for deferred motherhood

 SARATH PEIRIS

University of Saskatchewan researcher Karen Lawson is studying the psychological and social factors behind an increasing number of Canadian women delaying motherhood, a trend that has ramifications for women themselves and for the country's societal and economic future.

The national birth rate for women in their 20s has been decreasing. About one-third are waiting until they are over age 30 to have their first child, for reasons such as career advancement, financial stability, and education, according to Lawson, a professor in the psychology department.

The less positive repercussions of the trend, at the personal level, include the reduced fertility of women after age 28 that limits their reproductive capabilities. At the societal level, the decline in fertility rates in Canada to 1.61 children per woman—well below the replacement level of 2.1—has implications

for the economy, labour force, tax base and social safety net, because projected immigration won't fill the gap.

"This study will contribute to fostering informed reproductive decision-making in a way that will benefit women, families and society," said Lawson, who was recently awarded an Insight Grant of \$87,000 for the project, by the Social Sciences and Humanities Research Council of Canada.

Deferring motherhood to a later age can lead to difficulty in conceiving a child, having fewer children than desired, or involuntary childlessness, said Lawson. Among the common misbeliefs of women is the vast overestimation of the longevity of their fertility, and the success rate of medical interventions in addressing fertility problems, she said.

"I don't want to advocate that women should be having their children earlier, or that they should

be waiting to have their children," said Lawson.

The goal is to learn about the factors behind women's decisions on when or if they want to have children, and to help develop public

policies that support their choices.

"We're all about helping women make informed reproductive decisions," said project co-applicant Pamela Downe, an associate professor in anthropology with whom Lawson has done previous research on women's reproductive intentions.

Lawson and Downe will interview 60 women in Saskatchewan between the ages 18 to 45 with varying reproductive intentions or outcomes, focusing on why and how they decided on the timing of motherhood.

Factors such as personal attitudes, interpersonal relationships, available supports, and workplace practices that pose a societal barrier to earlier child-bearing, will be part of the discussion. Specific issues raised in the 60 interviews will be explored in a detailed questionnaire given to a nationally representative sample of 1,000 Canadian women who are

childless but intend to have children.

What's learned can guide the development of public programs and policies that support individual reproductive choices while meeting the national objective of having a stable population that can support economic and societal goals.

"Most social policy attempts worldwide to help families achieve reproduction goals have involved extrinsic rewards such as baby bonuses that for the most part have been dismal failures," said Lawson. "Policymakers need to identify how women perceive barriers that prevent them from achieving their reproductive goals, and the personal meanings women attach to their reproductive decisions—what's most important and salient, such as available community resources and child care strategies—and target those areas." ■

Sarath Peiris is assistant director, Research profile and Impact, at U of S.

“ This study will contribute to fostering informed reproductive decision-making in a way that will benefit women, families and society.

— Karen Lawson

Addressing education challenges

FROM PAGE 3

newcomer settlement, increasing Indigenous student graduation rates that currently are half the non-Indigenous rate of 84 per cent, and improving the child poverty rate of close to 25 per cent.

The project includes having parents engaged in pursuing educational and economic opportunities for themselves—through such things as adult learning or language classes, or skills enhancement. Given

the poverty and low adult education and literacy rates in the area, what's learned at Howard Coad School offers great possibilities to guide a provincial prototype for engaging parents, which will include rural and northern areas, said Pushor.

Pushor is also exploring ways that teachers can build relationships with families. This could include relieving teachers of such duties as lunch supervision to free up their

time to visit students' homes. Experience in some U.S. schools has shown that such relationships with parents has helped teacher retention.

"This research will address major challenges in public education and contribute to the well-being of children and families in Saskatchewan and beyond," said Pushor. ■

Sarath Peiris is assistant director, Research profile and Impact, at U of S.

SENS professor receives New Researcher Award

 VICTORIA SCHRAMM

Research that helps Northern Indigenous communities has made Timothy Jardine an international leader in applied aquatic ecology—it has also made him the most recent recipient of the New Researcher Award.

“As an aquatic ecologist and river scientist, coming to the U of S was a no-brainer,” said Jardine, who arrived at the U of S in 2012 after completing a postdoctoral fellowship at Griffith University in Australia.

“I came to the U of S because I was keenly aware of the great group doing environmental toxicology research here at the Toxicology Centre, and due to the university’s investment in water research and the creation of the Global Institute for Water Security (GIWS),” said Jardine, who received the New Researcher Award at Spring Convocation.

Jardine studies the biology of streams, rivers and wetlands where he tracks toxic chemicals through aquatic food webs and studies how changes to river flows affect river ecology. By monitoring toxicity levels and other human impacts, his research helps to protect communities along northern rivers and deltas.

“In the past, environmental



New Researcher Award recipient Timothy Jardine is an international leader in applied aquatic ecology.

decision-making has often excluded the voices of the very people most greatly affected by development—those living downstream and downwind of industrial developments,” he explained. “My hope is that by partnering with Indigenous communities, researchers in different disciplines, and with key decision-makers, we can achieve more acceptable and sustainable outcomes from development.”

His research has made vital and groundbreaking contributions

to our scientific understanding of northern riverine food webs and their potential risk to contamination and has had tangible impacts on the communities that live along these water sources.

“I am passionate about this research because it can lead to broader societal value beyond the academy,” he said. “By conducting interdisciplinary research, we can find practical solutions to help nearby communities. That is why the School of Environment and

Sustainability is such a good fit for me, because it offers the opportunity to work with great colleagues whose expertise cuts across so many disciplines.”

With an impressive track record of publishing in some of the world’s best journals, Jardine has helped change the direction of aquatic science and he also has research funding to back his work, including funding from the Natural Sciences and Engineering Research Council of Canada and the Social Sciences

“My hope is that by partnering with Indigenous communities, researchers in different disciplines, and with key decision-makers, we can achieve more acceptable and sustainable outcomes from development.”

— Timothy Jardine

and Humanities Research Council of Canada, totalling more than \$5 million.

In addition to these accomplishments, Jardine has established productive international collaborations in Brazil, Singapore and Australia, where his work is being used by the Australian State and Federal Governments to determine the environmental impacts of planned water resource developments. In 2016, Jardine was awarded the highly competitive Water Security Research Excellence Award from the GIWS.

With the New Researcher Award now on his resume—an award presented each year to an outstanding new U of S scholar in recognition of their significant contributions to knowledge or artistic creativity—Jardine is motivated to move his research even further.

“I hope to unify understanding of river ecology across the globe, from the Arctic to the tropics and in between, so we can all enjoy the many benefits that our freshwaters bring,” said Jardine. ■

Victoria Schramm is a communications specialist with the School of Environment and Sustainability.



Kimber family tree deeply rooted

JAMES SHEWAGA

From the family farm in southwestern Saskatchewan 70 years ago, to a mountaintop wedding in beautiful British Columbia in June, the Kimber family has been connected to the University of Saskatchewan for four generations.

The roots of this family tree are firmly planted in provincial agricultural history, dating back to 1926 when Clement and Blanche Kimber began ranching near the tiny village of Abbey, about an hour's drive northwest of Swift Current. They would go on to raise five children, with mother Blanche determined that all five should go on to pursue post-secondary education. Four went on to graduate from the U of S—sons Robert (1949), Stanley (1954) and David (1956) and daughter June (1967)—while daughter Bunty (1962) completed her studies in Regina to become a radiography technician.

“My dad was a rancher through and through, so he wouldn't have minded if we had all stayed there, but my mother wanted us to go to school for sure,” said David Kimber, who graduated from the agriculture program at the U of S and returned home to run the farm near Abbey and raise his own family. “Everybody came from a different aspect of agriculture, so I enjoyed my time at the university tremendously. I made a lot of friends and contacts that you keep for life.”

Among those contacts for life, of course, was his wife Marlene, whom he met while he was attending the



Doctors Christie Kimber and Zeke Steve, both graduates of the U of S College of Medicine class of 2015, were married June 16 on top of Mount Arrowsmith.  MAX WATSON

U of S and she was studying nursing at Saskatoon City Hospital.

“Yes, that was big!” he said, with a chuckle.

Now celebrating 59 years of marriage, David and Marlene are one of the many chapters in the Kimber family saga—part success story, part love story—that features a family filled with 23 U of S graduates and two current students on campus, and includes three couples who met while studying at the university and went on to start families of their own.

David and Marlene's three sons Kevin, Perry and Allan also grew up on the family farm and went on to graduate from the

U of S; Kevin in engineering (1982), Perry with arts (1983) and physical therapy degrees (1988), and Allan from commerce (1987).

Interestingly, Kevin met his wife Valerie (nursing 1983) at the U of S before they embarked on successful careers that took them around the world, while Perry also met his wife Katherine (physical therapy 1985, master's in physical education 1993) on campus. Perry, who spent a year playing football for the Huskies, went on to teach classes at the U of S and now runs a successful physiotherapy company with his wife in Saskatoon.

For David and Marlene, watching each of their sons cross the

stage at TCU Place to be awarded their degrees in U of S convocation ceremonies were memorable moments that they will never forget.

“Yes, we were there to watch and it was a very good feeling,” said David. “It was the ultimate goal of ours, all our lives, to have our children get a good education. We just encouraged them and they worked hard and I think they got good schooling there. So, we're pretty proud.”

David's youngest son Allan also went on to watch his own daughters follow in his footsteps and graduate from the U of S; Christie in medicine (2015) and Alyssa in engineering (2015).

“I certainly left it completely up to them, but I was happy for sure that they had chosen the U of S because I knew it was a great school,” said Allan, now a successful certified financial planner in Regina and Weyburn. “I would have been proud to see them graduate wherever they chose, but I think it was extra special because it was the U of S. It's just always been a part of us and I think everyone feels that they have received an excellent education there.”

Fast forward to the picturesque scene of getting married on a mountaintop, where Allan's daughter Christie Kimber exchanged vows with Zeke Steve on June 16. Christie, a former Huskies women's volley-

in the University of Saskatchewan



Clockwise from bottom right: Marlene and David Kimber and their sons Perry, Kevin and Allan Kimber.

 SUBMITTED

ball player, and Zeke both grew up in southeastern Saskatchewan—Christie in Weyburn and Zeke in nearby Milestone—and had plenty of mutual childhood friends, but somehow had never crossed paths prior to coming to campus.

“We always joke about how lucky it was because we have lots of mutual friends, but we had never met and how that is so lucky because we probably wouldn’t have ended up together!” said Christie, with a laugh. “So, it was pretty amazing that our paths happened to cross in university. It’s pretty special.”

Now doctors working together in B.C., Christie and Zeke met in medical school in 2011, graduated

from the U of S together in 2015, were engaged in 2017 and married in 2018. While following in the family footsteps wasn’t a key consideration for coming to the U of S, looking back Christie is happy that she made that decision.

“For me at the time, I didn’t really think about going there just because the rest of the family went there ... but I could tell that the legacy was important to my dad,” said Christie. “So, to be able to go there, both for volleyball and for school, worked out really well.

“I really appreciate all the people that I met at the U of S, and I got to play the sport that I love at the university level, so I was pretty

excited to do that. And obviously I met Zeke there, so that was pretty amazing.”

Christie and Zeke said their time in the College of Medicine prepared them well to be practising physicians, particularly the special emphasis on rural medicine and the numerous opportunities to gain hands-on-experience as clinicians.

“I wanted to go to medical school and the U of S was the best option for me, and the rural-focused training was very important,” said Zeke, whose sister Anna also graduated from medical school in the same class.

While Christie and Zeke are the latest members of the family to tie the knot, Callan is the most recent member of the Kimber family tree to graduate and join the ranks of more than 150,000 U of S alumni worldwide. The son of Perry and Katherine and former president of the Edwards Business Students’ Society, Callan earned his commerce degree in 2016, while his younger siblings Jadyn and Sophia are now carrying on the U of S family tradition. Sophia is entering her first year of university this fall, while Jadyn is moving from physics to computer science for his fourth year at the U of S and is happy to keep the Kimber family connection going.

“It feels like I am sort of holding up the family tradition,” said Jadyn. “It feels important and it’s cool to be on the same campus that pretty much my entire family has been on. And probably my favourite part of learning at the University of Saskatchewan is that I have felt so involved on campus in general, but especially with the astronomy department. It’s been a great experience.” ■

KIMBER CONNECTIONS TO U OF S:

(U OF S GRADUATES/COURSES IN PARENTHESES)

CLEMENT AND BLANCHE KIMBER

SON: ROBERT KIMBER (AGRICULTURE 1949)

SON: STANLEY KIMBER (AGRICULTURE 1954)

SON: DAVID KIMBER (AGRICULTURE 1956)

DAUGHTER: JUNE (KIMBER) GALE (EDUCATION 1967)

DAUGHTER: BUNTY (KIMBER) MANZ

DAVID KIMBER (AGRICULTURE 1956) AND MARLENE KIMBER

SON: KEVIN KIMBER (ENGINEERING 1982) AND VALERIE KIMBER (NURSING 1983)

SON: PERRY KIMBER (ARTS 1983, PHYSICAL THERAPY 1988) AND KATHERINE DANIELS (PHYSICAL THERAPY 1985, MASTER’S PHYSICAL EDUCATION 1993)

GRANDSON: CALLAN KIMBER (COMMERCE 2016)

GRANDSON: JADYN KIMBER (COMPUTER SCIENCE, ENTERING FOURTH YEAR)

GRANDDAUGHTER: SOPHIA KIMBER (ARTS AND SCIENCE, ENTERING FIRST YEAR)

SON: ALLAN KIMBER (COMMERCE 1987)

GRANDDAUGHTER: DR. CHRISTIE KIMBER (MEDICINE 2015) AND DR. ZEKE STEVE (MEDICINE 2015)

GRANDDAUGHTER: ALYSSA KIMBER (ENGINEERING 2015)

ROBERT CLEMENT KIMBER (AGRICULTURE 1949) AND VIVIAN KIMBER

DAUGHTER: DR. GLORIA KIMBER-JACKLIN (VETERINARY MEDICINE 1988) AND GORDON JACKLIN (AGRICULTURE 1978)

DAUGHTER: EDITH (KIMBER) HALYK (ARTS 1984, NURSING 1984)

DAUGHTER: JOYCE (KIMBER) PARENT (EDUCATION 1980, ARTS 1983)

GRANDDAUGHTER: SARAH (KIMBER) PARENT (MEDICINE 2010)

GRANDDAUGHTER: BRIGITTE (KIMBER) PARENT (NURSING 2011)

STANLEY KIMBER (AGRICULTURE 1954) AND ELIZABETH KIMBER

DAUGHTER: SHARON KIMBER (NURSING 1998)

JUNE (KIMBER) GALE (EDUCATION 1967) AND CARL GALE

SON: GORDON GALE (ARTS 1977, AGRICULTURE 1981) AND SHELLEY THOMPSON (AGRICULTURE 1981, MASTER’S SCIENCE 1983)

GRANDDAUGHTER: ELIZABETH THOMPSON-GALE (NURSING 2014)



MAKING A DIFFERENCE:

Experiencing life on the street

CHRIS MORIN

When it came time to make the decision to go without basic necessities like food, water and shelter for 36 hours, Jacqueline Ottmann knew there was no way she could say no.

Still, it was not a decision that the university's first vice-provost, Indigenous engagement could make lightly. As one of the participants in the Sanctum Survivor Challenge, in which a dozen participants take to Saskatoon's streets from June 1 to 2 as a way to support mothers and individuals in Saskatchewan living with HIV and AIDS, Ottmann knew this was an important cause to a community that she feels a personal connection to.

"Ultimately, this was something that is such an important cause, and I said yes to doing this because I wanted to help pregnant moms with HIV and AIDS," said Ottmann, who is Anishinaabe (Saulteaux) and a member of Saskatchewan's Fishing Lake First Nation.

Ottmann, who recently returned to the U of S after earning her master's in education (2002) and her PhD (2005) in the Department of Educational Administration in the College of Education, said participating in the fundraising event was

something she knew would come with an emotional impact.

The Sanctum Survivor event is an annual city-wide fundraiser in which Ottmann participated along with other community leaders to gain first-hand understanding of the many challenges faced by people who experience poverty, homelessness and chronic illness in Saskatoon every day. The participants take part in a number of tasks that are framed around their survival, going without money and wearing donated clothing for the duration of the event.

"The day itself included a lot of walking. We walked over 17 kilometres to get from one agency to another, between Saskatoon AIDS to the Friendship Inn to Broadway to do laundry at the Lighthouse, where we asked the staff for garbage bags to protect our food and blankets. We did have our phones," said Ottmann, noting that one amenity was used to tweet the 36-hour experience of homelessness.

And then there was the rain and cold.

"I wore five layers of shirts and jackets in order to keep warm," she said. "You can't prepare or speculate



Jacqueline Ottmann, fifth from left, and the other members of the Sanctum Survivor Challenge.

VERSA FILMS

what this experience would be like. You have to be in the midst of the lived experience, which I think provides change in perspective, attitude and belief systems. I realized the weight of it all when I arrived at 6am and started picking out donor clothes to wear for the day and finding that there were very few in my size."

"We soon realized how significant the Friendship Inn is, how warm, safe and welcoming the space is. But, more importantly, there was a sense of community there," Ottmann continued.

"People were in conversation with one another, the service workers were kind, and it was a very safe atmosphere."

After the event, Ottmann said it took her "awhile to process everything that I learned that day, and I

think I'm still trying to understand what my role is as an advocate for those experiencing homelessness, and those mothers with HIV and AIDS."

Ultimately, the fundraising event has left a positive impact. This September will mark the opening of Sanctum 1.5, a 10-bed care home that will support high-risk, HIV-positive, pregnant women in Saskatoon, which organizers said will be the first of its kind in Canada.

Throughout the group's collective experiences, Ottmann, a former elementary and high school teacher and principal, said there was a lot of learning and sharing that went on throughout the 36 hours, and that this is only a start.

"We learned that there needs to be more counselling for mental

health and addiction, and that homelessness, addiction and mental health are all so often connected. There needs to be an integrated approach in caring to support people who experience these challenges."

Ottmann said that despite the negative aspects that are intrinsic to experiencing homelessness, "a lot of positive learning opportunities came from the experience. There was so much gratitude. Two of us spent the night at the Larson House detox centre. This experience was very deep; the centre became full and so they had to turn people away and there we were with two beds. It was hard to accept.

"At the same time, I feel so grateful for everything that these caregivers do for those in need on a daily basis." ■

Combination of treatments improves outcomes

FROM PAGE 7

the motor therapy.

Each AIH treatment consisted of 10 five-minute cycles where the animals breathed hypoxic air (11 per cent oxygen) alternating with normal air (21 per cent oxygen).

Each week the research team compared the abilities of both groups as they performed specific motor tasks that had been mastered before the injury, and then they compared the cells in the spinal cords of both groups of animals. Results confirmed that AIH leads to increases in the amount of specific proteins within cells linked to hypoxia and plasticity. Researchers also observed notable improvement in the functional abilities of the group that received both AIH and rehabilitative therapy.

“We think that this combination of treatment is important because the AIH makes the cells more accessible to plasticity—that is, more amenable to making stronger connections with other neurons,” said Muir. “The rehabilitation training activates the correct neural pathways and ensures that the appropriate neural circuitry becomes stronger.”

Those outcomes are significant for human medicine. Clinical and pre-clinical trials in the U.S. have already demonstrated that people with spinal injuries who received AIH therapy combined with rehabilitative training showed an improved ability to walk further and for longer periods of time.

A significant finding of the current study was evidence that the proteins connected with plasticity were increased in areas of the spinal cord other than just the injury site—an indication that hypoxia triggers a reaction from neurons in other parts of the body, including the brain. Since AIH treatments expose the whole body to hypoxia, it's possible that the nerve cells of the peripheral nervous system and the brain are also reacting to the low-level stress by creating the proteins associated

with plasticity.

“In spinal cord injuries, we tend to focus on those areas that we know are directly responsible for controlling the muscles involved in the behaviour we are studying, such as walking. But it is likely that many parts of the nervous system need to change in order for a person or an animal to improve the way they move, how they can perform a particular task,” said Muir.

This particular study has prompted even more questions and research regarding AIH therapy and its possibilities for enhancing nervous system function and even repairing damaged cells.

It's been proven that AIH stim-

ulates intact nerve cells to express hypoxia- and plasticity-related proteins, so a subsequent study is now investigating whether damaged cells in the peripheral nervous system are able to produce those proteins and then repair themselves.

“Any information we find by looking in the periphery may help us learn how to repair the spinal cord and brain,” said Verge. “Although there are differences between the brain and the spinal cord and the peripheral nervous system, many of the key pathways are quite similar in what they do.”

Muir is conducting a study that examines the value of AIH therapy as a long-term treatment used over

three months rather than just one week. The study is also investigating whether AIH therapy is effective with chronic injuries where there's a longer time gap between the injury and the beginning of therapy.

Although cautious about giving false hope, both Verge and Muir are optimistic that AIH therapy will have a positive impact on a wide range of injuries and conditions that affect the nervous system.

“We're not necessarily trying to fix what's been damaged in the

spinal cord injury models,” said Muir. “What we're doing with AIH is enhancing the plastic capability of the cells and neural pathways that are undamaged, no matter what the injury, and then trying to sculpt or strengthen those existing connections so that we get recovery of function. That's the ultimate goal.” ■

Lynne Gunville of Candle Lake, Sask., is a freelance writer and editor whose career includes 25 years of teaching English and communications to adults.



COMING EVENTS

MISCELLANY

Diefenbaker Youth History and Governance Camps

The Diefenbaker Canada Centre invites grade five to nine students to join us to explore the links between democracy, Canada's history, and current events. Week-long programs provide future parliamentarians with a strong understanding of the inner workings of the Canadian government. With each week featuring a distinct theme, there is sure to be stimulating debate and discussion this summer for camp participants. For more information, visit: usask.ca/Diefenbaker/educational/Summer%20Camps.php

- July 23-27, 9 am-4 pm, Decisions that Count. Explore the decisions that shaped Canada in a week-long odyssey through Canadian history and politics. Campers will examine key flashpoints, such as the signing of the Numbered Treaties, Confederation, and the 1995 Quebec referendum, and analyze the decision-making processes that led to these events, as well as their outcomes and far-reaching consequences. Campers will hone their critical thinking and rhetorical skills through debates, simulations, and engagement with expert guest speakers. Cost is \$225 per person.
- August 13-17, 9 am-4 pm, A Century of Conflict. Immerse yourself in historic wars and groundbreaking struggles for justice as you examine the legacy of Canadian

conflict in the 20th century and beyond. From world-spanning military conflicts such as the First and Second World Wars and the War on Terror, to social issues such as the Civil Rights Movement and the Oka Crisis, campers will improve their critical thinking ability, develop speech writing skills, and hone their negotiating prowess as they engage in debates, simulations and interactive exercises. Cost is \$225 per person.

COURSES/WORKSHOPS

Edwards School of Business, Executive Education

Registration is open to the public and to all university employees for upcoming programs. Call 306-966-8686, email execed@edwards.usask.ca or visit: edwards.usask.ca/execed

- September 10-12, The Project Management Course – Saskatoon
- September 11-12, Conflict Resolution in the Workplace – Saskatoon
- September 13, Leadership Communication – Saskatoon
- September 18, Leadership Essentials for Supervisors – Saskatoon
- September 19, Type and Stress Management – Saskatoon
- September 24-28, Labour-Management Relations Certificate Program – Saskatoon

**NEXT OCN: August 10, 2018
DEADLINE: July 30, 2018**

LONG SERVICE AWARD RECIPIENTS 2018

The university would like to recognize the following employees for their 25 years of hard work and dedication to the University of Saskatchewan.

DAWN ABBOTT	CHANDRA KRETZER
KEVIN BANMAN	JANE LAMOTHE
MARIE BATTISTE	LAUREL MCDONALD
MARGARET BIEBER	KELLY MCINNES
MURRAY BREMNER	DIANNE MILLER
SHELLEY BUECKERT	TAMMY MORRISON
PAUL BULKA	FRANCISCO OTERO-CAGIDE
DAVID CAMPBELL	YUANMING PAN
KAREN DAVIS	SOLEDADE PEDRAS
DAWN DOBNI	TRACY PRYSLIAK
CINDY FARRA	WILLIAM ROBERTSON
SHANNON FROESE	LAVERNE SANDER
MIZAN GLAIZGH	DONALD SCHMIDT
VENKAT GOPALAKRISHNAN	KELLY THIESEN
IRENE GRECK	SURESH TIKOO
KIMBERLY HEIDINGER	JUDITH YUNGWIRTH
JAMES HENDERSON	AZEDE ZERESENAI
RYAN HOCKLEY	LI ZONG
LINDA HUELLER	
KIM JONES	
MARGARET KENNEDY	



ON TIME TRAVEL . . .

Pack your bags and set your sights on memory lane, because this year's *On Campus News* back page features landmark moments and events from our storied 110-year history.

Have a particular event you'd like to see featured? Let us know about it at news@usask.ca.

With files from University Archives and Special Collections.



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JULY 1910

CAMPUS CONSTRUCTION BEGINS

While the university was established in 1907 and the first classes offered were in 1909, construction on campus didn't start until 1910 with the College Building. In the early years, the U of S campus moved from location to location in Saskatoon: the fourth floor of the Drinkle Building downtown, Nutana Collegiate and, eventually, Victoria School.

Following the recommendation of President Walter Murray, the university's Board of Governors hired Brown and Vallance, architects from Montreal, to design the buildings and supervise the construction. The original stone-clad building, and many subsequent buildings, adhered to the Collegiate Gothic style, using limestone, or

Greystone, that was quarried just north of campus.

On July 29, 1910, Prime Minister Wilfrid Laurier laid the cornerstone for the College Building. A number of items documenting the university's early history—including the University Act, photos of administration and the University Calendar—were placed in the cornerstone. The first classes on campus were in fall 1913.

The College Building, now known as the Peter MacKinnon Building, was initially designed as a general-purpose building, and was the original home of the College of Agriculture. It was designated a Provincial Heritage Property in 1982 and a National Historic Site in 2001.